



RAJASTHAN STATE MINES & MINERALS LIMITED

(A Government of Rajasthan Enterprise)

SBU & PC LIGNITE, JAIPUR

Khanij Bhawan, Tilak Marg, C-Scheme, Jaipur-302005

Corporate Office: 4, Meera Marg, Udaipur-303001

Registered Office: C-89-90, Lal Kothi Scheme, Jaipur-302015

Ph. (0141)2227947,2227408,2227360 FAX- 0141-2227761 E-mail jaipur.rsmm@rajasthan.gov.in
CIN-U14109RJ1949SGC000505, Website: www.rsmm.com , GSTIN-08AAACR7857H1Z0

REGISTERED

Ref. No./RSMMS/SBU (L)/F.5/2021-22/ 633

Date 21.06.2021

To,
The Regional Director,
Central Ground Water Board,
Western Region, Jhalana Dungari,
JAIPUR-302004
e-mail- rdcgwa-cgwb@nic.in

Sub: Ground water monitoring report for Kasnau Matasukh Lignite Mines, Distt. Nagaur (Raj.).

Dear Sir,

In compliance of conditions stipulated in the Environmental Clearance vide letter No. J 11015/21/99/IA.II(M) dated 19th July, 2000 & Project Code- Raj-165/243/2000; please find enclosed herewith Ground water monitoring report for the period(s) QE-March' 20, QE-June' 20, QE-September' 20, QE-December' 20 and QE-March' 21, in respect of Kasnau Matasukh Lignite Mines, Distt. Nagaur (Rajasthan).

Thanking you,

Yours faithfully,

(Arun Singh)

Head & In-charge (Lignite)
& Project Proponent
Head & In-charge (Lignite)
Rajasthan State Mines & Minerals Ltd.
Khanij Bhawan, Tilak Marg
JAIPUR-302005

Encl : As above

Copy to: 1. Dy. General Manager (IT), Corporate Office, Udaipur to upload on RSMML website



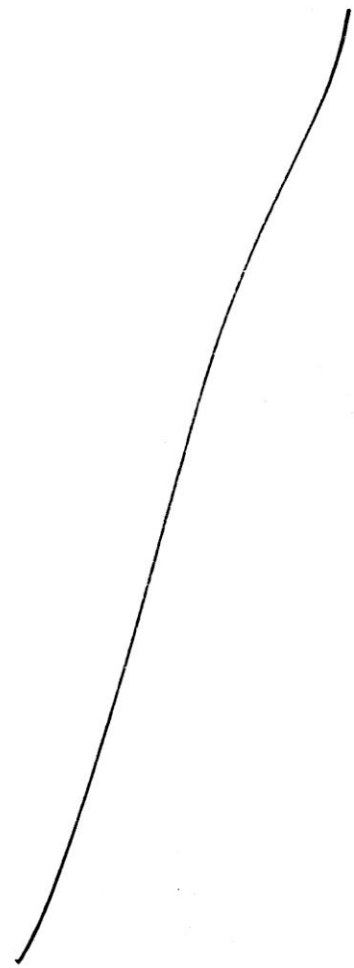
(Arun Singh)


Head & In-charge (Lignite)
& Project Proponent
(ARUN SINGH)
Head & In-Charge (Lignite)
Rajasthan State Mines & Minerals Ltd.
Khanij Bhawan, Tilak Marg
JAIPUR-302005

**Water Level Records of Piezometers for
Kasnau-Matasukh Lignite Mines, Nagaur**

Quarter-I (January 2021 – March 2021)

S. No.	Date of Measurement	Pz Nr. Kasnau Pit (mRL) N 27° 04' 55.0" E 74° 04' 09.5"		Pz Nr. Mines Office (mRL) N 27° 05' 39.9" E 74° 04' 11.1"	
		Depth to Water Level (m bgl)	mRL	Depth to Water Level (m bgl)	mRL
1	04.01.2021	62.83		55.69	
2	11.02.2021	62.98		55.73	
3	10.03.2021	63.00		56.30	




MINES MANAGER
Kasnau-Matasukh Lignite Mines
V.P.O.: -Farrod, Tehsil:-Jayal
Dist.: -Nagaur (Raj.) 341030



Rajasthan State Mines & Minerals Limited

(A Government of Rajasthan Enterprise)

S.B.U. LIME STONE

8, West Patel Nagar, Circuit House Road, Jodhpur- 342011

Phone: 0291 2511031/2516199 Fax: 0291 2511029 (e-mail: rsmmjodhpur@rsmm.com)

CENTRAL LABORATORY

An ISO 9001:2015 Certified Laboratory

REF.: F19 (8)/LIG - N/2020-21/ 2364 (3)

Date: 18.03.2021

Issued to:

Dy. General Manager (Mining)
Kasnau Matasukh Lignite Unit,
RSMML, Nagaur.

REF. - Nil

DATE - Nil

Sample Received On Date: 16.03.2021

SAMPLE PARTICULARS

Source & Location: - Sample of water collected from Mines Discharge Water from Kasnau Matasukh Lignite Mines on dated 25.01.2021

TEST RESULTS


(Analysed as per IS-10500: 2012)

S. No.	Properties	RSMM/4N/03-21/11969
1.	p ^H	8.10
2.	Temperature °C	32.3
3.	Alkalinity Phenolphthalein (CaCO ₃)	Nil
4.	Alkalinity Methyl Orange (CaCO ₃)	650
5.	Total Hardness	1480
6.	Calcium Hardness	580
7.	Magnesium Hardness	900
8.	Carbonate Hardness	650
9.	Non Carbonate Hardness	830
10.	Chlorides as Cl ⁻	4150
11.	Sulphate	1557
12.	Fluoride	-
13.	Total Dissolved Solids	8780

Note: All results except at Sr. No.1 & 2 are in mg/Lit.


(Dr. SHALENDRA SINGH YADAV)
Sr. Manager & Incharge (Lab)


Note: - Samples drawn by RSMML


MINES MANAGER
Kasnau-Matasukh Lignite Mines
V.P.O.: - Farrod, Tehsil: - Jayal
Dist.: - Nagaur (Raj.) 341030

**Water Level Records of Piezometers for
Kasnau-Matasukh Lignite Mines, Nagaur**

Quarter-IV (October 2020 – December 2020)

S. No.	Date of Measurement	Pz Nr. Kasnau Pit (mRL) N 27° 04' 55.0" E 74° 04' 09.5"		Pz Nr. Mines Office (mRL) N 27° 05' 39.9" E 74° 04' 11.1"	
		Depth to Water Level (m bgl)	mRL	Depth to Water Level (m bgl)	mRL
1	16.10.2020	62.76		55.07	
2	11.11.2020	62.71		55.33	
3	03.12.2020	62.78		55.46	


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Dist.: -Nagaur (Raj.) 341030



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CENTRAL LABORATORY

An ISO 9001:2015 Certified Laboratory

RIE: F19 (8) LIG - N/2020-21/1717

Date: 11.12.2020

Issued to:

Dy. General Manager (Mining)
Kasnau Matasukh Lignite Unit,
RSMML, Nagaur.

REF. - RSMML/Lig/NGR/2020-21/1978

DATE -01.12.2020

Sample Received On Date: 08.12.2020

SAMPLE PARTICULARS

Source & Location: - Sample of water collected from Confined Aquifer Water from water Kasnau Matasukh Lignite Mines on dated 27.11.2020.

TEST RESULTS

(Analysed as per IS-10500: 2012)

S. No.	Properties	RSMML/4N/12-20/6729
1.	pH	8.07
2.	Temperature °C	20.60
3.	Alkalinity Phenolphthalein (CaCO ₃)	Nil
4.	Alkalinity Methyl Orange (CaCO ₃)	640
5.	Total Hardness	1400
6.	Calcium Hardness	560
7.	Magnesium Hardness	840
8.	Carbonate Hardness	640
9.	Non Carbonate Hardness	760
10.	Chlorides as Cl ⁻	4430
11.	Sulphate	1482
12.	Fluoride	-
13.	Total Dissolved Solids	8820

Note: All results except at Sr. No.1 & 2 are in mg/lit.

MINES MANAGER

Kasnau-Matasukh Lignite Mines

V.P.O.: Farrod, Tehsil: Jayal

Dist.: Nagaur (Raj.) 341030

Manager & Incharge (Lab)

Note: Samples drawn by RSMML, Rep. and analyzed by Analyst 'A' (S)

TEAM TEST HOUSE
(Unit of Team Institute of Science & Technology Pvt. Ltd.)

Approved by Ministry of Environment and Forest, Government of India as Environmental Laboratory

RSPCB

ISO 9001:2015

OHSAS 18001:2007

JDA/UDH

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Laboratory : G1-584, RIICO Industrial Area,
Sitapura, Jaipur - 302022, Rajasthan
Phone : +91 9460222039, 9460222049,
Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502520100001437F	Date :	12-12-2020
Issued To :	M/S Rajasthan State Mines & Minerals Ltd Kasnau Matasukh Lignite mines, Nagaur, Nagaur (Rajasthan).	Type of Unit :	Industry
Type of Sample :	Potable and Domestic Water	Date of Sample Collection/Monitoring :	03-12-2020
Point of Collection :	Drinking Water Mines Manager Office	Date of Receipt :	05-12-2020
Date of Test/Analysis :	05-12-2020 to 12-12-2020	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	Rakesh Sharma
Unit's representative :	S.L Berwal	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Turbidity [NTU]	BDL(<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
2	pH	7.25	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
3	Hardness (total) [mg/l]	111.11	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
4	Iron [mg/l]	BDL (<0.01)	IS 3025 (Part 53) : 2003 RA 2019	0.3	-
5	Chloride [mg/l]	29.57	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
6	Total Dissolved Solids [mg/l]	185	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
7	Phosphate (total) [mg/l]	BDL (<1.0)	IS 3025 (Part 32) : 1988 RA 2019	-	-
8	Calcium [mg/l]	40.4	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00

Note:

Continue to next page...

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Kasnau-Matasukh Lignite Mines
V.P.O.: Farrod, Tehsil: Jayal
Dist.: Nagaur (Raj.) 341030

Rajesh Narayan

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Email : marketinglab@teamtesthouse.com

RESULTS


S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
9	Magnesium [mg/l]	2.45	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00
10	Manganese [mg/l]	BDL (<0.01)	IS 3025 (Part 59) : 2006 RA 2017	0.1	0.3
11	Sulphate [mg/l]	7.84	IS 3025 (Part 24) : 1986 RA 2019	200.00	400.00
12	Nitrate [mg/l]	4.25	IS 3025 (Part 34) : 1988 RA 2019	45.00	-
13	Fluoride [mg/l]	0.54	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
14	Alkalinity - T [mg/l]	87.3	IS 3025 (Part 23) : 1986 RA 2019	200.00	600.00

Notes :-

- # Parameter No. 1,2,3,4,5,6,7,8,9,10,11,12,13,14 covered under NABL scope and Parameter No. NONE does not cover under NABL scope
- # Parameter No. NONE outsourced for testing.
- # The results listed refer only to the tested sample (s) & parameters (s). Endorsement of products is neither inferred nor implied.
- # This report is not to be reproduced wholly or in part and can not be used evidence in the court of law and should not be used in any advertising media without our special permission in writing.
- # The samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified.

Puran Mayyogi
Puran Mayyogi
*Senior Analyst

Rajesh Maheshwan
Rajesh Maheshwan
Authorized Signatory
(Report No: TC502520100001437F)


MINES MANAGER
Kasnau-Matasukh Lignite Mines
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Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No.	100001439	Date :	15-12-2020
Issued To :	M/S Rajasthan State Mines & Minerals Ltd Kasnau Matasukh Lignite mines, Nagaur, Nagaur (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Potable and Domestic Water	Date of Sample Collection/Monitoring :	04-12-2020
Point of Collection :	Drinking Water at Canteen	Date of Receipt :	05-12-2020
Date of Test/Analysis :	05-12-2020 to 15-12-2020	Sampling Plan :	IS 3025:1937(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	Rakesh Sharma
Unit's representative :	Mr S.L Berwal	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Turbidity [NTU]	BDL(<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
2	pH	7.95	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
3	Hardness (total) [mg/l]	190	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
4	Iron [mg/l]	0.09	IS 3025 (Part 53) : 2003 RA 2019	0.3	-
5	Chloride [mg/l]	139	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
6	Total Dissolved Solids [mg/l]	436	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
7	Phosphate (total) [mg/l]	BDL(<0.1)	IS 3025 (Part 32) : 1988 RA 2019	-	-
8	Calcium [mg/l]	44	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00

Note:

Continue to next page...

MINES MANAGER
Kasnau-Matasukh Lignite Mines
V.P.O.-Farrod, Tehsil:-Jayal
Dist.-Nagaur (Raj.) 341030

Rajesh Malhotra

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Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
9	Magnesium [mg/l]	19.44	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00
10	Manganese [mg/l]	BDL (<0.01)	IS 3025 (Part 59) : 2006 RA 2017	0.1	0.3
11	Sulphate [mg/l]	46	IS 3025 (Part 24) : 1986 RA 2019	200.00	400.00
12	Nitrate [mg/l]	15.85	IS 3025 (Part 34) : 1988 RA 2019	45.00	-
13	Fluoride [mg/l]	0.75	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
14	Alkalinity -T [mg/l]	180	IS 3025 (Part 23) : 1986 RA 2019	200.00	600.00

Notes :-

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- # The samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified.

Puran Mai Yogi
Puran Mai Yogi
Senior Analyst

Rajesh Maheerwan
Rajesh Maheerwan
Authorized Signatory
(Report No: 100001439)

MINES MANAGER
Kasnau-Matasukh Lignite Mines
V.P.O.-Farrod, Tehsil:-Jayal
Dist.-Nagaur (Raj.) 341030

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Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502521100001438F	Date :	15-12-2020
Issued To :	M/S Rajasthan State Mines & Minerals Ltd Kasnau Matasukh Lignite mines, Nagaur, Nagaur (Rajasthan),	Type of Unit :	Industry
Type of Sample :	Mine Discharge Water	Date of Sample Collection/Monitoring :	03-12-2020
Point of Collection	Confined Acqifer Depressurization Borwell No. - 94 MS	Date of Receipt :	05-12-2020
Date of Test/Analysis :	05-12-2020 to 12-12-2020	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	Rakesh Sharma
Unit's representative :	Mr S.L Berwal	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard : Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Turbidity [NTU]	BDL(<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
2	pH	7.61	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
3	Hardness (total) [mg/l]	1717.17	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
4	Iron [mg/l]	0.13	IS 3025 (Part 53) : 2003 RA 2019	0.3	-
5	Chloride [mg/l]	4434.8	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
6	Total Dissolved Solids [mg/l]	9879	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
7	Total Dissolved Solids [mg/l]	9879	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
8	Phosphate (total) [mg/l]	BDL(<1.0)	IS 3025 (Part 32) : 1988 RA 2019	-	-

Continue to next page.

Note:

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Kasnau-Matasukh Lignite Mines
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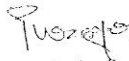
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 Phone : +91 9460222039, 9460222049,
 Email : director@teamtesthouse.com,
 Email : marketinglab@teamtesthouse.com


RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
9	Calcium [mg/l]	181.82	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00
10	Magnesium [mg/l]	306.79	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00
11	Magnesium [mg/l]	306.79	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00
12	Manganese [mg/l]	0.05	IS 3025 (Part 59) : 2006 RA 2019	0.1	0.3
13	Sulphate [mg/l]	275.55	IS 3025 (Part 24) : 1986 RA 2019	200.00	400.00
14	Nitrate [mg/l]	54.76	IS 3025 (Part 34) : 1988 RA 2019	45.00	
15	Fluoride [mg/l]	1.93	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
16	Alkalinity - T [mg/l]	720	IS 3025 (Part 23) : 1986 RA 2019	200.00	600.00

- Notes :-
- # Parameter No. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16 covered under NABL scope and Parameter No. NONE does not cover under NABL scope
 - # Parameter No. NONE outsourced for testing.
 - # The results listed refer only to the tested sample (s) & parameters (s). Endorsement of products is neither inferred nor implied.
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 - # The samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified.


 Senior Analyst


 Authorized Signatory
 (Report No: TC502521100001438F)


MINES MANAGER
 Kasnau-Matasukh Lignite Mines
 V.P.O.-Farrod, Tehsil:-Jayal
 Dist.-Nagaur (Raj.) 341030

**Water Level Records of Piezometers for
Kasnau-Matasukh Lignite Mines, Nagaur**

Quarter-III (July 2020 – September 2020)

S. No.	Date of Measurement	Pz Nr. Kasnau Pit (mRL) N 27° 04' 55.0" E 74° 04' 09.5"		Pz Nr. Mines Office (mRL) N 27° 05' 39.9" E 74° 04' 11.1"	
		Depth to Water Level (m bgl)	mRL	Depth to Water Level (m bgl)	mRL
1	10.07.2020	62.78		55.16	
2	07.08.2020	62.82		55.18	
3	10.09.2020	62.80		55.14	



MINES MANAGER
Kasnau-Matasukh Lignite Mines
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Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TC502520100000703F	Date :	31-07-2020
Issued To :	M/S Rajasthan State Mines & Minerals Ltd Kasnau Matasukh Lignite mines, Nagaur, Nagaur (Rajasthan).	Type of Unit :	Industry
Type of Sample :	Potable and Domestic Water	Date of Sample Collection/Monitoring :	18-06-2020
Point of Collection :	Drinking Water Mines Manager Office	Date of Receipt :	20-07-2020
Date of Test/Analysis :	20-07-2020 to 31-07-2020	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	-	Sample Collected By :	Banwari Lal Kumawat
Unit's representative :	S.L Bairwa	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
1	Turbidity [NTU]	BDL (<0.1)	IS 3025 (Part 10) : 1984 RA 2017	1.00	5.00
2	pH	7.32	IS 3025 (Part 11) : 1983 RA 2017	6.50 - 8.50	-
3	Hardness (total) [mg/l]	96	IS 3025 (Part 21) : 2009 RA 2019	200.00	600.00
4	Iron [mg/l]	BDL (<0.01)	IS 3025 (Part 53) : 2003 RA 2019	0.3	-
5	Chloride [mg/l]	39.99	IS 3025 (Part 32) : 1988 RA 2019	250.00	1000.00
6	Total Dissolved Solids [mg/l]	181	IS 3025 (Part 16) : 1984 RA 2017	500.00	2000.00
7	Phosphate (total) [mg/l]	BDL (<0.1)	IS 3025 (Part 32) : 1988 RA 2019	-	-
8	Calcium [mg/l]	32	IS 3025 (Part 40) : 1991 RA 2019	75.00	200.00

Note:

Continue to next page

MINES MANAGER
Kasnau-Matasukh Lignite Mines
V.P.O.-Farrod, Tehsil:-Joyal
Dist.-:Nagaur (Raj.) 341030

TEAM TEST HOUSE

(Unit of Team Institute of Science & Technology Pvt. Ltd.)

Approved by Ministry of Environment and Forest, Government of India as Environmental Laboratory

SPCB

ISO 9001:2015

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JD-11342

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Sitapura, Jaipur - 302022, Rajasthan
Phone : +91 9460222039, 9460222049,
Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

RESULTS

S.No	Parameters	Observed Value	Testing Protocol	Requirement (Acceptable Limit) as per IS 10500 : 2012 (RA 2018) Max.	Standard Permissible limits in the absence of Alternate Sources as per IS 10500 : 2012
9	Magnesium [mg/l]	3.89	IS 3025 (Part 46) : 1994 RA 2019	30.00	100.00
10	Manganese [mg/l]	BDL (<0.01)	IS 3025 (Part 59) : 2006 RA 2017	0.1	0.3
11	Sulphate [mg/l]	30.57	IS 3025 (Part 24) : 1986 RA 2019	200.00	400.00
12	Nitrate [mg/l]	1.47	IS 3025 (Part 34) : 1988 RA 2019	45.00	-
13	Fluoride [mg/l]	0.43	IS 3025 (Part 60) : 2008 RA 2019	1.00	1.50
14	Alkalinity - T [mg/l]	84	IS 3025 (Part 23) : 1986 RA 2019	200.00	600.00

Notes :-

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Pooja
Pooja Mal Yogi
Senior Analyst

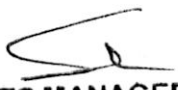
Rajesh
Rajesh Maheshwan
Authorized Signatory
(Report No: TC502520100000703F)

S
MINES MANAGER
Kasnau-Matasukh Lignite Mines
V.P.O.:-Farrod, Tehsil:-Jayal
Dist.:-Nagaur (Raj.) 341030


**Water Level Records of Piezometers for
Kasnau-Matasukh Lignite Mines, Nagaur**

Quarter-II (April 2020 – June 2020)

S. No.	Date of Measurement	Pz Nr. Kasnau Pit (mRL) N 27° 04' 55.0" E 74° 04' 09.5"		Pz Nr. Mines Office (mRL) N 27° 05' 39.9" E 74° 04' 11.1"	
		Depth to Water Level (m bgl)	mRL	Depth to Water Level (m bgl)	mRL
1	16.04.2020	62.83		55.22	
2	07.05.2020	62.84		55.25	
3	04.06.2020	62.81		55.19	


MINES MANAGER
Kasnau-Matasukh Lignite Mines
V.P.O.: -Farrod, Tehsil: -Jayal
Dist.: -Nagaur (Raj.) 341030

257



TEAM TEST HOUSE

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Email : director@teamtesthouse.com,
Email : marketinglab@teamtesthouse.com

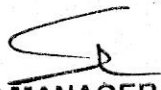
TEST REPORT


Report No./ULR No.	TC502520100000705F	Date	31.07.2020
Issued To :	M/S Rajasthan State Mines & Minerals Ltd. Kasnau Matasukh Lignite mines, Nagaur, (Rajasthan),	Type of Unit :	Mines
Type of Sample :	Mine discharge water	Date of Sample Collection/Monitoring:	18-06-2020
Point of Collection	Unconfined Acqifer at 270 MRL	Date of Receipt :	20-06-2020
Date of Test/Analysis	20.06.2020 to 30.06.2020	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	Banwari Lal Kumawat
Unit's representative :	S. L. Beirwal	Condition of Sample :	Fit for testing

S. No.	Parameters	Observed Value	Testing Protocol
1	Turbidity [NTU]	BDL (<0.1)	IS 3025 (Part 10) : 1984 RA 2017
2	pH	8.25	IS 3025 (Part 11) : 1983 RA 2017
3	Hardness (total) [mg/l]	1500	IS 3025 (Part 21) : 2009 RA 2019
4	Iron [mg/l]	BDL (<0.01)	IS 3025 (Part 53) : 2003 RA 2019
5	Chloride [mg/l]	547.75	IS 3025 (Part 32) : 1988 RA 2019
6	Total Dissolved Solids [mg/l]	3571	IS 3025 (Part 16) : 1984 RA 2017
7	Phosphate (total) [mg/l]	BDL (<0.1)	IS 3025 (Part 32) : 1988 RA 2019
8	Calcium [mg/l]	160	IS 3025 (Part 40) : 1991 RA 2019
9	Magnesium [mg/l]	24.3	IS 3025 (Part 46) : 1994 RA 2019
10	Manganese [mg/l]	BDL (<0.01)	IS 3025 (Part 59) : 2006 RA 2017
11	Sulphate [mg/l]	402.58	IS 3025 (Part 24) : 1986 RA 2019
12	Nitrate [mg/l]	46.59	IS 3025 (Part 34) : 1988 RA 2019
13	Fluoride [mg/l]	1.30	IS 3025 (Part 60) : 2008 RA 2019
14	Alkalinity - T [mg/l]	570	IS 3025 (Part 23) : 1986 RA 2019

- Notes :-
- # Parameter No. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15 covered under NABL scope and Parameter No. NONE does not cover under NABL scope
 - # Parameter No. NONE outsourced for testing.
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 - # The samples will be destroyed after 15 days from the date of issue of test report unless otherwise specified.


Puran Mal Yogi
Senior Analyst


MINES MANAGER
Kasnau-Matasukh Lignite Mines
V.P.O.:-Farrod, Tehsil:-Jayal
Dist.:-Nagaur (Raj.) 341030


Authorized Signatory
(Report No: TC502520100000705F)

TEAM TEST HOUSE

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 Email : director@teamtesthouse.com,
 Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No.	TC502520100000704F	Date	31.07.2020
Issued To :	M/S Rajasthan State Mines & Minerals Ltd. Kasnau Matasukh Lignite mines, Nagaur, (Rajasthan).	Type of Unit :	Mines
Type of Sample :	Mine discharge water	Date of Sample Collection/Monitoring:	18-06-2020
Point of Collection	Confined Acqifer Depressurization Borwell No. - 94 MS	Date of Receipt :	20-06-2020
Date of Test/Analysis	20.06.2020 to 30.06.2020	Sampling Plan :	IS 3025:1987(Part 1)RA 2014
Quantity of Sample :	2 Ltr.	Sample Collected By :	Banwari Lal Kumawat
Unit's representative :	S. L. Beirwal	Condition of Sample :	Fit for testing

S. No.	Parameters	Observed Value	Testing Protocol
1	Turbidity [NTU]	BDL (<0.1)	IS 3025 (Part 10) : 1984 RA 2017
2	pH	7.91	IS 3025 (Part 11) : 1983 RA 2017
3	Hardness (total) [mg/l]	1480	IS 3025 (Part 21) : 2009 RA 2019
4	Iron [mg/l]	BDL (<0.01)	IS 3025 (Part 53) : 2003 RA 2019
5	Chloride [mg/l]	2088.89	IS 3025 (Part 32) : 1988 RA 2019
6	Total Dissolved Solids [mg/l]	9044	IS 3025 (Part 16) : 1984 RA 2017
7	Phosphate (total) [mg/l]	BDL (<0.1)	IS 3025 (Part 32) : 1988 RA 2019
8	Calcium [mg/l]	304	IS 3025 (Part 40) : 1991 RA 2019
9	Magnesium [mg/l]	174.96	IS 3025 (Part 46) : 1994 RA 2019
10	Manganese [mg/l]	BDL (<0.01)	IS 3025 (Part 59) : 2006 RA 2017
11	Sulphate [mg/l]	1385.71	IS 3025 (Part 24) : 1986 RA 2019
12	Nitrate [mg/l]	75.64	IS 3025 (Part 34) : 1988 RA 2019
13	Fluoride [mg/l]	1.52	IS 3025 (Part 60) : 2008 RA 2019
14	Alkalinity - T [mg/l]	1000	IS 3025 (Part 23) : 1986 RA 2019

- Notes :-
- # Parameter No. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15 covered under NABL scope and Parameter No. NONE does not cover under NABL scope
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P. K. Singh
 Senior Analyst


S. L. Beirwal
MINES MANAGER
 Kasnau-Matasukh Lignite Mines
 V.P.O.:-Farrod, Tehsil:-Jayal
 Dist.:-Nagaur (Raj.) 341030

Banwari Lal Kumawat
 Authorized Signatory
 (Report No: TC502520100000704F)

**Water Level Records of Piezometers for
Kasnau-Matasukh Lignite Mines, Nagaur**

Quarter-I (January 2020 – March 2020)

S. No.	Date of Measurement	Pz Nr. Kasnau Pit (mRL) N 27° 04' 55.0" E 74° 04' 09.5"		Pz Nr. Mines Office (mRL) N 27° 05' 39.9" E 74° 04' 11.1"	
		Depth to Water Level (m bgl)	mRL	Depth to Water Level (m bgl)	mRL
1	06.01.2020	62.89		55.26	
2	06.02.2020	62.84		55.20	
3	05.03.2020	62.86		55.17	


MINES MANAGER
Kasnau-Matasukh Lignite Mines
V.P.O.: -Farrod, Tehsil: -Jayal
Dist.: -Nagaur (Raj.) 341030



TEAM TEST HOUSE

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Phone : +91 9460222039, 9460222040
Email : director@teamtesthouse.com
Email : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TTH/RSMM/01	Date	28.02.2020
Issued To :	M/S Rajasthan State Mines & Minerals Ltd Kasnau Matasukh Lignite mines, Nagaur, Nagaur (Rajasthan),	Type of Unit	mines
Type of Sample :	Mine discharge water	Date of Sample Collection/Monitoring :	11.02.2020
Point of Collection	Confined Acqifer Depressurization Borewell No. - 94 MS	Date of Receipt	14.02.2020
Date of Test/Analysis :	14.02.2020 to 28.02.2020	Sampling Plan	IS 3025 1987(Part 10) RA 201
Quantity of Sample :	2 Ltr.	Sample Collected By :	Banwan Lal Kumawat
Unit's representative :	Mr. S.L. Berwal	Condition of Sample	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Turbidity [NTU]	BDL (<0.1)	IS 3025 (Part 10) : 1984 RA 201
2	pH	7.85	IS 3025 (Part 11) : 1983 RA 201
3	Hardness (total) [mg/l]	1460	IS 3025 (Part 21) : 2009 RA 201
4	Iron [mg/l]	BDL (<0.01)	IS 3025 (Part 53) : 2003 RA 201
5	Chloride [mg/l]	2025	IS 3025 (Part 32) : 1988 RA 201
6	Total Dissolved Solids [mg/l]	8997	IS 3025 (Part 16) : 1984 RA 201
7	Phosphate (total) [mg/l]	BDL (<0.1)	IS 3025 (Part 32) : 1988 RA 201
8	Calcium [mg/l]	300	IS 3025 (Part 40) : 1991 RA 201
9	Magnesium [mg/l]	172.53	IS 3025 (Part 46) : 1994 RA 201
10	Manganese [mg/l]	BDL (<0.01)	IS 3025 (Part 59) : 2006 RA 201
11	Sulphate [mg/l]	1360	IS 3025 (Part 24) : 1986 RA 201
12	Nitrate [mg/l]	80.4	IS 3025 (Part 34) : 1988 RA 201
13	Fluoride [mg/l]	1.68	IS 3025 (Part 60) : 2008 RA 201
14	Alkalinity - T [mg/l]	1080	IS 3025 (Part 23) : 1986 RA 201

Notes :-

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Sd/- Manoj Mal Yogi

MINES MANAGER
Kasnau-Matasukh Lignite Mines
V.P.O.:-Farrod, Tehsil:-Jaisal
Dist.:-Nagaur (Raj.) 341030

Authorized Signatory
(Report No. TTH/RSMM/01)



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E-mail : director@teamtesthouse.com
E-mail : marketinglab@teamtesthouse.com

TEST REPORT

Report No./ULR No. :	TTH/RSMM/02	Date	28.02.2020
Issued To :	M/S Rajasthan State Mines & Minerals Ltd Kasnau Matasukh Lignite mines, Nagaur, Nagaur (Rajasthan).	Type of Unit	mines
Type of Sample :	Mine discharge water	Date of Sample Collection/Monitoring :	11.02.2020
Point of Collection	Unconfined Acqifer at 270 MRL	Date of Receipt :	14.02.2020
Date of Test/Analysis :	14.02.2020 to 28.02.2020	Sampling Plan :	IS 3025:1987(Part 1)RA 20
Quantity of Sample :	2 Ltr.	Sample Collected By :	Banwan Lal Kurjawat
Unit's representative :	Mr. S.L.Berwal	Condition of Sample :	Fit for testing

RESULTS

S.No	Parameters	Observed Value	Testing Protocol
1	Turbidity [NTU]	BDL (<0.1)	IS 3025 (Part 10) : 1984 RA 20
2	pH	8.12	IS 3025 (Part 11) : 1983 RA 20
3	Hardness (total) [mg/l]	1460	IS 3025 (Part 21) : 2009 RA 20
4	Iron [mg/l]	BDL (<0.01)	IS 3025 (Part 53) : 2003 RA 20
5	Chloride [mg/l]	540.7	IS 3025 (Part 32) : 1988 RA 20
6	Total Dissolved Solids [mg/l]	3520	IS 3025 (Part 16) : 1984 RA 20
7	Phosphate (total) [mg/l]	BDL (<0.1)	IS 3025 (Part 32) : 1988 RA 20
8	Calcium [mg/l]	164	IS 3025 (Part 40) : 1991 RA 20
9	Magnesium [mg/l]	21.7	IS 3025 (Part 46) : 1994 RA 20
10	Manganese [mg/l]	BDL (<0.01)	IS 3025 (Part 59) : 2006 RA 20
11	Sulphate [mg/l]	396	IS 3025 (Part 24) : 1986 RA 20
12	Nitrate [mg/l]	50.7	IS 3025 (Part 34) : 1988 RA 20
13	Fluoride [mg/l]	1.40	IS 3025 (Part 60) : 2008 RA 20
14	Alkalinity - T [mg/l]	610	IS 3025 (Part 23) : 1986 RA 20

Notes :-

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Senior Analyst Yogi

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Kasnau-Matasukh Lignite Mines
V.P.O.-Farrod, Tehsil:-Jayal
Dist.-:Nagaur (Raj.) 341030

Authorized Signatory
(Report No. TTH/RSMM/02)



Rajasthan State Mines & Minerals Limited

(A Government of Rajasthan Enterprise)

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Phone: 0291 2511031/2516199 Fax: 0291 2511029 (e-mail: rsmmjodhpur@rsmml.com)

CENTRAL LABORATORY

An ISO 9001:2015 Certified Laboratory



F19 (8)/LIG - N/2019-20/ 2297

Date: 22.01.2020

Issued to:

Dy. General Manager (Mining)
Kasnau Matasukh Lignite Unit,
RSMML, Nagaur.

REF. - RSMML/Lig/NGR/2019-20/904

DATE -15.01.2020

Sample Received On Date: 20.01.2020

SAMPLE PARTICULARS

Source & Location: - Sample of water collected from Dewatering Pump Discharge of Matasukh Pit on dated 10.01.2020.

TEST RESULTS

(Analysed as per IS-1514: 1990)

S. No.	Properties .	RSMML/4N/01-20/1238
1.	p ^H	8.10
2.	Temperature °C	15.40
3.	Alkalinity Phenolphthalein (CaCO ₃)	Nil
4.	Alkalinity Methyl Orange (CaCO ₃)	640
5.	Total Hardness	1360
6.	Calcium Hardness	480
7.	Magnesium Hardness	880
8.	Carbonate Hardness	640
9.	Non Carbonate Hardness	720
10.	Chlorides as Cl ⁻	3740
11.	Sulphate	1217
12.	Fluoride	
13.	Total Dissolved Solids	7606

Note: All results except at Sr. No.1 & 2 are in mg/Lit.

R/S
ANALYST 'A' (S)
Camp Jodhpur

P. Jodha
Manager (Lab)

[Signature]
MINES MANAGER
Kasnau-Matasukh Lignite Mines

Note: - Samples drawn by RSMML Rep. and analysed at
V.P.O.: Farrod, Tehsil: Jayal
Dist.: Nagaur (Raj.) 341030

File Laboratory
concerned sample file
File Unit Head.
[Signature] 23/1/2020