

**STACK EMISSION REPORT OF FUME TREATMENT PLANT
FOR THE MONTH FEBRUARY 2024**

LOCATION	DATE OF TEST	STACK DISCHARGE VOLUME Nm ³ / hr	GASEOUS FLUORIDE mg/ Nm ³	PARTICULATE FLUORIDE mg/ Nm ³	TOTAL FLUORIDE mg/ Nm ³	TOTAL PARTICULATE mg/ Nm ³
FTP-1	01.02.2024	738275	0.52	0.36	0.88	32.46
	20.02.2024	743228	0.47	0.37	0.84	22.41
FTP-2	06.02.2024	765022	1.65	0.61	2.26	23.44
	21.02.2024	756363	0.36	0.32	0.68	37.69
FTP-3	02.02.2024	728920	0.73	0.23	0.96	18.83
	21.02.2024	740256	0.46	0.10	0.56	30.32
FTP-4	01.02.2024	729595	0.70	1.19	1.89	78.39
	20.02.2024	746312	0.60	0.20	0.80	31.67
FTP-5	06.02.2024	761389	0.36	0.33	0.69	36.39
	22.02.2024	781056	0.29	0.42	0.71	33.24
FTP-6	02.02.2024	775836	0.36	0.18	0.54	45.52
	23.02.2024	725951	0.56	0.24	0.80	45.51
FTP-7	07.02.2024	887479	0.31	0.10	0.41	31.11
	22.02.2024	865820	0.36	0.20	0.56	31.58
FTP-8	07.02.2024	907273	0.70	0.10	0.80	28.27
	23.02.2024	907749	0.58	0.22	0.80	32.72

NOTE:

1. Total Fluoride emission 0.102 Kg/ Ton of Aluminum produced, against total hot metal Production 37401 MT.
2. **Orissa State Pollution Control Board Norm :**
Total Fluoride emission: 0.300 Kg / Ton of Aluminum produced
Total particulate: 100 mg/Nm³.
Stack discharge volume: 9,93,600 Nm³/hr

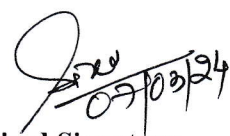

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F60G8/QC/4.5.1
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Dt.04.07.2013

**STACK EMISSION REPORT OF BAKE OVEN PLANT
FOR THE MONTH OF FEBRUARY 2024**

LOCATION	DATE OF TEST	STACK DISCHARGE VOLUME Nm ³ /hr	GASEOUS FLUORIDE mg/ Nm ³	PARTICULATE FLUORIDE mg/ Nm ³	TOTAL FLUORIDE mg/ Nm ³	TOTAL PARTICULATE MATTER mg/ Nm ³
BO-I	09.02.2024	158917	0.41	0.31	0.72	22.30
	24.02.2024	159020	0.73	0.15	0.88	25.12
BO-II	10.02.2024	200525	0.36	0.32	0.68	48.42
	26.02.2024	200521	0.39	0.17	0.56	45.11

- I. Total Fluoride emission **0.006 Kg/ Ton** of Aluminium produced, against total hot metal Production **37401 MT**.
- II. **Orissa State Pollution Control Board Norm:**
Total Fluoride emission: 0.1 kg/Ton of Aluminium produced
Total particulate: 50 mg/Nm³.
Stack discharge volume BO-I: 1,60,000 Nm³/hr
Stack discharge volume BO-II: 2,00,880 Nm³/hr


09/03/24
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DOC NO : QLS/SAMP/08-B/00

TEST REPORT

Name & Address Of the Customer : M/s. National Aluminium Company Limited Smelter Plant Division, Angul, Odisha- 759145	Report No. : QLS/MR/A/23-24/C/1895 Date : 28.02.2024 Sample No. : QLS/MR/A/23-24/1895-1904 Sample Description : Stack Flue Gas Date of Performance(s) : 26-28.02.2024
Ref No & Date: SMLT/T&C/S20/OMC-5639/5300007582/WO/7329, Dated. 13.04.2023	

Analysis Result

Analysis Result

Sampling Done by: S.Poddar				Sampling done as per : EPA/IS				
Sample No.	Location	Date of Sampling	Time (hrs.)	SO ₂ (mg/Nm ³)	NO _x (mg/Nm ³)	Temp. (°C)	Velocity (m/s)	Discharge Volume (Nm ³ /hr.)
1895	FTP-1	21.02.2024	10.15	40.3	29.8	101	19.99	816691
1896	FTP-2		12.05	32.7	28.2	99	19.31	793247
1897	FTP-3		16.00	47.6	33.1	104	19.77	801114
1898	FTP-4	20.02.2024	15.05	42.3	32.2	97	19.71	815060
1899	FTP-5		12.05	51.3	32.6	100	10.47	782704
1900	FTP-6		11.00	35.2	23.2	98	11.90	894498
1901	GTC-7	19.02.2024	15.10	38.8	24.1	104	11.82	1016780
1902	GTC-8		12.35	49.3	27.2	101	12.09	1048166
1903	B.O-1	22.02.2024	12.00	256.4	109.9	96	11.47	273486
1904	B.O-2		10.10	248.2	118.1	94	11.16	267494
METHOD OF TEST REFERENCE								
EPA Part-2 : for Temperature, Velocity & Discharge Volume								
EPA Part-6 : for Sulphur dioxide								
EPA Part-7 : for Oxides of Nitrogen								

Report Prepared By:

for Qualissure Laboratory Services
Reviewed & Authorized By

Benimadhab Gorai, Chemist
(Authorized Signatory)

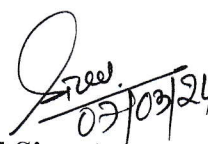
-----End of the Report-----

- The results relate only to the item(s) tested.
- This Test Report shall not be reproduced without the permission of Qualissure Laboratory Services
- The reserved part of sample(s), except perishable sample(s), shall be retained for 30 days from the date of issue of the Test Report

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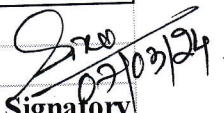
**FUGITIVE EMISSION OF FLUORIDE IN POTROOMS
FOR THE MONTH OF FEBRUARY 2024**

Location	Date of Sampling	No of Pots in operation	Fugitive emission in mg/m ³ (Average)	Average fugitive emission mg/m ³	Average fugitive emission in kg/T of Al from pot rooms (Kg/T of Al)	OSPCB NORM: Total Fugitive emission from Pot rooms (Kg/T of Al)
Pot room-A	13.02.2024 15.02.2024	120	1.22	1.155	0.371	0.40
Pot room-B	13.02.2024 15.02.2024	120	0.94			
Pot room-C	12.02.2024 14.02.2024	120	1.70			
Pot room-D	12.02.2024 14.02.2024	120	1.77			
Pot room-E	17.02.2024 19.02.2024	119	0.64			
Pot room-F	17.02.2024 19.02.2024	120	1.53			
Pot room-G	10.02.2024 16.02.2024	120	0.71			
Pot room-H	10.02.2024 16.02.2024	120	0.73			


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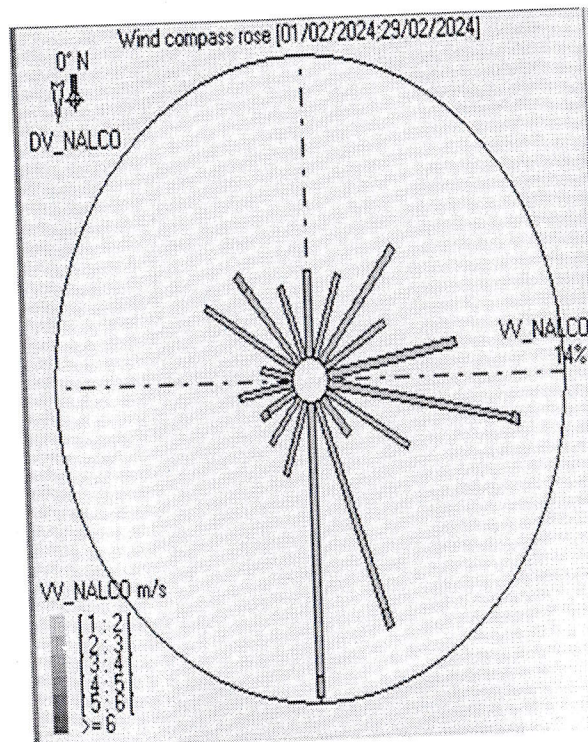
MAXIMUM & MINIMUM TEMPERATURE AND RAIN FALL**FEBRUARY 2024**

DATE	MAXIMUM TEMP. (deg.C)	MINIMUM TEMP. (deg C)	RAIN FALL (mm)
01-Feb	31.0	19.0	0.0
02-Feb	29.0	19.0	0.0
03-Feb	30.0	18.0	0.0
04-Feb	31.0	17.0	0.0
05-Feb	33.0	20.0	0.0
06-Feb	32.0	19.0	0.0
07-Feb	30.0	21.0	0.0
08-Feb	29.0	16.0	0.0
09-Feb	28.0	16.0	0.0
10-Feb	30.0	17.0	0.0
11-Feb	30.0	17.0	5.8
12-Feb	31.0	18.0	0.0
13-Feb	31.0	18.0	0.0
14-Feb	32.0	19.0	0.0
15-Feb	31.0	20.0	0.0
16-Feb	32.0	20.0	0.0
17-Feb	34.0	21.0	0.0
18-Feb	34.0	21.0	0.0
19-Feb	34.0	21.0	0.0
20-Feb	35.0	21.0	0.0
21-Feb	35.0	22.0	0.0
22-Feb	35.0	22.0	0.0
23-Feb	33.0	21.0	0.0
24-Feb	32.0	21.0	0.0
25-Feb	29.0	21.0	0.0
26-Feb	29.0	20.0	0.0
27-Feb	33.0	21.0	9.4
28-Feb	33.0	21.0	0.0
29-Feb	33.0	20.0	0.0
Max. Temp. for the month in Deg.C		35.0	
Min. Temp. for the month in Deg.C.		16.0	
Total rainfall (mm) -		15.2	YEAR 2024:31.90


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AIR LABORATORY
नालको NALCO
WINDROSE FOR THE MONTH OF FEBRUARY 2024



	< 1	[1 : 2 [	[2 : 3 [	[3 : 4 [	[4 : 5 [	[5 : 6 [	≥ 6	Accumulation
[350 : 10 [	67.1	4.1						4.1
[10 : 30 [	49.8	4.1						4.1
[30 : 50 [	47.9	6.8						6.8
[50 : 70 [	51.1	4.1						4.1
[70 : 90 [	51.1	7.8						7.8
[90 : 110 [	79.0	11.0	0.5					11.4
[110 : 130 [	50.2	5.5						5.5
[130 : 150 [	38.4	2.3						2.3
[150 : 170 [	34.2	10.5	0.9					11.4
[170 : 190 [	44.7	12.8	0.9					13.7
[190 : 210 [	24.2	3.7						3.7
[210 : 230 [	65.8	2.7						2.7
[230 : 250 [	67.6	1.8	0.5					2.3
[250 : 270 [	74.9	3.2						3.2
[270 : 290 [	92.2	1.8						1.8
[290 : 310 [	107.8	5.9						5.9
[310 : 330 [	98.6	4.6	0.9					5.5
[330 : 350 [	83.1	3.7						3.7
Accumulation	1127.9	96.3	3.7					100 %


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F60G4/QC/4.5.1
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**ANALYSIS REPORT OF GROUND WATER AND SURFACE WATER
FOR THE MONTH FEBRUARY 2024**

Sl. No.	Sampling place	Approx. Distance from Storm water Channel (in meter)	Fluoride mg/l (Norm 1.5)	pH (Norm 6.5-9.0)
1	Open Pond (Kulad)	200	*	*
2	Open Pond (Kulad)	100	*	*
3	Bore Well (Kulad)	100	0.65	7.3
4	Open Well Kulad)	75	0.25	6.6
5	Open Pond (Bonda)	100	1.42	7.9
6	Open well (Bonda)	100	0.56	6.8
7	Open Pond (Bonda – Rly. Culvert)	15	1.35	7.4
8	Tube Well (Bonda)	100	0.74	6.9
9	Open well (Bonda)	50	*	*
10	Open Well (Chowadhia)	10	*	*
11	Open Well (Chowadhia)	15	*	*
12	Tube Well (Chowadhia)	100	*	*
13	Open Pond (Chowadhia)	100	0.56	7.8
14	Open Pond (Banarpal)	200	0.75	7.5
15	Open Pond (Banarpal)	200	0.73	7.6

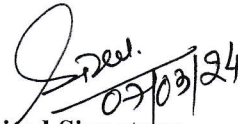
- Sample could not be collected as access to the location was restricted.


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F60G5/QC/4.5.1
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ANALYSIS REPORT OF GROUND AND SURFACE WATER
(SURROUNDING VILLAGES OF SMELTER PLANT)
FOR THE MONTH OF **FEBRUARY 2024**

Sl. No.	Sampling place	Direction with respect to Smelter Plant	Approx. Distance from Smelter Plant Km	Fluoride mg/l (Norm 1.5)	pH (Norm 6.5-9.0)
1	TURANGA TUBEWELL	NW	4	0.24	6.7
2	KURUDOL OPEN WELL	NW	5	0.47	6.8
3	BALARAM PRASAD TUBE WELL	N	5	0.77	6.8
4	GOTAMARA OPEN WELL	NE	6	0.56	6.7
5	TULASIPAL OPEN WELL	SE	4	1.13	7.4
6	LANGULIABERA OPEN WELL	S	3	0.77	7.3
7	GOPINATHPUR OPEN WELL	SW	2.5	0.47	7.1
8	ANKULA TUBE WELL	W	2	0.61	6.6


07/03/24
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F60G7/QC/4.5.1
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**ANALYSIS OF TREATED EFFLUENT FROM SEWAGE TREATMENT PLANT
(INSIDE TOWNSHIP)
FOR THE MONTH OF FEBRUARY 2024**

Sample Collected on: 14.02.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	7.2
2	Suspended solids	mg/l	100	02
3	BOD 3 days at 27 deg. C	mg/l	30	07
4	Fecal Coliform (Sample collected on 28.02.2024)	MPN /100ml	1000	96


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F60G7/QC/4.5.1
Issue No 001.Rev 00
Dt.02.07.2015

**ANALYSIS OF TREATED EFFLUENT FROM SEWAGE TREATMENT PLANT
(NEAR CISF BARRACK)
FOR THE MONTH OF FEBRUARY 2024**

Sample Collected on: 14.02.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	6.6
2	Suspended solids	mg/l	100	02
3	BOD 3 days at 27 deg. C	mg/l	30	05
4	Fecal Coliform (Sample collected on 28.02.2024)	MPN/100ml	1000	94


03/02/24
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BORE WELL ANALYSIS REPORT

FOR THE MONTH OF FEBRUARY 2024

Sl No.	Location	Date of Collection and analysis.	pH (Norm 6.5-9.0)	Fluoride as F mg/l (Norm 1.5)	Cyanide as CN mg/l (Norm 0.2)
1	Bore well -3 (Hazardous waste land fill)	20.02.2024	7.2	1.40	ND
2	Bore well -4 (Hazardous waste land fill)	20.02.2024	7.5	0.97	ND
3	Bore well -5 (Hazardous waste land fill)	20.02.2024	7.1	0.82	ND

Note:

1) ND – Not detectable.


20/02/24
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F60G11/QC/4.5.1
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FORAGE FLUORIDE MONITORING (GRASS SAMPLES) REPORTS AROUND SMLETER PLANT

FOR THE MONTH OF FEBRUARY 2024

SL. No	Location	Direction w.r.t Smelter Plant	Date of collection of sample	Fluoride content (dry basis) in ppm for the month of FEB'24	Fluoride content (dry basis) in ppm for the month of JAN' 23	Average of two consecutive months in ppm
1	Bonda	South-East	12.02.2024	39	38.7	38.85
2	Tulsipal	South-East	17.02.2024	38.5	36.9	37.7
3	Languliabeda	South-West	17.02.2024	39.2	37.6	38.4
4	Banarpal	East	19.02.2024	39.7	38.5	39.1
5	Turang	West	13.02.2024	38.6	38.4	38.5
6	Balaramprasad	North	02.02.2024	39.4	39	39.2

Norm- For single month - 80ppm
Average of two consecutive months - 60 ppm
Annual average - 40 ppm

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