

**STACK EMISSION REPORT OF FUME TREATMENT PLANT
FOR THE MONTH NOVEMBER 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	01.11.2024	737264	1.94	0.31	2.25	18.81
	22.11.2024	734909	0.53	0.45	0.98	22.86
FTP-2	01.11.2024	782685	1.00	0.75	1.75	21.51
	28.11.2024	773525	1.16	0.40	1.56	7.63
FTP-3	04.11.2024	733657	3.96	0.35	4.31	14.82
	23.11.2024	727370	0.82	0.71	1.53	10.70
FTP-4	02.11.2024	740477	1.59	0.33	1.92	19.70
	23.11.2024	741332	0.72	0.18	0.90	8.21
FTP-5	02.11.2024	767749	1.28	0.83	2.11	7.52
	26.11.2024	760324	0.44	0.55	0.99	16.01
FTP-6	04.11.2024	733657	0.72	0.37	1.09	21.57
	25.11.2024	780600	0.48	0.30	0.78	13.30
FTP-7	05.11.2024	934318	0.39	0.23	0.63	10.53
	25.11.2024	875951	0.30	0.16	0.46	11.88
FTP-8	05.11.2024	929754	0.49	0.25	0.74	26.86
	22.11.2024	895483	0.40	0.19	0.59	27.73

NOTE:

1. Total Fluoride emission 0.160 Kg/ Ton of Aluminum produced, against total hot metal Production 38962 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

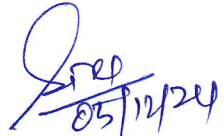

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F60G8/QC/4.5.1
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**STACK EMISSION REPORT OF BAKE OVEN PLANT
FOR THE MONTH OF NOVEMBER 2024**

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	06.11.2024	159251	0.69	0.11	0.80	9.92
	27.11.2024	158034	0.53	0.15	0.68	15.03
BO-II	07.11.2024	200572	0.88	0.13	1.01	9.53

- I. Total Fluoride emission **0.006 Kg/ Ton** of Aluminium produced, against total hot metal Production 38962 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


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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/24-25/C/1114 Date : 26.11.2024 Sample No. : QLS/MR/A/24-25/1114-1123 Sample Description : Stack Flue Gas Date of Performance(s) : 23-26.11.2024
Ref No & Date: SMLT/T&C/S20/OMC-5639/5300007582/WO/7329, Dated. 13.04.2023	

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.)
1114	FTP-1	20.11.2024	10:00	42.4	35.6	92	17.37	737094
1115	FTP-2		10:50	45.5	32.9	91	17.94	763302
1116	FTP-3		14:20	51.2	25.9	101	19.50	807364
1117	FTP-4		15:30	57.4	29.7	98	17.63	735998
1118	FTP-5		11:45	49.3	31.6	100	10.33	781538
1119	FTP-6		13:09	52.3	32.9	97	10.19	777219
1120	GTC-7	19.11.2024	14:40	31.9	26.8	101	11.37	997811
1121	GTC-8		15:25	45.8	27.8	100	10.65	937019
1122	B.O-1		10:30	316.8	164.2	93	10.73	195534
1123	B.O-2		11:20	242.8	145.3	92	11.88	289734
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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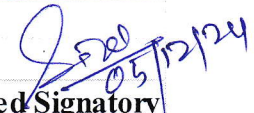
**FUGITIVE EMISSION OF FLUORIDE IN POTROOMS
FOR THE MONTH OF NOVEMBER 2024**

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	15.11.2024 21.11.2024	118	0.62	0.713	0.228	0.4
Pot room-B	15.11.2024 21.11.2024	118	0.85			
Pot room-C	16.11.2024 18.11.2024	119	0.60			
Pot room-D	16.11.2024 18.11.2024	117	0.62			
Pot room-E	11.11.2024 13.11.2024	116	0.64			
Pot room-F	11.11.2024 13.11.2024	116	0.62			
Pot room-G	12.11.2024 14.11.2024	120	0.63			
Pot room-H	12.11.2024 14.11.2024	120	1.12			


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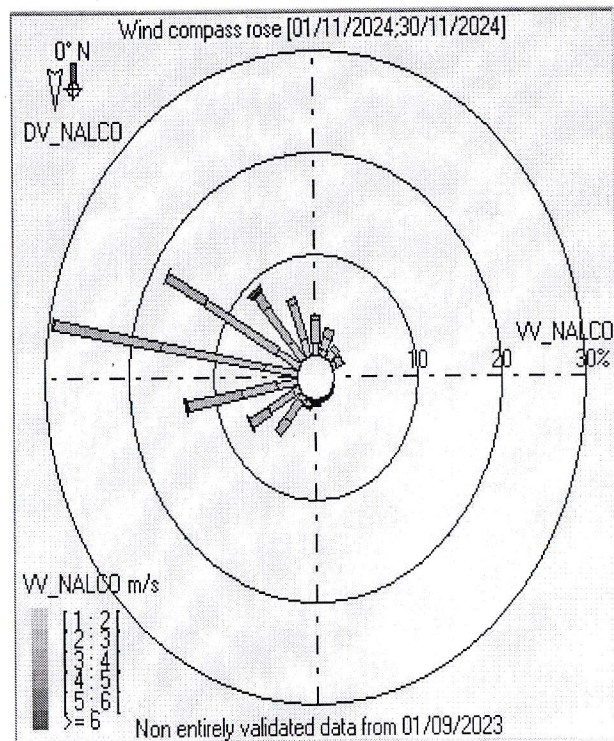
MAXIMUM & MINIMUM TEMPERATURE AND RAIN FALL NOVEMBER-2024

DATE	MAXIMUM TEMP. (deg.C)	MINIMUM TEMP. (deg C)	RAIN FALL (mm)
01-Nov	34.0	23.0	0.0
02-Nov	34.0	23.0	0.0
03-Nov	34.0	23.0	0.0
04-Nov	32.0	23.0	0.0
05-Nov	33.0	23.0	0.0
06-Nov	32.0	24.0	0.0
07-Nov	33.0	23.0	0.0
08-Nov	32.0	23.0	0.0
09-Nov	32.0	22.0	0.0
10-Nov	32.0	22.0	0.0
11-Nov	31.0	23.0	0.0
12-Nov	32.0	22.0	0.0
13-Nov	32.0	21.0	0.0
14-Nov	32.0	21.0	0.0
15-Nov	32.0	20.0	0.0
16-Nov	32.0	20.0	0.0
17-Nov	31.0	19.0	0.0
18-Nov	31.0	19.0	0.0
19-Nov	30.0	19.0	0.0
20-Nov	29.0	19.0	0.0
21-Nov	28.5	19.0	0.0
22-Nov	29.0	18.0	0.0
23-Nov	29.0	18.0	0.0
24-Nov	29.0	18.0	0.0
25-Nov	27.0	18.0	0.0
26-Nov	29.0	19.0	0.0
27-Nov	30.0	21.0	0.0
28-Nov	28.0	20.0	0.0
29-Nov	27.0	20.0	3.6
30-Nov	27.0	20.0	0.0
Max. Temp. for the month in Deg		34.0	
Min. Temp. for the month in Deg.		18.0	
Total rainfall (mm) -		3.6	YEAR 2024: 1537.70


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AIR LABORATORY
नालको **NALCO**
WINDROSE FOR THE MONTH OF NOVEMBER 2024



	< 1	[1 : 2 [	[2 : 3 [	[3 : 4 [	[4 : 5 [	[5 : 6 [	>= 6	Accumulation
[350 : 10 [	207.5	1.1	2.4	0.3				3.9
[10 : 30 [	0.5	0.7	1.1	1.0				2.8
[30 : 50 [	0.1	1.0	0.6					1.6
[50 : 70 [		0.6	0.7	0.1				1.4
[70 : 90 [	0.1							
[90 : 110 [	0.2							
[110 : 130 [	0.3	0.1						0.1
[130 : 150 [	0.2	0.2						0.2
[150 : 170 [	0.1		0.1	0.1				0.2
[170 : 190 [	0.2	0.1	0.2	0.2				0.6
[190 : 210 [	0.2	0.2	0.6	0.2				1.0
[210 : 230 [	0.2	0.7	2.5	1.7				4.9
[230 : 250 [	0.6	0.8	3.3	2.6			0.1	6.8
[250 : 270 [	0.3	2.4	4.3	6.6	0.1		0.1	13.5
[270 : 290 [	0.5	3.9	12.5	13.0	0.2			29.5
[290 : 310 [	0.3	3.0	9.9	5.2			0.1	18.2
[310 : 330 [	0.6	2.3	4.4	1.8		0.1	0.5	9.1
[330 : 350 [	0.3	1.7	3.8	0.7				6.1
Accumulation	212.4	18.8	46.4	33.6	0.3	0.1	0.8	100 %

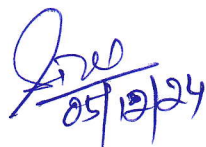

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**ANALYSIS REPORT OF GROUND WATER AND SURFACE WATER
FOR THE MONTH NOVEMBER 2024**

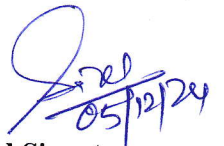
Sl. No.	Sampling place	Approx. Distance from Storm water Channel (in meter)	Fluoride mg/l (Norm 1.5)	pH (Norm 6.5-9.0)
1	Open Pond (Kulad)	200	*	*
2	Open Pond (Kulad)	100	*	*
3	Bore Well (Kulad)	100	1.26	6.7
4	Open Well Kulad)	75	0.95	6.9
5	Open Pond (Bonda)	100	1.45	7.3
6	Open well (Bonda)	100	1.47	7.5
7	Open Pond (Bonda – Rly. Culvert)	15	1.31	8.0
8	Tube Well (Bonda)	100	1.05	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	0.65	6.6
14	Open Pond (Banarpal)	200	1.24	6.8
15	Open Pond (Banarpal)	200	0.99	7.3

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


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ANALYSIS REPORT OF GROUND AND SURFACE WATER
(SURROUNDING VILLAGES OF SMELTER PLANT)
FOR THE MONTH OF NOVEMBER 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	0.35	6.7
2	KURUDOL OPEN WELL	NW	5	1.03	7.2
3	BALARAM PRASAD TUBE WELL	N	5	1.13	7.3
4	GOTAMARA OPEN WELL	NE	6	0.57	7.2
5	TULASIPAL OPEN WELL	SE	4	0.75	7.1
6	LANGULIABERA OPEN WELL	S	3	1.05	7.0
7	GOPINATHPUR OPEN WELL	SW	2.5	0.64	7.1
8	ANKULA TUBE WELL	W	2	0.73	6.8


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F60G7/QC/4.5.1

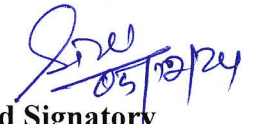
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**ANALYSIS OF TREATED EFFLUENT FROM SEWAGE TREATMENT PLANT
(INSIDE TOWNSHIP)
FOR THE MONTH OF NOVEMBER 2024**

Sample Collected on: 19.11.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	7.3
2	Suspended solids	mg/l	100	05
3	BOD 3 days at 27 deg. C	mg/l	30	03
4	Fecal Coliform (Sample collected on 26.11.2024)	MPN /100ml	1000	87

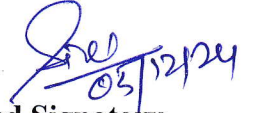

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**ANALYSIS OF TREATED EFFLUENT FROM SEWAGE TREATMENT PLANT
(NEAR CISF BARRACK)
FOR THE MONTH OF NOVEMBER 2024**

Sample Collected on: 19.11.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	6.8
2	Suspended solids	mg/l	100	03
3	BOD 3 days at 27 deg. C	mg/l	30	06
4	Fecal Coliform (Sample collected on 26.11.2024)	MPN/100ml	1000	93


03/12/24
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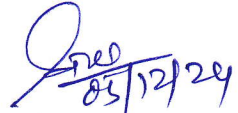
BORE WELL ANALYSIS REPORT

FOR THE MONTH OF NOVEMBER 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)	20.11.2024	7.1	1.43	ND
2	Bore well -4 (Hazardous waste land fill)	20.11.2024	7.3	1.18	ND
3	Bore well -5 (Hazardous waste land fill)	20.11.2024	7.1	1.17	ND

Note:

1) ND – Not detectable.


20/11/24
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FORAGE FLUORIDE MONITORING (GRASS SAMPLES) REPORTS AROUND SMLETER PLANT

FOR THE MONTH OF NOVEMBER 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 NOV'24	Fluoride content (dry basis) in ppm for the month of OCT'24	Average of two consecutive months in ppm
1	Bonda	South-East	08.11.2024	39.5	39.7	39.6
2	Tulsipal	South-East	12.11.2024	39	39.92	39.46
3	Languliabeda	South-West	12.11.2024	38.5	39.1	38.8
4	Banarpal	East	11.11.2024	39.1	38.5	38.8
5	Turang	West	07.11.2024	38.4	39.5	38.95
6	Balaramprasad	North	08.11.2024	38	39.9	38.95

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


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