

**STACK EMISSION REPORT OF FUME TREATMENT PLANT
FOR THE MONTH DECEMBER 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	02.12.2024	746009	0.79	0.63	1.42	15.07
	21.12.2024	743997	0.86	0.35	1.21	9.27
FTP-2	04.12.2024	775412	1.70	0.32	2.02	12.33
	24.12.2024	777835	0.95	0.35	1.30	10.12
FTP-3	03.12.2024	739819	0.72	0.33	1.05	14.89
	23.12.2024	732428	1.16	0.18	1.34	17.58
FTP-4	03.12.2024	745020	0.81	0.23	1.04	14.45
	25.12.2024	744830	1.33	1.99	1.53	15.93
FTP-5	05.12.2024	763397	0.65	0.68	1.33	14.10
	25.12.2024	768870	0.39	0.36	0.75	17.33
FTP-6	05.12.2024	774145	0.54	0.23	0.77	13.63
	23.12.2024	783852	0.38	0.20	0.58	15.15
FTP-7	04.12.2024	895732	0.75	0.33	1.08	10.60
	24.12.2024	910094	0.54	0.19	0.73	23.29
FTP-8	02.12.2024	953467	0.49	0.28	0.77	13.65
	24.12.2024	993100	0.44	0.36	0.80	18.54

NOTE:

1. Total Fluoride emission 0.133 Kg/ Ton of Aluminum produced, against total hot metal Production 39283 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

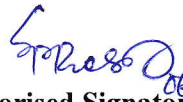

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F60G8/QC/4.5.1
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**STACK EMISSION REPORT OF BAKE OVEN PLANT
FOR THE MONTH OF DECEMBER 2024**

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	06.12.2024	159521	0.90	0.18	1.08	12.26
	26.12.2024	159814	0.69	0.11	0.80	11.52
BO-II	13.12.2024	200400	1.02	0.20	1.22	16.39
	27.12.2024	200642	0.95	0.16	1.11	26.33

- I. Total Fluoride emission **0.009 Kg/ Ton** of Aluminium produced, against total hot metal Production 39283 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 :	Report No. : QLS/MR/A/24-25/C/1266
M/s. National Aluminium Company Limited	Date : 26.12.2024
Smelter Plant Division,	Sample No. : QLS/MR/A/24-25/1266-1275
Angul,	Sample Description : Stack Flue Gas
Odisha- 759145	Date of Performance(s) : 22-26.12.2024
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.)
1266	FTP-1	19.12.2024	14.45	31.9	29.3	99	17.5	730544
1267	FTP-2		14:00	34.1	19.7	97	18.44	770780
1268	FTP-3		09:50	39.3	16.9	100	19.04	789459
1269	FTP-4		10:40	43.8	21.9	98	18.32	763751
1270	FTP-5		11:30	37.2	25.1	96	10.03	966103
1271	FTP-6	18.12.2024	14:00	35.6	23.4	98	10.83	822716
1272	GTC-7		14:50	43.3	25.8	101	11.36	995379
1273	GTC-8		15:40	45.8	31.2	98	10.60	936421
1274	B.O-1		10:30	256.2	141.3	92	9.67	176651
1275	B.O-2		11:25	283.8	169.6	93	11.29	274611

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:

R. Sharma

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

F60G10/QC/4.5.1
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**FUGITIVE EMISSION OF FLUORIDE IN POTROOMS
FOR THE MONTH OF DECEMBER 2024**

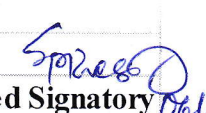
Location	Date of Sampling	No of Pots in operation	Fugitive emission in mg/m ³ (Average)	Average fugitive emission mg/m ³	Total fugitive emission in kg/T of Al from pot rooms (Kg/T of Al)	OSPCB NORM: Total Fugitive emission from Pot rooms (Kg/T of Al)
Pot room-A	11.12.2024 13.12.2024	120	0.68	1.236	0.270	0.4
Pot room-B	11.12.2024 13.12.2024	118	0.77			
Pot room-C	10.12.2024 12.12.2024	119	0.81			
Pot room-D	10.12.2024 12.12.2024	117	1.19			
Pot room-E	17.12.2024 19.12.2024	116	1.86			
Pot room-F	17.12.2024 19.12.2024	116	2.08			
Pot room-G	14.12.2024 16.12.2024	120	1.20			
Pot room-H	14.12.2024 16.12.2024	120	1.30			


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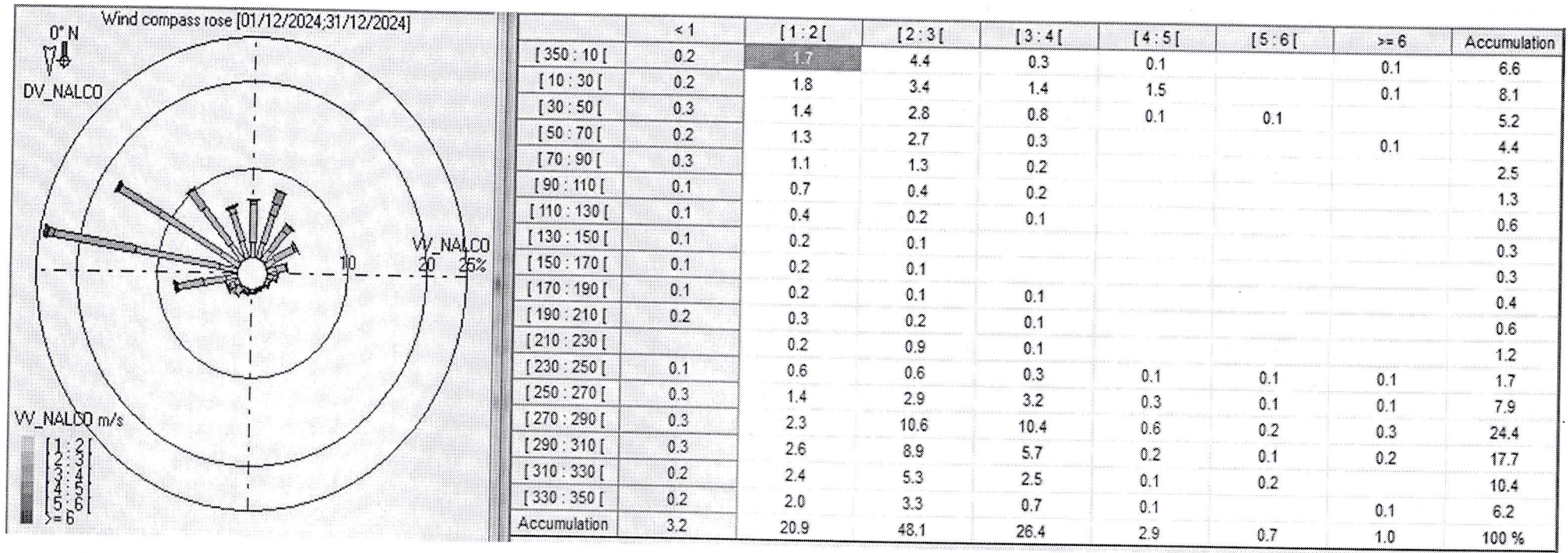
MAXIMUM & MINIMUM TEMPERATURE AND RAIN FALL

DECEMBER-2024

DATE	MAXIMUM TEMP. (deg.C)	MINIMUM TEMP. (deg C)	RAIN FALL (mm)
01-Dec	27.0	21.0	0.0
02-Dec	25.0	22.0	0.0
03-Dec	30.5	21.0	0.0
04-Dec	29.0	21.0	0.0
05-Dec	31.0	21.0	0.0
06-Dec	31.0	22.0	0.0
07-Dec	30.0	21.0	0.0
08-Dec	29.0	21.0	0.0
09-Dec	30.0	22.0	2.8
10-Dec	29.0	18.0	0.0
11-Dec	24.0	16.0	0.0
12-Dec	23.0	17.0	0.0
13-Dec	21.0	16.0	0.0
14-Dec	25.0	14.0	0.0
15-Dec	27.0	13.0	0.0
16-Dec	23.0	13.0	0.0
17-Dec	19.0	15.0	0.0
18-Dec	23.0	17.0	0.0
19-Dec	23.0	20.0	0.0
20-Dec	20.0	18.0	13.3
21-Dec	26.0	18.0	1.8
22-Dec	28.0	18.0	0.0
23-Dec	28.0	19.0	0.0
24-Dec	23.0	19.0	13.0
25-Dec	22.0	19.0	6.9
26-Dec	28.0	19.0	0.0
27-Dec	29.0	18.0	0.0
28-Dec	30.0	19.0	0.0
29-Dec	31.0	20.0	0.0
30-Dec	30.0	19.0	0.0
31-Dec	23.0	16.0	0.0
Max. Temp. for the month in Deg		31.0	
Min. Temp. for the month in Deg.		13.0	
Total rainfall (mm) -		37.8	YEAR 2024: 1575.50


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




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**ANALYSIS REPORT OF GROUND WATER AND SURFACE WATER
FOR THE MONTH DECEMBER 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	0.94	6.6
4	Open Well Kulad)	75	0.80	6.6
5	Open Pond (Bonda)	100	1.46	8.2
6	Open well (Bonda)	100	1.45	7.8
7	Open Pond (Bonda – Rly. Culvert)	15	1.48	7.8
8	Tube Well (Bonda)	100	1.48	7.1
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	0.70	6.4
14	Open Pond (Banarpal)	200	0.95	6.7
15	Open Pond (Banarpal)	200	0.82	7.1

- 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 **DECEMBER 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	0.51	7.0
2	KURUDOL OPEN WELL	NW	5	0.73	7.2
3	BALARAM PRASAD TUBE WELL	N	5	1.11	7.4
4	GOTAMARA OPEN WELL	NE	6	0.56	7.1
5	TULASIPAL OPEN WELL	SE	4	1.10	7.1
6	LANGULIABERA OPEN WELL	S	3	1.11	7.0
7	GOPINATHPUR OPEN WELL	SW	2.5	1.47	7.7
8	ANKULA TUBE WELL	W	2	0.95	6.9


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

Sample Collected on: 10.12.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	7.3
2	Suspended solids	mg/l	100	06
3	BOD 3 days at 27 deg. C	mg/l	30	04
4	Fecal Coliform (Sample collected on 27.12.2024)	MPN /100ml	1000	97


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F60G7/QC/4.5.1
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**ANALYSIS OF TREATED EFFLUENT FROM SEWAGE TREATMENT PLANT
(NEAR CISF BARRACK)
FOR THE MONTH OF DECEMBER 2024**

Sample Collected on: 10.12.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	6.8
2	Suspended solids	mg/l	100	05
3	BOD 3 days at 27 deg. C	mg/l	30	08
4	Fecal Coliform (Sample collected on 27.12.2024)	MPN/100ml	1000	94


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BORE WELL ANALYSIS REPORT

FOR THE MONTH OF DECEMBER 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)	19.12.2024	6.9	1.48	ND
2	Bore well -4 (Hazardous waste land fill)	19.12.2024	7.2	1.29	ND
3	Bore well -5 (Hazardous waste land fill)	19.12.2024	7.0	1.43	ND

Note:

1) ND – Not detectable.


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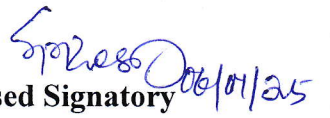
F60G11/QC/4.5.1
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FORAGE FLUORIDE MONITORING (GRASS SAMPLES) REPORTS AROUND SMLETER PLANT

FOR THE MONTH OF DECEMBER 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 DEC'24	Fluoride content (dry basis) in ppm for the month of NOV'24	Average of two consecutive months in ppm
1	Bonda	South-East	16.12.2024	39.2	39.5	39.35
2	Tulsipal	South-East	12.12.2024	38	39	38.5
3	Languliabeda	South-West	12.12.2024	37.5	38.5	38
4	Banarpal	East	14.12.2024	39.4	39.1	39.25
5	Turang	West	09.12.2024	39.7	38.4	39.05
6	Balaramprasad	North	07.12.2024	39.1	38	38.55

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


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