

**STACK EMISSION REPORT OF FUME TREATMENT PLANT
FOR THE MONTH OF SEPTEMBER 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	03.09.2024	732714	0.63	0.37	1.00	29.20
	23.09.2024	731170	1.51	0.27	1.78	25.63
FTP-2	03.09.2024	767090	0.65	0.27	0.92	27.17
	21.09.2024	759825	2.51	0.44	2.95	24.80
FTP-3	02.09.2024	732860	0.74	0.47	1.21	33.08
	24.09.2024	731086	2.57	0.42	2.99	27.91
FTP-4	21.09.2024	741575	1.05	0.25	1.30	28.79
	23.09.2024	736127	1.31	0.30	1.61	27.19
FTP-5	04.09.2024	756367	0.56	0.45	1.01	45.59
	24.09.2024	761055	1.22	0.53	1.75	38.46
FTP-6	05.09.2024	730653	0.77	0.25	1.02	51.28
	25.09.2024	728896	0.80	0.32	1.12	44.36
FTP-7	04.09.2024	866090	0.50	0.32	0.82	43.93
	24.09.2024	899000	0.66	0.26	0.92	43.58
FTP-8	05.09.2024	915873	0.52	0.33	0.85	31.97
	25.09.2024	885773	0.99	0.51	1.50	45.70

NOTE:

- Total Fluoride emission 0.172 Kg/ Ton of Aluminum produced, against total hot metal Production 36583 MT.
- 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


 Authorised Signatory 05/10/24
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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 SEPTEMBER 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	06.09.2024	159632	1.37	0.13	1.50	37.28
	26.09.2024	159454	3.15	0.16	3.31	37.01
BO-II	07.09.2024	200502	1.23	0.15	1.38	25.62
	27.09.2024	200726	1.78	0.16	1.94	28.20

- I. Total Fluoride emission **0.017 Kg/ Ton** of Aluminium produced, against total hot metal Production **36583 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/878 Date : 04.10.2024 Sample No. : QLS/MR/A/24-25/878-887 Sample Description : Stack Flue Gas Date of Performance(s) : 25.09.2024-04.10.2024
Ref No & Date: SMLT/T&C/S20/OMC-5639/5300007582/WO/7329, Dated. 13.04.2023	

Analysis Result

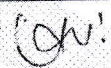
Sampling Done by: S.Poddar				Sampling done as per : EPA/IS				
Sample No.	Location	Date of Sampling	Time (hrs.)	SO ₂ (mg/Nm ³)	NO _x (mg/Nm ³)	Temp. (°C)	Velocity (m/s)	Discharge Volume (Nm ³ /hr.)
883	FTP-1	23.09.2024	9:08	57.0	26.0	99	22.03	913399
884	FTP-2		9:45	51.2	24.5	97	18.16	757113
885	FTP-3		10:40	63.3	28.6	100	18.56	767434
886	FTP-4		11:45	48.8	24.9	101	17.36	715982
887	FTP-5		14:30	49.3	26.0	99	9.97	751349
880	FTP-6	21.09.2024	14:20	60.0	31.1	97	10.69	808875
881	GTC-7		15:10	55.6	33.0	101	11.13	968849
882	GTC-8		16:00	63.3	28.6	100	10.12	872991
878	B.O-1		10:00	307.5	163.4	98	10.42	185815
879	B.O-2		10:45	354.5	189.0	92	11.89	287747

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)

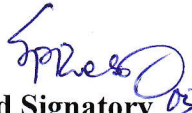
-----End of the Report-----

- 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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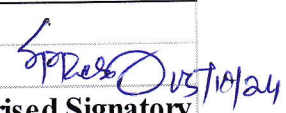
FUGITIVE EMISSION OF FLUORIDE IN POTROOMS
FOR THE MONTH OF SEPTEMBER 2024

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	18.09.2024 20.09.2024	118	1.49	1.263	0.286	0.4
Pot room-B	18.09.2024 20.09.2024	120	1.90			
Pot room-C	13.09.2024 19.09.2024	119	1.03			
Pot room-D	13.09.2024 19.09.2024	114	1.22			
Pot room-E	12.09.2024 14.09.2024	112	0.57			
Pot room-F	12.09.2024 14.09.2024	118	0.71			
Pot room-G	15.09.2024 17.09.2024	120	1.48			
Pot room-H	15.09.2024 17.09.2024	119	1.70			


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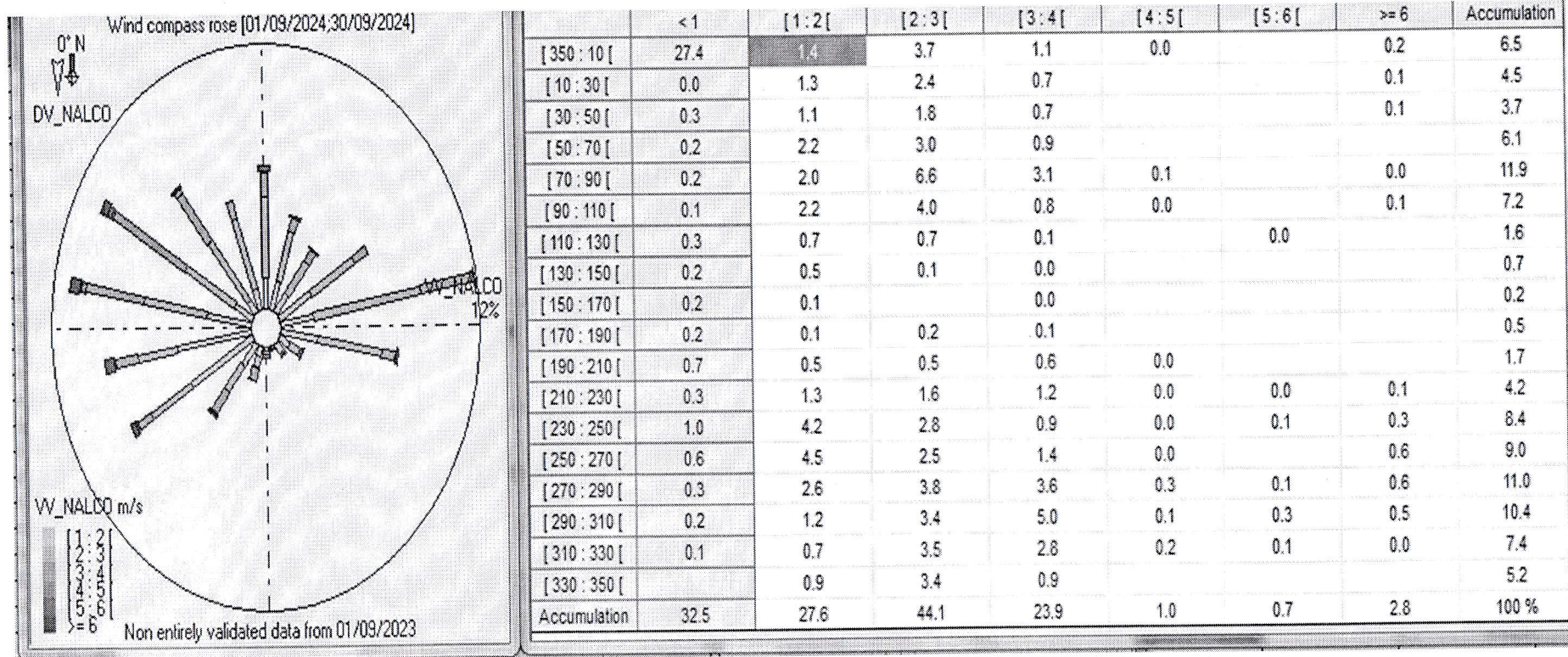
MAXIMUM & MINIMUM TEMPERATURE AND RAIN FALL**SEPTEMBER-2024**

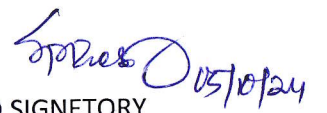
DATE	MAXIMUM TEMP. (deg.C)	MINIMUM TEMP. (deg C)	RAIN FALL (mm)
01-Sep	34.0	27.0	13.5
02-Sep	34.0	27.0	6.4
03-Sep	34.0	27.0	5.9
04-Sep	36.0	27.0	0.0
05-Sep	36.0	27.0	0.0
06-Sep	36.0	27.0	0.0
07-Sep	36.0	27.0	0.0
08-Sep	37.0	27.0	18.8
09-Sep	32.0	27.0	6.7
10-Sep	35.0	27.0	0.0
11-Sep	35.0	28.0	3.6
12-Sep	35.0	28.0	0.0
13-Sep	34.0	28.0	0.0
14-Sep	32.0	26.0	12.0
15-Sep	32.0	26.0	5.3
16-Sep	33.0	26.0	8.5
17-Sep	32.0	26.0	0.0
18-Sep	34.0	27.0	0.0
19-Sep	35.0	27.5	0.0
20-Sep	37.0	28.0	0.0
21-Sep	35.0	27.0	5.3
22-Sep	35.0	27.0	5.0
23-Sep	35.0	26.0	37.6
24-Sep	33.0	26.0	37.5
25-Sep	33.0	26.0	61.5
26-Sep	32.0	26.0	0.0
27-Sep	34.0	26.0	0.0
28-Sep	36.0	26.0	0.0
29-Sep	37.0	27.0	0.0
30-Sep	37.0	27.0	0.0
Max. Temp. for the month in Deg		37.0	
Min. Temp. for the month in Deg.		26.0	
Total rainfall (mm) -		227.6	YEAR 2024: 1395.5


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AIR LABORATORY
नालको NALCO
WINDROSE FOR THE MONTH OF SEPTEMBER 2024




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**ANALYSIS REPORT OF GROUND WATER AND SURFACE WATER
FOR THE MONTH OF SEPTEMBER 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	0.91	6.8
4	Open Well Kulad)	75	0.55	6.7
5	Open Pond (Bonda)	100	1.44	8.1
6	Open well (Bonda)	100	1.39	7.8
7	Open Pond (Bonda – Rly. Culvert)	15	1.45	7.5
8	Tube Well (Bonda)	100	0.81	6.8
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	0.89	6.7
14	Open Pond (Banarpal)	200	0.83	8.7
15	Open Pond (Banarpal)	200	0.86	7.4

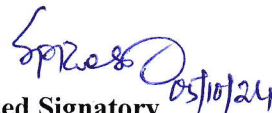
- Sample could not be collected as access to the location was restricted.


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ANALYSIS REPORT OF GROUND AND SURFACE WATER
(SURROUNDING VILLAGES OF SMELTER PLANT)
FOR THE MONTH OF SEPTEMBER 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	0.43	7.1
2	KURUDOL OPEN WELL	NW	5	0.79	7.6
3	BALARAM PRASAD TUBE WELL	N	5	0.33	7.5
4	GOTAMARA OPEN WELL	NE	6	1.45	7.2
5	TULASIPAL OPEN WELL	SE	4	0.70	7.6
6	LANGULIABERA OPEN WELL	S	3	0.32	6.9
7	GOPINATHPUR OPEN WELL	SW	2.5	0.68	7.0
8	ANKULA TUBE WELL	W	2	0.80	6.6

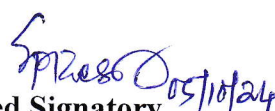

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**ANALYSIS OF TREATED EFFLUENT FROM SEWAGE TREATMENT PLANT
(INSIDE TOWNSHIP)
FOR THE MONTH OF SEPTEMBER 2024**

Sample Collected on: 14.09.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	8.1
2	Suspended solids	mg/l	100	01
3	BOD 3 days at 27 deg. C	mg/l	30	03
4	Fecal Coliform (Sample collected on 25.09.2024)	MPN/100ml	1000	94


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

Sample Collected on: 14.09.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	7.0
2	Suspended solids	mg/l	100	01
3	BOD 3 days at 27 deg. C	mg/l	30	06
4	Fecal Coliform (Sample collected on 25.09.2024)	MPN/100ml	1000	90


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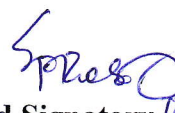
BORE WELL ANALYSIS REPORT

FOR THE MONTH OF SEPTEMBER 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)	05.09.2024	7.0	1.45	ND
2	Bore well -4 (Hazardous waste land fill)	05.09.2024	7.4	1.07	ND
3	Bore well -5 (Hazardous waste land fill)	05.09.2024	6.9	1.42	ND

Note:

- 1) ND – Not detectable.


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FORAGE FLUORIDE MONITORING (GRASS SAMPLES) REPORTS AROUND SMLETER PLANT

FOR THE MONTH OF SEPTEMBER 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 SEP'24	Fluoride content (dry basis) in ppm for the month of AUG' 24	Average of two consecutive months in ppm
1	Bonda	South-East	12.09.2024	38.5	37.5	38
2	Tulsipal	South-East	20.09.2024	39.1	39.6	39.35
3	Languliabeda	South-West	20.09.2024	38	38.3	38.15
4	Banarpal	East	18.09.2024	39.2	38	38.6
5	Turang	West	07.09.2024	37.6	38.4	38
6	Balaramprasad	North	09.09.2024	38.4	39.4	38.9

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


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