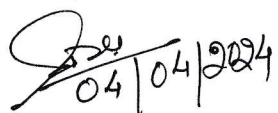


**STACK EMISSION REPORT OF FUME TREATMENT PLANT
FOR THE MONTH MARCH 2024**

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	05.03.2024	732563	1.21	0.22	1.43	33.01
	20.03.2024	745464	1.36	0.26	1.62	23.19
FTP-2	02.03.2024	774956	0.65	0.37	1.02	30.48
	25.03.2024	764956	0.91	0.41	1.32	8.78
FTP-3	02.03.2024	737973	0.76	0.30	1.06	28.54
	22.03.2024	735634	1.60	0.23	1.83	35.33
FTP-4	04.03.2024	753664	0.96	0.26	1.22	26.17
	20.03.2024	745812	0.76	0.17	0.93	27.65
FTP-5	04.03.2024	772638	0.41	0.49	0.90	35.88
	22.03.2024	801444	0.72	0.61	1.33	36.43
FTP-6	05.03.2024	784751	0.60	0.21	0.81	43.44
	23.03.2024	747279	0.63	0.34	0.97	37.26
FTP-7	07.03.2024	863043	0.90	0.19	1.09	43.46
	25.03.2024	865351	1.60	0.37	1.97	36.92
FTP-8	06.03.2024	924083	0.52	0.19	0.71	33.79
	23.03.2024	981815	0.59	0.25	0.84	34.99

NOTE:

1. Total Fluoride emission 0.136 Kg/ Ton of Aluminum produced, against total hot metal Production 41009 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


04/04/2024
Authorised Signatory
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NALCO, Smelter Plant, Angul

F60G8/QC/4.5.1
Issue No 001.Rev 00
Dt.04.07.2013

**STACK EMISSION REPORT OF BAKE OVEN PLANT
FOR THE MONTH OF MARCH 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	06.03.2024	159209	0.71	0.09	0.80	18.23
	27.03.2024	159494	0.99	0.15	1.14	30.96
BO-II	07.03.2024	200681	0.81	0.12	0.93	27.60
	27.03.2024	200574	0.78	0.16	0.94	27.87

I. Total Fluoride emission **0.008 Kg/ Ton** of Aluminium produced, against total hot metal Production 41009 MT.

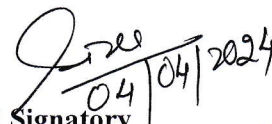
II. **Orissa State Pollution Control Board Norm:**

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


04/04/2024
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9830093976

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/2136 Date : 30.03.2024 Sample No. : QLS/MR/A/23-24/2136-2145 Sample Description : Stack Flue Gas Date of Performance(s) : 23.03.2024-30.03.2024
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.)
2136	FTP-1	20.03.2024	14.24	32.0	26.7	100	18.71	767577
2137	FTP-2		13.20	36.4	28.8	98	18.88	778821
2138	FTP-3		15.28	46.9	31.5	101	19.25	787588
2139	FTP-4		11.20	47.8	30.7	95	18.36	763463
2140	FTP-5		10.30	40.1	23.1	98	10.54	792185
2141	FTP-6	19.03.2024	15.10	27.7	22.4	96	9.71	733738
2142	GTC-7		13.35	43.6	25.8	99	9.25	806291
2143	GTC-8		14.08	58.7	31.8	93	9.42	834681
2144	B.O-1		10.00	218.6	128.2	92	10.07	242807
2144	B.O-2		10.45	201.1	114.5	104	10.55	246274

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

**FUGITIVE EMISSION OF FLUORIDE IN POTROOMS
FOR THE MONTH OF MARCH 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	12.03.2024 18.03.2024	120	0.69	0.971	0.304	0.40
Pot room-B	12.03.2024 18.03.2024	120	0.61			
Pot room-C	19.03.2024 21.03.2024	120	1.40			
Pot room-D	19.03.2024 21.03.2024	120	1.31			
Pot room-E	14.03.2024 16.03.2024	119	1.16			
Pot room-F	14.03.2024 16.03.2024	120	1.20			
Pot room-G	13.03.2024 15.03.2024	120	0.81			
Pot room-H	13.03.2024 15.03.2024	120	0.59			


04/04/2024
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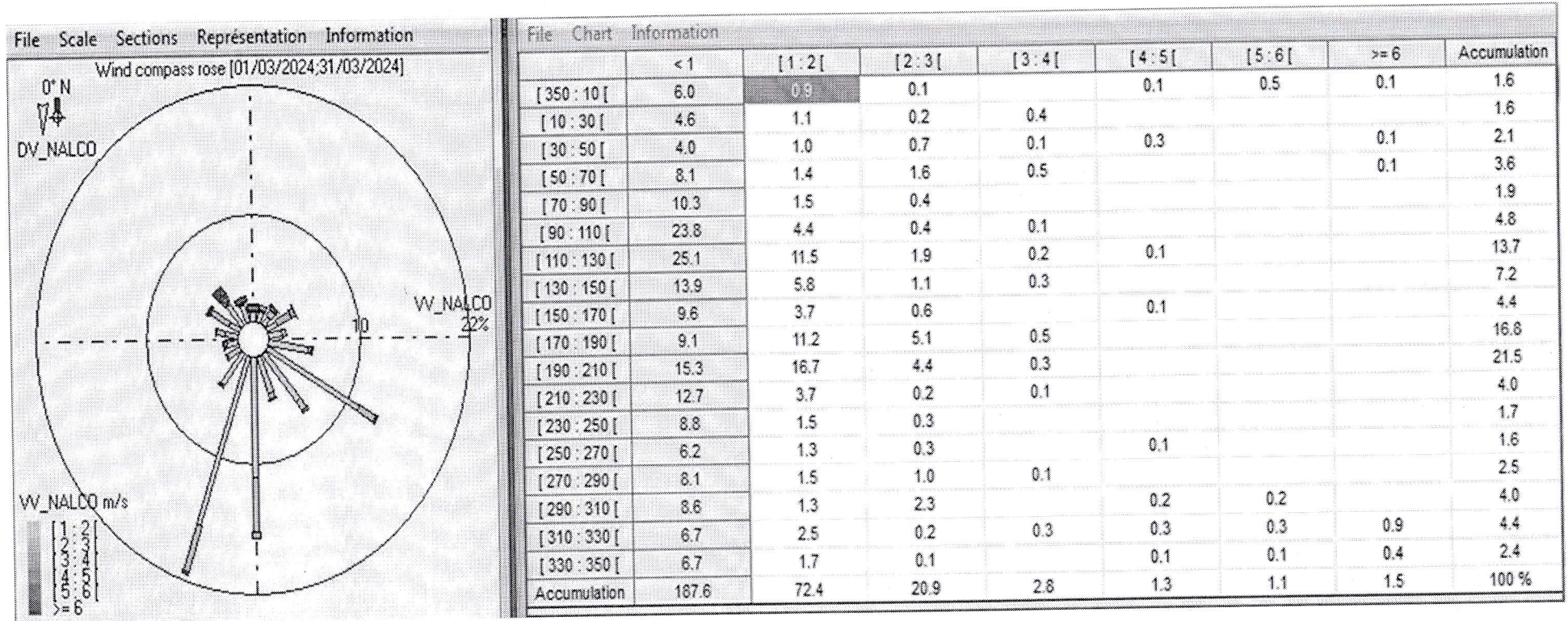
MAXIMUM & MINIMUM TEMPERATURE AND RAIN FALL **MARCH 2024**

DATE	MAXIMUM TEMP. (deg.C)	MINIMUM TEMP. (deg C)	RAIN FALL (mm)
01-Mar	34.0	21.0	0.0
02-Mar	34.5	23.0	0.0
03-Mar	34.5	23.0	0.0
04-Mar	36.0	24.0	0.0
05-Mar	35.0	24.0	0.0
06-Mar	36.0	24.0	0.0
07-Mar	34.0	22.0	33.0
08-Mar	31.0	20.0	0.0
09-Mar	35.0	21.0	0.0
10-Mar	35.0	21.0	0.0
11-Mar	36.0	23.0	0.0
12-Mar	37.0	25.0	0.0
13-Mar	37.0	25.0	0.0
14-Mar	37.0	23.0	0.0
15-Mar	37.0	25.0	0.0
16-Mar	36.0	26.0	1.0
17-Mar	36.0	26.0	0.0
18-Mar	36.0	20.0	9.7
19-Mar	25.0	18.0	42.0
20-Mar	22.0	16.0	0.5
21-Mar	30.0	18.0	0.0
22-Mar	34.0	18.0	0.0
23-Mar	36.0	22.0	0.0
24-Mar	36.0	22.0	0.0
25-Mar	37.0	23.0	0.0
26-Mar	37.0	23.0	0.0
27-Mar	34.0	27.0	0.0
28-Mar	38.0	26.0	0.0
29-Mar	40.0	26.0	0.0
30-Mar	40.0	26.0	0.0
31-Mar	40.0	26.0	0.0
Max. Temp. for the month in Deg.C		40.0	
Min. Temp. for the month in Deg.C.		16.0	
Total rainfall (mm) -		86.2	YEAR 2024: 118.10

04/04/2024
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AIR LABORATORY
नालको **NALCO**
WINDROSE FOR THE MONTH OF MARCH 2024




 04/04/2024
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F60G4/QC/4.5.1
Issue No 001.Rev 00
Dt.04.07.2013

**ANALYSIS REPORT OF GROUND WATER AND SURFACE WATER
FOR THE MONTH MARCH 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	0.72	6.7
4	Open Well Kulad)	75	0.90	6.8
5	Open Pond (Bonda)	100	1.44	8.1
6	Open well (Bonda)	100	0.41	6.6
7	Open Pond (Bonda – Rly. Culvert)	15	1.40	6.8
8	Tube Well (Bonda)	100	1.20	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	1.05	7.1
14	Open Pond (Banarpal)	200	0.93	6.9
15	Open Pond (Banarpal)	200	0.88	7.2

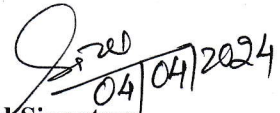
- Sample could not be collected as access to the location was restricted.


04/04/2024
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F60G5/QC/4.5.1
Issue No 001.Rev 00
Dt.04.07.2013

ANALYSIS REPORT OF GROUND AND SURFACE WATER
(SURROUNDING VILLAGES OF SMELTER PLANT)
FOR THE MONTH OF **MARCH 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	1.27	6.9
2	KURUDOL OPEN WELL	NW	5	0.94	6.9
3	BALARAM PRASAD TUBE WELL	N	5	1.45	6.9
4	GOTAMARA OPEN WELL	NE	6	1.35	6.7
5	TULASIPAL OPEN WELL	SE	4	1.41	7.5
6	LANGULIABERA OPEN WELL	S	3	1.16	7.3
7	GOPINATHPUR OPEN WELL	SW	2.5	0.50	7.2
8	ANKULA TUBE WELL	W	2	0.61	6.7

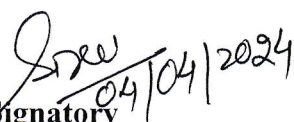

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F60G7/QC/4.5.1
Issue No 001.Rev 00
Dt.02.07.2015

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

Sample Collected on: 05.03.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	7.5
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 23.03.2024)	MPN /100ml	1000	98

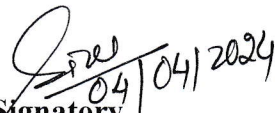

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F60G7/QC/4.5.1
Issue No 001.Rev 00
Dt.02.07.2015

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

Sample Collected on: 05.03.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	6.5
2	Suspended solids	mg/l	100	03
3	BOD 3 days at 27 deg. C	mg/l	30	08
4	Fecal Coliform (Sample collected on 23.03.2024)	MPN/100ml	1000	87


04/04/2024
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F61B/QC/4.5.1
ISSUE No.01 REV00
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BORE WELL ANALYSIS REPORT

FOR THE MONTH OF MARCH 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)	06.03.2024	6.9	1.46	ND
2	Bore well -4 (Hazardous waste land fill)	06.03.2024	7.5	1.12	ND
3	Bore well -5 (Hazardous waste land fill)	06.03.2024	6.9	0.89	ND

Note:

1) ND – Not detectable.

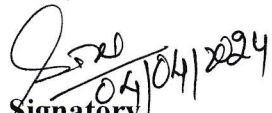

04/04/2024
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FORAGE FLUORIDE MONITORING (GRASS SAMPLES) REPORTS AROUND SMLETER PLANT

FOR THE MONTH OF MARCH 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 MAR'24	Fluoride content (dry basis) in ppm for the month of FEB' 23	Average of two consecutive months in ppm
1	Bonda	South-East	09.03.2024	39.5	39	39.25
2	Tulsipal	South-East	14.03.2024	39.2	38.5	38.85
3	Languliabeda	South-West	14.03.2024	38.5	39.2	38.85
4	Banarpal	East	04.03.2024	38.2	39.7	38.95
5	Turang	West	13.03.2024	38.9	38.6	38.75
6	Balaramprasad	North	09.03.2024	39.8	39.4	39.6

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


04/04/2024
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