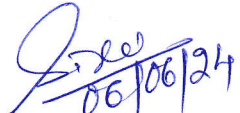


**STACK EMISSION REPORT OF FUME TREATMENT PLANT
FOR THE MONTH MAY 2024**

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	02.05.2024	731378	0.80	0.54	1.34	36.82
	23.05.2024	727620	1.15	0.71	1.86	42.48
FTP-2	02.05.2024	770283	0.47	0.71	1.18	30.46
	22.05.2024	767131	1.31	0.53	1.84	44.48
FTP-3	06.05.2024	725824	2.10	1.08	3.18	28.18
	22.05.2024	718712	2.13	1.05	3.18	50.93
FTP-4	03.05.2024	742926	1.07	0.26	1.33	17.70
	23.05.2024	736044	2.26	0.26	2.52	29.71
FTP-5	06.05.2024	756195	0.67	0.67	1.34	58.71
	24.05.2024	753328	1.27	0.45	1.72	44.64
FTP-6	03.05.2024	754141	0.69	0.23	0.92	65.26
	24.05.2024	754388	1.53	0.37	1.90	45.92
FTP-7	04.05.2024	887660	0.70	0.35	1.05	37.89
	25.05.2024	877670	0.88	0.25	1.13	46.18
FTP-8	04.05.2024	911347	0.37	0.30	0.67	57.66
	25.05.2024	892090	0.95	0.53	1.48	56.55

NOTE:

1. Total Fluoride emission 0.194 Kg/ Ton of Aluminum produced, against total hot metal Production 39025 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
Issue No 001.Rev 00
Dt.04.07.2013

**STACK EMISSION REPORT OF BAKE OVEN PLANT
FOR THE MONTH OF MAY 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	08.05.2024	159579	1.28	0.18	1.46	23.70
	27.05.2024	159446	1.05	0.34	1.39	34.93
BO-II	28.05.2024	200514	1.75	0.18	1.93	40.53

- I. Total Fluoride emission **0.014 Kg/ Ton** of Aluminium produced, against total hot metal Production 39025 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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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/24-25/C/278 Date : 03.06.2024 Sample No. : QLS/MR/A/24-25/278-287 Sample Description : Stack Flue Gas Date of Performance(s) : 23.05.2024-31.05.2024
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.)
283	FTP-1	22.05.2024	10.15	45.3	27.5	100	18.91	781999
284	FTP-2		11.00	51.9	35.8	99	19.05	789991
285	FTP-3		11.40	69.1	33.6	100	16.89	698446
286	FTP-4		12.30	60.8	38.2	97	17.71	738352
287	FTP-5		13.20	41.2	28.0	98	9.36	709135
281	FTP-6	21.05.2024	15.45	37.9	25.5	98	10.36	784928
280	GTC-7		14.50	66.9	29.1	100	9.99	875279
279	GTC-8		14.05	72.5	32.8	97	10.63	939104
282	B.O-1		12.00	266.1	106.6	95	11.49	277353
278	B.O-2		11.10	298.1	136.8	101	12.63	299475

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)

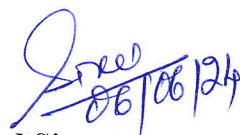
-----End of the Report-----

- 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

F60G10/QC/4.5.1
Issue No 001.Rev 00
Dt. 04.07.2013

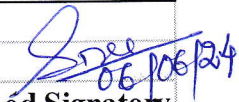
**FUGITIVE EMISSION OF FLUORIDE IN POTROOMS
FOR THE MONTH OF MAY 2024**

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	11.05.2024 13.05.2024	120	1.00	1.245	0.273	0.4
Pot room-B	11.05.2024 13.05.2024	120	0.80			
Pot room-C	10.05.2024 16.05.2024	119	0.99			
Pot room-D	10.05.2024 16.05.2024	119	1.35			
Pot room-E	15.05.2024 17.05.2024	112	1.38			
Pot room-F	15.05.2024 17.05.2024	120	1.40			
Pot room-G	14.05.2024 20.05.2024	120	1.58			
Pot room-H	14.05.2024 20.05.2024	119	1.46			

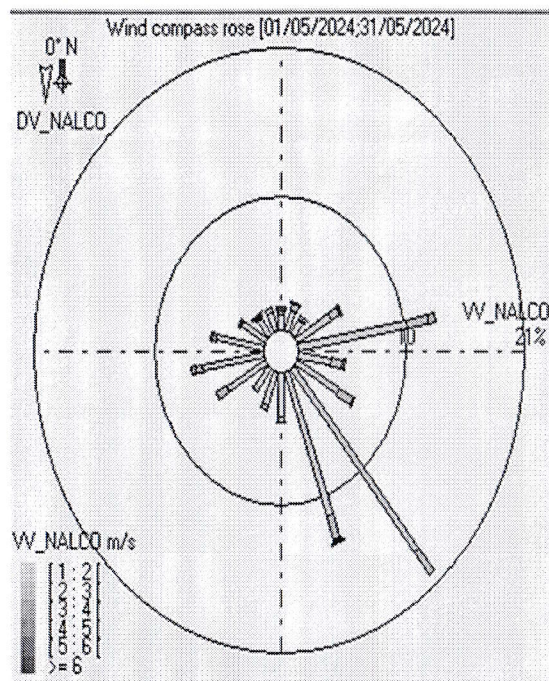

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MAXIMUM & MINIMUM TEMPERATURE AND RAIN FALL**MAY 2024**

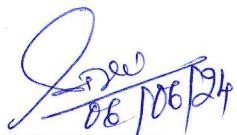
DATE	MAXIMUM TEMP. (deg.C)	MINIMUM TEMP. (deg C)	RAIN FALL (mm)
01-May	44.0	28.0	0.0
02-May	43.0	26.0	0.0
03-May	42.0	27.0	0.0
04-May	42.0	27.0	0.0
05-May	42.5	27.0	0.0
06-May	42.0	26.0	0.0
07-May	35.0	26.0	0.0
08-May	39.0	24.0	0.0
09-May	38.0	25.0	0.0
10-May	38.0	27.0	0.0
11-May	37.0	24.0	38.3
12-May	37.0	22.0	35.0
13-May	37.0	25.0	0.0
14-May	37.0	24.0	0.0
15-May	37.0	28.0	0.0
16-May	38.0	27.0	16.0
17-May	40.0	28.0	0.0
18-May	40.0	28.0	0.0
19-May	39.0	28.0	0.0
20-May	41.0	24.0	0.0
21-May	37.0	25.5	0.0
22-May	39.0	27.0	0.0
23-May	38.0	27.5	0.0
24-May	38.0	27.0	7.3
25-May	38.0	27.0	0.0
26-May	38.0	28.0	8.8
27-May	39.0	29.0	0.0
28-May	42.0	29.0	0.0
29-May	42.0	29.0	0.0
30-May	42.0	29.0	0.0
31-May	39.0	27.0	0.0
Max. Temp. for the month in Deg.C		44.0	
Min. Temp. for the month in Deg.C.		22.0	
Total rainfall (mm) -		105.4	YEAR 2024: 251.4


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AIR LABORATORY
नालको NALCO
WINDROSE FOR THE MONTH OF MAY 2024



	< 1	[1 : 2 [	[2 : 3 [	[3 : 4 [	[4 : 5 [	[5 : 6 [	>= 6	Accumulation
[350 : 10 [	3.1	1.1	0.3	0.1	0.2			1.7
[10 : 30 [	6.9	1.6	0.5		0.1			2.2
[30 : 50 [	8.1	1.3	0.3		0.1			1.7
[50 : 70 [	13.5	3.6	0.8	0.1	0.1			4.7
[70 : 90 [	12.9	10.2	2.0	0.6				12.9
[90 : 110 [	6.4	3.0	1.1	0.2				4.4
[110 : 130 [	7.2	4.5	1.5	0.1				6.1
[130 : 150 [	11.7	17.9	2.2					20.2
[150 : 170 [	11.8	11.6	1.8	0.2	0.1		0.1	13.8
[170 : 190 [	6.1	3.3	0.4	0.1				3.9
[190 : 210 [	6.4	2.6	0.4					3.0
[210 : 230 [	5.1	2.1	0.1					2.2
[230 : 250 [	7.8	4.1	1.0					5.1
[250 : 270 [	7.7	5.7	0.7	0.3				6.7
[270 : 290 [	7.8	4.5	0.4	0.1				5.0
[290 : 310 [	5.3	2.5	0.3					2.8
[310 : 330 [	7.5	1.5	0.1	0.1	0.1		0.1	1.9
[330 : 350 [	4.3	1.4	0.4					1.8
Accumulation	139.3	82.7	14.5	1.9	0.7		0.2	100 %


 06/06/24
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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 MAY 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	0.82	7.0
4	Open Well Kulad)	75	0.92	6.7
5	Open Pond (Bonda)	100	1.47	8.3
6	Open well (Bonda)	100	0.53	6.9
7	Open Pond (Bonda – Rly. Culvert)	15	0.97	6.8
8	Tube Well (Bonda)	100	1.46	8.2
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	1.17	7.4
14	Open Pond (Banarpal)	200	1.49	8.6
15	Open Pond (Banarpal)	200	1.35	7.5

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


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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 **MAY 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	6.7
2	KURUDOL OPEN WELL	NW	5	1.21	7.0
3	BALARAM PRASAD TUBE WELL	N	5	1.44	6.9
4	GOTAMARA OPEN WELL	NE	6	0.79	6.7
5	TULASIPAL OPEN WELL	SE	4	1.39	7.6
6	LANGULIABERA OPEN WELL	S	3	1.04	7.5
7	GOPINATHPUR OPEN WELL	SW	2.5	0.63	7.0
8	ANKULA TUBE WELL	W	2	0.79	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 MAY 2024**

Sample Collected on: 17.05.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	7.3
2	Suspended solids	mg/l	100	24
3	BOD 3 days at 27 deg. C	mg/l	30	03
4	Fecal Coliform (Sample collected on 30.05.2024)	MPN /100ml	1000	98


06/06/24
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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 CJSF BARRACK)
FOR THE MONTH OF MAY 2024**

Sample Collected on: 17.05.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	6.8
2	Suspended solids	mg/l	100	14
3	BOD 3 days at 27 deg. C	mg/l	30	03
4	Fecal Coliform (Sample collected on 30.05.2024)	MPN/100ml	1000	92


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F61B/QC/4.5.1
ISSUE No.01 REV00
Dt.04.07.2013

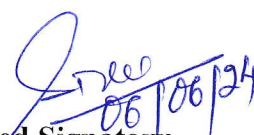
BORE WELL ANALYSIS REPORT

FOR THE MONTH OF MAY 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)	16.05.2024	7.2	1.42	ND
2	Bore well -4 (Hazardous waste land fill)	16.05.2024	7.5	1.27	ND
3	Bore well -5 (Hazardous waste land fill)	16.05.2024	7.0	1.17	ND

Note:

1) ND – Not detectable.


06/06/24
Authorised Signatory
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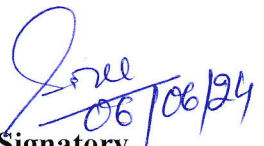
FORAGE FLUORIDE MONITORING (GRASS SAMPLES) REPORTS AROUND SMLETER PLANT

FOR THE MONTH OF MAY 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 MAY'24	Fluoride content (dry basis) in ppm for the month of APRIL' 24	Average of two consecutive months in ppm
1	Bonda	South-East	13.05.2024	39.4	39.1	39.25
2	Tulsipal	South-East	11.05.2024	38.75	38.2	38.475
3	Languliabeda	South-West	11.05.2024	39.2	39.4	39.3
4	Banarpal	East	09.05.2024	39.4	38.5	38.95
5	Turang	West	10.05.2024	38.7	39.1	38.9
6	Balaramprasad	North	07.05.2024	39	38.6	38.8

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

Authorised Signatory


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