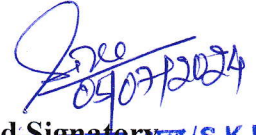


**STACK EMISSION REPORT OF FUME TREATMENT PLANT
FOR THE MONTH JUNE 2024**

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	01.06.2024	742919	2.17	0.83	3.00	35.04
	21.06.2024	737057	0.61	0.19	0.80	44.61
FTP-2	01.06.2024	769745	1.33	0.57	1.90	34.82
	24.06.2024	774732	1.47	0.41	1.88	38.98
FTP-3	03.06.2024	746824	1.79	0.33	2.12	38.15
	22.06.2024	727071	2.44	0.51	2.95	35.80
FTP-4	03.06.2024	745230	1.06	0.19	1.25	33.23
	22.06.2024	738280	3.40	0.50	3.90	30.43
FTP-5	04.06.2024	786248	1.04	1.05	2.09	53.84
	24.06.2024	793333	1.05	0.42	1.47	45.41
FTP-6	05.06.2024	732263	1.91	0.65	2.56	35.76
	25.06.2024	753308	1.32	0.57	1.89	48.86
FTP-7	05.06.2024	856162	1.53	0.26	1.79	35.86
	25.06.2024	865926	2.41	0.59	3.00	25.40
FTP-8	04.06.2024	922291	0.92	0.61	1.53	57.24
	26.06.2024	931314	0.80	0.90	1.70	56.87

NOTE:

1. Total Fluoride emission 0.254 Kg/ Ton of Aluminum produced, against total hot metal Production 37607 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

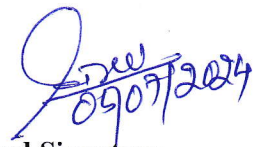

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F60G8/QC/4.5.1
Issue No 001.Rev 00
Dt.04.07.2013

**STACK EMISSION REPORT OF BAKE OVEN PLANT
FOR THE MONTH OF JUNE 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	27.06.2024	157177	1.25	0.26	1.51	43.61
BO-II	08.06.2024	200620	1.57	0.11	1.68	34.62
	21.06.2024	200427	0.93	0.30	1.23	37.84

- I. Total Fluoride emission **0.008 Kg/ Ton** of Aluminium produced, against total hot metal Production **37607 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


Authorised Signatory
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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/378 Date : 03.07.2024 Sample No. : QLS/MR/A/24-25/378-386 Sample Description : Stack Flue Gas Date of Performance(s) : 28.06.2024-03.07.2024
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.)
386	FTP-1	25.06.2024	15:00	53.8	36.0	100	18.22	748507
385	FTP-2		14:00	46.8	32.1	101	18.15	743697
383	FTP-3		11:00	38.0	25.1	101	19.07	741571
384	FTP-4		12:05	45.6	35.9	98	19.75	815659
379	FTP-5	24.06.2024	11:10	46.8	40.9	100	10.04	751613
380	FTP-6		12:09	39.7	24.1	98	11.09	834661
362	GTC-7		14:10	52.7	39.0	102	10.3	891920
381	GTC-8		15:15	63.4	40.5	100	10.71	932346
378	B.O-1		10:00	377.5	121.0	96	9.8	234268

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 Gora, Chemist
(Authorized Signatory)

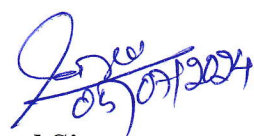
-----End of the Report-----

- 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 JUNE 2024**

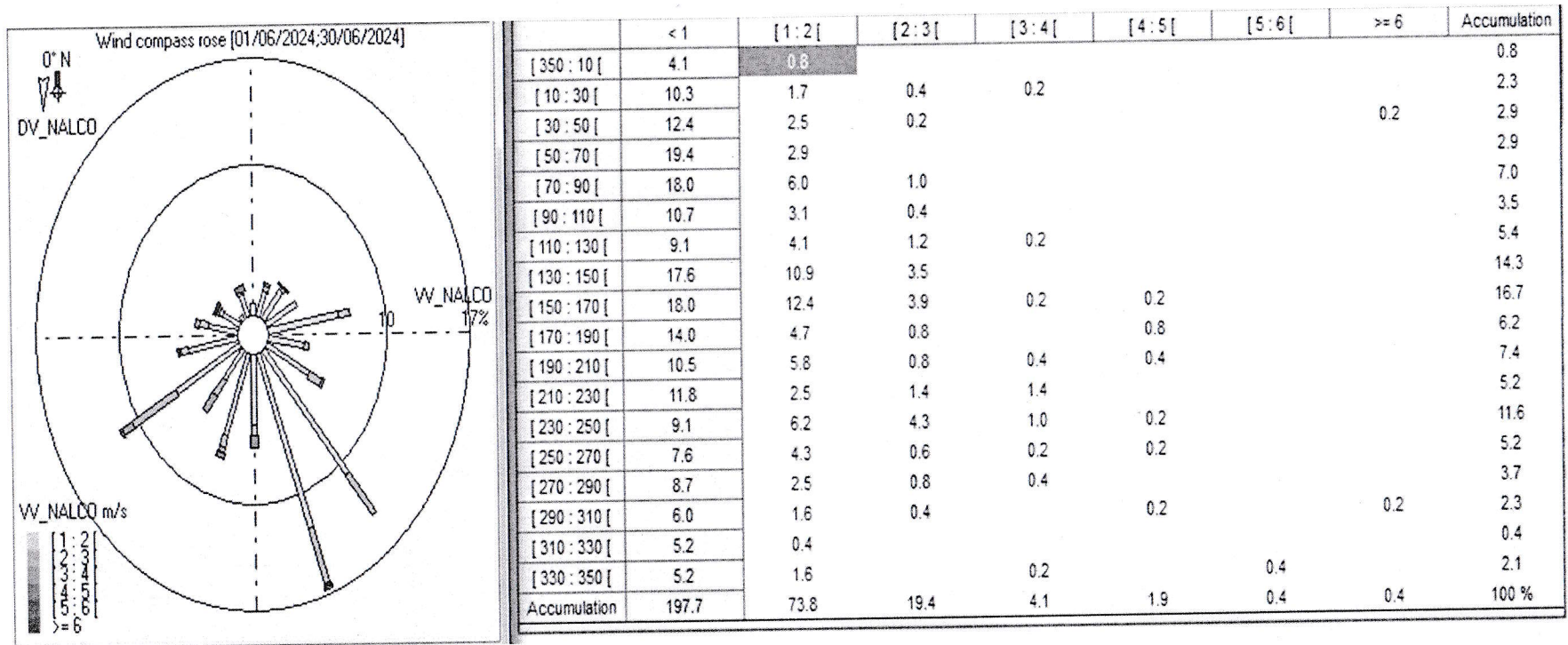
Location	Date of Sampling	No of Pots in operation	Fugitive emission in mg/m ³ (Average)	Average fugitive emission mg/m ³	Average fugitive emission in kg/T of Al from pot rooms (Kg/T of Al)	OSPCB NORM: Total Fugitive emission from Pot rooms (Kg/T of Al)
Pot room-A	12.06.2024 14.06.2024	120	1.82	1.129	0.373	0.4
Pot room-B	12.06.2024 14.06.2024	120	1.83			
Pot room-C	11.06.2024 13.06.2024	119	0.64			
Pot room-D	11.06.2024 13.06.2024	120	0.82			
Pot room-E	18.06.2024 20.06.2024	113	0.84			
Pot room-F	18.06.2024 20.06.2024	119	1.24			
Pot room-G	17.06.2024 19.06.2024	120	0.91			
Pot room-H	17.06.2024 19.06.2024	119	0.93			

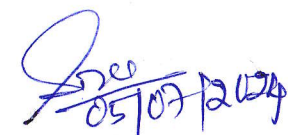

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NALCO, Smelter Plant, Angul

MAXIMUM & MINIMUM TEMPERATURE AND RAIN FALL			
JUNE-2024			
DATE	MAXIMUM TEMP. (deg.C)	MINIMUM TEMP. (deg C)	RAIN FALL (mm)
01-Jun	39.0	27.0	0.0
02-Jun	39.0	24.0	29.7
03-Jun	38.0	28.0	0.0
04-Jun	40.0	27.0	0.0
05-Jun	38.0	28.0	0.0
06-Jun	40.0	28.0	0.0
07-Jun	41.0	26.0	0.0
08-Jun	41.0	28.0	0.0
09-Jun	41.0	29.0	0.0
10-Jun	42.0	28.0	0.0
11-Jun	41.0	29.0	0.0
12-Jun	41.0	29.0	0.0
13-Jun	40.0	29.0	0.0
14-Jun	41.0	28.0	0.0
15-Jun	42.0	28.0	0.0
16-Jun	43.0	27.0	91.2
17-Jun	41.0	31.0	0.9
18-Jun	41.0	30.0	1.2
19-Jun	41.0	30.0	0.0
20-Jun	41.0	25.0	0.0
21-Jun	34.0	26.0	0.0
22-Jun	34.0	26.0	0.0
23-Jun	35.0	27.0	0.0
24-Jun	37.0	27.0	0.0
25-Jun	38.0	27.0	0.0
26-Jun	37.0	27.0	0.0
27-Jun	32.0	27.0	5.8
28-Jun	34.0	26.0	47.0
29-Jun	34.0	26.0	0.0
30-Jun	34.0	26.0	3.0
Max. Temp. for the month in Deg.C		43.0	
Min. Temp. for the month in Deg.C.		24.0	
Total rainfall (mm) -		178.8	YEAR 2024: 430.20


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



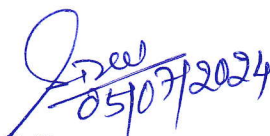

 05/07/2024
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F60G4/QC/4.5.1
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**ANALYSIS REPORT OF GROUND WATER AND SURFACE WATER
FOR THE MONTH JUNE 2024**

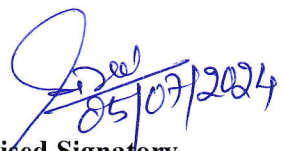
Sl. No.	Sampling place	Approx. Distance from Storm water Channel (in meter)	Fluoride mg/l (Norm 1.5)	pH (Norm 6.5-9.0)
1	Open Pond (Kulad)	200	*	*
2	Open Pond (Kulad)	100	*	*
3	Bore Well (Kulad)	100	1.46	6.7
4	Open Well Kulad)	75	1.08	7.3
5	Open Pond (Bonda)	100	1.43	8.3
6	Open well (Bonda)	100	0.95	6.7
7	Open Pond (Bonda – Rly. Culvert)	15	1.48	7.7
8	Tube Well (Bonda)	100	1.39	7.0
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	1.47	7.7
14	Open Pond (Banarpal)	200	1.14	8.2
15	Open Pond (Banarpal)	200	1.16	7.5

- 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 JUNE 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	0.54	6.5
2	KURUDOL OPEN WELL	NW	5	0.37	6.5
3	BALARAM PRASAD TUBE WELL	N	5	0.69	7.0
4	GOTAMARA OPEN WELL	NE	6	1.42	7.1
5	TULASIPAL OPEN WELL	SE	4	0.96	7.1
6	LANGULIABERA OPEN WELL	S	3	0.96	6.9
7	GOPINATHPUR OPEN WELL	SW	2.5	0.69	7.1
8	ANKULA TUBE WELL	W	2	0.83	6.7

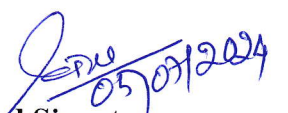

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F60G7/QC/4.5.1
Issue No 001.Rev 00
Dt.02.07.2015

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

Sample Collected on: 14.06.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	6.9
2	Suspended solids	mg/l	100	02
3	BOD 3 days at 27 deg. C	mg/l	30	05
4	Fecal Coliform (Sample collected on 26.06.2024)	MPN /100ml	1000	97


05/07/2024
Authorised Signatory

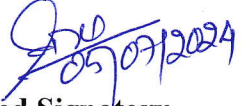
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F60G7/QC/4.5.1
Issue No 001.Rev 00
Dt.02.07.2015

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

Sample Collected on: 14.06.2024

Sl. No	Parameters	Units	Norms (max)	Analysis
1	pH	-	6.5 to 9.0	6.6
2	Suspended solids	mg/l	100	03
3	BOD 3 days at 27 deg. C	mg/l	30	02
4	Fecal Coliform (Sample collected on 26.06.2024)	MPN/100ml	1000	94


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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 JUNE 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)	19.06.2024	8.1	1.11	ND
2	Bore well -4 (Hazardous waste land fill)	19.06.2024	8.0	1.16	ND
3	Bore well -5 (Hazardous waste land fill)	19.06.2024	7.8	0.94	ND

Note:

1) ND – Not detectable.


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FORAGE FLUORIDE MONITORING (GRASS SAMPLES) REPORTS AROUND SMLETER PLANT

FOR THE MONTH OF JUNE 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 JUN'24	Fluoride content (dry basis) in ppm for the month of MAY'24	Average of two consecutive months in ppm
1	Bonda	South-East	10.06.2024	28.3	39.4	33.85
2	Tulsipal	South-East	12.06.2024	33.6	38.75	36.175
3	Languliabeda	South-West	12.06.2024	35.7	39.2	37.45
4	Banarpal	East	08.06.2024	37	39.4	38.2
5	Turang	West	11.06.2024	39	38.7	38.85
6	Balaramprasad	North	07.06.2024	38.8	39	38.9

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

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