

### Ref No:NBC/ED(P&T)/ 1858

Date: 27.05.2024

The Deputy Director General of Forest, Integrated Regional Office, Ministry of Environment, Forest & Climate Change, Regional Office (EZ), A/3, Chandrashekharpur, Bhubaneswar – 751023 Email: <u>roez.bsr-mef@nic.in</u>

Sub: Submission of Half Yearly Compliance Report of Environment Clearance issued to Utkal-D Coal Mines of NALCO for the period of **Oct** 23 to Mar 24.

Ref:

То

- 1. Environment Clearance of Utkal-D Coal Mines issued by MOEFCC vide letter no. J-11015/203/2006-IA.II(M) dated 29.01.2007.
- Environment Clearance of Utkal-D Coal Mines transferred by MOEFCC vide letter no. J-11015/203/2006-IA.II(M) dated 11.08.2020.

Dear Sir,

Inviting reference to the subject cited above, we are enclosing the Half Yearly Compliance Report for the period of **Oot'23 to Mar'24** for the conditions stipulated in Environment Clearance of Utkal-D Coal Mines of NALCO issued vide MOEFCC's letter no. J-11015/203/2006-IA.II(M) dated 29.01.2007 and letter no. J-11015/203/2006-IA.II(M) dated 11.08.2020 for your kind consideration. The copy of the compliance report is also being sent in the soft copy through email for your kind perusal.

We wish to inform that all the necessary actions are being taken in compliance to the specific and general conditions of Environment Clearance granted to Utkal-D Coal Mines of NALCO.

We trust that the information furnished is in line with your requirement.

Thanking You,

Yours Faithfully, For and on behalf of NALCO

(A K Panda) GGM (T&C) and Authofized Signatory PANDA Group General Manager (T & C) & Authorised Signatory National Aluminium Company Ltd.

### नेशनल एल्यूमिनियम कम्पनी लिमिटेड

(भारत सरकार का एक उद्यम) निगम कार्यालय National Aluminium Company Limited 13 (A Government of India Enterprise) CORPORATE OFFICE

नालको भवन, पि-1, नयापल्ली, भुवनेश्वर - 751 013 ) भारत Nalco Bhawan, P/1, Nayapalli,Bhubaneswar - 751 013, India फोन Telephone: (EPABX) (0674) 2301988, 2301999, 2300013, 2300976, 2301550, 2303233, फैक्स Fax-(0674) 2301290, 2300580,2300740, 2300640 & 2300246, वेबसाटठ Website: www.nalcoindia.com CIN: L27203OR1981GOI000920

### Copy to:

- 1. AIG of Forest, Ministry of Environment Forest & Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi 110003 (email: monitoring-ec@nic.in)
- 2. Member Secretary, Central Pollution Control Board, Parivesh Bhawan', East Arjun Nagar, Shahdara, New Delhi 110032 (email: mscb.cpcb@nic.in)
- Zonal Office, Central Pollution Control Board, Southern Conclave, Block 502, 5<sup>th</sup> & 6<sup>th</sup> Floor, 1582 Rajdanga Main Road, Kolkata, WB – 700107 (email: rdkolkata.cpcb@gov.in)
- Member Secretary, State Pollution Control Board, Parivesh Bhawan, A/118, Unit 8, Nilkantha Nagar, Nayapalli, Bhubaneswar, Odisha – 751012 (email: paribesh1@ospcbboard.org)
- 5. Regional Officer, State Pollution Control Board, S-3/3, Industrial Estate, Hakimpada, Angul, Odisha (email: rospcb.angul@ospcbboard.org)



# HALF YEARLY COMPLIANCE REPORT (OCTOBER 2023 TO MARCH 2024)

For

Utkal "D" Coal Mines At. Tehsil Chhendipada, District Angul, Odisha

Of

National Aluminium Company Limited (NALCO)

### Half Yearly EC Compliances Report of Utkal-D Coal Mines

### MOEFCC File No. J-11015/203/2006-IA.II(M) dated: 29.01.2007 MOEFCC File No. J-11015/203/2006-IA.II(M) dated 11.08.2020

#### A. Specific Conditions S. No Conditions **Compliance Status / Remark** (i) The Orissa Mining Company Ltd (OMCL) Environment Clearance issue to M/s Orissa Mining shall ensure strict compliance of all the Company Ltd (OMCL) has been transferred to National environmental conditions imposed in Aluminium Company Limited (NALCO) vide MOEFCC letter this environmental for Utkal –D coal J-11015/203/2006-IA.II(M), dated 11.08.2020. Presently mining project. NALCO is ensuring strict compliance of all the environmental conditions imposed in this environmental clearance of Utkal D coal mining project. (ii) The OMCL shall be responsible for this Environment Clearance issue to M/s Orissa Mining project under the varies Acts, namely Company Ltd (OMCL) has been transferred to National the Water (Prevention & Control of Aluminium Company Limited (NALCO) vide MOEFCC letter Pollution) Act, 1974, the Air (Prevention J-11015/203/2006-IA.II(M), dated 11.08.2020. & Control of Pollution) Act.1981, the Environment (Protection) Act, 1986 and Presently NALCO will be responsible for this project under Public Liability Insurance Act, 1991 the varies Acts, namely the Water (Prevention & Control of along with their amendments and Rules Pollution) Act, 1974, the Air (Prevention & Control of framed thereunder. Pollution) Act.1981, the Environment (Protection) Act, 1986 and Public Liability Insurance Act, 1991 along with their amendments and Rules framed thereunder. (iii) In case of change of technology from Point noted. There is no proposal of changing the opencast to underground, a fresh technology from opencast to underground as of now. Fresh clearance shall be obtained. The present prior clearance will be obtained from Ministry in case of clearance is only for opencast mining. change in technology from opencast to underground. (iv) All the conditions stipulated by SPCB in All the conditions stipulated by SPCB in their NOC is being their NOC shall be effectively complied. implemented. (v) Mining operations in forest area shall be The mining operation is being strictly carried out only after restricted only to that area for which obtaining clearance for diversion of forestland. forestry clearance for diversion of forestland has been obtained. Mining shall be carried out as per (vi) Mining activities is being carried out as per statuette at a statuette at a safe distance from the safe distance from the Singhada Jhor and the nallah flowing Singhada Jhor and the nallah flowing within the lease boundary by maintaining a distance of within the lease boundary. 15m as specified in amended Consent to Operate (CTO) An embankment of 3m height shall be issued by SPCB vide Letter No.- 14903/IND-I-CON-6762 constructed within 2 years of start of dated 19.08.2022. Embankment of 3m height along the mining operations along the southern southern bank of the Jhor and also by the side of the bank of the Jhor and also by the side of diverted nallahs is under progress. the diverted nallahs. (vii) Top soil shall be stacked properly with The excavated top soil has been stacked with terracing proper slope at earmarked site(s) and method and proper slope and height is being maintained should not be kept active and shall be at earmarked site as per approved Mining Plan. Garland

S. No	Conditions	Compliance Status / Remark
	used for reclamation and development of greenbelt.	drainage also been constructed around the top soil storage area for rain water drainage and for top soil protection. In future top soil will be used for reclamation and development of greenbelt. Location of the top soil is enclosed as <b>Annexure 1</b> .
(viii)	OB should be stacked at earmarked external OB dump site within mining lease area and shall be a maximum height of 90m only and cons it of benches of 30m each. The ultimate slope of the dump shall not exceed 28°, Monitoring and management of reclaimed dump site should continue until the vegetation becomes self- sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.	OB is being removed and stacked at earmarked site as per approved mining plan in terracing method up to maximum 60m height and slope angle is being maintained as per guide line of MoEFCC. Final terraces will be used for plantation work. The compliance status of dump is being submitted to MoEF&CC and SPCB, Bhubaneswar.
(ix)	Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediments flow from soil, OB and mineral dumps. The water so collected should be utilized for watering the mine area roads, green belt development etc. The drains should be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide for adequate retention period to allow proper settling of silt material.	The appropriate size of catch drain around the OB dumps has been constructed to arrest silt and sediments flow from soil, OB and mineral dumps. The collected water is being utilized for sprinkling on haul roads and green belt development. The drain is being regularly desilted and maintained properly. The garland drains of width 2.5m with 60:1 gradient and 2.3 km length has been constructed till date. Capacity of sump is designed for 24,500 KL by keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Retention period of two days is provided to allow proper settling of silt material.
(x)	Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.	Dimension of the retaining wall and toe of the dumps is being designed as per guidelines. OB benches are maintained with the maximum height 6-7 m and width 10m to check run-off and siltation. This is based on the rainfall data.
(xi)	Crushers at the CHP should be operated with high efficiency bag filters and water	No CHP installed in mines as of now.

	Conditions	Compliance Status / Remark
	sprinkling system should be provided to	
	check fugitive emissions from crushing	
	operations, conveyor system, haulage	
	roads, transfer points etc.	
(xii)	Drills should be wet operated only.	At present two nos of wet operated drills are used for
		drilling work.
(xiii)	Controlled blasting should be practiced with use of delay detonators and only during day time. The mitigate measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.	Controlled blasting is being done with use of delay detonators and only during day time. Required mitigative measures are being adopted to control the ground vibrations and to arrest the flying rocks and boulders.
(xiv)	The total area brought under afforestation shall not be less than 291.13 ha and shall include external OB dump (Area 106.57 ha), back filling area covering 60 ha, balance excavated void (106.42 ha), along mining lease boundary, greenbelt (6 ha), safety zone (12.14 ha) and vacant/undisturbed area by planting native species in consultation with the local DFO/Agriculture dept. The density of the trees should be around 2500plants/ha.	Noted. The total area brought under afforestation will be more than 291.13 ha by end of the mine. Plantation work is ongoing in phased manner. Native species are being given preferences for plantation.
(xv)	Backfilling shall begin from the 21 <sup>st</sup> year of mining operations. A progressive mine closure plan shall be implemented and OB generated shall be back filled covering a total area of 60 ha. Plantation shall be develop over the back filled area and on balanced of the excavated area (void) covering an area of 106.42 ha, the higher benches of which shall be gently sloped.	Not applicable as backfilling work will begin from 21 <sup>st</sup> year of mining operations.
(xvi)	Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and construction of new piezometers. The monitoring for quantity should be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected should be submitted to MOEF and CPCB quarterly within one month of monitoring.	Regular monitoring of ground water level and quality is being done. Construction of bore well and installation of piezometers and automatic flow meters has been done. Water quality and ground water level data is being monitored and same is being submitted to SPCB, CPCB and MoEFCC. Monitoring Report enclosed as <b>Annexure 2</b> .
	The Company shall put of artificial	Soil Moisture Conservation Plan for buffer zone of the

S. No	Conditions	Compliance Status / Remark
	augmentation of ground water	implementation cost of Rs. 10.88 Cr. already been
	resource. The project authority shall	deposited in Odisha CAMPA account. We are also providing
	meet water requirement of nearby	water to nearby villagers for their daily needs. Apart from
	village(s) in case the village wells go dry	this, rain water harvesting structure will be installed after
	due to dewatering of mine.	construction of office buildings and residential colony.
(xviii)	ETP also be provided for workshop and	Construction of ETP for treatment of waste water is under
	CHP waste water	progress.
(xix)	A program for conservation of the	No endangered species is found in the study area.
	endangered species found in the study	However, if any endangered species is found in study area
	area, if any, shall be formulated and	then program for conservation of the endangered species
	implemented in consultation with the	will be formulated and implemented in consultation with
	concerned Department in the State	the concerned Department in the State Government.
	Government. Separate funds, shall be	Separate funds will be earmarked for implementation of the various activities thereunder and the status thereof will
	earmarked for implementation of the various activities thereunder and the	be regularly reported to MOEFCC and its Regional Office at
	status thereof shall be regularly	Bhubaneswar.
	reported to this Ministry and its	Bliuballeswal.
	Regional Office, Bhubaneswar.	
(xx)	Digital processing of the entire lease	Mining activities started on date 09.11.2022. Digital
	area using remote sensing techniques	processing of the entire lease area using remote sensing
	should be done regularly once in 3 years	techniques will be done for monitoring land use pattern
	for monitoring land use pattern and	and reports will be submitted to MOEFCC and its Regional
	reports submitted to MOEF and its	Office at Bhubaneswar.
	Regional Office at Bhubaneswar.	
(xxi)	Besides carrying out regular periodic	Occupational health surveillance is being carried out for all
	health checkup of their workers, 10% of	employees in respective time interval at Utkal Polyclinic
	workers identified from work force	Bhubaneswar. (Annexure 3)
	engaged in active mining operations	
	shall be subject to health checkup for	
	occupational diseases, and hearing	
	impairment, if any, through an agency	
	such as NIOH, Ahmadabad with in	
	period of one year and the results	
() () ()	reported to his ministry ad to DGMS.	DO Decomponentian op northe selicy of Cost of Culture sel
(xxii)	R&R of village Dhobamalia basti shall be	R&R compensation as per the policy of Govt. of Odisha and
	completed within the specified time schedule and the R&R package shall not	consultation with the PAVs and PDFs in RPDAC already been approved and disbursed to the affected families.
	be less than that of the National R&R	שבנה מאטרטיבת מות מוצאת זבת נס נוופ מוופנובת ומווווופג.
	policy.	
(xxiii)	A final mine closure plan along with	Not applicable as of now. Final mine closure plan along
	details of Corpus fund should be	with details of Corpus fund will be submitted to the
	submitted to Ministry of Environment	MOEFCC 5 years in advance before the mine closure for
	and Forest 5 years in advance of final	approval.
	mine closure for approval.	
(xxiv)	Consent to operate shall be obtained	The Consent to Operate has been obtained from State
	before start of Mining operation.	Pollution Control Board, Odisha vide Letter No
		14903/IND-I-CON-6762 dated 19.08.2022 before start of
		the mining operation.

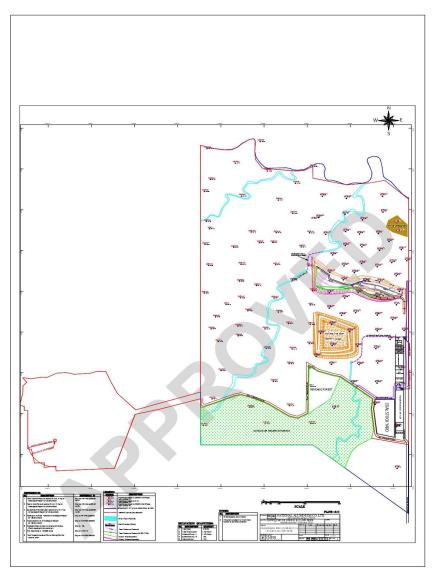
(ii)	B. Ger No change in Mining Technology and scope of working should be made without prior approval of the MOEF No change in calendar plan including	neral Conditions There is no change in Mining Technology and scope of working. Prior approval of MOEFCC will be taken in case of
(ii)	scope of working should be made without prior approval of the MOEF	working. Prior approval of MOEFCC will be taken in case of
	No change in calendar plan including	any change in Mining Technology and scope of working.
	excavation, quantum of mineral coal and waste should be made.	No change in calendar plan including excavation, quantum of mineral coal and waste. As of now mining operation is going on as per the approved mining plan.
	Four Ambient Air Quality Monitoring station should be established in the core zone as well as in the buffer zone for SPM, RPM, $SO_2$ and $NO_x$ monitoring location of the station should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation of the SPCB	Four Ambient Air Quality Monitoring stations are established in the core zone as well as in the buffer zone for monitoring of SPM, RPM, SO <sub>2</sub> and NO <sub>x</sub> . Monitoring locations of the station are decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation of the SPCB. NABL accredited laboratory is carrying out the monitoring work. Monitoring report enclosed as <b>Annexure 2</b> .
	Data on ambient air quality (SPM, RPM, $SO_2$ and $NO_x$ ) should be regularly submitted to the MOEF including its Regional Office , BBSR and to SPCB and CPCB once in six months	Data on ambient air quality (SPM, RPM, $SO_2$ and $NO_x$ ) are regularly monitored by NABL accredited laboratory and submitted to MOEFCC New Delhi, MOEFCC Bhubaneswar, SPCB and CPCB along with Half yearly compliance report. Monitoring report enclosed as <b>Annexure 2</b> .
	Fugitive dust emission (SPM and RPM) from all source should be control regularly monitored and data recorded properly. Water spraying arrangements on haul roads, wagon loading, dump trucks (Loading and unloading) points should be provided and properly maintained.	Fugitive dust emission (SPM and RPM) from all sources are monitored regularly and data are recorded properly. This is being submitted to the MOEFCC New Delhi, MOEFCC Bhubaneswar, SPCB and CPCB along with Half yearly compliance report. Water spraying arrangements are available for control of fugitive dust on haul roads, dumping area, stock yard, trucks loading and unloading points. 4 nos of water sprinkling tankers of capacity 18 KL each, 02 nos mist cannon of capacity 12 KL each and 20 nos of rain guns are used for controlling the fugitive dust inside the mines area.
(vi)	Adequate measures should be taken for	Adequate measures are taken to control the noise levels
	control of noise levels below 85 dB(A) in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM etc	below 85 dB(A) in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM etc are provided with ear plugs/muffs. New machineries are being used in mines. A well experience mechanic team with

S. No	Conditions	Compliance Status / Remark
	should be provided with ear plugs/Muffs	mobile maintenance van is engaged for maintenance of mining equipment and timely maintenance is being done to reduce noise from vehicles.
(vii)	Industrial waste water (workshop and waste water from mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents.	Waste water collected from mines area is being collected in de-silting pond for treatment. This water is being used for various mining activities such as sprinkling on road, dust suppression, plantation etc. During monsoon season excess collected water is being discharge to nearby nallah after proper treatment as per the standards prescribed under GSR 422 (E) dated 19 <sup>th</sup> May, 1993 and 31 <sup>st</sup> December, 1993 as amended from time to time. Establishment of Oil and grease trap inceptor is in progress.
(viii)	Vehicular emissions should be kept under control and regularly monitored Vehicles used for transportation the mineral should be covered with tarpaulin and optimally loaded.	Regular maintenance of mining equipment are being done to control the vehicular emissions. Truck/dumpers used for transportation of coal are being monitored regularly by PUC certificate. At present coal is being transported through trucks/dumper which is loaded optimally and covered with tarpaulin.
(ix)	Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.	We are in process of establishing Environmental laboratory. Pollution monitoring and laboratory equipment will be purchased in consultation with State Pollution Control Board.
(x)	Personnel working in dusty areas should wear protective respiration devices and they should also be provided with adequate training and information on safety and health aspects. Occupational health surveillance programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.	PPE are provided to all employees of mine to protect them from dust and noise. Prior training is being imparted to all working employees on job, safety and health aspects. Periodic re-fresher training are also being done for employees working inside the mine. Periodically medical examinations <b>Annexure 3</b> is being carried out for all employees of mines to detect any contractions due to exposure to dust and noise and to take corrective measures, if required.
(xi)	A separate environmental management cell with suitable qualified personnel should be set up under the control of a Senior Executive, who will report directly to the Head of the company.	A separate environmental management cell has already setup vide NALCO order no. NALCO/Coal Mines Division/336/2024 dated 11.07.2023 with suitable qualified personnel under the control of a Senior Executive, who is reporting directly to the Head of the company.
(xii)	The funds earmarked for environmental protection should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to this Ministry and its Regional Office at BBSR.	The funds earmarked for environmental protection has been kept in separate and will not diverted for any other purpose.
(xiii)	The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The Project Authorities shall extend full	Full cooperation will be provided to the officers(s) of the Regional Office by furnishing the requisite data/information/monitoring reports as and when required.

S. No	Conditions	Compliance Status / Remark
	cooperation to the officers(s) of the Regional Office by furnishing the requisite data/information/monitoring reports.	
(xiv)	A copy of the environmental clearance letter shall be marked to concerned Panchayat/Local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.	Environment Clearance of Utkal D Coal block was granted to M/s OMC Ltd on 19.01.2007. Coal block was deallocated as per the order of Hon'ble Supreme Courte of India vide their Judgment dated 25.08.2014. Further coal block was allocated by Ministry of Coal to M/s NALCO Ltd under the Coal Mines (Special Provision) Act 2015 vide allotment order no. F.No. 103/34/2015-NA dated 02.05.2016. Same Environment Clearance was transferred from the M/s MC to NALCO.
(xv)	State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry center and Collector's Office/Tehsildar's Office for 30 days.	Not applicable
(xvi)	The Project Authorities should advertise at least in two local newspaper widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance and a copy of the clearance letter is available with the state pollution control Board and may also be seen at the website of the MOEF at http://envfor.nic.in	Environment Clearance of Utkal D Coal block was granted to M/s OMC Ltd on 19.01.2007. Coal block was deallocated as per the order of Hon'ble Supreme Court of India vide their judgment dated 25.08.2014. Further coal block was allocated by Ministry of Coal to M/s NALCO Ltd under the Coal Mines (Special Provision) Act 2015 vide allotment order no. F.No. 103/34/2015-NA dated 02.05.2016. Same Environment Clearance was transferred from the M/s OMC to NALCO.

### **ANNEXURE 1**

### Location of Top Soil



Plan / Plate 21C

ENVIRONMENTAL MONITORING REPORT FOR THE MINTH OF OCTOBER-2023



# NATIONAL ALUMINIUM COMPANY LIMITED Coal Mine Division Angul-759145, Odisha



My World Consultancy Services Private Limited

Plot No. 766, Telengapentha, Cuttack, Odisha 754001





WCS/LQR/57

### TEST REPORT

Report No.		WCS231018A	Issue Date	÷	26.10.2023
NABL ULR No.	1	TC1122523000000181F		11	- 19 MAA MADA AMA
Name of the Client	:	National Aluminium Company L	imited		
Address	3	Coal Mine Division			
		Angul-759145, Odisha			
Sampling Location	:	Gopiballavpur Village			
Sample Description		Ambient Air Quality Monitoring	Date of Sampling	1	05.10.2023
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)	Sample ID No	120	WCS1023A13A
Environmental Condition	1	Clear weather	Date of Receiving	15	09.10.2023
Sample Collected by	:	WCS Laboratory	Quantity of Sample	į.	l No.
Date of Testing	32	09.10.2023 to 11.10.2023	Sample Condition	12	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m <sup>3</sup>	57.2	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM23)	$\mu g/m^3$	32.5	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	$\mu g/m^3$	5.8	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	µg/m³	18.3	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	143.0	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

hahataser Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory

(Mr. Pradeept Mohapatra)

N.B.: 0 The results relate to the sample received in respect to the Parameters tested.

O Liability for return of sample ceases after 7 days from the date of Test certificate.

• The report cannot be reproduced either in full or in part, without prior written consent of Director.

In case of any complaint, please mail us bijaya@theworld.co.in







WCS/LQR/57

### TEST REPORT

Report No.	1	WCS231018B	Issue Date	÷	26.10.2023
NABL ULR No.	a.	TC1122523000000181F		1.1	
Name of the Client	1	National Aluminium Company L	imited		
Address	<b>3</b>	Coal Mine Division			
		Angul-759145, Odisha			
Sampling Location	1	Colony Area			
Sample Description		Ambient Air Quality Monitoring	Date of Sampling	1	05.10.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No	1	WCS1023A13B
Environmental Condition	:	Clear weather	Date of Receiving	1	09.10.2023
Sample Collected by	:	WCS Laboratory	Quantity of Sample		1 No.
Date of Testing	- 2	09.10.2023 to 11.10.2023	Sample Condition	12	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	60.2	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	$\mu g/m^3$	36.9	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	μg/m <sup>3</sup>	6.3	80 (As per NAAQ 2009)	1S-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	19.3	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	150.5	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Bhahatasy

Reviewed by (Mr. Bijaya Kumar Chahataray)

Authorized Signatory

(Mr. Pradeept Mohapatra)

N.B.: O The results relate to the sample received in respect to the Parameters tested.

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WCS/LQR/57

#### TEST REPORT

Report No.	3	WCS231018C	Issue Date	:	26.10.2023
NABL ULR No.	:	TC1122523000000181F			
Name of the Client	4	National Aluminium Company L	imited		
Address		Coal Mine Division			
		Angul-759145, Odisha			
Sampling Location	28	Near Weigh Bridge			
Sample Description	1	Ambient Air Quality Monitoring	Date of Sampling		05.10.2023
Sampling Plan & Method		WCS/QSP/SAMP (AIR)	Sample ID No	:	WCS1023A130
Environmental Condition	2	Clear weather	Date of Receiving	1	09.10.2023
Sample Collected by	8	WCS Laboratory	Quantity of Sample	;	1 No.
Date of Testing	\$	09.10.2023 to 11.10.2023	Sample Condition		Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	μg/m³	68.5	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	µg/m³	42.2	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	6.8	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	22.0	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	μg/m³	171.3	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)

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### TEST REPORT

WCS/LQR/57

Report No.	1	WCS231018D	Issue Date	-	26.10.2023
NABL ULR No.	4	TC1122523000000181F			
Name of the Client	1	National Aluminium Company L	imited		
Address	7	Coal Mine Division			
		Angul-759145, Odisha			
Sampling Location	4	Near Settling Pond			
Sample Description	2	Ambient Air Quality Monitoring	Date of Sampling	10	05.10.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No	1	WCS1023A13D
Environmental Condition	:	Clear weather	Date of Receiving	1	09.10.2023
Sample Collected by	1	WCS Laboratory	Quantity of Sample	3	1 No.
Date of Testing	12	09.10.2023 to 11.10.2023	Sample Condition	1	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	56.3	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	$\mu g/m^3$	37.6	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	6.5	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	µg/m³	18.0	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	140.8	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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(Mr. Pradeept Mohapatra)

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WORD Consultancy Services	MY WORLD CONSULTANC	Y SERVICES PRIVATE (TESTING LABOR GST NO: 21AADCT40 CIN: U725010R2010PT	ATORY)
WCS/LQR/59	TEST REPOR	8T	TC-11225
Report No.	: WCS231019	Issue Date	: 26.10.2023
NABL ULR No.	: TC1122523000000181F		
Name of the Client	: National Aluminium Compar	y Limited	
Address	: Coal Mine Division Angul-759145, Odisha		
Month of Sampling	: October- 2023	Date of Receiving	: 09.10.2023
Sample Description	: Ambient Noise	Quantity of Sample	: 04
Sampling Plan & Method	: WCS/QSP/SAMP (NOISE)	Sample Condition	: Good
Sample Collected by	: WCS Laboratory	Date of Analysis	: 10.10.2023

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS1023N02A	Gopiballavpur Village	05.10.2023	50.8	38.8	Clear Weather
WCS1023N02B	Near Settling Pond	05.10.2023	63.8	41.5	Clear Weather
WCS1023N02C	Near Town ship	05.10.2023	60.2	40.0	Clear Weather
WCS1023N02D	Near Weigh Bridge	05.10.2023	64.2	67.2	Clear Weather
Te	st Method	IS 9989	: 1981		

Noise Standard in dB(A) Leq as per CPCB							
Category of Area	Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Leq (10.00 Pm to 6.00 Am)					
Industrial Area	75	70					
Commercial Area	65	55					
Residential Area	55	45					
Sensitive Area	50	40					

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(Mr. Bijaya Kumar Chahataray)

Authorized Signatory

(Mr. Pradeept Mohapatra)

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### WCS/LQR/57

### TEST REPORT

Report No.		WCS231020A Issue Date			26.10.2023
NABL ULR No.		TC1122523000000181F			
Name of the Client		National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	1	Gopiballavpur Village			
Sample Description	4	Ambient Air Quality Monitoring	Date of Sampling	10	19.10.2023
Sampling Plan & Method	-1	WCS/QSP/SAMP (AIR)	Sample ID No	2	WCS1023A37A
Environmental Condition	1	Clear Weather	Date of Receiving	:	21.10.2023
Sample Collected by	1	WCS Laboratory	Quantity of Sample	-	1 No.
Date of Testing	1	21,10,2023 to 25,10,20232	Sample Condition	1	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	59.4	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	µg/m³	36.0	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	6.0	80 (As per NAAQ 2009)	18-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	17.8	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	146.6	500 (As per CTO No-2938)	18-5182 (Part-4) 1999 RA 2019

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### TEST REPORT

WCS/LQR/57

Report No.		WCS231020B	Issue Date		26.10.2023
NABL ULR No.	;	TC1122523000000181F			
Name of the Client	4	National Aluminium Company L	imited		
Address	ų.	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	1	Colony Area			
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	1	19.10.2023
Sampling Plan & Method	32	WCS/QSP/SAMP (AIR)	Sample ID No	:	WCS1023A37B
Environmental Condition	:	Clear Weather	Date of Receiving	:	21.10.2023
Sample Collected by	1	WCS Laboratory	Quantity of Sample	:	1 No.
Date of Testing	24	21.10.2023 to 25.10.20232	Sample Condition	:	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	62.5	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	μg/m <sup>3</sup>	34,4	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	μg/m <sup>3</sup>	6.0	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	µg/m³	19.1	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	152.2	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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### TEST REPORT

Report No.	:	WCS231020C	Issue Date	1	26.10.2023
NABL ULR No.	4	TC1122523000000181F			
Name of the Client	14	National Aluminium Company L	imited		
Address		Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	4	Near Weigh Bridge			
Sample Description	1	Ambient Air Quality Monitoring	Date of Sampling	12	19.10.2023
Sampling Plan & Method	82	WCS/QSP/SAMP (AIR)	Sample ID No	1	WCS1023A37C
Environmental Condition	1	Clear Weather	Date of Receiving	:	21.10.2023
Sample Collected by	:	WCS Laboratory	Quantity of Sample	:	1 No.
Date of Testing	3	21,10,2023 to 25,10,20232	Sample Condition	:	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m <sup>3</sup>	77.3	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	µg/m³	46.7	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	6.4	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m <sup>3</sup>	20.5	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	190.0	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651



### TEST REPORT

Report No.	4	WCS231020D	Issue Date	:	26.10.2023
NABL ULR No.	3	TC1122523000000181F			
Name of the Client		National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex			
		Angul-759145, Odisha			
Sampling Location	4	Near Settling Pond			
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	1	19.10.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No	1	WCS1023A37D
Environmental Condition		Clear Weather	Date of Receiving	1	21.10.2023
Sample Collected by	4	WCS Laboratory	Quantity of Sample	-	1 No.
Date of Testing	:	21.10.2023 to 25.10.20232	Sample Condition		Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	65.9	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	µg/m³	40.2	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	μg/m³	5.9	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	μg/m <sup>3</sup>	21.3	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	μg/m <sup>3</sup>	168.5	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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WCS/LQR/59	TEST REPOR	а		TC-11225
Report No.	: WCS231021	Issue Date	:	26.10.2023
NABL ULR No.	: TC1122523000000181F			
Name of the Client	: National Aluminium Compar	v Limited		
Address	: Coal Mine Division Angul-759145, Odisha			
Month of Sampling	: October- 2023	Date of Receiving	:	21.10.2023
Sample Description	: Ambient Noise	Quantity of Sample	:	04
Sampling Plan & Method	: WCS/QSP/SAMP (NOISE)	Sample Condition	10	Good
Sample Collected by	: WCS Laboratory	Date of Analysis		25.10.2023

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS1023N04A	Gopiballavpur Village	19.10.2023	49.7	39.0	Clear Weather
WCS1023N04B	Near Settling Pond	19.10.2023	62.8	42.5	Clear Weather
WCS1023N04C	Near Town ship	19.10.2023	61.7	41.3	Clear Weather
WCS1023N04D	Near Weigh Bridge	19.10.2023	64.8	67.0	Clear Weather
Tes	t Method	IS 9989	: 1981		

Noise Standard in dB(A) Leq as per CPCB							
Category of Area	Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Leq (10.00 Pm to 6.00 Am)					
Industrial Area	75	70					
Commercial Area	65	55					
Residential Area	55	. 45					
Sensitive Area	50	40					

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ENVIRONMENTAL MONITORING REPORT FOR THE MINTH OF NOVEMBER-2023



# NATIONAL ALUMINIUM COMPANY LIMITED Coal Mine Division Angul-759145, Odisha



## My World Consultancy Services Private Limited

Plot No. 766, Telengapentha, Cuttack, Odisha 754001





### WCS/LQR/57

### TEST REPORT

Report No.	:	WCS231108A	Issue Date		08.11.2023
NABL ULR No.	1	TC1122523000000189F			
Name of the Client	1	National Aluminium Company L	imited		
Address	:	Coal Mine Division			
		Angul-759145, Odisha			
Sampling Location		Gopiballavpur Village (Buffer Zo	one)		
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	:	03.11.2023
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)	Sample ID No	5	WCS1123A01A
Environmental Condition	2	Clear weather	Date of Receiving	÷	06.11.2023
Sample Collected by	:	WCS Laboratory	Quantity of Sample	1	1 No.
Date of Testing	2	06.11.2023 to 08.11.2023	Sample Condition	E	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	56.4	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	µg/m <sup>3</sup>	33.7	60 (As per NAAQ 2009)	1S-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	$\mu g/m^3$	5.4	80 (As per NAAQ 2009)	1S-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m <sup>3</sup>	16.5	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	132.2	500 (As per CTO No-2938)	1S-5182 (Part-4) 1999 RA 2019

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### WCS/LQR/57

### TEST REPORT

Report No. NABL ULR No.	:	WCS231108B TC1122523000000189F	Issue Date		08.11.2023
Name of the Client	:	National Aluminium Company L	imited		
Address	ť	Coal Mine Division Angul-759145, Odisha			
Sampling Location	1	Colony Area (Buffer Zone)			
Sample Description	34	Ambient Air Quality Monitoring	Date of Sampling	23	03.11.2023
Sampling Plan & Method		WCS/QSP/SAMP (AIR)	Sample ID No	1	WCS1123A01B
Environmental Condition	1	Clear weather	Date of Receiving	1	06.11.2023
Sample Collected by	4	WCS Laboratory	Quantity of Sample	:	1 No.
Date of Testing	1	06.11.2023 to 08.11.2023	Sample Condition	:	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	66.1	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	$\mu g/m^3$	37.1	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	µg/m³	5.8	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	18.0	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	165.4	500 (As per CTO No-2938)	1S-5182 (Part-4) 1999 RA 2019

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(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)

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### WCS/LQR/57

### TEST REPORT

Report No.	1	WCS231108C	Issue Date		08.11.2023
NABL ULR No.	- E	TC1122523000000189F			
Name of the Client	:	National Aluminium Company L	imited		
Address	10	Coal Mine Division Angul-759145, Odisha			
Sampling Location	4	Near Weigh Bridge (Core Zone)			
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	:	03.11.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No	:	WCS1123A01C
Environmental Condition		Clear weather	Date of Receiving	:	06.11.2023
Sample Collected by	:	WCS Laboratory	Quantity of Sample	:	1 No.
Date of Testing	1	06.11.2023 to 08.11.2023	Sample Condition	1	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	μg/m <sup>3</sup>	72.8	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM23)	μg/m <sup>3</sup>	45.8	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	μg/m <sup>3</sup>	6.2	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	μg/m³	20.2	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	μg/m <sup>3</sup>	210	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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(Mr. Bijaya Kumar Chahataray)

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### TEST REPORT

Report No.	:	WCS231108D	Issue Date		08.11.2023
NABL ULR No.	:	TC1122523000000189F			
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Coal Mine Division Angul-759145, Odisha			
Sampling Location	:	Near Settling Pond (Core Zone)			
Sample Description	10	Ambient Air Quality Monitoring	Date of Sampling	3	03.11.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No		WCS1123A01D
Environmental Condition	:	Clear weather	Date of Receiving	:	06.11.2023
Sample Collected by	:	WCS Laboratory	Quantity of Sample	:	1 No.
Date of Testing	1	06.11.2023 to 08.11.2023	Sample Condition	•	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PMio)	µg/m³	66	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM23)	$\mu g/m^3$	41.2	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	6.0	80 (As per NAAQ 2009)	1S-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	18.8	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	171.5	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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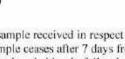




Page 4 of 4

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(Mr. Pradeept Mohapatra)







WCS/LQR/57

### TEST REPORT

Report No.	3	WCS231116A	Issue Date	:	27.11.2023
NABL ULR No.	4	TC1122523000000197F			
Name of the Client	4	National Aluminium Company L	imited		
Address	4	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	Gopiballavpur Village (Buffer Zo	one)		
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	:	17.11.2023
Sampling Plan & Method	12	WCS/QSP/SAMP (AIR)	Sample ID No	2	WCS1123A08A
Environmental Condition	:	Clear Weather	Date of Receiving	:	20.11.2023
Sample Collected by	:	WCS Laboratory	Quantity of Sample	1	1 No.
Date of Testing	:	20.11.2023 to 24.11.2023	Sample Condition	12	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	58.8	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2s)	µg/m³	34.9	60 (As per NAAQ 2009)	1S-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	6.2	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	µg/m <sup>3</sup>	17	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	135.6	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Bhachatarag Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory

(Mr. Pradeept Mohapatra)

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### TEST REPORT

WCS/LQR/57

Report No.	:	WCS231116B	Issue Date	1	27.11.2023
NABL ULR No.	S\$	TC1122523000000197F	2 - 2 - 2		
Name of the Client		National Aluminium Company L	imited		
Address	4	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	1	Colony Area (Buffer Zone)			
Sample Description	12	Ambient Air Quality Monitoring	Date of Sampling	1	17.11.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No	1	WCS1123A08B
Environmental Condition	*	Clear Weather	Date of Receiving	*	20.11.2023
Sample Collected by	4	WCS Laboratory	Quantity of Sample	1	1 No.
Date of Testing	1	20.11.2023 to 24.11.2023	Sample Condition	*	Good

Parameter	Unit	Result	. Standard	Test Method
Respirable Suspended Particulate Matter (PM <sub>10</sub> )	µg/m³	65.2	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2 s)	µg/m³	39.9	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	µg/m³	5,4	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	18.4	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	162.8	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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(Mr. Bijaya Kumar Chahataray)

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### WCS/LQR/57

### TEST REPORT

Report No.	3	WCS231116C	Issue Date	:	27.11.2023
NABL ULR No.	4	TC1122523000000197F			
Name of the Client	3	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	1	Near Weigh Bridge (Core Zone)			
Sample Description	1	Ambient Air Quality Monitoring	Date of Sampling	1	17.11.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No	2	WCS1123A08C
Environmental Condition	:	Clear Weather	Date of Receiving	:	20.11.2023
Sample Collected by	:	WCS Laboratory	Quantity of Sample	:	1 No.
Date of Testing	:	20.11.2023 to 24.11.2023	Sample Condition	t.	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	μg/m <sup>3</sup>	74.6	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM <sub>2.8</sub> )	μg/m³	48.2	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	μg/m <sup>1</sup>	6.8	80 (As per NAAQ 2009)	1S-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	μg/m <sup>3</sup>	21.4	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	μg/m <sup>3</sup>	245	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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WCS/LQR/57

Date of Testing

MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043N1ZE CIN: U725010R2010PTC011651



### TEST REPORT

Report No.	:	WCS231116D	Issue Date	5	27.11.2023
NABL ULR No.	1	TC1122523000000197F			
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	40	Near Settling Pond (Core Zone)			
Sample Description	1	Ambient Air Quality Monitoring	Date of Sampling	10	17.11.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No	:	WCS1123A08D
Environmental Condition	:	Clear Weather	Date of Receiving	5	20.11.2023
Sample Collected by	4	WCS Laboratory	Quantity of Sample		1 No.

20.11.2023 to 24.11.2023

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM <sub>10</sub> )	µg/m³	66	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	µg/m³	44.2	60 (As per NAAQ 2009)	1S-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	6.6	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	19	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	184.4	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Reviewed by

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(Mr. Bijaya Kumar Chahataray)

(Mr. Pradeept Mohapatra)

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Sample Condition

: Good

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WCS/LQR/57

### TEST REPORT

Report No.		WCS231110	Issue Date		08.11.2023
NABL ULR No.	:	TC1122523000000191F			
Name of the Client	12	National Aluminium Company L	imited		
Address		Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sample Description	3	Fugitive Emission (Core Zone)			
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)			
Environmental Condition	125	Clear Weather	Date of Receiving	1	06.11.2023
Sample Collected by	4	WCS Laboratory	Quantity of Sample	:	4 No.
Date of Testing	1	07.11.2023	Sample Condition		Good

SI. No.	Sample ID No	Location	Date of Sampling	Suspended Particulate Matter (SPM)	Unit
1	WCS1123A03A	Haul Road	04.11.2023	313	μg/m³
2	WCS1123A03B	OB Dump	04.11.2023	176	μg/m³
3	WCS1123A03C	Loading Point	04.11.2023	292	μg/m <sup>3</sup>
4	WCS1123A03D	Blasting Area	04.11.2023	268	µg/m³
	Standard :	500	µg/m³		
	Т	IS-5182 (Part-4) 1999	9 RA 2019		

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### WCS/LQR/99

### TEST REPORT

Report No.	:	WCS231110A	Issue Date	:	08.11.2023
NABL ULR No.	82	TC1122523000000191F			
Name of the Client	3	National Aluminium Compa	iny Limited		
Address	4	Smelter & Power (S&P) Com Angul-759145, Odisha	plex		
Sample Description	4	Personal Sampling Analysis	(Core Zone)		
Sampling Plan & Method	4	WCS/QSP/SAMP (AIR)			
Environmental Condition	1	Clear Weather	Date of Receiving	1	06.11.2023
Sample Collected by	1	WCS Laboratory	Quantity of Sample	R.	4 No.
Date of Testing	32	07.11.2023	Sample Condition	1	Good

SL No.	Sample ID No	Location	Date of Sampling	Respirable Particulate Matter (RPM)	Unit
1	WCS1123A04A	Haul Road	04.11.2023	1.04	mg/m <sup>3</sup>
2	WCS1123A04B	OB Dump	04.11.2023	0.59	mg/m <sup>3</sup>
3	WCS1123A04C	Loading Point 04.11.2023	0.97	mg/m <sup>3</sup>	
4	WCS1123A04D	Blasting Area	04.11.2023	0.89	mg/m <sup>3</sup>
Per	missible Limit as per D Dhanbad, Da	3.0	mg/m <sup>3</sup>		
	Te	NIOS-600-15th Aug	ust, 1994		

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World Consultancy Services	MY WORLD CONSULTANC	Y SERVICES PRIVATE (TESTING LABOR GST NO: 21AADCT40 CIN: U725010R2010PT	ATORY) 43NIZE
WCS/LQR/59	TEST REPOR	т	TC-11225
Report No.	: WCS231109	Issue Date	: 08.11.2023
NABL ULR No.	: TC1122523000000190F		
Name of the Client	: National Aluminium Compan	y Limited	
Address	: Coal Mine Division		
	Angul-759145, Odisha		
Month of Sampling	: November- 2023	Date of Receiving	: 06.11.2023
Sample Description	: Ambient Noise	Quantity of Sample	: 04
Sampling Plan & Method	: WCS/QSP/SAMP (NOISE)	Sample Condition	: Good
Sample Collected by	: WCS Laboratory	Date of Analysis	: 07.11.2023

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS1123N01A	Gopiballavpur Village (Buffer Zone)	03.11.2023	50.1	38.8	Clear Weather
WCS1123N01B	Near Settling Pond (Core Zone)	03.11.2023	63.0	41.5	Clear Weather
WCS1123N01C	Colony Area (Buffer Zone)	03.11.2023	62.5	42.0	Clear Weather
WCS1123N01D	Near Weigh Bridge (Core Zone)	03.11.2023	63.6	65.2	Clear Weather
Tes	t Method	IS 9989	: 1981		

Noise Standard in dB(A) Leq as per CPCB					
Category of Area	Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Leq (10.00 Pm to 6.00 Am)			
Industrial Area	75	70			
Commercial Area	65	55			
Residential Area	55	45			
Sensitive Area	50	40			
1 1					

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WORLD Services	MY WORLD CONSUL	TANCY SERVICES PRIVATE (TESTING LABOR GST NO: 21AADCT40 CIN: U725010R2010PT	ATORY) 043NIZE
WCS/LQR/59	TEST R	EPORT	TC-11225
Report No.	: WCS231117	Issue Date	: 27.11.2023
NABL ULR No.	: TC1122523000000198F		
Name of the Client	: National Aluminium Co	ompany Limited	
Address	: Coal Mine Division Angul-759145, Odisha	odinise nu komenini kalu k nintrowek	
Month of Sampling	: November- 2023	Date of Receiving	: 20.11.2023
Sample Description	: Ambient Noise	Quantity of Sample	
Sampling Plan & Method	: WCS/QSP/SAMP (NOIS		: Good
Sample Collected by	: WCS Laboratory	Date of Analysis	: 21.11.2023

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS1123N02A	Gopiballavpur Village (Buffer Zone)	17.11.2023	52.6	39,4	Clear Weather
WCS1123N02B	Near Settling Pond (Core Zone)	17.11.2023	66.2	43.6	Clear Weather
WCS1123N02C	Colony Area (Buffer Zone)	17.11.2023	62.4	44.1	Clear Weather
WCS1123N02D	Near Weigh Bridge (Core Zone)	17.11.2023	66.8	68.5	Clear Weather
Tes	t Method	IS 9989	: 1981		

Noise Standard in dB(A) Leq as per CPCB					
Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Leq (10.00 Pm to 6.00 Am)				
75	70				
65	55				
55	45				
50	40				
	Day Time dB(A) Leq (6.00 Am to 10.00 Pm) 75 65 55				

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Wo	NCS rld Consultancy Services	MY WORL		ANCY SERVICES PRIVATE (TESTING LABO GST NO: 21AADCT4 CIN: U725010R2010P	RATORY) 1043NIZE TC011651	
D	WCS/LQR/60	Weepplul		EST REPORT	TC-11225	
Report No.       : WCS231115A         NABL ULR No.       : TC1122523000000196F         Name of the Client       : National Aluminium Company I         Address       : Smelter & Power (S&P) Complex         Angul-759145, Odisha       : Mate No.			omplex	: 27.11.2023		
Samp Samp Envir Samp	bling Location : ble Description : bling Plan & Method : ronmental Condition : ble Collected by :	Ground Wat WCS/QSP/S Temperature Weather WCS Labor	ter SAMP (WATE 29 °C, Clear atory	Sample ID No Quantity of Sample	: 04.11.2023 : 06.11.2023 : WCS1123W02A : 1 Ltr	
	of Testing :	06.11.2023	to 17.11.2023	Sample Condition	: Good	
SL No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods	
1	Colour	Hazen	3	Max, 5	IS 3025 ( Part-4): 2021	
2	Odour	-	Agreable	Agreeable	IS 3025 ( Part-5): 2018	
3	pH Value	-	5.762	6.5-8.5	IS 3025 ( Part-11): 2022	
4	Taste Threshold	-	Agreable	Agreeable	IS 3025 ( Part-7); 2017	
5	Turbidity	NTU	0.3	1	IS 3025 ( Part-10 ): 1984 RA 2017	
6	Total Dissolved Solid as TDS	mg/l	150	500	IS 3025 ( Part-16): 1984 RA 2017	
7	Ammonia as Total ammonia-N	mg/l	0.08	0.5	IS 3025 ( Part-34): 1988 RA 2019	
8	Chloride as Cl	mg/l	22.49	250	IS 3025( Part-32): 1988 RA 2019	
9	Fluoride as F	mg/l	< 0.02	1.0	APHA 23 <sup>ad</sup> Ed. (4500-F-D): 2017	
10	Iron as Fe	mg/l	0.15	1.0	IS 3025 (Part -53): 2003 RA 2019	
н	Total Hardness as CaCO <sub>3</sub>	mg/l	30	200	IS 3025 ( Part-21): 2009 RA 2019	
12	Calcium as Ca	mg/l	8.02	75	IS 3025 ( Part-40): 1991 RA 2019	
13	Magnesium as Mg	mg/l	2,43	30	APHA 23sl Ed. (3500-Mg-B): 2017	
14	Nitrate as NO3	mg/l	12.1	45	APHA 23 <sup>rd</sup> Ed. (4500-NO <sub>2</sub> -B): 2017	
15	Sulphate as SO <sub>4</sub>	mg/l	2.72	200	IS 3025 ( Part-24 Sec 1):2022	
16	Total Alkalinity as CaCO <sub>3</sub>	mg/l	15	200	IS 3025 ( Part-23): 1986 RA 2019	
17	Total Chromium as Cr	mg/l	<0.02	0.05	IS 3025 ( Part-52) : 2003 RA 2019	
18	Potassium as K	mg/i	4.8	-	IS 3025 (Part-45): 1993 RA 2019	
19	Sodium as Na	mg/l	6.1		18 3025 ( Part-45) : 1993 RA 2019	
20	Total Suspended Solid as TSS	mg/l	<5		IS 3025 ( Part-17): 2022	
21	E.Coli	MPN/ 100 ml	< <b>I</b>	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019	
22	Faecal Coliform	MPN/ 100 ml	<1		1S 1622 : 1981 RA 2019	
23	Total Coliform	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	18 1622 : 1981 RA 2019	

Bhachasta say Reviewed by

Authorized Signatory for Microbiology (Miss. Laxmi Sahoo)

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Authorized Signatory for Chemical (Mr. Pradeept Mohapatra)

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WCS/LQR/60

MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO. 21AADCT4043NIZE CIN: U725010R2010PTC011651

## TEST REPORT

Report No.	9	WCS231115A	Issue Date	:	27.11.2023
Name of the Client	्य	National Aluminium Company L	imited		
Address	4	Smelter & Power (S&P) Complex			
		Angul-759145, Odisha			
Sampling Location	1	Colony Area Bore Well No-MAF	MT6 (Buffer Zone)		
Sample Description	1	Ground Water	Date of Sampling	:	04.11.2023
Sampling Plan & Method	8 <b>2</b>	WCS/QSP/SAMP (WATER)	Date of Receiving	23	06.11.2023
Environmental Condition	:	Temperature 29 °C, Clear Weather	Sample ID No	:	WCS1123W02A
Sample Collected by	4	WCS Laboratory	Quantity of Sample	1	1 Ltr
Date of Testing	1	06.11.2023 to 17.11.2023	Sample Condition		Good

Sl. No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	<0.02	0.03	IS 3025 (Part 55) : 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	<0.02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/l	<0.1	0,7	Annex F of IS 13428* or IS 15302
27	Boron as B	mg/l	< 0.1	0.5	IS 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	<0.02	4.0	IS 3025 (Part 26): 2021* or APHA 4500-CI G
29	Copper as Cu	mg/l	<0.01	0.05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	<0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of IS 3025 (Part 39):2021
32	Phenolic compounds as C <sub>0</sub> H <sub>5</sub> OH	mg/l	<0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/l	<0.001	0.01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	<0.02	0,1	Annex J of IS 13428
35	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zine as Zn	mg/l	< 0.05	5	IS 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	< 0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/1	<0.01	0.05	IS 3025 (Part 27):1986 RAA 2019
39	Lead as Pb	mg/l	<0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	<0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	<0.02	0.07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	<0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mg/l	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	< 0.001	0.01	IS 3025 (Part 37):2022

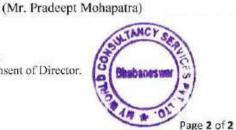
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Wo	rld Consultancy Services			CIN: U725010R2010P	TCO11651
	WCS/LQR/60		<u>T</u>	EST REPORT	TC-11225
AAB Addr Addr Samp Samp Covid	pling Location : ple Description : pling Plan & Method : ronmental Condition : ple Collected by :	National Al Smelter & F Angul-7591 Colony Are Ground Wa WCS/QSP/S Temperature Weather WCS Labor	000000196F luminium Con Power (S&P) Co 45, Odisha ea Bore Well N ter SAMP (WATE a 29 °C, Clear atory	o-MAFMT7 (Buffer Zone) Date of Sampling R) Date of Receiving Sample ID No Quantity of Sample	: 04.11.2023 : 06.11.2023 : WCS1123W02B : 1 Ltr
Date SL	of Testing :		to 17.11.2023	Sample Condition Requirement as per IS	: Good
No.	Parameter	Unit	Result	10500:2012 Reaffirmed 2018	Test Methods
1	Colour	Hazen	4	Max, 5	IS 3025 ( Part-4): 2021
2	Odour		Agreeable	Agreeable	IS 3025 ( Part-5): 2018
3	pH Value		5.864	6.5-8.5	IS 3025 ( Part-11): 2022
4	Taste Threshold	(4+)	Agreeable	Agreeable	IS 3025 ( Part-7): 2017
5	Turbidity	NTU	0.6	1	IS 3025 (Part-10): 1984 RA 2017
6	Total Dissolved Solid as TDS	mg/l	142	500	IS 3025 ( Part-16): 1984 RA 2017
7	Ammonia as Total ammonia-N	mg/l	0.06	0.5	IS 3025 ( Part-34): 1988 RA 2019
8	Chloride as Cl	mg/l	22.49	250	IS 3025( Part-32): 1988 RA 2019
9	Fluoride as F	mg/l	<0.02	1.0	APHA 23 <sup>rd</sup> Ed, (4500-F-D): 2017
10	fron as Fe	mg/l	0.14	0.1	IS 3025 (Part -53): 2003 RA 2019
11	Total Hardness as CaCO <sub>3</sub>	mg/l	24	200	IS 3025 (Part-21): 2009 RA 2019
12	Calcium as Ca	mg/l	6.41	75	IS 3025 ( Part-40): 1991 RA 2019
13	Magnesium as Mg	mg/l	1.94	30	APHA 23 <sup>rd</sup> Ed. (3500-Mg-B): 2017
14	Nitrate as NO <sub>3</sub>	mg/l	9.26	45	APHA 23 <sup>sd</sup> Ed. (4500-NO <sub>3</sub> -B): 2017
15	Sulphate as SO <sub>4</sub>	mg/l	2.2	200	IS 3025 ( Part-24 Sec 1):2022
16	Total Alkalinity as CaCO3	mg/l	25	200	IS 3025 ( Part-23): 1986 RA 2019
17	Total Chromium as Cr	mg/l	<0.02	0.05	IS 3025 (Part-52); 2003 RA 2019
18	Potassium as K	mg/l	4.9	*	IS 3025 ( Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	6.5	**	IS 3025 (Part-45): 1993 RA 2019
20	Total Suspended Solid as TSS	mg/l	5		IS 3025 (Part-17): 2022
21	E.Coli	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019
22	Faecal Coliform	MPN/ 100 ml	<1		IS 1622 : 1981 RA 2019
23	Total Coliform	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	1S 1622 : 1981 RA 2019
	O Liability for return	Autho o the sample re of sample ceas be reproduced to	(Miss. Laxin ceived in respect ses after 7 days fr either in full or in	for Microbiology ii Sahoo) to the Parameters tested. om the date of Test certificate. part, without prior written conse world.co.in	Authorized Signatory for Chen (Mr. Pradeept Mohapatra) ent of Director.

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## MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 2IAADCT4043NIZE CIN: U725010R2010PTC011651

## TEST REPORT

Report No.	2	WCS231115B	Issue Date	:	27.11.2023
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	1	Colony Area Bore Well No-MAF	MT7 (Buffer Zone)		
Sample Description	:	Ground Water	Date of Sampling		04.11.2023
Sampling Plan & Method	*	WCS/QSP/SAMP (WATER)	Date of Receiving		06.11.2023
Environmental Condition	340	Temperature 29 ºC, Clear Weather	Sample ID No	2	WCS1123W02B
Sample Collected by	:	WCS Laboratory	Quantity of Sample	1	1 Ltr
Date of Testing	÷	06.11.2023 to 17.11.2023	Sample Condition	:	Good

SI. No.	Parameter	Unit	Result	Requirement as per 1S 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	<0.02	0.03	IS 3025 (Part 55) : 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	< 0.02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/l	<0.1	0.7	Annex F of 1S 13428* or IS 15302
27	Boron as B	mg/l	<0.1	0,5	IS 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	< 0.02	4,0	IS 3025 (Part 26): 2021* or APHA 4500-CI G
29	Copper as Cu	mg/l	<0.01	0.05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	<0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of IS 3025 (Part 39):2021
32	Phenolic compounds as C <sub>8</sub> H <sub>8</sub> OH	mg/l	<0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/l	<0.001	0.01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	<0.02	0.1	Annex J of IS 13428
35	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zinc as Zn	mg/l	<0.05	5	IS 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	<0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	<0.01	0.05	IS 3025 (Part 27):1986 RAA 2019
39	Lead as Pb	mg/l	<0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	<0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	< 0.02	0.07	1S 3025 (Part 2)
42	Nickel as Ni	mg/l	<0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mg/l	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	< 0.001	0.01	IS 3025 (Part 37):2022

adatesay Reviewed by

(Mr. Bijaya Kumar Chahataray)

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(Mr. Pradeept Mohapatra)

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Wo	rld Consultancy Services			GST NO: 21AADCT4 CIN: U725010R2010P	
	WCS/LQR/60		T	EST REPORT	TC-11225
NAB Nam Addr Samp Samp Samp Samp	ort No. : BL ULR No. : e of the Client : ress : bling Location : ole Description : oling Plan & Method : ronmental Condition : ble Collected by : of Testing :	National Al Smelter & P Angul-7591 Dhobamalij Ground Wat WCS/QSP/S Temperature Weather WCS Labor	000000196F luminium Com ower (S&P) Co 45, Odisha ya Village, Du ter SAMP (WATE) 2 29 °C, Clear	g well (Buffer Zone) Date of Sampling	: 27.11.2023 : 04.11.2023 : 06.11.2023 : WCS1123W02C : 1 Ltr : Good
SI. No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
1	Colour	Hazen	3	Max, 5	IS 3025 ( Part-4): 2021
2	Odour	24	Agreeable	Agreeable	IS 3025 ( Part-5): 2018
3	pH Value		5.864	6.5-8.5	IS 3025 ( Part-11): 2022
4	Taste Threshold		Agreeable	Agreeable	18 3025 ( Part-7): 2017
5	Turbidity	NTU	0.3	1	IS 3025 ( Part-10 ): 1984 RA 2017
6	Total Dissolved Solid as TDS	mg/l	164	500	IS 3025 ( Part-16): 1984 RA 2017
7	Ammonia as Total ammonia-N	mg/l	0.07	0.5	IS 3025 ( Part-34): 1988 RA 2019
8	Chloride as Cl	mg/l	23.99	250	IS 3025( Part-32): 1988 RA 2019
9	Fluoride as F	mg/l	<0.02	1.0	APHA 23rd Ed. (4500-F-D): 2017
10	Iron as Fe	mg/l	0.11	1.0	IS 3025 (Part -53): 2003 RA 2019
11	Total Hardness as CaCOs	mg/l	28	200	IS 3025 (Part-21): 2009 RA 2019
12	Calcium as Ca	mg/l	8.82	75	IS 3025 ( Part-40): 1991 RA 2019
13	Magnesium as Mg	mg/l	1.46	30	APHA 23 <sup>nl</sup> Ed. (3500-Mg-B): 2017
14	Nitrate as NO <sub>3</sub>	mg/l	6.30	45	APHA 23 <sup>st</sup> Ed. (4500-NO <sub>3</sub> -B): 2017
15	Sulphate as SO <sub>4</sub>	mg/l	2.3	200	IS 3025 ( Part-24 Sec 1):2022
16	Total Alkalinity as CaCO2	mg/l	30	200	IS 3025 (Part-23): 1986 RA 2019
17	Total Chromium as Cr	mg/l	<0.02	0.05	IS 3025 (Part-52): 2003 RA 2019
18	Potassium as K	mg/t	5.1		IS 3025 (Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	7.2		IS 3025 (Part-45): 1993 RA 2019
20	Total Suspended Solid as TSS	mg/l	<5		IS 3025 ( Part-17): 2022
21	E.Coli	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019
22	Faecal Coliform	MPN/ 100 ml	<1		1S 1622 : 1981 RA 2019
23	Total Coliform	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019
	Liability for return	o the sample re of sample ceas be reproduced e	(Miss. Laxm ceived in respect es after 7 days fr sither in full or in	ii Sahoo) to the Parameters tested, om the date of Test certificate. part, without prior written conse eworld.co.in	Authorized Signatory for Chen (Mr. Pradeept Mohapatra) ent of Director.

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World Consultancy Services	MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043N1ZE CIN: U725010R2010PTC011651
WCS/LQR/60	TEST REPORT

Report No.	13	WCS231115C	Issue Date	1	27.11.2023
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	Dhobamaliya Village, Dug Well	(Buffer Zone)		
Sample Description	:	Ground Water	Date of Sampling	•	04.11.2023
Sampling Plan & Method	:	WCS/QSP/SAMP (WATER)	Date of Receiving	:	06.11.2023
Environmental Condition		Temperature 29 °C, Clear Weather	Sample ID No	1	WCS1123W02C
Sample Collected by	:	WCS Laboratory	Quantity of Sample	:	1 Ltr
Date of Testing	:	06.11.2023 to 17.11.2023	Sample Condition	:	Good

SI. No.	Parameter	Unit	Result	Requirement as per 1S 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	<0.02	0.03	1S 3025 (Part 55) : 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	<0,02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/l	<0.1	0.7	Annex F of 15 13428* or 15 15302
27	Boron as B	mg/l	<0.1	0.5	1S 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	<0.02	4.0	1S 3025 (Part 26): 2021* or APHA 4500-Cl G
29	Copper as Cu	mg/l	<0.01	0.05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	<0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0,5	1.0	Clause 6 of IS 3025 (Part 39):2021
32	Phenolic compounds as CoH3OH	mg/l	< 0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/l	<0.001	0.01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	<0.02	0.1	Annex J of 1S 13428
35	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zinc as Zn	mg/l	< 0.05	5	IS 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	<0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	< 0.01	0.05	IS 3025 (Part 27):1986 RAA 2019
39	Lead as Pb	mg/l	<0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	<0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	<0.02	0.07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	< 0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mg/l	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	<0.001	0.01	IS 3025 (Part 37):2022

andrag Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory

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Page 2 of 2

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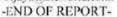
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	WCS/LQR/60		T	EST REPORT	TC-11225
AB lam ddr		National A Smelter & F Angul-7591	000000196F luminium Con Power (S&P) Co 45, Odisha		: 27.11.2023
amp amp nvii amp	bling Location : ble Description : bling Plan & Method : ronmental Condition : ble Collected by : of Testing :	Ground Wa WCS/QSP/S Temperature Weather WCS Labor 06.11.2023	ter SAMP (WATE) e 29 °C, Clear atory to 17.11.2023	Well (Buffer zone) Date of Sampling R) Date of Receiving Sample ID No Quantity of Sample Sample Condition Requirement as per IS	: Good
No.	Parameter	Unit	Result	10500:2012 Reaffirmed 2018	Test Methods
1	Colour	Hazen	4	Max, 5	IS 3025 ( Part-4): 2021
2	Odour		Agreeable	Agreeable	IS 3025 ( Part-5): 2018
3	pH Value		7,489	6.5-8.5	IS 3025 (Part-11): 2022
4	Taste Threshold		Agreeable	Agreeable	IS 3025 ( Part-7): 2017
5	Turbidity	NTU	0.9	1	IS 3025 ( Part-10 ): 1984 RA 2017
6	Total Dissolved Solid as TDS	mg/l	270	500	IS 3025 ( Part-16): 1984 RA 2017
7	Ammonia as Total ammonia-N	mg/l	0.06	0.5	IS 3025 (Part-34): 1988 RA 2019
8	Chloride as Cl	mg/l	55.98	250	IS 3025( Part-32); 1988 RA 2019
9	Fluoride as F	mg/l	<0.02	1.0	APHA 23 <sup>rd</sup> Ed. (4500-E-D): 2017
10	Iron as Fe	mg/l	0.08	1.0	IS 3025 (Part -53): 2003 RA 2019
11	Total Hardness as CaCO <sub>3</sub>	mg/l	46	200	IS 3025 ( Part-21): 2009 RA 2019
12	Calcium as Ca	mg/l	15.23	75	IS 3025 ( Part-40): 1991 RA 2019
13	Magnesium as Mg	mg/l	1.94	30	APHA 23rd Ed. (3500-Mg-B): 2017
14	Nitrate as NO <sub>3</sub>	mg/l	5.43	45	APHA 23 <sup>rd</sup> Ed. (4500-NO3-B): 2017
15	Sulphate as SO <sub>4</sub>	mg/l	2.6	200	IS 3025 ( Part-24 Sec 1):2022
16	Total Alkalinity as CaCO <sub>3</sub>	mg/l	70	200	IS 3025 ( Part-23): 1986 RA 2019
17	Total Chromium as Cr	mg/l	<0.02	0.05	IS 3025 ( Part-52) : 2003 RA 2019
18	Potassium as K	mg/l	4.8		IS 3025 ( Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	6.8		IS 3025 ( Part-45) : 1993 RA 2019
20	Total Suspended Solid as TSS	mg/l	<5	-	IS 3025 ( Part-17): 2022
21	E.Coli	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019
22	Faecal Coliform	MPN/ 100 ml	<1	-	1S 1622 : 1981 RA 2019
23	Total Coliform	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019

Reviewed by (Mr. Bijaya Kumar Chahataray) Authorized Signatory for Microbiology (Miss. Laxmi Sahoo) Authorized Signatory for Chemical (Mr. Pradeept Mohapatra)

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#### WCS/LQR/60

## TEST REPORT

Report No.	10	WCS231115D	Issue Date	2	27.11.2023
Name of the Client		National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	Raijharana Village, Dug Well (Bi	iffer Zone)		
Sample Description	020	Ground Water	Date of Sampling	1	04.11.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (WATER)	Date of Receiving	:	06.11.2023
Environmental Condition	:	Temperature 29 °C, Clear Weather	Sample ID No	:	WCS1123W02D
Sample Collected by	1	WCS Laboratory	Quantity of Sample	:	1 Ltr
Date of Testing	1	06.11.2023 to 17.11.2023	Sample Condition	\$	Good

SI. No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	<0.02	0.03	IS 3025 (Part 55): 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	< 0.02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/l	<0,1	0.7	Annex F of IS 13428* or IS 15302
27	Boron as B	mg/l	<0.1	0.5	IS 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	< 0.02	4.0	IS 3025 (Part 26): 2021* or APHA 4500-Cl G
29	Copper as Cu	mg/l	<0.01	0.05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	<0.05	0,1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of IS 3025 (Part 39):2021
32	Phenolic compounds as C <sub>a</sub> H <sub>2</sub> OH	mg/l	<0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/l	<0.001	0.01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	<0.02	0.1	Annex J of IS 13428
35	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zine as Zn	mg/l	<0.05	5	IS 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	< 0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	<0.01	0,05	IS 3025 (Part 27):1986 RAA 2019
39	Lead as Pb	mg/l	<0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	< 0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	<0.02	0.07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	<0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mg/l	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	<0,001	0.01	IS 3025 (Part 37):2022

rectary Reviewed by

## (Mr. Bijaya Kumar Chahataray)

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Wo	NCS rld Consultancy Services	MY WORL	D CONSULT	ANCY SERVICES PRIVATE (TESTING LABO GST NO: 21AADCT4 CIN: U725010R2010P	RATORY) 4043NIZE
	WCS/LQR/60		I	EST REPORT	TC-11225
NAB Nam Addr Samp Samp Samp Samp	bling Location : ble Description : bling Plan & Method : ronmental Condition :	National A Smelter & F Angul-7591 Gopiballav Ground Wa WCS/QSP/S Temperature Weather	000000196F luminium Con Power (S&P) C 45, Odisha pur Village, D ter SAMP (WATE e 29 °C, Clear	ug Well (Buffer Zone) Date of Sampling	: 27.11.2023 : 04.11.2023 : 06.11.2023 : WCS1123W02E
	of Testing :	WCS Labor		Quantity of Sample	
SI.	Parameter :	Unit	to 17.11.2023 Result	Sample Condition Requirement as per 18	: Good Test Methods
1	Colour	Hazen	4	10500:2012 Reaffirmed 2018 Max, 5	IS 3025 ( Part-4): 2021
2	Odour		Agreeable	Agreeable	1S 3025 (Part-5): 2018
3	pH Value		7,703	6.5-8.5	IS 3025 (Part-11): 2022
4	Taste Threshold		Agreeable	Agreeable	IS 3025 ( Part-7): 2017
5	Turbidity	NTU	0.4	1	IS 3025 (Part-10): 1984 RA 2017
6	Total Dissolved Solid as TDS	mg/l	376	500	IS 3025 (Part-16): 1984 RA 2017
7	Ammonia as Total ammonia-N	mg/l	0.16	0.5	IS 3025 (Part-34): 1988 RA 2019
8	Chloride as Cl	mg/l	55.98	250	IS 3025 (Part-32): 1988 RA 2019
9	Fluoride as F	mg/l	< 0.02	1.0	APHA 23 <sup>rd</sup> Ed. (4500-F-D): 2017
10	Iron as Fe	mg/l	0.24	1.0	1S 3025 (Part -53): 2003 RA 2019
11	Total Hardness as CaCO3	mg/l	96	200	IS 3025 ( Part-21): 2009 RA 2019
12	Calcium as Ca	mg/l	19.24	75	IS 3025 ( Part-40); 1991 RA 2019
13	Magnesium as Mg	mg/l	11.66	30	APHA 23 <sup>rd</sup> Ed. (3500-Mg-B): 2017
14	Nitrate as NO1	mg/l	0.42	45	APHA 23rd Ed. (4500-NOs-B): 201
15	Sulphate as SO <sub>4</sub>	mg/l	4.31	200	IS 3025 ( Part-24 Sec 1):2022
16	Total Alkalinity as CaCO3	mg/I	295	200	IS 3025 ( Part-23): 1986 RA 2019
17	Total Chromium as Cr	mg/l	< 0.02	0.05	IS 3025 ( Part-52) : 2003 RA 2019
18	Potassium as K	mg/l	4.6	-	IS 3025 ( Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	71		IS 3025 ( Part-45) : 1993 RA 2019
20	Total Suspended Solid as TSS	mg/l	<5	(internet)	IS 3025 ( Part-17): 2022
21	E.Coli	MPN/ 100 ml	< 1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019
22	Faecal Coliform	MPN/ 100 ml	< 1		IS 1622 : 1981 RA 2019
2.3	Total Coliform	MPN/ 100 ml	< 1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019

Reviewed by

Authorized Signatory for Microbiology (Miss. Laxmi Sahoo)

Authorized Signatory for Chemical (Mr. Pradeept Mohapatra)

(Mr. Bijaya Kumar Chahataray) N.B.:

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## TEST REPORT

Report No.	020	WCS231115E	Issue Date	:	27.11.2023
Name of the Client	14	National Aluminium Company L	imited		
Address	;	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	4	Gopiballavpur Village, Dug Well	(Buffer Zone)		
Sample Description	1	Ground Water	Date of Sampling	5	04.11.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (WATER)	Date of Receiving	1	06.11.2023
Environmental Condition	-	Temperature 29 °C, Clear Weather	Sample ID No	1	WCS1123W02E
Sample Collected by	:	WCS Laboratory	Quantity of Sample	:	1 Ltr
Date of Testing	4	06.11.2023 to 17.11.2023	Sample Condition	;	Good

SL No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	< 0.02	0.03	IS 3025 (Part 55) : 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	< 0.02	0.2	Annex K of 1S 13428
26	Barium as Ba	mg/l	<0.1	0.7	Annex F of IS 13428* or IS 15302
27	Boron as B	mg/l	<0.1	0.5	IS 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	<0.02	4.0	1S 3025 (Part 26): 2021* or APHA 4500-Cl G
29	Copper as Cu	mg/l	<0.01	0,05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	<0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of 18 3025 (Part 39):2021
32	Phenolic compounds as C <sub>6</sub> H <sub>3</sub> OH	mg/l	<0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/l	<0.001	0.01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	<0.02	0.1	Annex J of IS 13428
35	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zine as Zn	mg/l	<0.05	5	IS 3025 (Part 49): 1994 RA 2019
37	Cadmium as Cd	mg/l	<0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	<0.01	0.05	IS 3025 (Part 27): 1986 RAA 2019
39	Lead as Pb	mg/l	< 0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	< 0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	<0.02	0.07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	< 0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mg/l	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	<0.001	0.01	1S 3025 (Part 37):2022

hahotasay Reviewed by

(Mr. Bijaya Kumar Chahataray)

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WCS/LQR/60

MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651



#### TEST REPORT

	2.0.00		I MULLYNI		
	rt No. : L ULR No. :	WCS23111 TC1122523	5F 000000196F	Issue Date	: 27.11.2023
	e of the Client ;	- 이 가 귀에 여기가 가 귀 것	luminium Com	pany Limited	
Addr	성 (6) 가슴이 제품 20 C C C C C C C C C C C C C C C C C C		ower (S&P) Co		
28	22 - 12 - 12 -	Angul-7591			
	ling Location :		age, Dug Well		
	ble Description : bling Plan & Method :	Ground Wa	ter SAMP (WATEF	<ul> <li>Date of Sampling</li> <li>Date of Receiving</li> </ul>	: 04.11.2023 : 06.11.2023
	ronmental Condition :		e 29 °C, Clear	Sample ID No	<ul> <li>A CONTRACTOR CONTRACTOR AND A CONTRACTOR AND AND A CONTRACTOR AND A CONTRACTOR AND A CONTRACTOR</li></ul>
		Weather	· ···	oumple to the	WCS1123W02F
	e Collected by :	WCS Labor		Quantity of Sample	: I Ltr
	of Testing :	06.11.2023	to 17.11.2023	Sample Condition	: Good
SI. No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
1	Colour	Hazen	1	Max, 5	IS 3025 ( Part-4): 2021
2	Odour	+-	Agreeable	Agreeable	IS 3025 ( Part-5): 2018
3	pH Value		6.824	6.5-8.5	IS 3025 ( Part-11): 2022
4	Taste Threshold		Agreeable	Agreeable	IS 3025 ( Part-7): 2017
5	Turbidity	NTU	0.1	1	IS 3025 ( Part-10 ): 1984 RA 2017
6	Total Dissolved Solid as TDS	mg/l	320	500	IS 3025 ( Part-16): 1984 RA 2017
7	Ammonia as Total ammonia-N	mg/l	0.07	0.5	IS 3025 ( Part-34): 1988 RA 2019
8	Chloride as Cl	mg/l	47.49	250	IS 3025( Part-32): 1988 RA 2019
9	Fluoride as F	mg/t	<0.02	1.0	APHA 23 <sup>40</sup> Ed. (4500-F-D): 2017
10	Iron as Fe	mg/l	0.053	1.0	IS 3025 (Part -53): 2003 RA 2019
П	Total Hardness as CaCO <sub>3</sub>	mg/l	48	200	IS 3025 ( Part-21): 2009 RA 2019
12	Calcium as Ca	mg/l	16.83	75	IS 3025 ( Part-40): 1991 RA 2019
13	Magnesium as Mg	mg/l	1.46	30	APHA 23 <sup>id</sup> Ed. (3500-Mg-B): 2017
14	Nitrate as NO <sub>2</sub>	mg/l	5.61	45	APHA 23 <sup>id</sup> Ed. (4500-NO <sub>3</sub> -B): 201
15	Sulphate as SO <sub>4</sub>	mg/l	2.8	200	1S 3025 ( Part-24 Sec 1) 2022
16	Total Alkalinity as CaCO <sub>3</sub>	mg/l	65	200	1S 3025 ( Part-23): 1986 RA 2019
17	Total Chromium as Cr	mg/l	<0.02	0.05	IS 3025 ( Part-52) : 2003 RA 2019
18	Potassium as K	mg/l	4,7	-	IS 3025 ( Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	6.9		IS 3025 ( Part-45) : 1993 RA 2019
20	Total Suspended Solid as TSS	mg/l	<5	-	IS 3025 ( Part-17): 2022
21	E.Coli	MPN/ 100 mI	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019
22	Faecal Coliform	MPN/ 100 ml	<]		IS 1622 : 1981 RA 2019
23	Total Coliform	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019

Bodala. Reviewed by

Authorized Signatory for Microbiology (Miss. Laxmi Sahoo)

Authorized Signatory for Chemical (Mr. Pradeept Mohapatra)

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(Mr. Bijaya Kumar Chahataray) N.B.:

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#### TEST REPORT

Report No.	ŝ.	WCS231115F	Issue Date		27.11.2023
Name of the Client	1	National Aluminium Company L	imited		
Address	4	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	1	Kosala Village, Dug Well (Buffer	· Zone)		
Sample Description		Ground Water	Date of Sampling	1	04.11.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (WATER)	Date of Receiving	4	06.11.2023
Environmental Condition	1	Temperature 29 °C, Clear Weather	Sample ID No	1	WCS1123W02F
Sample Collected by	:	WCS Laboratory	Quantity of Sample	:	1 Ltr
Date of Testing	1	06.11.2023 to 17.11.2023	Sample Condition	4	Good

SL No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	< 0.02	0.03	IS 3025 (Part 55) : 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	< 0.02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/l	<0.1	0.7	Annex F of IS 13428* or IS 15302
27	Boron as B	mg/l	<0.1	0.5	IS 3025 (Part 57):2021
28	Chloramines as CI2	mg/l	<0.02	4.0	1S 3025 (Part 26); 2021* or APHA 4500-Cl G
29	Copper as Cu	mg/l	<0.01	0.05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	<0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of IS 3025 (Part 39):2021
32	Phenolic compounds as CaH3OH	mg/l	<0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/l	< <b>0</b> .001	0.01	1S 3025 (Part 56):2003 RA 2019 or 1S 15303*
34	Silver as Ag	mg/l	< 0.02	0.1	Annex J of IS 13428
35	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zine as Zn	mg/l	<0.05	5	1S 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	<0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	< 0.01	0.05	IS 3025 (Part 27):1986 RAA 2019
39	Lead as Pb	mg/l	<0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	<0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	< 0.02	0,07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	<0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mg/l	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	<0.001	0.01	IS 3025 (Part 37):2022

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(Mr. Bijaya Kumar Chahataray)

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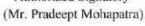
World Consultancy Services		SERVICES PRIVATE (TESTING LABOR SST NO: 21AADCT40 N: U725010R2010PT	2AT	ORY) BNIZE
WCS/LQR/60	TEST REPORT			TC-11225
Report No.	: WCS231114A	Issue Date	1	27.11.2023
NABL ULR No.	: TC1122523000000195F			
Name of the Client	: National Aluminium Company	Limited		
Address	<ul> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> </ul>			
Sampling Location	: Mines Discharge Water (Core Z	one)		
Sample Description	: Surface Water	Date of Sampling	10	04.11.2023
Sampling Plan & Method	: WCS/QSP/SAMP (WATER)	Date of Receiving	13	06.11.2023
Environmental Condition	: Temperature 29 °C, Clear Weathe	r Sample ID No	1	WCS1123W01A
Sample Collected by	: WCS Laboratory	Quantity of Sample	:	1 Ltr
Date of Testing	: 06.11.2023 to 17.11.2023	Sample Condition	10	Good

SI. No.	Parameter	Unit	Result	Permissible Limit as per Consent Order No- 5059/IND-1-CON-6762 Dt:28.03.2023	Test Methods
I.	pH Value		6.85	5.5-9.0	IS 3025 ( Part-11): 2022
2	Total suspended Solid	mg/l	18	100	IS 3025( Part-17)1984 RA 2012
3	Oil &Grease	mg/l	<4	10	APHA 23rd Ed. ( 5520-B): 2017
4	Biochemical Oxygen Demand as BOD	mg/l	3	14 (Art)	IS 3025 ( Part-44): 1993
5	Chemical Oxygen Demand as COD	mg/l	8	250	APHA 23rd Ed. (5220-D): 2017
6	Colour	Hazen	20		IS 3025 ( Part-4): 2021
7	Specific Conductivity	µs/cm	462.5	**	IS 3025 ( Part-14): 2013
8	Turbidity	NTU	85.2		IS 3025 ( Part-10 ): 1984 RA 2017
9	Dissolve Oxygen as DO	mg/l	6		IS 3025 ( Part-38): 1989
10	Total Hardness as CaCO <sub>3</sub>	mg/l	86		APHA 23st Ed. ( 2340-C): 2017
11	Chloride as Cl	mg/l	44,99	10 10 M	IS 3025 ( Part-32): 1988
12	Sulphate as SO4	mg/l	68,1	-	IS 3025 ( Part-24, Sec-1): 2022
13	Nitrate as NO <sub>3</sub>	mg/l	1.44	-	APHA 23 <sup>rd</sup> Ed. ( 4500-NO <sub>3</sub> -B): 2017
14	Calcium as Ca	mg/l	16.03		APHA 23rd Ed. (3500-Ca-B): 2017
15	Magnesium as Mg	mg/l	11.18		APHA 23rd Ed. (3500-Mg-B): 2017
16	Total Dissolved Solid as TDS	mg/l	270		IS 3025 ( Part-16): 1984
17	Total Alkalinity as CaCO <sub>2</sub>	mg/l	135		IS 3025 ( Part-23): 1986 RA 2019
18	Potassium as K	mg/l	22.4	1	IS 3025 ( Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	38.1	<u>419</u> 3	IS 3025 (Part-45): 1993 RA 2019

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WCS/LQR/60		TEST REPORT			TC-11225
Report No.	1	WCS231114B	Issue Date	1	27.11.2023
NABL ULR No.	\$	TC1122523000000195F			
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	12	Seepage Water (Core Zone)			
Sample Description	1	Surface Water	Date of Sampling	4	04.11.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (WATER)	Date of Receiving	1	06.11.2023
Environmental Condition	:	Temperature 29 ºC, Clear Weather	Sample ID No	:	WCS1123W01B
Sample Collected by	:	WCS Laboratory	Quantity of Sample	1	l Ltr
Date of Testing	:	06.11.2023 to 17.11.2023	Sample Condition	:	Good

SI. No.	Parameter	Unit	Result	Permissible Limit as per Consent Order No- 5059/IND-1-CON-6762 Dt:28.03.2023	Test Methods
1	pH Value	447	6.91	5,5-9.0	IS 3025 ( Part-11): 2022
2	Total suspended Solid	тgЛ	20	100	IS 3025( Part-17)1984 RA 2012
3	Oil &Grease	mg/l	<4	10	APHA 23 <sup>rd</sup> Ed. ( 5520-B): 2017
4	Biochemical Oxygen Demand as BOD	mg/l	<2		(S 3025 ( Part-44): 1993
5	Chemical Oxygen Demand as COD	mg/l	4	250	APHA 23rd Ed. (5220-D): 2017
6	Colour	Hazen	15	- 22	IS 3025 ( Part-4): 2021
7	Specific Conductivity	µs/cm	442.3	- C	IS 3025 ( Part-14): 2013
8	Turbidity	NTU	54.6	-	IS 3025 ( Part-10 ): 1984 RA 2017
9	Dissolve Oxygen as DO	mg/l	5.4	-	IS 3025 ( Part-38): 1989
10	Total Hardness as CaCO <sub>1</sub>	mg/l	82	-	APHA 23 <sup>et</sup> Ed. ( 2340-C): 2017
11	Chloride as Cl	mg/l	50.98	-	IS 3025 ( Part-32): 1988
12	Sulphate as SO <sub>4</sub>	mg/l	41.7		IS 3025 ( Part-24, Sec-1): 2022
13	Nitrate as NO <sub>3</sub>	mg/l	<1	(100)	APHA 23 <sup>rd</sup> Ed. ( 4500-NO <sub>2</sub> -B): 2017
14	Calcium as Ca	mg/l	20.84	<u>a</u>	APHA 23rd Ed. (3500-Ca-B): 2017
15	Magnesium as Mg	mg/l	7.29		APHA 23rd Ed. (3500-Mg-B): 2017
16	Total Dissolved Solid as TDS	mg/l	262	H-1	IS 3025 ( Part-16): 1984
17	Total Alkalinity as CaCO3	mg/l	160	H.	IS 3025 ( Part-23): 1986 RA 2019
18	Potassium as K	mg/l	5		IS 3025 ( Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	4.2	<b></b>	IS 3025 (Part-45): 1993 RA 2019

to seu Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)



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WCS/LQR/60	TEST REPORT	
Report No. Name of the Client Address	<ul> <li>WCSL231103</li> <li>National Aluminium Company Limited</li> <li>Smelter &amp; Power (S&amp;P) Complex</li> </ul>	Issue Date : 08.11.2023

		A
Month of Monitoring	1	N
Sample Description		G
Sampling Plan & Method	3	W
Environmental Condition	3	C
Sample Collected by	27	W

Angul-759145, Odisha

: November- 2023 : Ground Water Level

: WCS/QSP/SAMP (WATER LEVEL)

: Clear Weather

: WCS Laboratory

Sample ID No.	Location	Date	Ground water Level
WCS1123WL01	Raijharana (Dug Well) (Buffer Zone)	04.11.2023	0.5 meter
WCS1123WL02	Kosala (Dug Well) (Buffer Zone)	04.11.2023	1.60 meter
WCS1123WL03	Gopiballavpur Village (Dug Well) (Buffer Zone)	04.11.2023	1.73 meter
WCS1123WL04	Dhobamalya Village (Dug Well) (Buffer Zone)	04.11.2023	2.7 meter
WCS1123WL05	Colony Area Bore Well No-MAPM_T6 (Buffer Zone)	04.11.2023	3.38 meter
WCS1123WL06	Colony Area Bore Well No-MAPM_T7 (Buffer Zone)	04.11.2023	2.26 meter

Reviewed by (Mr. Bijaya Kumar Chahataray)

Authorized Signatory

Date of Receiving : 06.11.2023

(Mr. Pradeept Mohapatra)

N.B.;

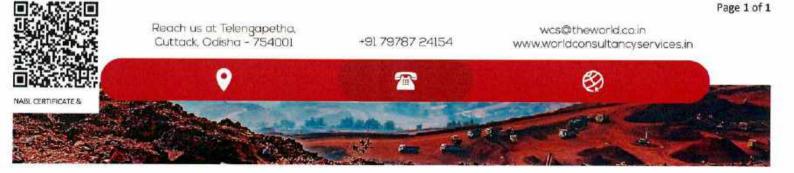
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ENVIRONMENTAL MONITORING REPORT FOR THE MONTH OF DECEMBER-2023



# NATIONAL ALUMINIUM COMPANY LIMITED Coal Mine Division Angul-759145, Odisha



## My World Consultancy Services Private Limited

Plot No. 766, Telengapentha, Cuttack, Odisha 754001





## WCS/LQR/57

### TEST REPORT

Report No.	1	WCS231213A	Issue Date	2	13.12.2023
NABL ULR No.	:	TC1122523000000230F			and a state state of
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Coal Mine Division Angul-759145, Odisha			
Sampling Location		Gopiballavpur Village			
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	1	08,12,2023
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No	:	WCS1223A01A
Environmental Condition	1	Clear weather	Date of Receiving	:	11.12.2023
Sample Collected by	1	WCS Laboratory	Quantity of Sample	:	1 No.
Date of Testing	:	11.12.2023 to 13.12.2023	Sample Condition	:	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	55.2	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2 s)	$\mu g/m^3$	33.2	60 (As per NAAQ 2009)	1S-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	$\mu g/m^3$	5.8	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	µg/m³	16.4	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	122.5	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory

(Mr. Pradeept Mohapatra)

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## WCS/LQR/57

## TEST REPORT

TC-11225

Report No.	3	WCS231213B	Issue Date	3	13.12.2023
NABL ULR No.	:	TC1122523000000230F			
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Coal Mine Division Angul-759145, Odisha			
Sampling Location	:	Colony Area			
Sample Description	4	Ambient Air Quality Monitoring	Date of Sampling		08.12.2023
Sampling Plan & Method	3	WCS/QSP/SAMP (AIR)	Sample ID No	3	WCS1223A01B
Environmental Condition	1	Clear weather	Date of Receiving	:	11.12.2023
Sample Collected by	1	WCS Laboratory	Quantity of Sample		1 No.
Date of Testing	1	11.12.2023 to 13.12.2023	Sample Condition	3	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	63.5	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	µg/m³	35.2	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	µg/m³	5.2	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	µg/m <sup>1</sup>	17.6	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	148.9	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory

(Mr. Pradeept Mohapatra)

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## WCS/LQR/57

## TEST REPORT

Report No.	1	WCS231213C	Issue Date	23	13.12.2023
NABL ULR No.	:	TC1122523000000230F			
Name of the Client	1	National Aluminium Company L	imited		
Address	:	Coal Mine Division Angul-759145, Odisha			
Sampling Location	-1	Near Weigh Bridge			
Sample Description	1	Ambient Air Quality Monitoring	Date of Sampling	12	08.12.2023
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No	:	WCS1223A01C
Environmental Condition	;	Clear weather	Date of Receiving	:	11.12.2023
Sample Collected by	:	WCS Laboratory	Quantity of Sample	1	I No.
Date of Testing	:	11.12.2023 to 13.12.2023	Sample Condition	-	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	μg/m³	70.8	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	μg/m³	42.8	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	5.6	80 (As per NAAQ 2009)	18-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	17.8	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	μg/m³	216	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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Reviewed by (Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)

N.B.:

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    - -END OF REPORT-







WCS/LQR/57

MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043N1ZE CIN: U725010R2010PTC011651



## TEST REPORT

TC-11225

: WCS231213D	Issue Date	4	13.12.2023
: TC1122523000000230F			
: National Aluminium Company L	imited		
: Coal Mine Division			
Angul-759145, Odisha			
: Near Settling Pond			
: Ambient Air Quality Monitoring	Date of Sampling	3	08.12.2023
: WCS/QSP/SAMP (AIR)	Sample ID No	:	WCS1223A01D
: Clear weather	Date of Receiving	:	11.12.2023
: WCS Laboratory	Quantity of Sample	*	1 No.
: 11.12.2023 to 13.12.2023	Sample Condition	*	Good
	<ul> <li>TC1122523000000230F</li> <li>National Aluminium Company L</li> <li>Coal Mine Division Angul-759145, Odisha</li> <li>Near Settling Pond</li> <li>Ambient Air Quality Monitoring</li> <li>WCS/QSP/SAMP (AIR)</li> <li>Clear weather</li> <li>WCS Laboratory</li> </ul>	<ul> <li>TC1122523000000230F</li> <li>National Aluminium Company Limited</li> <li>Coal Mine Division Angul-759145, Odisha</li> <li>Near Settling Pond</li> <li>Ambient Air Quality Monitoring WCS/QSP/SAMP (AIR)</li> <li>Sample ID No</li> <li>Clear weather</li> <li>Date of Receiving</li> <li>WCS Laboratory</li> <li>Quantity of Sample</li> </ul>	<ul> <li>TC1122523000000230F</li> <li>National Aluminium Company Limited</li> <li>Coal Mine Division Angul-759145, Odisha</li> <li>Near Settling Pond</li> <li>Ambient Air Quality Monitoring Date of Sampling : WCS/QSP/SAMP (AIR) Sample ID No : Clear weather Date of Receiving : WCS Laboratory Quantity of Sample :</li> </ul>

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	64	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM <sub>2.5</sub> )	$\mu g/m^3$	41.5	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	6	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	$\mu g/m^3$	18.6	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	151.4	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Bhoche. Reviewed by

(Mr. Bijaya Kumar Chahataray)

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Authorized Signatory

(Mr. Pradeept Mohapatra)







#### TC-11225

## WCS/LQR/57

## TEST REPORT

TC1122523000000235F			26.12.2023
: National Aluminium Company L	imited		
: Smelter & Power (S&P) Complex Angul-759145, Odisha			
: Gopiballavpur Village (Buffer Zo	one)		
: Ambient Air Quality Monitoring	Date of Sampling	1	22.12.2023
WCS/QSP/SAMP (AIR)	Sample ID No	•	WCS1223A02A
: Clear Weather	Date of Receiving	:	25.12.2023
: WCS Laboratory	Quantity of Sample	1	1 No.
25.12.2023 to 26.12.2023	Sample Condition	:	Good
	<ul> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> <li>Gopiballavpur Village (Buffer Zo Ambient Air Quality Monitoring</li> <li>WCS/QSP/SAMP (AIR)</li> <li>Clear Weather</li> <li>WCS Laboratory</li> </ul>	<ul> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> <li>Gopiballavpur Village (Buffer Zone)</li> <li>Ambient Air Quality Monitoring WCS/QSP/SAMP (AIR)</li> <li>Clear Weather</li> <li>WCS Laboratory</li> <li>Date of Receiving Quantity of Sample</li> </ul>	<ul> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> <li>Gopiballavpur Village (Buffer Zone)</li> <li>Ambient Air Quality Monitoring WCS/QSP/SAMP (AIR)</li> <li>Clear Weather</li> <li>WCS Laboratory</li> <li>Date of Receiving Quantity of Sample :</li> </ul>

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM <sub>10</sub> )	µg/m³	54.0	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2 5)	µg/m <sup>3</sup>	32.7	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	μg/m <sup>3</sup>	6.0	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	18.2	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	125.2	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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Reviewed by

(Mr. Bijaya Kumar Chahataray)

N.B.:

Authorized Signatory

(Mr. Pradeept Mohapatra)

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World Consultancy Services		E LIMITED RATORY) 1043NIZE TC011651	
WCS/LQR/57	<u>TEST R</u>	EPORT	TC-11225
Report No. NABL ULR No.	: WCS231217B : TC1122523000000235F	Issue Date	: 26.12.2023
Name of the Client Address	<ul> <li>National Aluminium Company I</li> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> </ul>	imited	
Sampling Location Sample Description Sampling Plan & Method Environmental Condition	<ul> <li>Colony Area (Buffer Zone)</li> <li>Ambient Air Quality Monitoring</li> <li>WCS/QSP/SAMP (AIR)</li> <li>Clear Weather</li> </ul>	Date of Sampling Sample ID No Date of Receiving	: 22.12.2023 : WCS1223A02B : 25.12.2023

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM <sub>10</sub> )	µg/m³	64.2	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2 5)	µg/m³	36.8	60 (As per NAAQ 2009)	1S-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	µg/m³	5.4	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	µg/m <sup>3</sup>	18.0	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	151.7	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

(Mr. Bijaya Kumar Chahataray)

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WCS Laboratory

25.12.2023 to 26.12.2023

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Quantity of Sample : 1 No.

Sample Condition : Good

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Sample Collected by

Date of Testing

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TC-11225

## WCS/LQR/57

## TEST REPORT

Report No.	1	WCS231217C	Issue Date	<b>\$</b> 2	26.12.2023
NABL ULR No.	:	TC1122523000000235F			
Name of the Client	1	National Aluminium Company L	imited		
Address	-	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	1	Near Weigh Bridge (Core Zone)			
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	:	22.12.2023
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)	Sample ID No		WCS1223A02C
Environmental Condition	:	Clear Weather	Date of Receiving	:	25.12.2023
Sample Collected by	1	WCS Laboratory	Quantity of Sample	:	I No.
Date of Testing	:	25.12.2023 to 26.12.2023	Sample Condition	:	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	μg/m <sup>3</sup>	68.1	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM23)	μg/m <sup>3</sup>	40.3	60 (As per NAAQ 2009)	1S-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	5.6	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	19.2	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	244.0	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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Reviewed by (Mr. Bijaya Kumar Chahataray)

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MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043N1ZE CIN: U725010R2010PTC011651 Consultancy WCS/LQR/57 TEST REPORT TC-11225

Report No.	1	WCS231217D	Issue Date	:	26.12.2023
NABL ULR No.	:	TC1122523000000235F			
Name of the Client	1	National Aluminium Company L	imited		
Address	;	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	Near Settling Pond (Core Zone)			
Sample Description	2	Ambient Air Quality Monitoring	Date of Sampling		22.12.2023
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)	Sample ID No	:	WCS1223A02D
Environmental Condition	3	Clear Weather	Date of Receiving	10	25.12.2023
Sample Collected by	3	WCS Laboratory	Quantity of Sample		1 No.
Date of Testing	1	25.12.2023 to 26.12.2023	Sample Condition	•	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	μg/m <sup>3</sup>	62.2	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	µg/m³	41,5	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	µg/m <sup>3</sup>	6.5	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	18.6	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	164.3	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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World Consultancy Services	MY WORLD CONSULTA	NCY SERVICES PRIVATE (TESTING LABOR GST NO: 21AADCT40 CIN: U725010R2010P1	RATORY)
WCS/LQR/59	TEST REP	ORT	TC-11225
Report No.	: WCS231212	Issue Date	: 13.12.2023
NABL ULR No.	: TC1122523000000229F		
Name of the Client	: National Aluminium Com	pany Limited	
Address	: Coal Mine Division		
	Angul-759145, Odisha		
Month of Sampling	: December- 2023	Date of Receiving	: 08.12.2023
Sample Description	: Ambient Noise	Quantity of Sample	
Sampling Plan & Method	: WCS/QSP/SAMP (NOISE)		: Good
Sample Collected by	: WCS Laboratory	Date of Analysis	: 11.12.2023

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS1223N01	Gopiballavpur Village	08.12.2023	52.6	39.8	Clear Weather
WCS1223N02	Near Settling Pond	08.12.2023	63.8	40.8	Clear Weather
WCS1223N03	Near Town ship	08.12.2023	63.0	41.1	Clear Weather
WCS1223N04	Near Weigh Bridge	08.12.2023	64.2	67.5	Clear Weather
Tes	st Method	IS 9989	: 1981		

Ne	oise Standard in dB(A) Leq as per C	СРСВ
Category of Area	Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Leq (10.00 Pm to 6.00 Am)
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Sensitive Area	50	40

Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)

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WORLD Consultancy Services	MY WORLD CONSULTANC	CY SERVICES PRIVATE L (TESTING LABOR) GST NO: 21AADCT40 CIN: U725010R2010PT	ATORY) 43NIZE
WCS/LQR/59	TEST REPOR	RT.	TC-11225
Report No.	: WCS231220	Issue Date	: 26,12,2023
NABL ULR No.	: TC1122523000000238F		
Name of the Client	: National Aluminium Compan	iv Limited	
Address	: Coal Mine Division		
	Angul-759145, Odisha		
Month of Sampling	: December- 2023	Date of Receiving	: 25.12.2023
Sample Description	: Ambient Noise	Quantity of Sample	: 04
Sampling Plan & Method	: WCS/QSP/SAMP (NOISE)	Sample Condition	: Good
Sample Collected by	: WCS Laboratory	Date of Analysis	: 25.12.2023

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS1223N07A	Gopiballavpur Village	22.12.2023	54.0	40.2	Clear Weather
WCS1223N07B	Near Settling Pond	22.12.2023	64.1	41.2	Clear Weather
WCS1223N07C	Near Town ship	22.12.2023	63.5	42.0	Clear Weather
WCS1223N07D	Near Weigh Bridge	22.12.2023	63.9	66.6	Clear Weather
Tes	t Method	IS 9989	: 1981	6.	

No	oise Standard in dB(A) Leq as per C	CPCB
Category of Area	Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Leq (10.00 Pm to 6.00 Am)
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Sensitive Area	50	40

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Reviewed by (Mr. Bijaya Kumar Chahataray)

Authorized Signatory

(Mr. Pradeept Mohapatra)

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## WCS/LQR/57

#### TEST REPORT

Report No.	1	WCS231218	Issue Date	(e)	26.12.2023
NABL ULR No.	1	TC1122523000000236F			
Name of the Client	2	National Aluminium Company L	imited		
Address	1	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sample Description	÷	Fugitive Emission (Core Zone)			
Sampling Plan & Method		WCS/QSP/SAMP (AIR)			
Environmental Condition	:	Clear Weather	Date of Receiving	:	25.12.2023
Sample Collected by	:	WCS Laboratory	Quantity of Sample	:	4 No.
Date of Testing	\$	26.12.2023	Sample Condition		Good

Sl. No.	Sample ID No	Location	Date of Sampling	Suspended Particulate Matter (SPM)	Unit
1	WCS1223A03A	Haul Road	22.12.2023	282	µg/m³
2	WCS1223A03B	OB Dump	23.12.2023	190	$\mu g/m^3$
3	WCS1223A03C	Loading Point	23.12.2023	340	μg/m³
4	WCS1223A03D	Blasting Area	22.12.2023	210	µg/m³
	Standard	as per CTO No-2938		500	μg/m <sup>3</sup>
	Te	est Method		1S-5182 (Part-4) 1999	) RA 2019

1. toru Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)

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TC-11225

WCS/LQR/99

## TEST REPORT

Report No. WCS231218A Issue Date : 26.12.2023 . NABL ULR No. TC1122523000000236F ÷ Name of the Client National Aluminium Company Limited 1 Address Smelter & Power (S&P) Complex 4 Angul-759145, Odisha Sample Description Personal Sampling Analysis (Core Zone) Sampling Plan & Method WCS/QSP/SAMP (AIR) 2 **Environmental Condition** 3 Clear Weather Date of Receiving : 25.12.2023 Sample Collected 1 WCS Laboratory Quantity of Sample : 4 No. Date of Testing : 26.12.2023 Sample Condition : Good

SI. No.	Sample ID No	Location	Date of Sampling	Respirable Particulate Matter (RPM)	Unit	Sample Collected Person
ï	WCS1223A03E	Haul Road	22.12.2023	1.07	mg/m <sup>3</sup>	Mr. Rames Chandra Jena
2	WCS1223A03F	OB Dump	23.12.2023	0.60	mg/m <sup>3</sup>	Mr. Ranjit Mandal
3	WCS1223A03G	23.12.2023	0.94	mg/m <sup>3</sup>	Mr. Markanda Nayk	
4	WCS1223A03H	Blasting Area	22.12.2023	0.81	mg/m <sup>3</sup>	Mr. Sonu Panday
Pern	nissible Limit as per Dhanbad, l	DGMS (Tech.) (So Dated 21st January	2007-011-020	3.0	mg/m <sup>3</sup>	-
	1	l'est Method		NIOS-6	00-15th /	August, 1994

Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)

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## ENVIRONMENTAL MONITORING REPORT FOR THE MONTH OF JANUARY-2024



## NATIONAL ALUMINIUM COMPANY LIMITED Coal Mine Division Angul-759145, Odisha



My World Consultancy Services Private Limited

Plot No. 766, Telengapentha, Cuttack, Odisha 754001

World Consultancy Services		MY WORL		(TESTING LABOR GST NO: 21AADCT40	243	ORY) INIZE
VCS/LOR/60			TEST REPORT	6		TC-11225
	4	WCSL24010		Issue Date	3	22.01.2024
	:	TC11225240	00000038F			
Name of the Client		National Al	uminium Company	Limited		
	:	Smelter & Pe	ower (S&P) Complex			
sampling Location		1.1.1.997		(one)		
	÷				38	16.01.2024
					1	17.01.2024
승규는 것 같은 것 같은 것 같아요. 한 것은 것 같은 것 같은 것 같이 많은 것 같아요.	÷.	그는 그의 그는 것이 같은 것이 말했다. 이 것이 같이 많이	2월 11일 14일 14일 17일 17일 17일 17일 17일 17일 17일 17일 17일 17			WCS0124W07A
					10	l Ltr
	:			Sample Condition	3	Good
Parameter		Unit	Result	Permissible Limit as per Consent Order No- 5059/IND-I-CON-6762 Dt:28.03.2023		Test Methods
	VCS/LQR/60 Report No. NABL ULR No. Name of the Client Address Sampling Location Sample Description Sampling Plan & Method Environmental Condition Sample Collected by Date of Testing	VCS/LQR/60 Report No. : NABL ULR No. : Name of the Client : Address : Sampling Location : Sample Description : Sampling Plan & Method : Environmental Condition : Sample Collected by : Date of Testing :	World Consultancy Services WCS/LQR/60 Report No. : WCSL24010 NABL ULR No. : TC11225240 Name of the Client : National Ale Address : Smelter & Pe Angul-75914 Sampling Location : Mines Disch Sample Description : Surface Wate Sampling Plan & Method : WCS/QSP/S Environmental Condition : Temperature Sample Collected by : WCS Labora Date of Testing : 17.01.2024 t	World Consultancy ServicesClWCS/LQR/60TEST REPORTReport No.: WCSL240107ANABL ULR No.: TC11225240000000038FName of the Client: National Aluminium CompanyAddress: Smelter & Power (S&P) Complex Angul-759145, OdishaSampling Location: Mines Discharge Water (Core Z Sample DescriptionSampling Plan & Method: WCS/QSP/SAMP (WATER)Environmental Condition: Temperature 29 °C, Clear Weather Sample Collected bySample Of Testing: 17.01.2024 to 20.01.2024	World Consultancy Services(TESTING LABOR GST NO: 2LAADCT40 CIN: U725010R2010PTVCS/LQR/60TEST REPORT (CIN: U725010R2010PTKeport No.:WCSL240107AKABL ULR No.:TC1122524000000038FName of the Client:National Aluminium Company LimitedAddress:Smelter & Power (S&P) Complex Angul-759145, OdishaSampling Location:Mines Discharge Water (Core Zone)Sampling Plan & Method:WCS/QSP/SAMP (WATER)Banple Collected by:Temperature 29 °C, Clear WeatherSample Collected by:WCS LaboratoryQuantity of SampleDate of Testing:17.01.2024 to 20.01.2024Sample ConditionParameterUnitResultPermissible Limit as per Consent Order No- 5059/IND-L-CON-6762	WCS/LQR/60TEST REPORTReport No.:WCSL240107AIssue Date:NABL ULR No.:TC1122524000000038F::Name of the Client:National Aluminium Company Limited:Nddress:Smelter & Power (S&P) Complex Angul-759145, Odisha::Sampling Location:Mines Discharge Water (Core Zone):Sample Description:Surface WaterDate of Sampling:Sampling Plan & Method:WCS/QSP/SAMP (WATER)Date of Receiving:Chvironmental Condition:Temperature 29 °C, Clear WeatherSample ID No:Sample Collected by:WCS LaboratoryQuantity of Sample:Date of Testing:17.01.2024 to 20.01.2024Sample Condition:ParameterUnitResultPermissible Limit as per Consent Order No- 5059/IND-I-CON-6762

No.	Tarameter	Cuit	Result	5059/IND-I-CON-6762 Dt:28.03.2023	Test methods
1	pH Value	-	6,852	5.5-9.0	IS 3025 ( Part-I1): 2022
2	Total suspended Solid	mg/l	14	100	IS 3025( Part-17)1984 RA 2012
3	Oil &Grease	mg/I	<4	10	APHA 23rd Ed. ( 5520-B): 2017
4	Biochemical Oxygen Demand as BOD	mg/l	3.2		IS 3025 ( Part-44): 1993
5	Chemical Oxygen Demand as COD	mg/l	5.3	250	APHA 23rd Ed. (5220-D); 2017
6	Colour	Hazen	20	2	IS 3025 ( Part-4). 2021
7	Specific Conductivity	µs/cm	472		IS 3025 ( Part-14): 2013
8	Turbidity	NTU	92.5		IS 3025 ( Part-10 ): 1984 RA 2017
9	Dissolve Oxygen as DO	mg/l	6.1		IS 3025 (Part-38): 1989
10	Total Hardness as CaCO <sub>2</sub>	mg/l	85	-	APHA 23 <sup>rd</sup> Ed. ( 2340-C): 2017
11	Chloride as Cl	mg/l	46.99		IS 3025 ( Part-32): 1988
12	Sulphate as SO <sub>4</sub>	mg/l	70.5	-	1S 3025 ( Part-24, Sec-1): 2022
13	Nitrate as NO3	mg/l	1.42		APHA 23 <sup>rd</sup> Ed. ( 4500-NO <sub>2</sub> -B): 2017
14	Calcium as Ca	mg/l	18,44		APHA 23rd Ed. (3500-Ca-B): 2017
15	Magnesium as Mg	mg/l	9.48	-	APHA 23 <sup>rd</sup> Ed. (3500-Mg-B): 2017
16	Total Dissolved Solid as TDS	mg/l	278	. <del>.</del>	IS 3025 (Part-16): 1984
17	Total Alkalinity as CaCO <sub>3</sub>	mg/t	140		IS 3025 ( Part-23): 1986 RA 2019
18	Potassium as K	mg/l	26.2	(1 <del>11)</del> :	IS 3025 ( Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	38.5	2.000	IS 3025 (Part-45): 1993 RA 2019

Reviewed by (Ms. Laxmi Sahoo)

Authorized Signatory (Mr. Pradeept Mohapatra)



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1	WCS World Consultancy Services	MY WORLE	G	SERVICES PRIVATE (TESTING LABOI ST NO: 21AADCT4 I: U725010R2010P	RATORY) 1043NIZE		
V	VCS/LQR/60		TEST REPORT		TC-11225		
		WCSL24010		Issue Date	: 22.01.2024		
		FC11225240					
N	ame of the Client : I	National Alu	minium Company l	imited			
A		Smelter & Po Angul-75914	wer (S&P) Complex 5, Odisha				
S	ampling Location : 5	Seepage Wat	ter (Core Zone)				
		Surface Wate	r	: 16.01.2024			
S	ampling Plan & Method : V	WCS/QSP/S/	AMP (WATER)	Date of Receiving	: 17.01.2024		
S	ample Collected by : V	WCS Laborat WCS Laborat 7.01.2024 to		<ul> <li>Sample ID No Quantity of Sample Sample Condition</li> </ul>	: WCS0124W07B : I Ltr : Good		
SI. No.	Parameter	Unit	Result	Permissible Limit as per Consent Order No- 5059/IND-I-CON-6762 Dt:28.03.2023	Test Methods		
1	pH Value	- 224	6.921	5.5-9.0	18 3025 ( Part-11): 2022		
2	Total suspended Solid	mg/l	23	100	IS 3025( Part-17)1984 RA 2012		
3	Oil &Grease	mg/I	<4	10	APHA 23 <sup>rd</sup> Ed. ( 5520-B): 2017		
4	Biochemical Oxygen Demand as BOD	mg/l	<2		IS 3025 ( Part-44): 1993		
5	Chemical Oxygen Demand as COD	mg/l	3	250	APHA 23rd Ed. (5220-D): 2017		
6	Colour	Hazen	15		1S 3025 ( Part-4): 2021		
7	Specific Conductivity	μs/cm	448	1. H	1S 3025 ( Part-14): 2013		

5	Chemical Oxygen Demand as COD	mg/l	3	250	APHA 23rd Ed. (5220-D): 2017
6	Colour	Hazen	15		IS 3025 ( Part-4): 2021
7	Specific Conductivity	μs/cm	448	- 10 H	1S 3025 ( Part-14): 2013
8	Turbidity	NTU	58.2	-	1S 3025 ( Part-10 ): 1984 RA 2017
9	Dissolve Oxygen as DO	mg/l	5.2		IS 3025 (Part-38): 1989
10	Total Hardness as CaCO3	mg/l	80	-	APHA 23 <sup>rd</sup> Ed. ( 2340-C): 2017
11	Chloride as Cl	mg/l	52.49	-	IS 3025 ( Part-32): 1988
12	Sulphate as SO <sub>4</sub>	mg/l	40.8	1	IS 3025 ( Part-24, Sec-1): 2022
13	Nitrate as NO <sub>3</sub>	mg/l	ા		APHA 23 <sup>rd</sup> Ed. ( 4500-NO <sub>3</sub> -B): 2017
14	Calcium as Ca	mg/l	24.85	722	APHA 23rd Ed. (3500-Ca-B): 2017
15	Magnesium as Mg	mg/l	4.37	- <del>1</del>	APHA 23rd Ed. (3500-Mg-B): 2017
16	Total Dissolved Solid as TDS	mg/l	265	5. <del>22</del>	IS 3025 ( Part-16): 1984
17	Total Alkalinity as CaCO3	mg/l	172		IS 3025 ( Part-23): 1986 RA 2019
18	Potassium as K	mg/l	5.8		IS 3025 ( Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	3.7		1S 3025 (Part-45): 1993 RA 2019

Reviewed by (Ms. Laxmi Sahoo)

Authorized Signatory (Mr. Pradeept Mohapatra)



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Wo	NCS rfd Consultancy Services	MY WOR	LD CONSULT4	NCY SERVICES PRIVATE (TESTING LABO GST NO: 21AADCT4 CIN: U725010R2010P	RATORY) 1043NIZE
Repo NAB	/LQR/60 prt No. : L ULR No. : e of the Client :		<u>TEST REH</u> 108A 4000000039F Juminium Com	Issue Date	۲۲-11225 تC-11225 : 22.01.2024
Addr	ess :	Smelter & Angul-759	Power (S&P) Co 145, Odisha	mplex	
Samp Samp Envir Samp	bling Location : ble Description : bling Plan & Method : ronmental Condition : ble Collected by : of Testing :	Ground Wa WCS/QSP/ Temperatur WCS Labo	iter SAMP (WATEF re 29 °C, Clear V	I no 1(Buffer Zone) Date of Sampling () Date of Receiving Weather Sample ID No Quantity of Sample Sample Condition	: 16.01.2024 : 17.01.2024 : WCS0124W08A : 1 Ltr : Good
SL No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
1	Colour	Hazen	2	Max, 5	IS 3025 ( Part-4): 2021
2	Odour		Agreeable	Agreeable	15 3025 ( Part-5): 2018
3	pH Value		5.864	6.5-8.5	IS 3025 ( Part-11): 2022
4	Taste Threshold		Agreeable	Agreeable	IS 3025 ( Part-7); 2017
5	Turbidity	NTU	0.4	1 1 1	IS 3025 ( Part-10 ): 1984 RA 2017
6	Total Dissolved Solid as TDS	mg/l	145	500	IS 3025 ( Part-16): 1984 RA 2017
7	Ammonia as Total ammonia-N	mg/l	0.06	0.5	IS 3025 (Part-34): 1988 RA 2019
8	Chloride as Cl	mg/l	19,49	250	IS 3025( Part-32): 1988 RA 2019
9	Fluoride as F	mg/l	< 0.02	1.0	APHA 23 <sup>rd</sup> Ed. (4500-F-D): 2017
10	Iron as Fe	mg/l	0.12	1.0	IS 3025 (Part -53): 2003 RA 2019
11	Total Hardness as CaCO <sub>3</sub>	mg/l	25	200	IS 3025 ( Part-21): 2009 RA 2019
12	Calcium as Ca	mg/l	6.41	75	IS 3025 ( Part-40): 1991 RA 2019
13	Magnesium as Mg	mg/l	1.45	30	APHA 23rd Ed. (3500-Mg-B): 2017
14	Nitrate as NO <sub>3</sub>	mg/l	П	45	APHA 23rd Ed. (4500-NO3-B); 2017
15	Sulphate as SO4	mg/l	0.58	200	IS 3025 ( Part-24 Sec 1):2022
16	Total Alkalinity as CaCO <sub>3</sub>	mg/l	10	200	IS 3025 ( Part-23): 1986 RA 2019
17	Total Chromium as Cr	mg/l	< 0.02	0.05	IS 3025 ( Part-52) : 2003 RA 2019
18	Potassium as K	mg/l	4.5		IS 3025 ( Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	6.4		IS 3025 ( Part-45) : 1993 RA 2019
20	Total Suspended Solid as TSS	mg/l	<5	The second s	IS 3025 ( Part-17): 2022
21	E.Coli	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019
22	Faecal Coliform	MPN/ 100 ml	<1		IS 1622 : 1981 RA 2019
23	Total Coliform	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019

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Reviewed by

(Ms. Laxmi Sahoo)

Authorized Signatory (Mr. Pradeept Mohapatra)

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### WCS/LQR/60

## TEST REPORT

Report No.	15	WCSL240108A	Issue Date	1	22.01.2024
Name of the Client	:	National Aluminium Company L	imited		
Address	•	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	A39 Colony Area Borewell no 1	(Buffer Zone).		
Sample Description		Ground Water	Date of Sampling	2	16.01.2024
Sampling Plan & Method	:	WCS/QSP/SAMP (WATER)	Date of Receiving		17.01.2024
Environmental Condition	:	Temperature 29 °C, Clear Weather	Sample ID No	:	WCS0124W08A
Sample Collected by	:	WCS Laboratory	Quantity of Sample		1 Ltr
Date of Testing	÷40	17.01.2024 to 20.01.2024	Sample Condition	:	Good
	040 840			•	Tale M

SL No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	< 0.02	0.03	1S 3025 (Part 55) : 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	< 0.02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/l	<0.1	0.7	Annex F of IS 13428* or IS 15302
27	Boron as B	mg/l	<0.1	0.5	18 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	<0.02	4.0	1\$ 3025 (Part 26): 2021* or APHA 4500-Cl G
29	Copper as Cu	mg/l	<0.0]	0.05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	< 0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of IS 3025 (Part 39):2021
32	Phenolic compounds as CaH3OH	mg/l	< 0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/l	<0.001	0.01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	<0.02	0.1	Annex J of 15 13428
35	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zinc as Zn	mg/l	<0.05	5	IS 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	< 0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	<0.01	0.05	IS 3025 (Part 27):1986 RAA 2019
39	Lead as Pb	mg/l	< 0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	<0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	<0.02	0.07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	<0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mg/l	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	<0.001	0.01	IS 3025 (Part 37):2022

Reviewed by (Ms. Laxmi Sahoo)

Authorized Signatory

(Mr. Pradeept Mohapatra)





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W	NCS orld Consultancy Services	MY WOR	LD CONSULTA	ANCY SERVICES PRIVAT (TESTING LABO GST NO: 21AADCT CIN: U725010R2010	A043NIZE
wc	S/LQR/60		TEST RE	PORT	TC-11225
NAI Nan Add Sam Sam Sam Sam Date	ort No. : BL ULR No. : te of the Client : ress : pling Location : ple Description : pling Plan & Method : ronmental Condition : ple Collected by : of Testing :	National A Smelter & I Angul-7591 A56 Colon Ground Wa WCS/QSP/ Temperatur WCS Labor	1000000039F <b>luminium Com</b> Power (S&P) Co 45, Odisha y Area Borewe ter SAMP (WATEI e 29 °C, Clear <sup>1</sup>	omplex Il no 2(Buffer Zone). Date of Sampling	: 22.01.2024 : 16.01.2024 : 17.01.2024 : WCS0124W08B : 1 Ltr : Good
SI. No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
<b>I</b> §7	Colour	Hazen	3	Max, 5	1S 3025 ( Part-4): 2021
2	Odour	22	Agrecable	Agreeable	18 3025 ( Part-5): 2018
3	pH Value	22.7	5,921	6.5-8.5	IS 3025 ( Part-11): 2022
4	Taste Threshold		Agreeable	Agreeable	IS 3025 ( Part-7): 2017
5	Turbidity	NTU	0.5		IS 3025 ( Part-10 ): 1984 RA 2017
6	Total Dissolved Solid as TDS	mg/l	140	500	IS 3025 (Part-16): 1984 RA 2017
7	Ammonia as Total ammonia-N	mg/t	0.04	0.5	IS 3025 (Part-34): 1988 RA 2019
8	Chloride as Cl	mg/l	22.99	250	IS 3025(Part-32): 1988 RA 2019
9	Fluoride as F	mg/l	< 0.02	1.0	APHA 23 <sup>tt</sup> Ed. (4500-F-D): 2017
10	Iron as Fe	mg/l	0.1	1,0	IS 3025 (Part -53); 2003 RA 2019
11	Total Hardness as CaCO3	mg/l	22	200	IS 3025 (Part-21): 2009 RA 2019
12	Calcium as Ca	mg/l	5.61	75	15 3025 (Part-40): 1991 RA 2019
13	Magnesium as Mg	mg/l	1.94	30	APHA 23 <sup>rd</sup> Ed. (3500-Mg-B): 2017
14	Nitrate as NO3	mg/l	10.2	45	APHA 23 <sup>rd</sup> Ed. (4500-NO <sub>3</sub> -B): 2017
15	Sulphate as SO <sub>4</sub>	mg/l	1.5	200	IS 3025 ( Part-24 Sec 1):2022
16	Total Alkalinity as CaCO3	mg/l	20	200	IS 3025 ( Part-23): 1986 RA 2019
17	Total Chromium as Cr	mg/l	<0.02	0.05	IS 3025 (Part-52): 2003 RA 2019
8	Potassium as K	mg/l	4.5		IS 3025 (Part-45): 1993 RA 2019
9	Sodium as Na	mg/l	6.8	-	IS 3025 (Part-45): 1993 RA 2019
20	Total Suspended Solid as TSS	тдЛ	5		IS 3025 (Part-17); 2022
!1	E.Coli	MPN/ 100 ml	4	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019
22	Faecal Coliform	MPN/ 100 ml	<	<b>**</b> (	IS 1622 : 1981 RA 2019
23	Total Coliform	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019

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Reviewed by

(Ms. Laxmi Sahoo) N.B.: O The results

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Authorized Signatory

(Mr. Pradeept Mohapatra)

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WCS/LQR/60

## MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043N1ZE CIN: U725010R2010PTC011651

## TEST REPORT

	Issue Date		22.01.2024
: National Aluminium Company L	imited		
: Smelter & Power (S&P) Complex Angul-759145, Odisha			
	(Buffer Zone).		
: Ground Water	Date of Sampling		16.01.2024
: WCS/QSP/SAMP (WATER)	Date of Receiving	ŧ	17.01.2024
: Temperature 29 °C, Clear Weather	Sample ID No	2	WCS0124W08B
: WCS Laboratory	Quantity of Sample	\$	1 Ltr
: 17.01.2024 to 20.01.2024	Sample Condition	:	Good
	<ul> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> <li>A56 Colony Area Borewell no 2</li> <li>Ground Water</li> <li>WCS/QSP/SAMP (WATER)</li> <li>Temperature 29 °C, Clear Weather</li> <li>WCS Laboratory</li> </ul>	<ul> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> <li>A56 Colony Area Borewell no 2(Buffer Zone).</li> <li>Ground Water Date of Sampling</li> <li>WCS/QSP/SAMP (WATER) Date of Receiving</li> <li>Temperature 29 °C, Clear Weather Sample ID No</li> <li>WCS Laboratory Quantity of Sample</li> </ul>	<ul> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> <li>A56 Colony Area Borewell no 2(Buffer Zone).</li> <li>Ground Water Date of Sampling : WCS/QSP/SAMP (WATER) Date of Receiving : Temperature 29 °C, Clear Weather Sample ID No : WCS Laboratory Quantity of Sample :</li> </ul>

SL No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	<0.02	0.03	1S 3025 (Part 55) : 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	<0.02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/I	<0.1	0.7	Annex F of IS 13428* or IS 15302
27	Boron as B	mg/l	<0.1	0.5	18 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	<0.02	4.0	18 3025 (Part 26): 2021* or APHA 4500-C1 G
29	Copper as Cu	mg/l	<0.01	0.05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	<0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of 1S 3025 (Part 39):2021
32	Phenolic compounds as CoH5OH	mg/l	< 0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/l	<0.001	0.01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	< 0.02	0.1	Annex J of IS 13428
35	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zine as Zn	mg/l	<0.05	5	IS 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	<0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	<0.01	0.05	IS 3025 (Part 27):1986 RAA 2019
39	Lead as Pb	mg/l	<0,001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	<0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	<0.02	0.07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	<0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mg/l	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	< 0.001	0.01	IS 3025 (Part 37):2022

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Wor	VCS Id Consultancy Services	MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651 TEST REPORT TC-11225					
WCS	/LQR/60						
NAB Nama Addr Samp Samp Samp Envir Samp	ling Location : le Description : ling Plan & Method : onmental Condition : le Collected by :	WCSL240108CIssue Date:22.01,2024TC1122524000000039FImitedImitedImitedNational Aluminium Company LimitedImitedImitedSmelter & Power (S&P) ComplexImitedImitedAngul-759145, OdishaImitedImitedDhobamaliya Village. (Buffer Zone)ImitedImitedGround WaterDate of Sampling:16.01.2024WCS/QSP/SAMP (WATER)Date of Receiving:17.01.2024Temperature 29 °C, Clear WeatherSample ID No:WCS0124W08CWCS LaboratoryQuantity of Sample:1 Ltr					
SI.	of Testing :			Sample Condition Requirement as per IS	: Good		
No.	Parameter	Unit	Result	10500:2012 Reaffirmed 2018	Test Methods		
1	Colour	Hazen	3	Max, 5	IS 3025 ( Part-4): 2021		
2	Odour		Agreeable	Agreeable	IS 3025 ( Part-5): 2018		
3	pH Value	-	5.924	6.5-8.5	IS 3025 ( Part-11): 2022		
4	Taste Threshold		Agreeable	Agreeable	IS 3025 ( Part-7); 2017		
5	Turbidity	NTU	0.2	1. 1.	IS 3025 ( Part-10 ): 1984 RA 2017		
6	Total Dissolved Solid as TDS	mg/l	158	500	IS 3025 ( Part-16): 1984 RA 2017		
7	Ammonia as Total ammonia-N	mg/l	0.05	0.5	IS 3025 ( Part-34): 1988 RA 2019		
8	Chloride as Cl	mg/l	24.49	250	IS 3025( Part-32): 1988 RA 2019		
9	Fluoride as F	mg/l	<0.02	1.0	APHA 23 <sup>nt</sup> Ed. (4500-F-D): 2017		
10	Iron as Fe	mg/l	0.13	1.0	IS 3025 (Part -53): 2003 RA 2019		
11	Total Hardness as CaCO1	mg/I	27	200	IS 3025 (Part-21); 2009 RA 2019		
12	Calcium as Ca	mgЛ	7.21	75	IS 3025 (Part-40): 1991 RA 2019		
13	Magnesium as Mg	mg/l	2.19	30	APHA 23rd Ed. (3500-Mg-B): 2017		
14	Nitrate as NO <sub>3</sub>	mg/l	6.50	45	APHA 23rd Ed. (4500-NO <sub>3</sub> -B): 2017		
15	Sulphate as SO <sub>4</sub>	mg/l	2	200	IS 3025 ( Part-24 Sec 1):2022		
16	Total Alkalinity as CaCO3	mg/l	25	200	IS 3025 ( Part-23): 1986 RA 2019		
17	Total Chromium as Cr	mg/l	<0.02	0.05	IS 3025 ( Part-52) : 2003 RA 2019		
18	Potassium as K	mg/l	5.6		IS 3025 ( Part-45): 1993 RA 2019		
19	Sodium as Na	mg/l	7.8		1S 3025 ( Part-45) : 1993 RA 2019		
20	Total Suspended Solid as TSS	mg/l	<5	-	1S 3025 ( Part-17): 2022		
21	E.Coli	MPN/ 100 ml	<]	Shall not be detectable in any 100 ml sample	15 1622 : 1981 RA 2019		
22	Faecal Coliform	MPN/ 100 ml	<1		IS 1622 : 1981 RA 2019		
23	Total Coliform	MPN/ 100 ml	<]	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019		

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(Ms. Laxmi Sahoo)

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## WCS/LQR/60

## TEST REPORT

Report No.	:	WCSL240108C	Issue Date	4	22.01.2024
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:20	Dhobamaliya Village.(Buffer Zon	ie)		
Sample Description	:	Ground Water	Date of Sampling	:	16.01.2024
Sampling Plan & Method	1	WCS/QSP/SAMP (WATER)	Date of Receiving	1	17.01.2024
Environmental Condition	:	Temperature 29 °C, Clear Weather	Sample ID No	:	WCS0124W08C
Sample Collected by	:	WCS Laboratory	Quantity of Sample	1	1 Ltr
Date of Testing	4	17.01.2024 to 20.01.2024	Sample Condition	:	Good

SI. No.	Parameter	Unit	Result	Requirement as per 1S 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	< 0.02	0.03	IS 3025 (Part 55): 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	<0.02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/l	<0.1	0.7	Annex F of IS 13428* or IS 15302
27	Boron as B	mg/l	<0.1	0.5	IS 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	<0.02	4.0	IS 3025 (Part 26): 2021* or APHA 4500-CLG
29	Copper as Cu	mg/l	<0.01	0.05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	<0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of IS 3025 (Part 39):2021
32	Phenolie compounds as C <sub>6</sub> H <sub>3</sub> OH	mg/l	< 0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/l	<0.001	0.01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	< 0.02	0.1	Annex J of 1S 13428
35	Sulphide as H <sub>2</sub> S	mgA	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zinc as Zn	mg/l	<0.05	5	IS 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	< 0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	< 0.01	0.05	IS 3025 (Part 27):1986 RAA 2019
39	Lead as Pb	mg/l	<0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	<0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	<0.02	0.07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	<0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mg/l	< 0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	<0.001	0.01	IS 3025 (Part 37):2022

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Wo	VCS Id Consultancy Services	MY WORL	D CONSULTA	ANCY SERVICES PRIVATE (TESTING LABO GST NO: 21AADCT4 CIN: U725010R2010P	RATORY) 4043NIZE
WC	S/LQR/60		TEST REI	PORT	TC-11225
NÁB Namo Addr Samp Samp Samp Envir Samp	ling Location : le Description : ling Plan & Method : onmental Condition : le Collected by :	National A Smelter & F Angul-7591 Raijharana Ground Wa WCS/QSP/S Temperatur WCS Labor	000000039F luminium Com Power (S&P) Co 45, Odisha Village(Buffer ter SAMP (WATEI e 29 °C, Clear V atory	r Zone). Date of Sampling R) Date of Receiving Weather Sample ID No Quantity of Sample	
Date SL	of Testing :	17.01,2024	to 20.01.2024	Sample Condition	: Good
No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
1	Colour	Hazen	3	Max, 5	IS 3025 ( Part-4): 2021
2	Odour		Agreeable	Agreeable	IS 3025 ( Part-5): 2018
3	pH Value		7.582	6.5-8.5	IS 3025 ( Part-11): 2022
4	Taste Threshold		Agreeable	Agreeable	IS 3025 ( Part-7): 2017
5	Turbidity	NTU	0.8	1.00	IS 3025 ( Part-10 ): 1984 RA 2017
6	Total Dissolved Solid as TDS	mg/l	260	500	IS 3025 ( Part-16): 1984 RA 2017
7	Ammonia as Total ammonia-N	mg/l	0.05	0.5	IS 3025 ( Part-34): 1988 RA 2019
8	Chloride as Cl	mg/l	54.99	250	IS 3025( Part-32): 1988 RA 2019
9	Fluoride as F	mg/I	<0.02	1.0	APHA 23 <sup>ad</sup> Ed. (4500-F-D): 2017
10	Iron as Fe	mgЛ	0.06	1.0	IS 3025 (Part -53): 2003 RA 2019
11	Total Hardness as CaCO <sub>3</sub>	mg/l	40	200	IS 3025 ( Part-21): 2009 RA 2019
12	Calcium as Ca	mg/l	14.43	75	IS 3025 ( Part-40): 1991 RA 2019
13	Magnesium as Mg	mg/l	0.97	30	APHA 23 <sup>rd</sup> Ed. (3500-Mg-B): 2017
14	Nitrate as NO3	mg/l	4.85	45	APHA 23 <sup>nd</sup> Ed. (4500-NO <sub>3</sub> -B): 2017
15	Sulphate as SO4	mg/l	2,2	200	IS 3025 ( Part-24 Sec 1):2022
16	Total Alkalinity as CaCO3	mg/l	65	200	IS 3025 (Part-23): 1986 RA 2019
17	Total Chromium as Cr	mg/l	<0.02	0.05	IS 3025 (Part-52): 2003 RA 2019
18	Potassium as K	mg/l	5.5	**	IS 3025 (Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	7	+	IS 3025 ( Part-45): 1993 RA 2019
20	Total Suspended Solid as TSS	mg/l	<5		IS 3025 ( Part-17): 2022
21	E.Coli	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019
22	Faecal Coliform	MPN/ 100 ml	<1	<b></b>	IS 1622 : 1981 RA 2019
23	Total Coliform	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622: 1981 RA 2019

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#### MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651

#### TEST REPORT

Report No.	÷.	WCSL240108D	Issue Date	1	22.01.2024
Name of the Client	:	National Aluminium Company L	imited		
Address		Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	Raijharana Village (Buffer Zone)			
Sample Description	:	Ground Water	Date of Sampling	\$	16.01.2024
Sampling Plan & Method	:	WCS/QSP/SAMP (WATER)	Date of Receiving	-	17.01.2024
Environmental Condition	:	Temperature 29 °C, Clear Weather	Sample ID No	-	WCS0124W08D
Sample Collected by	:	WCS Laboratory	Quantity of Sample	2	1 Ltr
Date of Testing	2	17.01.2024 to 20.01.2024	Sample Condition	2	Good

SL No.	Parameter	Unit	Result	Requirement as per 1S 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	<0.02	0.03	IS 3025 (Part 55): 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	<0.02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/l	<0.1	0.7	Annex F of IS 13428* or IS 15302
27	Boron as B	mg/l	<0.1	0.5	18 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	<0.02	4.0	IS 3025 (Part 26): 2021* or APHA 4500-C1 G
29	Copper as Cu	mg/l	≪0.01	0.05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/I	< 0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of IS 3025 (Part 39):2021
32	Phenolic compounds as C6H3OH	mg/l	< 0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/1	<0.001	0.01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	<0.02	0.1	Annex J of IS 13428
35	Sulphide as H <sub>2</sub> S	mgЛ	< 0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zinc as Zn	mg/l	<0.05	5	IS 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	< 0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	<0.01	0.05	IS 3025 (Part 27):1986 RAA 2019
39	Lead as Pb	mg/l	<0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	<0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	<0.02	0.07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	<0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mgЛ	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	<0.001	0.01	IS 3025 (Part 37):2022

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#### TEST REPORT

	ort No. : BL ULR No. :	WCSL2401	08E 000000039F	Issue Date	: 22.01.2024
	e of the Client		luminium Con	many Limited	
Add			ower (S&P) Co		
		Angul-7591		hiphex	
	oling Location :		pur Village(Bu	iffer Zone).	
	ole Description :	Ground Wa		Date of Sampling	: 16.01.2024
	oling Plan & Method : ronmental Condition :		SAMP (WATE		: 17.01.2024
	ole Collected by :	WCS Labor		Weather Sample ID No Quantity of Sample	: WCS0124W08E : 1 Ltr
	of Testing :		to 20.01.2024	Sample Condition	: Good
SL No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
1	Colour	Hazen	4	Max, 5	1S 3025 ( Part-4): 2021
2	Odour	++	Agreeable	Agreeable	IS 3025 ( Part-5): 2018
3	pH Value	-	7.562	6.5-8.5	IS 3025 ( Part-11): 2022
4	Taste Threshold		Agreeable	Agreeable	IS 3025 ( Part-7): 2017
5	Turbidity	NTU	0.3	L	IS 3025 ( Part-10 ): 1984 RA 2017
6	Total Dissolved Solid as TDS	mg/l	362	500	IS 3025 ( Part-16): 1984 RA 2017
7	Ammonia as Total ammonia-N	mg/l	0.15	0.5	IS 3025 ( Part-34): 1988 RA 2019
8	Chloride as CI	mg/l	56.49	250	IS 3025( Part-32): 1988 RA 2019
9	Fluoride as F	mg/l	< 0.02	1.0	APHA 23 <sup>st</sup> Ed. (4500-F-D): 2017
10	fron as Fe	mg/l	0.2	1,0	IS 3025 (Part -53): 2003 RA 2019
11	Total Hardness as CaCO <sub>3</sub>	тgЛ	92	200	IS 3025 ( Part-21); 2009 RA 2019
12	Calcium as Ca	mg/l	15.99	75	IS 3025 ( Part-40): 1991 RA 2019
13	Magnesium as Mg	mg/l	10.85	30	APHA 23 <sup>rd</sup> Ed. (3500-Mg-B): 2017
14	Nitrate as NO <sub>3</sub>	mg/l	0.38	45	APHA 23 <sup>rd</sup> Ed. (4500-NO <sub>3</sub> -B): 2017
15	Sulphate as SO <sub>4</sub>	mg/l	5.2	200	IS 3025 ( Part-24 Sec 1):2022
16	Total Alkalinity as CaCO <sub>3</sub>	mg/l	280	200	IS 3025 ( Part-23): 1986 RA 2019
17	Total Chromium as Cr	mg/l	< 0.02	0.05	IS 3025 ( Part-52) : 2003 RA 2019
18	Potassium as K	mg/I	4.2	4	IS 3025 ( Part-45): 1993 RA 2019
19	Sodium as Na	mg/l	8.2	**	1S 3025 (Part-45): 1993 RA 2019
20	Total Suspended Solid as TSS	mg/l	<5	*	IS 3025 ( Part-17): 2022
21	E.Coli	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019
22	Faecal Coliform	MPN/ 100 ml	< 1	÷:	IS 1622 : 1981 RA 2019
23	Total Coliform	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019

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(Mr. Pradeept Mohapatra)

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#### TEST REPORT

Report No.	:0	WCSL240108E	Issue Date	2	22.01.2024
Name of the Client	23	National Aluminium Company L	imited		
Address	•	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	t)	Gopiballavpur Village (Buffer Zo	ne).		
Sample Description	5	Ground Water	Date of Sampling	÷	16.01.2024
Sampling Plan & Method	:	WCS/QSP/SAMP (WATER)	Date of Receiving	1	17.01.2024
Environmental Condition	:	Temperature 29 °C, Clear Weather	Sample ID No	;	WCS0124W08E
Sample Collected by	:	WCS Laboratory	Quantity of Sample	÷	1 Ltr
Date of Testing	12	17.01.2024 to 20.01.2024	Sample Condition	\$	Good

SL No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	<0.02	0,03	IS 3025 (Part 55) : 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	<0.02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/l	<0.1	0.7	Annex F of IS 13428* or IS 15302
27	Boron as B	mg/I	<0.1	0.5	15 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	<0.02	4.0	18 3025 (Part 26): 2021* or APHA 4500-Cl G
29	Copper as Cu	mg/l	<0.01	0,05	1S 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	< 0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of IS 3025 (Part 39) 2021
32	Phenolic compounds as C6H3OH	mg/l	< 0.001	0.001	15 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mg/l	<0.001	0,01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	< 0.02	0.1	Annex J of IS 13428
35	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zinc as Zn	mg/l	<0.05	5	IS 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	< 0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	<0.01	0.05	IS 3025 (Part 27) 1986 RAA 2019
39	Lead as Pb	mg/l	<0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	<0.001	0.001	IS 3025 (Part 48): 1994 RA 2019
41	Molybdenum as Mo	mg/l	<0.02	0.07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	<0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	nıg/l	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	<0.001	0.01	IS 3025 (Part 37):2022



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V	VCS rid Consultancy Services	MY WORL	D CONSULT,	ANCY SERVICES PRIVATE (TESTING LABO GST NO: 21AADCT4 CIN: U725010R2010P	A043NIZE	
WCS	5/LQR/60		TEST RE	PORT	TC-11225	
NAB	rt No. : L ULR No. : e of the Client :		000000039F	Issue Date	: 22.01.2024	
\ddr	ess :	Smelter & I Angul-7591	Power (S&P) Co 45, Odisha	omplex		
Samp Samp Envir Samp Date	bling Location : ble Description : bling Plan & Method : ronmental Condition : ble Collected by : of Testing :	Ground Wa WCS/QSP/3 Temperatur WCS Labor	SAMP (WATE e 29 °C, Clear	R) Date of Sampling R) Date of Receiving Weather Sample ID No Quantity of Sample Sample Condition	: 16.01.2024 : 17.01.2024 : WCS0124W08F : 1 Ltr : Good	
SL No.	Parameter	Unit	Result	Requirement as per IS 10500:2012 Reaffirmed 2018	Test Methods	
1	Colour	Hazen	1	Max, 5	IS 3025 ( Part-4): 2021	
2	Odour	-	Agreeable	Agreeable	IS 3025 ( Part-5): 2018	
3	pH Value	-	6.965	6.5-8.5	IS 3025 ( Part-11): 2022	
4	Taste Threshold		Agreeable	Agreeable	IS 3025 ( Part-7): 2017	
5	Turbidity	NTU	0.2	1.000	IS 3025 ( Part-10 ): 1984 RA 2017	
6	Total Dissolved Solid as TDS	mg/l	305	500	IS 3025 ( Part-16): 1984 RA 2017	
7	Ammonia as Total ammonia-N	mg/l	0.05	0.5	IS 3025 (Part-34): 1988 RA 2019	
8	Chloride as Cl	mg/l	48.99	250	IS 3025( Part-32): 1988 RA 2019	
9	Fluoride as F	mg/l	<0.02	1.0	APHA 23rd Ed. (4500-F-D): 2017	
10	Iron as Fe	mg/L	0.062	1.0	IS 3025 (Part -53): 2003 RA 2019	
11	Total Hardness as CaCO <sub>3</sub>	mg/l	52	200	IS 3025 ( Part-21): 2009 RA 2019	
12	Calcium as Ca	mg/l	17.64	75	IS 3025 ( Part-40): 1991 RA 2019	
13	Magnesium as Mg	mg/l	1.94	30	APHA 23rd Ed. (3500-Mg-B): 2017	
14	Nitrate as NO <sub>3</sub>	mg/l	5.82	45	APHA 23 <sup>rd</sup> Ed. (4500-NO3-B): 2017	
15	Sulphate as SO4	mg/l	2.4	200	IS 3025 ( Part-24 Sec 1):2022	
16	Total Alkalinity as CaCO <sub>3</sub>	mg/l	70	200	IS 3025 ( Part-23): 1986 RA 2019	
17	Total Chromium as Cr	mg/l	<0.02	0.05	IS 3025 ( Part-52) : 2003 RA 2019	
18	Potassium as K	mg/l	4.9	**	IS 3025 ( Part-45): 1993 RA 2019	
19	Sodium as Na	mg/l	6.2	<del></del>	IS 3025 ( Part-45) : 1993 RA 2019	
20	Total Suspended Solid as TSS	mg/l	<5		IS 3025 ( Part-17): 2022	
21	E,Coli	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019	
22	Faecal Coliform	MPN/ 100 ml	<1		IS 1622 : 1981 RA 2019	
23	Total Coliform	MPN/ 100 ml	<1	Shall not be detectable in any 100 ml sample	IS 1622 : 1981 RA 2019	

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Authorized Signatory (Mr. Pradeept Mohapatra)

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#### WCS/LQR/60

#### TEST REPORT

Report No.	1	WCSL240108F	Issue Date	ł.	22.01.2024
Name of the Client	:	National Aluminium Company L	imited		
Address	10	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	Kosala Village (Buffer Zone).			
Sample Description	:	Ground Water	Date of Sampling	4	16.01.2024
Sampling Plan & Method	:	WCS/QSP/SAMP (WATER)	Date of Receiving	- 22	17.01.2024
Environmental Condition	:	Temperature 29 °C, Clear Weather	Sample ID No		WCS0124W08F
Sample Collected by	:	WCS Laboratory	Quantity of Sample	1	1 Ltr
Date of Testing	120	17.01.2024 to 20.01.2024	Sample Condition	:	Good

SI. No.	Parameter	Unit	Result	Requirement as per 1S 10500:2012 Reaffirmed 2018	Test Methods
24	Aluminium as Al	mg/l	<0.02	0,03	IS 3025 (Part 55) : 2003 RA 2019
25	Anionic detergents as MBAS	mg/l	<0.02	0.2	Annex K of IS 13428
26	Barium as Ba	mg/l	<0,1	0.7	Annex F of 1S 13428* or 1S 15302
27	Boron as B	mg/l	<0.1	0.5	1S 3025 (Part 57):2021
28	Chloramines as Cl <sub>2</sub>	mg/l	<0.02	4.0	1S 3025 (Part 26): 2021* or APHA 4500-Cl G
29	Copper as Cu	mgЛ	< 0.01	0.05	IS 3025 (Part 42):1992 RA 2019
30	Manganese as Mn	mg/l	<0.05	0.1	IS 3025 (Part 59):2006 RA 2017
31	Mineral oil	mg/l	<0.5	1.0	Clause 6 of 1S 3025 (Part 39):2021
32	Phenolic compounds as C6H3OH	mg/l	< 0.001	0.001	IS 3025 (Part 43): 1992 RA 2019
33	Selenium as Se	mgA	<0.001	0.01	IS 3025 (Part 56):2003 RA 2019 or IS 15303*
34	Silver as Ag	mg/l	<0.02	0.1	Annex J of IS 13428
35	Sulphide as H <sub>2</sub> S	mg/l	<0.05	0.05	IS 3025 (Part 29):1986 RA 2019
36	Zine as Zn	mg/l	<0.05	5	IS 3025 (Part 49):1994 RA 2019
37	Cadmium as Cd	mg/l	<0.001	0.003	IS 3025 (Part 41):1992 RA 2019
38	Cyanide as CN	mg/l	<0.01	0.05	1S 3025 (Part 27):1986 RAA 2019
39	Lead as Pb	mg/l	<0.001	0.01	IS 3025 (Part 47):1994 RA 2019
40	Mercury as Hg	mg/l	<0.001	0.001	IS 3025 (Part 48):1994 RA 2019
41	Molybdenum as Mo	mg/l	<0.02	0.07	IS 3025 (Part 2)
42	Nickel as Ni	mg/l	<0.01	0.02	IS 3025 (Part 54): 2003 RA 2019
43	Polynuclear aromatic hydro- carbons as PAH	mg/l	<0.0001	0.0001	APHA 6440
44	Total arsenic as As	mg/l	< 0.001	0.01	IS 3025 (Part 37):2022

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(Ms. Laxmi Sahoo)

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Page 2 of 2

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WCS/LQR/60

Sample Collected by

MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043N1ZE CIN: U725010R2010PTC011651

### TEST REPORT

Report No.	:	WCSL240109	Issue Date :	22.01.2024
Name of the Client	:	National Aluminium Company Limited	d	
Address	:	Smelter & Power (S&P) Complex		
		Angul-759145, Odisha		
Month of Monitoring		January- 2024		
Sample Description		Ground Water Level		
Sampling Plan & Method	:	WCS/QSP/SAMP (WATER LEVEL)	Date of Receiving :	17.01.2024
Environmental Condition		Clear Weather	<u></u>	

- ÷. Clear Weather
- WCS Laboratory 2

Sample ID No.	Location	Date	Ground water Level	
WCS0124WL01	Raijharana (Dug Well) (Buffer Zone)	16.01.2024		
WCS0124WL02	Kosala (Dug Well) (Buffer Zone)	16.01.2024	4.2 meter	
WCS0124WL03	Gopiballavpur Village (Dug Well) (Buffer Zone)	16.01.2024	2.0 meter	
WCS0124WL04	Dhobamalya Village (Dug Well) (Buffer Zone)	16.01.2024	5.0 meter	
WCS0124WL05	A39 Colony Area Borewell no 1(Buffer Zone)	16.01.2024	3.1 meter	
VCS0124WL06 A56 Colony Area Borewell no 2(Buffer Zone).		16.01.2024	2.0 meter	



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# ENVIRONMENTAL MONITORING REPORT FOR THE MONTH OF JANUARY-2024



# NATIONAL ALUMINIUM COMPANY LIMITED Coal Mine Division Angul-759145, Odisha



My World Consultancy Services Private Limited

Plot No. 766, Telengapentha, Cuttack, Odisha 754001





# WCS/LQR/57

#### TEST REPORT

Report No.	:	WCS240106A	Issue Date	2	10.01.2024
NABL ULR No.	:	TC112252400000006F			
Name of the Client	12	National Aluminium Company L	imited		
Address	12	Coal Mine Division			
		Angul-759145, Odisha			
Sampling Location	*	Gopiballavpur Village (Buffer Zo	one)		
Sample Description	2	Ambient Air Quality Monitoring	Date of Sampling	:	05.01.2024
Sampling Plan & Method	2	WCS/QSP/SAMP (AIR)	Sample ID No		WCS0124A01A
Environmental Condition	:	Clear weather	Date of Receiving	:	08.01.2024
Sample Collected by	:	WCS Laboratory	Quantity of Sample		1 No.
Date of Testing	1	08.01.2024 to 10.01.2024	Sample Condition		Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	52.2	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	μg/m <sup>3</sup>	34.2	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	$\mu g/m^3$	6.2	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	$\mu g/m^3$	18.0	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	$\mu g/m^3$	128.3	500 (As per CTO No-2938)	[S-5182 (Part-4) 1999 RA 2019

Bla Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)

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#### TEST REPORT

Report No. NABL ULR No.	:	WCS240106B TC1122524000000006F	Issue Date	r	10.01.2024
Name of the Client		National Aluminium Company L	imited		
Address	:	Coal Mine Division Angul-759145, Odisha			
Sampling Location	12	Colony Area (Buffer Zone)			
Sample Description	4	Ambient Air Quality Monitoring	Date of Sampling	ΕĻ.	05.01.2024
Sampling Plan & Method	2	WCS/QSP/SAMP (AIR)	Sample ID No		WCS0124A01B
Environmental Condition	1	Clear weather	Date of Receiving		08.01.2024
Sample Collected by	Ĭ.	WCS Laboratory	Quantity of Sample		1 No.
Date of Testing	:	08.01.2024 to 10.01.2024	Sample Condition	:	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	$\mu g/m^3$	62.8	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM35)	µg/m³	38.6	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	6.0	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	µg/m <sup>0</sup>	18,2	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	$\mu g/m^3$	155.4	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)

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### WCS/LQR/57

#### TEST REPORT

Report No.	1	WCS240106C	Issue Date		10.01.2024
NABL ULR No.	:	TC112252400000006F	1,2010,000,400,400,400,40		
Name of the Client	-	National Aluminium Company L	imited		
Address	ł	Coal Mine Division Angul-759145, Odisha			
Sampling Location	3	Near Weigh Bridge (Core Zone)			
Sample Description	- 1	Ambient Air Quality Monitoring	Date of Sampling	1	05.01.2024
Sampling Plan & Method	4	WCS/QSP/SAMP (AIR)	Sample ID No		WCS0124A01C
Environmental Condition	:	Clear weather	Date of Receiving		08.01.2024
Sample Collected by	1	WCS Laboratory	Quantity of Sample	:	1 No.
Date of Testing	4	08.01.2024 to 10.01.2024	Sample Condition	3	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	$\mu g/m^3$	71.4	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	µg/m³	42.9	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	$\mu g/m^3$	5.4	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	$\mu g/m^3$	18.8	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	μg/m <sup>3</sup>	224.6	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatrase)

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MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651



### TEST REPORT

Report No.	5	WCS240106D	Issue Date	3	10.01.2024
NABL ULR No.	:	TC112252400000006F		68	10170310177772-72
Name of the Client	:	National Aluminium Company L	imited		
Address	;	Coal Mine Division Angul-759145, Odisha			
Sampling Location	1	Near Settling Pond (Core Zone)			
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	3	05.01.2024
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Sample ID No		WCS0124A01D
Environmental Condition	4	Clear weather	Date of Receiving		08.01.2024
Sample Collected by	:	WCS Laboratory	Quantity of Sample	12	1 No.
Date of Testing	:	08.01.2024 to 10.01.2024	Sample Condition	÷	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM19)	µg/m <sup>3</sup>	61.8	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	µg/m³	43.4	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	6.1	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	19.0	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	155.7	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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(Mr. Bijaya Kumar Chahataray)

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(Mr. Pradeept Mohapatra)

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WCS/LQR/59		TEST REPOR	т		TC-11225
Report No.	1	WCS240107	Issue Date	20	10.01.2024
NABL ULR No.	3	TC112252400000007F			
Name of the Client	1	National Aluminium Company	v Limited		
Address	18	Coal Mine Division	1 1 100 (200 h 100 k 10 k 10 k 10 k 10 k 10 k 10 k		
		Angul-759145, Odisha			
Month of Sampling	15	January- 2024	Date of Receiving	5	08.01.2024
Sample Description		Ambient Noise	Quantity of Sample	÷	04
Sampling Plan & Method		WCS/QSP/SAMP (NOISE)	Sample Condition		Good
Sample Collected by	•	WCS Laboratory	Date of Analysis	1	09.01.2024

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS0124N01	Gopiballavpur Village	05.01.2024	51.0	39.4	Clear Weather
WCS0124N02	Near Settling Pond	05.01.2024	62.2	41.0	Clear Weather
WCS0124N03	Near Town ship	05.01.2024	62.4	41.8	Clear Weather
WCS0124N04	Near Weigh Bridge	05.01.2024	64.5	68.1	Clear Weather
Tes	st Method	IS 9989	: 1981		

Noise Standard in dB(A) Leq as per CPCB							
Category of Area	Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Leq (10.00 Pm to 6.00 Am)					
Industrial Area	75	70					
Commercial Area	65	55					
Residential Area	55	45					
Sensitive Area	50	40					

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#### WCS/LQR/57

### TEST REPORT

Report No.		WCS240109A	Issue Date	1	29.01.2024
NABL ULR No.	:	TC112252400000009F			
Name of the Client	12	National Aluminium Company L	imited		
Address	£(	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	Gopiballavpur Village (Buffer Zo	ine)		
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	2	24.01.2024
Sampling Plan & Method	10	WCS/QSP/SAMP (AIR)	Sample ID No	\$	WCS0124A03A
Environmental Condition	:	Medium Rain	Date of Receiving	1	27.01.2024
Sample Collected by	:	WCS Laboratory	Quantity of Sample	•	1 No.
Date of Testing	:	27.01.2024 to 29.01.2024	Sample Condition	1	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	48.0	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	µg/m³	33.4	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	6.0	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	μg/m <sup>3</sup>	16.2	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	μg/m <sup>1</sup>	124.1	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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(Mr. Pradeept Mohapatra)

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WCS/LQR/57	TEST R	EPORT	TC-11225
Report No. NABL ULR No. Name of the Client	: WCS240109B : TC1122524000000009F	Issue Date	: 29.01.2024
Address	<ul> <li>National Aluminium Company I</li> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> </ul>	amited	
Sampling Location Sample Description Sampling Plan & Method Environmental Condition	<ul> <li>Colony Area (Buffer Zone)</li> <li>Ambient Air Quality Monitoring</li> <li>WCS/QSP/SAMP (AIR)</li> <li>Medium Rain</li> </ul>	Date of Sampling Sample ID No Date of Receiving	: 24.01.2024 : WCS0124A03B : 27.01.2024

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM16)	$\mu g/m^3$	51.4	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	µg/m³	34.0	60 (As per NAAQ 2009)	1S-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	µg/m³	5.2	80 (As per NAAQ 2009)	1S-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	17.8	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	140.6	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Quantity of Sample :

Sample Condition

Phahatas Reviewed by

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WCS Laboratory

27.01.2024 to 29.01.2024

Sample Collected by

Date of Testing

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory

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(Mr. Pradeept Mohapatra)

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### WCS/LQR/57

#### TEST REPORT

Report No.	:	WCS240109C	Issue Date	4	29.01.2024
NABL ULR No.	1	TC112252400000009F			
Name of the Client	1	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	Near Weigh Bridge (Core Zone)			
Sample Description	8	Ambient Air Quality Monitoring	Date of Sampling	$\overline{t}$	24.01.2024
Sampling Plan & Method	<i>2</i> 3	WCS/QSP/SAMP (AIR)	Sample ID No	2	WCS0124A03C
Environmental Condition	4	Medium Rain	Date of Receiving	•	27.01.2024
Sample Collected by	1	WCS Laboratory	Quantity of Sample	¢.	1 No.
Date of Testing	1	27.01.2024 to 29.01.2024	Sample Condition	8	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m <sup>3</sup>	51.4	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2 s)	µg/m <sup>3</sup>	34.0	60 (As per NAAQ 2009)	1S-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	5.2	80 (As per NAAQ 2009)	1S-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	μg/m <sup>3</sup>	17.8	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	140.6	500 (As per CTO No-2938)	1S-5182 (Part-4) 1999 RA 2019

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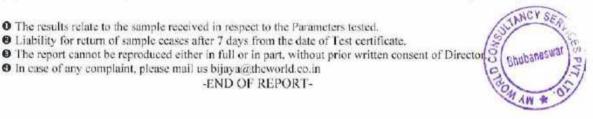
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World Consultancy Services		SERVICES PRIVATE (TESTING LABO GST NO: 21AADCT4 N: U725010R2010P	RATORY) 1043NIZE
WCS/LQR/57	TEST R	EPORT	TC-11225
Report No. NABL ULR No.	: WCS240109D : TC1122524000000009F	Issue Date	: 29.01.2024
Name of the Client Address	<ul> <li>National Aluminium Company L</li> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> </ul>	imited	
Sampling Location Sample Description Sampling Plan & Method Environmental Condition	<ul> <li>Near Settling Pond (Core Zone)</li> <li>Ambient Air Quality Monitoring</li> <li>WCS/QSP/SAMP (AIR)</li> <li>Medium Rain</li> </ul>	Date of Sampling Sample ID No Date of Receiving	: 24.01.2024 : WCS0124A03D : 27.01.2024

WCS Laboratory

27.01.2024 to 29.01.2024

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Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	59.4	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM23)	$\mu g/m^3$	40.6	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg∕m³	5.8	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	18.4	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Maiter (SPM)	µg/m <sup>3</sup>	149.7	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Quantity of Sample :

Sample Condition

Reviewed by

(Mr. Bijaya Kumar Chahataray)

Sample Collected by

Date of Testing

N.B.:

Authorized Signatory (Mr. Pradeept Mohapatra)

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World Consultancy Services		MY WORLD CONSULTANC	Y SERVICES PRIVATE I (TESTING LABOR GST NO: 21AADCT40 CIN: U725010R2010PT	AT 43	ORY) INIZE
WCS/LQR/59		TEST REPOR	т		L/ \_ TC-11225
Report No.		WCS240108	Issue Date	•	Martine Control And And Carl II
NABL ULR No.		TC112252400000008F	155de Date		27.01.2027
Name of the Client	4	National Aluminium Compan	v Limited		
Address	:	Coal Mine Division			
		Angul-759145, Odisha			
Month of Sampling	2	January- 2024	Date of Receiving	:	27.01.2024
Sample Description	:	Ambient Noise	Quantity of Sample	4	04
Sampling Plan & Method	0	WCS/QSP/SAMP (NOISE)	Sample Condition	3	Good
Sample Collected by	:	WCS Laboratory	Date of Analysis		27.01.2024

Sample ID No.	LocationDate of MonitoringDay Time dB(A) Leq		Night Time dB(A) Leq	Environmental Condition	
WCS0124N06	Gopiballavpur Village	24.01.2024	51.4	38.9	Medium Rain
WCS0124N07	Near Settling Pond	24.01.2024	63.4	40.5	Medium Rain
WCS0124N08	Near Town ship	25.01.2024	63.5	40.8	Clear Weather
WCS0124N09	Near Weigh Bridge	25.01.2024	64.1	69.2	Clear Weather
Tes	st Method	IS 9989	: 1981	100	

Noise Standard in dB(A) Leq as per CPCB						
Category of Area	Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Leq (10.00 Pm to 6.00 Am)				
Industrial Area	75	70				
Commercial Area	65	55				
Residential Area	55	45				
Sensitive Area	50	40				

chetar Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory

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(Mr. Pradeept Mohapatra)

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### WCS/LQR/57

#### TEST REPORT

Report No. NABL ULR No.		WCS240110 TC1122524000000010F	Issue Date	1	29.01.2024
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sample Description Sampling Plan & Method	‡ 1	Fugitive Emission (Core Zone) WCS/QSP/SAMP (AIR)			
Environmental Condition	:	Medium Rain	Date of Receiving	ž.	27.01.2024
Sample Collected by	:	WCS Laboratory	Quantity of Sample	1	4 No.
Date of Testing	:	28.01.2024	Sample Condition	1	Good

SI. No.	Sample ID No	Location	Date of Sampling	Suspended Particulate Matter (SPM)	Unit
1	WCS0124A04A	Haul Road	24.01.2024	245	$\mu g/m^3$
2	WCS0124A04B	OB Dump	25.01.2024	184	µg/m³
3	WCS0124A04C	Loading Point	25.01.2024	301	μg/m <sup>3</sup>
4	WCS0124A04D	Blasting Area	24.01.2024	219	μg/m <sup>3</sup>
	Standard :	500	µg/m³		
	Т	IS-5182 (Part-4) 1999	9 RA 2019		

Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)

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#### WCS/LQR/99

# TEST REPORT

Report No.	18	WCS240110A	Issue Date	2	29.01.2024
NABL ULR No.	:	TC1122524000000010F			
Name of the Client	1	National Aluminium Compa	iny Limited		
Address	1	Smelter & Power (S&P) Com	plex		
		Angul-759145, Odisha			
Sample Description	1	Personal Sampling Analysis	(Core Zone)		
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)			
Environmental Condition	:	Medium Rain	Date of Receiving	1	27.01.2024
Sample Collected	4	WCS Laboratory	Quantity of Sample	2	4 No.
Date of Testing		28.01.2024	Sample Condition	÷	Good

SI. No.	Sample ID No	Location	Date of Sampling	Respirable Particulate Matter (RPM)	Unit	Sample Collected Person
1	WCS0124A04E	Haul Road	24.01.2024	0.91	mg/m <sup>3</sup>	Mr. Rames Chandra Jena
2	WCS0124A04F	OB Dump	25.01.2024	0.66	mg/m <sup>3</sup>	Mr. Ranjit Mandal
3	WCS0124A04G	Loading Point	25.01.2024	0.85	mg/m <sup>3</sup>	Mr. Markanda Nayk
4	WCS0124A04H	Blasting Area	24.01.2024	0.79	mg/m³	Mr. Sonu Panday
Pern	nissible Limit as per Dhanbad, l	DGMS (Tech.) (So Dated 21st January		3.0	mg/m³	
		Fest Method		NIOS-6	00-15th /	August,1994

Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatya)

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ENVIRONMENTAL MONITORING REPORT FOR THE MONTH OF FEBRUARY-2024



# NATIONAL ALUMINIUM COMPANY LIMITED Coal Mine Division Angul-759145, Odisha



# My World Consultancy Services Private Limited

Plot No. 766, Telengapentha, Cuttack, Odisha 754001

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TEST REPORT



TC-11225

WCS/LQR/57
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Report No.	3	WCS240209A	Issue Date	:	09.02.2024
NABL ULR No.	:	TC112252400000021F			
Name of the Client	:	National Aluminium Company L	imited		
Address : Smelter & Power (S&P) Complex Angul-759145, Odisha					
Sampling Location	-	Gopiballavpur Village (Buffer Ze	one)		
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	12	05.02.2024
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)	Sample ID No	3	WCS0224A01A
Environmental Condition	:	Medium Rain	Date of Receiving	1	08.02.2024
Sample Collected by	:	WCS Laboratory	Quantity of Sample	sţ.	1 No.
Date of Testing	:	08.02.2024 to 09.02.2024	Sample Condition	3	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM <sub>10</sub> )	μg/m <sup>3</sup>	50,2	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2 5)	µg/m <sup>3</sup>	34.5	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	μg/m <sup>3</sup>	6.2	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	15.8	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	125.8	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Reviewed by

(Mr. Bijaya Kumar Chahataray)

TANCY S Bhubaneswa Authorized Signatory (Mr. Pradeept Mohapatra) -0

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World Consultancy Services	MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651						
WCS/LQR/57	TEST F	REPORT	TC-11225				
Report No.	: WCS240209B	Issue Date	: 09.02.2024				
NABL ULR No.	: TC1122524000000021F						
Name of the Client	: National Aluminium Company	Limited					
Address	: Smelter & Power (S&P) Comple: Angul-759145, Odisha	x					
Sampling Location	: Colony Area (Buffer Zone)						
Sample Description	: Ambient Air Quality Monitoring	Date of Sampling	: 05.02.2024				
Sampling Plan & Method	: WCS/QSP/SAMP (AIR)	Sample ID No	: WCS0224A01B				
Environmental Condition	: Medium Rain	Date of Receiving	: 08.02.2024				
Sample Collected by	: WCS Laboratory	Quantity of Sample	: 1 No.				

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM <sub>10</sub> )	μg/m <sup>3</sup>	54.4	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	μg/m³	36.1	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	µg/m³	5.8	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	18.0	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	144.6	500 (As per CTO No-2938)	1S-5182 (Part-4) 1999 RA 2019

Sample Condition

Good

Phahata Day Reviewed by

Reviewed by (Mr. Bijaya Kumar Chahataray)

Date of Testing

TANCI Bhubanesy Authorized Signator (Mr. Pradeept Mohapatta)

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08.02.2024 to 09.02.2024

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TEST REPORT



TC-11225

WCS/L	QR/57
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#### Report No. WCS240209C Issue Date 09.02.2024 A NABL ULR No. TC1122524000000021F t Name of the Client National Aluminium Company Limited 3 Address Smelter & Power (S&P) Complex 1. Angul-759145, Odisha Sampling Location : Near Weigh Bridge (Core Zone) Sample Description Ambient Air Quality Monitoring Date of Sampling 05.02.2024 13 1 Sampling Plan & Method 4 WCS/QSP/SAMP (AIR) Sample ID No WCS0224A01C 3 Environmental Condition 1 Medium Rain Date of Receiving 08.02.2024 \$ Sample Collected by WCS Laboratory Quantity of Sample : ÷ 1 No. 08.02.2024 to 09.02.2024 Date of Testing 8 Sample Condition Good 2

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM <sub>10</sub> )	µg/m³	70.2	100 (As per NAAQ 2009)	1S-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	µg/m³	40.2	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	5.2	80 (As per NAAQ 2009)	1S-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	18.0	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	204.6	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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Reviewed by (Mr. Bijaya Kumar Chahataray)

LANC Bhubaneswa Authorized Signatory (Mr. Pradeept Mohapatra)

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WORLD Consultancy Services			SERVICES PRIVATI (TESTING LABO ST NO: 21AADCT4 V: U725010R2010P	RA1	TORY) 3NIZE
WCS/LQR/57		TEST RE	PORT		TC-11225
Report No.	:	WCS240209D	Issue Date	4	09.02.2024
NABL ULR No.	:	TC1122524000000021F			
Name of the Client		National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	1	Near Settling Pond (Core Zone)			
Sample Description		Ambient Air Quality Monitoring	Date of Sampling		05.02.2024
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)	Sample ID No	1	WCS0224A01D

Sample Description Sampling Plan & Method Environmental Condition Sample Collected by Date of Testing

: WCS/QSP/SAMP Medium Rain

: WCS Laboratory

: 08.02.2024 to 09.02.2024

Date of Sampling		05.02.2024
Sample ID No	1	WCS0224A0
Date of Receiving	4	08.02.2024
Quantity of Sample	\$	1 No.
Sample Condition	:	Good
Quantity of Sample	**	1 No.

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	61.4	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	µg/m³	42.4	60 (As per NAAQ 2009)	18-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	$\mu g/m^3$	6.0	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	μg/m <sup>3</sup>	18.2	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	148.6	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Chachetomy Reviewed by

(Mr. Bijaya Kumar Chahataray)

Chubanesn Authorized Signatory (Mr. Pradeept Mohapatra) 10

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WCS/LQR/59	TEST REPO	RT	TC-11225
Report No.	: WCS240211	Issue Date	: 09.02.2024
NABL ULR No.	: TC1122524000000042F		
Name of the Client	: National Aluminium Compa	ny Limited	
Address	: Coal Mine Division	7.5	
	Angul-759145, Odisha		
Month of Sampling	: February- 2024	Date of Receiving	: 08.02.2024
Sample Description	: Ambient Noise	Quantity of Sample	: 04
Sampling Plan & Method	: WCS/QSP/SAMP (NOISE)	Sample Condition	: Good
Sample Collected by	: WCS Laboratory	Date of Analysis	: 09.02.2024

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS0224N03	Gopiballavpur Village	05.02.2024	50.8	38.6	Clear Weather
WCS0224N04	Near Settling Pond	05.02.2024	62.5	40.2	Clear Weather
WCS0224N05	Near Town ship	05.02.2024	64.3	44.1	Clear Weather
WCS0224N06	Near Weigh Bridge	05.02.2024	64.8	70.8	Clear Weather
Tes	t Method	IS 9989	: 1981	10.0	

No	oise Standard in dB(A) Leq as per C	СРСВ
Category of Area	Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Leq (10.00 Pm to 6.00 Am)
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Sensitive Area	50	40

Phothetasay Reviewed by

(Mr. Bijaya Kumar Chahataray)

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TEST REPORT



#### WCS/LQR/57

Report No.	1	WCS240212A	Issue Date	3	22.02.2024
NABL ULR No.	:	TC1122524000000043F			
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex			
		Angul-759145, Odisha			
Sampling Location	3	Gopiballavpur Village (Buffer Zo	one)		
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	15	19.02.2024
Sampling Plan & Method		WCS/QSP/SAMP (AIR)	Sample ID No	:	WCS0224A01A
Environmental Condition	:	Medium Rain	Date of Receiving	3	21.02.2024
Sample Collected by	:	WCS Laboratory	Quantity of Sample	1	l No.
Date of Testing		21.02.2024 to 22.02.2024	Sample Condition	2	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM <sub>10</sub> )	μg/m³	51.0	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2 s)	µg/m³	36.6	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m³	5.8	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	16.1	80 (As per NAAQ 2009)	1S-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	121.6	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Blachetory Reviewed by

Reviewed by (Mr. Bijaya Kumar Chahataray)

TANCH Bhubaneswa Authorized Signatory (Mr. Pradeept Mohapatra) 4

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WCS/LQR/60	TEST REPORT		
Report No.	: WCS240212A	Issue Date	: 22.02.2024
Name of the Client	: National Aluminium Company	Limited	
Address	: Smelter & Power (S&P) Complex Angul-759145, Odisha		
Sampling Location	: Gopiballavpur Village (Buffer Z	one)	
Sample Description	: Ambient Air Quality	Date of Sampling	: 19.02.2024
Sampling Plan & Method	: WCS/QSP/SAMP (AIR)	Date of Receiving	: 21.02.2024
Environmental Condition	: Temperature 290C, Clear Weather	Sample ID No	: WCS0224A01A
Sample Collected by	: WCS Laboratory	Quantity of Sample	: 1
Date of Testing	: 21.02.2024 to 22.02.2024	Sample Condition	: Good

SI. No.	Parameter	Unit	Result	NAAQ Standard 2009	Test Methods
5	Ammonia (NH1)	μg/m3	12.4	Max-400	IS 5182 (Part-25):2018
6	Arsenic (As)	ng/m3	<1.0	Max-6	WCS/SOP/AIR
7	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m3	<1.0	Max-5	IS 5182 (Part-11):2006
8	Benzo alpha pyrene (BAP)	ng/m3	<1.0	Max-1	IS 5182 (Part-12):2004
9	Lead (Pb)	μg/m3	<0.1	Max-1	WCS/SOP/AIR
10	Nickel (Ni)	ng/m3	<1.0	Max-20	WCS/SOP/AIR
11	Carbon Monoxide (CO)	mg/m3	0.201	Max-4	IS 5182 (Part-10):1999
12	Ozone (O3)	µg/m3	<10.0	Max-100	Method of Air Sampling and Analysis (3 <sup>nt</sup> Edition) Method 411 by J.P.Lodge:1988

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Reviewed by (Mr. Bijaya Kumar Chahataray) N.B.: •••• The results relate to the sample rec

TANCY Bhubanesw Authorized Signatory (Mr. Pradeept Mohapatra) 10. 4

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WORD Consultancy Services	MY WORLD CONSULT	ANCY SERVICES PRIV (TESTING LA GST NO: 21AADO CIN: U725010R20	BORAT	INIZE
WCS/LQR/57	T	EST REPORT		TC-11225
Report No. NABL ULR No. Name of the Client Address	<ul> <li>WCS240212B</li> <li>TC1122524000000043F</li> <li>National Aluminium Con</li> <li>Smelter &amp; Power (S&amp;P) Co Angul-759145, Odisha</li> </ul>		ł	22.02.2024

Sampling Location Sample Description Sampling Plan & Method Environmental Condition Sample Collected by Date of Testing Colony Area (Buffer Zone)
 Ambient Air Quality Monitoring
 WCS/QSP/SAMP (AIR)
 Medium Rain

WCS Laboratory

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21.02.2024 to 22.02.2024

Date of Sampling	12	19.02.2024
Sample ID No	:	WCS0224A01B
Date of Receiving	:	21.02.2024
Quantity of Sample	2	1 No.
Sample Condition	:	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM16)	μg/m <sup>3</sup>	59.1	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	$\mu g/m^3$	37.3	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxīde (SO <sub>2</sub> )	µg/m <sup>3</sup>	6.0	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	17.4	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	152.3	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

hataray Reviewed by

(Mr. Bijaya Kumar Chahataray)

TANO Bhubanesu Authorized Signatory (Mr. Pradeept Mohapatra)

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WCS/LQR/60		TEST REPORT			
Report No.	1	WCS240212B	Issue Date	:	22.02.2024
Name of the Client		National Aluminium Company L	imited		
Address	;	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	13	Colony Area (Buffer Zone)			
Sample Description	:	Ambient Air Quality	Date of Sampling	1	19.02.2024
Sampling Plan & Method	5	WCS/QSP/SAMP (AIR)	Date of Receiving		21.02.2024
Environmental Condition	:	Temperature 29ºC, Clear Weather	Sample ID No	8	WCS0224A01B
Sample Collected by		WCS Laboratory	Quantity of Sample		1
Date of Testing	13	21.02.2024 to 22.02.2024	Sample Condition	4	Good

SI. No.	Parameter	Unit	Result	NAAQ Standard 2009	Test Methods
5	Ammonia (NH3)	μg/m3	12.0	Max-400	IS 5182 (Part-25):2018
6	Arsenic (As)	ng/m3	<1.0	Max-6	WCS/SOP/AIR
7	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m3	<1.0	Max-5	IS 5182 (Part-11):2006
8	Benzo alpha pyrene (BAP)	ng/m3	<1.0	Max-1	IS 5182 (Part-12):2004
9	Lead (Pb)	µg/m3	<0.1	Max-1	WCS/SOP/AIR
10	Nickel (Ni)	ng/m3	<1.0	Max-20	WCS/SOP/AIR
11	Carbon Monoxide (CO)	mg/m3	0.202	Max-4	IS 5182 (Part-10):1999
12	Ozone (O3)	µg/m3	<10.0	Max-100	Method of Air Sampling and Analysis (3 <sup>rd</sup> Edition) Method 411 by J.P.Lodge:1988

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Reviewed by // (Mr. Bijaya Kumar Chahataray) N.B.: • The results relate to the sample

TANC Bhubanesm Authorized Signatory (Mr. Pradeept Mohapatra)

The results relate to the sample received in respect to the Parameters tested.
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TEST REPORT



WCS/LQR/57

Report No.	1	WCS240212C	Issue Date	4	22.02.2024	
NABL ULR No.	\$H	TC112252400000043F				
Name of the Client	40	National Aluminium Company L	imited			
Address	1	Smelter & Power (S&P) Complex Angul-759145, Odisha				
Sampling Location	32	Near Weigh Bridge (Core Zone)				
Sample Description	5	Ambient Air Quality Monitoring	Date of Sampling	2	19.02.2024	
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)	Sample ID No	:	WCS0224A01C	
Environmental Condition	:	Medium Rain	Date of Receiving	č,	21.02.2024	
Sample Collected by	10	WCS Laboratory	Quantity of Sample	2	I No.	
Date of Testing	:	21.02.2024 to 22.02.2024	Sample Condition	1	Good	

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	μg/m <sup>3</sup>	69.2	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	μg/m <sup>3</sup>	41.0	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	µg/m³	5.4	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	17.1	80 (As per NAAQ 2009)	18-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	225.7	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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Reviewed by (Mr. Bijaya Kumar Chahataray) Authorized Signatory (Mr. Pradeept Mohapatra)

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Page 3 of 4



WCS/LQR/60		TEST REPORT			
Report No.	:	WCS240212C	Issue Date	1	22.02.2024
Name of the Client	:	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location		Near Weigh Bridge (Core Zone)			
Sample Description	:	Ambient Air Quality	Date of Sampling	2	19.02.2024
Sampling Plan & Method	1	WCS/QSP/SAMP (AIR)	Date of Receiving	:	21.02.2024
Environmental Condition		Temperature 29ºC, Clear Weather	Sample ID No	:	WCS0224A01C
Sample Collected by	1	WCS Laboratory	Quantity of Sample	1	1
Date of Testing	\$	21.02.2024 to 22.02.2024	Sample Condition	:	Good

SL No.	Parameter	Unit	Result	NAAQ Standard 2009	Test Methods
5	Ammonia (NH3)	μg/m3	12.1	Max-400	IS 5182 (Part-25):2018
6	Arsenic (As)	ng/m3	<1.0	Max-6	WCS/SOP/AIR
7	Benzene (C <sub>6</sub> H <sub>6</sub> )	µg/m3	<1.0	Max-5	1S 5182 (Part-11):2006
8	Benzo alpha pyrene (BAP)	ng/m3	<1.0	Max-1	IS 5182 (Part-12):2004
9	Lead (Pb)	μg/m3	<0.1	Max-1	WCS/SOP/AIR
10	Nickel (Ni)	ng/m3	<1.0	Max-20	WCS/SOP/AIR
11	Carbon Monoxide (CO)	mg/m3	0.205	Max-4	IS 5182 (Part-10):1999
12	Ozone (O3)	µg/m3	<10.0	Max-100	Method of Air Sampling and Analysis (3 <sup>rd</sup> Edition) Method 411 by J.P.Lodge:1988

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Authorized Signatory (Mr. Pradeept Mohapatra)

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(Mr. Bijaya Kumar Chahataray) N.B.: **0** The results relate to the s

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World Consultancy Services			SERVICES PRIVATE (TESTING LABOR ST NO: 21AADCT40 V: U725010R2010P	241 24:	
WCS/LQR/57		TEST RE	PORT		TC-11225
Report No.	÷	WCS240212D	Issue Date	:	22.02.2024
NABL ULR No.	\$	TC1122524000000043F			
Name of the Client	5	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	Near Settling Pond (Core Zone)			
Sample Description	10	Ambient Air Quality Monitoring	Date of Sampling	32	19.02.2024
Sampling Plan & Method		WCS/QSP/SAMP (AIR)	Sample ID No	2	WCS0224A01D
Environmental Condition	:	Medium Rain	Date of Receiving		21.02.2024
Sample Collected by	4	WCS Laboratory	Quantity of Sample	*	l No.
745 T C T C 200 EPH 200		그는 것은 것은 것은 것을 알았는 것을 위해 이야기 위험을 얻는 것은 것을 것을 것을 것을 수 있다.			

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	57.4	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	µg/m³	41.7	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	μg/m <sup>3</sup>	5.7	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	18.0	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	μք/m <sup>3</sup>	145.3	500 (As per CTO No-2938)	1S-5182 (Part-4) 1999 RA 2019

Sample Condition

: Good

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(Mr. Bijaya Kumar Chahataray)

Date of Testing

Authorized Signatory Bhubanes ar (Mr. Pradeept Mohapatra)

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: 21.02.2024 to 22.02.2024

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WCS/LQR/60	TEST REPO	)RT	
Report No.	: WCS240212D	Issue Date	: 22.02.2024
Name of the Client	: National Aluminium Com	pany Limited	
Address	: Smelter & Power (S&P) Co Angul-759145, Odisha	omplex	
Sampling Location	: Near Settling Pond (Core	Zone)	
Sample Description	: Ambient Air Quality	Date of Sampling	: 19.02.2024
Sampling Plan & Method	: WCS/QSP/SAMP (AIR)	Date of Receiving	: 21.02.2024
Environmental Condition	: Temperature 29°C, Clear W	eather Sample ID No	: WCS0224A01D
Sample Collected by	: WCS Laboratory	Quantity of Sample	: 1
Date of Testing	: 21.02.2024 to 22.02.2024	Sample Condition	: Good

SL No.	Parameter	Unit	Result	NAAQ Standard 2009	Test Methods
5	Ammonia (NH3)	μg/m3	12.4	Max-400	1S 5182 (Part-25):2018
6	Arsenic (As)	ng/m3	<1.0	Max-6	WCS/SOP/AIR
7	Benzene (C <sub>6</sub> H <sub>6</sub> )	μg/m3	<1.0	Max-5	IS 5182 (Part-11):2006
8	Benzo alpha pyrene (BAP)	ng/m3	<1.0	Max-1	IS 5182 (Part-12):2004
9	Lead (Pb)	µg/m3	<0.1	Max-I	WCS/SOP/AIR
10	Nickel (Ni)	ng/m3	<1.0	Max-20	WCS/SOP/AIR
11	Carbon Monoxide (CO)	mg/m3	0.202	Max-4	IS 5182 (Part-10):1999
12	Ozone (O3)	µg/m3	<10.0	Max-100	Method of Air Sampling and Analysis (3 <sup>rd</sup> Edition) Method 411 by J.P.Lodge:1988

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Reviewed by (Mr. Bijaya Kumar Chahataray) N.B.:

ANC Bhubaneswa Authorized Signatory (Mr. Pradeept Mohapatra)

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WCS/LQR/59	TEST RI	EPORT	TC-11225	
Report No.	: WCS240214	Issue Date	: 22.02.2024	
NABL ULR No.	: TC1122524000000045F	-		
Name of the Client	: National Aluminium Co	mpany Limited		
Address	: Coal Mine Division	12 TA		
	Angul-759145, Odisha			
Month of Sampling	: February- 2024	Date of Receiving	: 21.02.2024	
Sample Description	: Ambient Noise	Quantity of Sample	2 : 04	
Sampling Plan & Method	: WCS/QSP/SAMP (NOISI	E) Sample Condition	: Good	
Sample Collected by	: WCS Laboratory	Date of Analysis	: 22.02.2024	

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS0224N03	Gopiballavpur Village	19.02.2024	51.2	39.4	Clear Weather
WCS0224N04	Near Settling Pond	19.02.2024	61.4	40.8	Clear Weather
WCS0224N05 Near Town ship WCS0224N06 Near Weigh Bridge		19.02.2024	63.8	45.2	Clear Weather
		19.02.2024 64.5		71.2	Clear Weather
Tes	t Method	IS 9989	: 1981		

Noise Standard in dB(A) Leq as per CPCB		
Category of Area	Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Leq (10.00 Pm to 6.00 Am)
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Sensitive Area	50	40

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(Mr. Bijaya Kumar Chahataray)

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TEST REPORT

Sample Condition

Good

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(Mr. Pradeept Mohapatra)

WCS/LQR/57

NABL ULR No.

Date of Testing

Report No.

Address

WCS240213 Issue Date : 22.02.2024 5 TC1122524000000044F Name of the Client National Aluminium Company Limited \* Smelter & Power (S&P) Complex 1 Angul-759145, Odisha Sample Description Fugitive Emission (Core Zone) Sampling Plan & Method WCS/QSP/SAMP (AIR) Environmental Condition Medium Rain Date of Receiving : 21.02.2024 ۰. Sample Collected by 1 WCS Laboratory Quantity of Sample : 4 No.

Suspended SI. Date of Sample ID No Location Particulate Unit No. Sampling Matter (SPM) 1 WCS0224A03A Haul Road 19.02.2024 239  $\mu g/m^3$ 2 WCS0224A03B 170 **OB** Dump 18.02.2024 µg/m<sup>3</sup> 3 WCS0224A03C Loading Point 18.02.2024 298  $\mu g/m^3$ 4 WCS0224A03D Blasting Area 19.02.2024 205  $\mu g/m^1$ Standard as per CTO No-2938 500 µg/m<sup>3</sup> IS-5182 (Part-4) 1999 RA 2019 Test Method TANCI

Reviewed by

(Mr. Bijaya Kumar Chahataray)

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22.02.2024

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WCS/LQR/99	TES	ST REPORT		TC-11225			
Report No. NABL ULR No.	: WCS240213A : TC1122524000000044F	Issue Date	: 3	22.02.2024			
Name of the Client	: National Aluminium Comp	any Limited					
Address	<ul> <li>Smelter &amp; Power (S&amp;P) Com Angul-759145, Odisha</li> </ul>	plex					
Sample Description Sampling Plan & Method	: Personal Sampling Analysis : WCS/QSP/SAMP (AIR)	(Core Zone)					
Environmental Condition	: Medium Rain	Date of Receiving	: :	21.02.2024			
Sample Collected	: WCS Laboratory	Quantity of Sample	: 4	4 No.			
Date of Testing	: 22.02.2024	Sample Condition	: (	Good			

SI. No.	Sample ID No	Location	Date of Sampling	Respirable Particulate Matter (RPM)	Unit	Sample Collected Person
1	WCS0224A03E	Haul Road	19.02.2024	1.04	mg/m <sup>3</sup>	Mr. Rames Chandra Jena
2	WCS0224A03F	OB Dump	18.02.2024	0.72	mg/m³	Mr. Ranjit Mandal
3	WCS0224A03G	Loading Point	18.02.2024	0.82	mg/m <sup>3</sup>	Mr. Markanda Nayk
4	WCS0224A03H	Blasting Area	19.02.2024	0.81	mg/m³	Mr. Sonu Panday
Pern	nissible Limit as per Dhanbad, l	DGMS (Tech.) (S& Dated 21 <sup>st</sup> January	긴 하늘 밖에 안전을 걸고 있는 것이 많이 많이 있는 것을 들었다. ㅠㅠㅠㅠ	3.0	mg/m³	<del></del>
	1	Fest Method		NIOS-6	00-15th /	August,1994

Reviewed by

(Mr. Bijaya Kumar Chahataray)

VLTANCY Authorized Signatory (Mr. Pradeept Mohapatra) te

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ENVIRONMENTAL MONITORING REPORT FOR THE MONTH OF MARCH-2024



# NATIONAL ALUMINIUM COMPANY LIMITED Coal Mine Division Angul-759145, Odisha



My World Consultancy Services Private Limited

Plot No. 766, Telengapentha, Cuttack, Odisha 754001



Gopiballavpur Village (Buffer Zone)

Ambient Air Quality Monitoring

Angul-759145, Odisha

WCS/QSP/SAMP (AIR)

Clear weather

WCS Laboratory

: 07.03.2024 to 11.03.2024

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Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	$\mu g/m^3$	52.41	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM23)	$\mu g/m^3$	33.33	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	$\mu g/m^3$	6.0	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	µg/m³	16.1	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	$\mu g/m^3$	128.0	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Date of Sampling

Date of Receiving

Sample Condition

Quantity of Sample :

Sample ID No

Sampling Location

Sample Description

Sample Collected by

Date of Testing

N.B.:

Sampling Plan & Method

Environmental Condition

Reviewed by (Mr. Bijaya Kumar Chahataray) Authorized Signatory Shubaneswar (Mr. Pradeept Mohapatra)

05.03.2024

07.03.2024

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WCS/LQR/57	TEST RI	EPORT	TC-11225
Report No. NABL ULR No. Name of the Client Address	<ul> <li>WCSL240313B</li> <li>TC1122524000000070F</li> <li>National Aluminium Company L</li> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> </ul>	Issue Date	: 13.03.2024
Sampling Location Sample Description Sampling Plan & Method Environmental Condition Sample Collected by Date of Testing	<ul> <li>Colony Area (Buffer Zone)</li> <li>Ambient Air Quality Monitoring</li> <li>WCS/QSP/SAMP (AIR)</li> <li>Clear weather</li> <li>WCS Laboratory</li> <li>07.03.2024 to 11.03.2024</li> </ul>	Date of Sampling Sample ID No Date of Receiving Quantity of Sample Sample Condition	: 05.03.2024 : WCS0324A01B : 07.03.2024 : 1 No. : Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	55.18	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	µg/m³	35.15	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	µg/m³	5.7	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	µg/m³	17.6	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m³	145.4	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Reviewed by (Mr. Bijaya Kumar Chahataray)

ILTANC) Bhubanesy 0 Authorized Signatory (Mr. Pradeept Mohapatra

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WCS/LQR/57

MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651



#### TEST REPORT

Report No. NABL ULR No.	4	WCSL240313C TC1122524000000070F	Issue Date	8	13.03.2024
Name of the Client Address	:	National Aluminium Company L Smelter & Power (S&P) Complex	imited		
Sampling Location Sample Description Sampling Plan & Method Environmental Condition		Angul-759145, Odisha Near Weigh Bridge (Core Zone) Ambient Air Quality Monitoring WCS/QSP/SAMP (AIR) Clear weather	Date of Sampling Sample ID No Date of Receiving		05.03.2024 WCS0324A01C 07.03.2024
Sample Collected by Date of Testing	::	WCS Laboratory 07.03.2024 to 11.03.2024	Quantity of Sample Sample Condition		1 No. Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	μg/m³	68.41	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	μg/m <sup>3</sup>	40.89	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	5.5	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	$\mu g/m^3$	18.0	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	202.8	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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Reviewed by (Mr. Bijaya Kumar Chahataray) Authorized Signatory (Mr. Pradcept Mohapatra)

N.B.: O The results relate to the sample received in respect to the Parameters tested.

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WCS/LQR/57	TEST RE	PORT	TC-11225					
Report No. NABL ULR No. Name of the Client Address	<ul> <li>WCSL240313D</li> <li>TC1122524000000070F</li> <li>National Aluminium Company L</li> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> </ul>	Issue Date	: 13.03.2024					
Sampling Location Sample Description Sampling Plan & Method Environmental Condition Sample Collected by Date of Testing	<ul> <li>Near Settling Pond (Core Zone)</li> <li>Ambient Air Quality Monitoring</li> <li>WCS/QSP/SAMP (AIR)</li> <li>Clear weather</li> <li>WCS Laboratory</li> <li>07.03.2024 to 11.03.2024</li> </ul>	Date of Sampling Sample ID No Date of Receiving Quantity of Sample Sample Condition	: 05.03.2024 : WCS0324A01D : 07.03.2024 : 1 No. : Good					

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	μg/m³	60.49	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	$\mu g/m^3$	43.73	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	$\mu g/m^3$	6,1	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	µg/m <sup>3</sup>	18.3	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	μg/m <sup>3</sup>	147.7	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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(Mr. Bijaya Kumar Chahataray)

TANCI Authorized Signatory 11 + 01

N.B.: O The results relate to the sample received in respect to the Parameters tested.

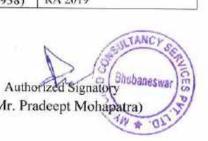
❷ Liability for return of sample ceases after 7 days from the date of Test certificate.

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-END OF REPORT-



(Mr. Pradeept Mohapatra)



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WCS/LQR/57

MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651



#### TEST REPORT

Report No.	:	WCSL240314A	Issue Date		28.03.2024
NABL ULR No.		TC1122524000000071F			2010012021
Name of the Client	1	National Aluminium Company L	imited		
Address	:	Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	:	Gopiballavpur Village (Buffer Zo	one)		
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	12	23.03.2024
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)	Sample ID No		WCS0324A02A
Environmental Condition	:	Clear weather	Date of Receiving	4	25.03.2024
Sample Collected by	:	WCS Laboratory	Quantity of Sample	1	1 No.
Date of Testing	:	25.03.2024 to 27.03.2024	Sample Condition	<u>.</u>	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	$\mu g/m^3$	50.63	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	µg/m³	35.04	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	µg/m <sup>3</sup>	6.1	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO <sub>2</sub> )	$\mu g/m^3$	16.4	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	µg/m <sup>3</sup>	121.3	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Reviewed by

(Mr. Bijaya Kumar Chahataray)

ULTANC Shubanes Authorized Signatory (Mr. Pradeept Mohapatra) 4. .07

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World Consultancy Services	MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651						
WCS/LQR/57	TEST RI	PORT		TC-11225			
Report No. NABL ULR No.	: WCSL240314B : TC1122524000000071F	Issue Date	:	28.03.2024			
Name of the Client Address	<ul> <li>National Aluminium Company L</li> <li>Smelter &amp; Power (S&amp;P) Complex Angul-759145, Odisha</li> </ul>	imited					
Sampling Location	: Colony Area (Buffer Zone)						
Sample Description	: Ambient Air Quality Monitoring	Date of Sampling	8	23.03.2024			
Sampling Plan & Method	WCS/QSP/SAMP (AIR)	Sample ID No	- 2	WCS0324A02B			
Environmental Condition	: Clear weather	Date of Receiving	4	25.03.2024			

Quantity of Sample :

Sample Condition

1 No.

Good

4

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	µg/m³	60.61	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	µg/m³	38.30	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO2)	µg/m³	5.9	80 (As per NAAQ 2009)	18-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	μg/m³	17.8	80 (As per NAAQ 2009)	18-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	μg/m³	153.8	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

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Reviewed by (Mr. Bijaya Kumar Chahataray)

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N.B.:

Sample Collected by

Date of Testing

The results relate to the sample received in respect to the Parameters tested.

WCS Laboratory

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25.03.2024 to 27.03.2024

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-END OF REPORT-

Reach us at Telengapetha. Cuttack, Odisha - 754001 wcs@theworld.co.in +91 79787 24154 www.worldconsultancyservices.in Ο 1 NABL CERTIFICATE & S

Page 2 of 4





Report No.	: WCSL240314C	Issue Date	10	28.03.2024
NABL ULR No.	: TC1122524000000071F		10	
Name of the Client	: National Aluminium Company Li	imited		
Address	: Smelter & Power (S&P) Complex Angul-759145, Odisha			
Sampling Location	: Near Weigh Bridge (Core Zone)			
Sample Description	: Ambient Air Quality Monitoring	Date of Sampling		23.03.2024
Sampling Plan & Method	: WCS/QSP/SAMP (AIR)	Sample ID No		WCS0324A02C
Environmental Condition	: Clear weather	Date of Receiving	-	25.03.2024
Sample Collected by	: WCS Laboratory	Quantity of Sample	:	1 No.
Date of Testing	: 25.03.2024 to 27.03.2024	Sample Condition	:	Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM10)	μg/m <sup>3</sup>	67.81	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM2.5)	μg/m³	40.56	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	$\mu g/m^3$	5.3	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	$\mu g/m^3$	17.2	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	$\mu g/m^3$	224.3	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Reviewed by (Mr. Bijaya Kumar Chahataray)

LIANC Bhubaneswa Authorized Signatory (Mr. Pradeept Mohapatra)

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WCS/LQR/57

MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651



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Authorized Signatory

(Mr. Pradeept Mohapatha)

#### TEST REPORT

Report No.	:	WCSL240314D	Issue Date	1	28.03.2024
NABL ULR No.	:	TC1122524000000071F			
Name of the Client		National Aluminium Company L	imited		
Address	1	Smelter & Power (S&P) Complex			
		Angul-759145, Odisha			
Sampling Location	:	Near Settling Pond (Core Zone)			
Sample Description	:	Ambient Air Quality Monitoring	Date of Sampling	5	23.03.2024
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)	Sample ID No		WCS0324A02D
Environmental Condition	:	Clear weather	Date of Receiving	:	25.03.2024
Sample Collected by	10	WCS Laboratory	Quantity of Sample		1 No.
Date of Testing	1	25.03.2024 to 27.03.2024	Sample Condition		Good

Parameter	Unit	Result	Standard	Test Method
Respirable Suspended Particulate Matter (PM <sub>10</sub> )	µg/m <sup>3</sup>	58.11	100 (As per NAAQ 2009)	IS-5182 (Part-23) 2006 RA 2017
Fine Particulate Matter (PM25)	µg/m <sup>3</sup>	41.22	60 (As per NAAQ 2009)	IS-5182 (Part-24) 2019
Sulphur Dioxide (SO <sub>2</sub> )	$\mu g/m^3$	6.4	80 (As per NAAQ 2009)	IS-5182 (Part-2) 2001 RA 2017
Nitrogen Oxides (NO2)	μg/m³	18.5	80 (As per NAAQ 2009)	IS-5182 (Part-6) 2006 RA 2017
Suspended Particulate Matter (SPM)	$\mu g/m^3$	146.0	500 (As per CTO No-2938)	IS-5182 (Part-4) 1999 RA 2019

Reviewed by

(Mr. Bijaya Kumar Chahataray)

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MY WORLD CONSULTANCY SERVICES PRIVATE LIMITED (TESTING LABORATORY) GST NO: 21AADCT4043NIZE CIN: U725010R2010PTC011651



#### TEST REPORT

Report No.	: WCSL240315A	Issue Date	•	28.03.2024
NABL ULR No.	: TC112252400000072F		0.00	1010012021
Name of the Client	: National Aluminium Comp	any Limited		
Address	: Smelter & Power (S&P) Con			
	Angul-759145, Odisha			
Sample Description	: Fugitive Emission (Core Zon	ne)		
Sampling Plan & Method	: WCS/QSP/SAMP (AIR)	and the second		
Environmental Condition	: Clear weather	Date of Receiving	4	25.03.2024
Sample Collected by	: WCS Laboratory	Quantity of Sample		4 No.
Date of Testing	: 25.03.2024	Sample Condition	4	Good

SL No.	Sample ID No	Location	Date of Sampling	Suspended Particulate Matter (SPM)	Unit
1	WCS0324A03A	Haul Road	23.03.2024	240	μg/m³
2	WCS0324A03B	OB Dump	22.03.2024	181	μg/m³
3	WCS0324A03C	Loading Point	22.03.2024	303	µg/m³
4	WCS0324A03D	Blasting Area	23.03.2024	220	µg/m³
	Standard :	as per CTO No-2938		500	μg/m³
	Те	est Method		IS-5182 (Part-4) 1999	RA 2019

(B adau Reviewed by

(Mr. Bijaya Kumar Chahataray)

Bhubanesw Authorized Signatory (Mr. Pradeept Mohapatra) 10 + 101

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WCS/LQR/99		TES	T REPORT		TC-11225
Report No.		WCSL240315B	Issue Date		28,03,2024
NABL ULR No.	:	TC1122524000000072F			20,05,2021
Name of the Client	:	National Aluminium Compa	any Limited		
Address	:	Smelter & Power (S&P) Com Angul-759145, Odisha			
Sample Description	:	Personal Sampling Analysis	(Core Zone)		
Sampling Plan & Method	:	WCS/QSP/SAMP (AIR)	Sec		
Environmental Condition	:	Clear weather	Date of Receiving	Ŧ	25.03.2024
Sample Collected	÷	WCS Laboratory	Quantity of Sample	1	4 No.
Date of Testing	1	25.03.2024	Sample Condition	8	Good

SI. No.	Sample ID No	Location	Date of Sampling	Respirable Particulate Matter (RPM)	Unit	Sample Collected Person
1	WCS0324A03E	Haul Road	23.03.2024	1.02	mg/m <sup>3</sup>	Mr. Rames Chandra Jena
2	WCS0324A03F	OB Dump	22.03.2024	0.82	mg/m <sup>3</sup>	Mr. Ranjit Mandal
3	WCS0324A03G	Loading Point	22.03.2024	0.90	mg/m³	Mr. Markanda Nayak
4	WCS0324A03H	Blasting Area	23.03.2024	0.75	mg/m <sup>3</sup>	Mr. Sonu Panday
Pern	nissible Limit as per Dhanbad, I	DGMS (Tech.) (Sð Dated 21 <sup>st</sup> January		3.0	mg/m <sup>1</sup>	
	1	Fest Method		NIOS-6	00-15th A	ugust,1994

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(Mr. Bijaya Kumar Chahataray)

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World Consultancy Services	MY WORLD CONSULTANC	Y SERVICES PRIVATE (TESTING LABOR GST NO: 21AADCT40 CIN: U725010R2010PT	2430	ORY) NIZE	
WCS/LQR/59	TEST REPOR	т		TC-11	225
Report No.	: WCSL240312	Issue Date	•	13.03.2024	
NABL ULR No.	TC112252400000069F		1050	1-11-1-1-1	
Name of the Client	: National Aluminium Compan	v Limited			
Address	: Coal Mine Division				
	Angul-759145, Odisha				
Month of Sampling	: March- 2024	Date of Receiving		07.03.2024	
Sample Description	: Ambient Noise	Quantity of Sample		04	
Sampling Plan & Method	: WCS/QSP/SAMP (NOISE)	Sample Condition	3	Good	
Sample Collected by	: WCS Laboratory	Date of Analysis		08.03.2024	

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS0324N01	Gopiballavpur Village	05.03.2024	51.1	36.2	Clear Weather
WCS0324N02	Near Settling Pond	05.03.2024	61.5	40.8	Clear Weather
WCS0324N03	Near Town ship	05.03.2024	65.2	45.2	Clear Weather
WCS0324N04	Near Weigh Bridge	05.03.2024	63.4	68.9	Clear Weather
Tes	t Method	IS 9989	: 1981		

Day Time dB(A) Leq	Night Time dB(A) Leq
(6.00 Am to 10.00 Pm)	(10.00 Pm to 6.00 Am)
75	70
65	55
55	45
50	40

cohotase Reviewed by

(Mr. Bijaya Kumar Chahataray)

Authorized Signatory (Mr. Pradeept Mohapatra)

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WCS World Consultancy Services	MY WORLD CONSULTANC	CY SERVICES PRIVATE (TESTING LABOR GST NO: 21AADCT40 CIN: U725010R2010PT	243	ORY) BNIZE
WCS/LQR/59	TEST REPOI	кт		TC-11225
Report No.	: WCSL240316	Issue Date	3	28.03.2024
NABL ULR No.	: TC1122524000000073F		14	
Name of the Client	: National Aluminium Company	iv Limited		
Address	: Coal Mine Division			
	Angul-759145, Odisha			
Month of Sampling	: March- 2024	Date of Receiving	4	25.03.2024
Sample Description	: Ambient Noise	Quantity of Sample	4	04
Sampling Plan & Method	: WCS/QSP/SAMP (NOISE)	Sample Condition		Good
Sample Collected by	: WCS Laboratory	Date of Analysis	-	27.03.2024

Sample ID No.	Location	Date of Monitoring	Day Time dB(A) Leq	Night Time dB(A) Leq	Environmental Condition
WCS0324N05	Gopiballavpur Village	23.03.2024	52.4	38.6	Clear Weather
WCS0324N06	Near Settling Pond	23.03.2024	61.5	41.2	Clear Weather
WCS0324N07	Near Town ship	23.03.2024	62.8	44.4	Clear Weather
WCS0324N08	Near Weigh Bridge	23.03.2024	65.3	70.8	Clear Weather
Test Method		IS 9989: 1981			

Noise Standard in dB(A) Leg as per CPCB					
Category of Area	Day Time dB(A) Leq (6.00 Am to 10.00 Pm)	Night Time dB(A) Le (10.00 Pm to 6.00 Am			
Industrial Area	75	70			
Commercial Area	65	55			
Residential Area	55	45			
Sensitive Area	50	40			

Bhahatamy Reviewed by

(Mr. Bijaya Kumar Chahataray)

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**HEALTH CHECK REPORT** 



LIST OF EMPLOYEES UNDERGONE IME/PME HELD DURING OCTOBER 2023

#### UTKAL D & E COAL MINES, UCMIPL MDO OF NALCO LTD.

	C. NO	NAME	DESIGNATION	SEX	AGE	A. R. NO.	IME/PME	REMARKS	
	DL-035	4 ALOK PALAI	GET RECORD KEEPER	м	24	٠	IME	FIT FOR EMPLOYMENT	
	DL-03	5 MD AZHARUDDIN	ASST. SURVEYOR	24	31	*	IME	FIT FOR EMPLOYMENT	
	DL-035	6 YERRANNA PADISETTI	MESS SUPERVISOR	31	46	÷.	IME	FIT FOR EMPLOYMENT	
1	DL-035	7 MADAN LAL MAHANTA	COOK	46	45		IME	FIT FOR EMPLOYMENT	
	DL-035	8 SHASHI KUMAR MAHTO	SURVEY HELPER	45	31		IME	FIT FOR EMPLOYMENT	
	DL-035	9 SAROJ KUMAR SARANGI	SR. CHEMIST	31	39	5 S <b>F</b>	IME	FIT FOR EMPLOYMENT	j" o
	DL-036	0 T B SAMRAT KESHARI PATRA	JR. CHEMIST	39	32		IME	FIT FOR EMPLOYMENT	
	DL-036	1 KALANDI PRADHAN	SURVEY HELPER	32	21		IME	FIT FOR EMPLOYMENT	
	DL-036	2 PARTHA BAURI	SUPERVISOR(CIVIL)	21	30	· · · · ·	IME	FIT FOR EMPLOYMENT	
	DL-036	3 SRIDHAR MANTRI	SURVEY HELPER	30	24		IME	FIT FOR EMPLOYMENT	
	DL-036	4 RAMESH KUMAR PRADHAN	SUPERVISOR/TRANSPORT)	24	24		IME	FIT FOR EMPLOYMENT	
	DL-036		OFFICE BOY	24	18	•	IME	FIT FOR EMPLOYMENT	
	DL-036	6 BOOPATHI PARTHA SARATHI SATYA	2ND CLASS MINES MANAGER	18	29		IME	FIT FOR EMPLOYMENT	
	DL-036	7 MD JALALUDDIN	DOZER OPERATOR	29	54	2 - Cl	IME	FIT FOR EMPLOYMENT	
	DL-036	8 SHRIKANTA NAYAK	DOZER OPERATOR	- 54	32		IME	FIT FOR EMPLOYMENT	
	DL-036	9 ASHOK GOPE	LMV MECHANIC	32	34		IME	FIT FOR EMPLOYMENT	
	DL-037	0 NIRANJAN PARIDA	LOADER OPERATOR	34	34		IME	FIT FOR EMPLOYMENT	
	1 DL-037	1 LAXMIDHAR JENA	ASST. COOK	34	55		IME	FIT FOR EMPLOYMENT	
	DL-037	2 SRIKANTA JENA	JR. ENGINEER	55	29	2 1	IME	FIT FOR EMPLOYMENT	
	DL-037	3 RAKESH KUMAR SAHOO	OVERMAN	29	25	1.14	IME	FIT FOR EMPLOYMENT	
	DL-037		COOK	25	49		IME	FIT FOR EMPLOYMENT	
	DL-037	5 BASUDEBA BISWAL	STORE ASST.	49	21		IME	FIT FOR EMPLOYMENT	
	· DL-037	DEEPAK KUMAR JENA	PLUMBER	21	26	- 14 H	IME	FIT FOR EMPLOYMENT	
	DL-037	LOKENDRA SINGH	SUPERVISOR(HORTICULTURE)	26	33	1 <b>.</b>	IME	FIT FOR EMPLOYMENT	
	DL-0378		HEAD (ELECT.)	33	46		IME		
	DL-0379	SHIV RAM JHA	AGM(ENV.)	46	55	a Salari	IME	FIT FOR EMPLOYMENT	
	DL-0380		STORE INCHARGE	55	33	1. 1. 1. 1.	IME	FIT FOR EMPLOYMENT	
	DL-0381		DOZER OPERATOR	33	37		IME	FIT FOR EMPLOYMENT	
	DL-0382		STORE EXECUTIVE	37	44		IME	FOT FOR EMPLOYMENT	
	DL-0383		GET(ELECT.)	44	23			FIT FOR EMPLOYMENT	
	DL-0384	ANANDA CHANDRA SAHOO	COOK	23	48	111 A. S. S.	IME	FIT FOR EMPLOYMENT	
	DL-0385	TALARI MADHU	SR. ENGINEER(CIVIL)	48	28	- dia		FIT FOR EMPLOYMENT	
	DL-0386	SRUSTI CHANDAN BARAL	DEPUTY MANAGER	28	35	1.1.1	IME	FIT FOR EMPLOYMENT	
	DL-0387	SUBRAT KUMAR PAL	PHARMACIST	35	47			FIT FOR EMPLOYMENT	
	DL-0388	GIDITHURI PRASAD	DIESEL TANKER DRIVER	47	38	10.000	IME	FIT FOR EMPLOYMENT	
	DL-0389	SUKALA SANYASI NAIDU	DIESEL SUPERVISOR	38	31		IME	FIT FOR EMPLOYMENT	
	DL-0390	RAJESH KUMAR PATRA	STORE ASST.	31	27		IME	FIT FOR EMPLOYMENT	
	DL-0390	MOKA SRINIVASA RAO	SR. ENGINEER(CIVIL)	27		1115	IME	FIT FOR EMPLOYMENT	
	DL-0391	CHITIKELA NANAJI	DIESEL TANKER DRIVER	1.11	31		IME	FIT FOR EMPLOYMENT	
	DL-0392	KALIA GOUDA		31	35		IME	FIT FOR EMPLOYMENT	
	DL-0393	SURLA KALYANA PRASAD NAIDU	PUMP OPERATOR	35	26	1.5	IME	FIT FOR EMPLOYMENT	
	DL-0394	SATISH SHARMA	DIESEL SUPERVISOR	26	23		IME	FIT FOR EMPLOYMENT	
			ASST. MANAGER(MIS)	23	37		IME	FIT FOR EMPLOYMENT	
	DL-0396	SANGRAM KESHARI PANDA	MANAGER (LAND)	37	50	•	IME	FIT FOR EMPLOYMENT	
	DL-0397	SRIKANTA KUMAR SWAIN	DEO(LAND)	50	35	<ul> <li>• • • • • • •</li> </ul>	IME	FIT FOR EMPLOYMENT	
	DL-0398	L R VENKATA SIVA RAMI REDDY	INCHARGE(HEIMM)	35	53	65.819	IME	FIT FOR EMPLOYMENT	
	DL-0399	NILANCHALA MAHANTY	SUPERVISOR(MINING)	53	26	1. <b>1</b> . 1. 1.	IME	FIT FOR EMPLOYMENT	
	DL-0400	DEBASISH SWAIN	SUPERVISOR(TRANSPORT)	26	23		IME	FIT FOR EMPLOYMENT	
	DL-0401		SUPERVISOR(TRANSPORT)	23	27		IME	FIT FOR EMPLOYMENT	
	DL-0402	JAGANNATH MALIK	SUPERVISOR(TRANSPORT)	27	24	• • • • • • • •	IME	FIT FOR EMPLOYMENT	
		Che	cked.	1.1	194.0		· · · · · · · ·		
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1 a							
DL-0403	SANJAYA KUMAR BEHERA	SUPERVISOR(TRANSPORT)	24	28	•	IME	FIT FOR EMPLOYME
DL-0404	CHHOTE BABU RATRE	SUPERVISOR(TRANSPORT)	28	30		IME	FIT FOR EMPLOYME
DL-0405	SHUVRANSHU SHEKHAR SAHU	OVERMAN(MINING)	30	30		IME	FIT FOR EMPLOYME
DL-0406	PRIYADARSHAN SAHOO	ASST, MANAGER(MINING)	30	35		IME	FIT FOR EMPLOYME
DL-0407	GOPAL KRISHNA MOHANTA	MESS SUPERVISOR	35	23		IME	FIT FOR EMPLOYME
DL-0408	CHAITANYA GOCHHI	COOK	23	53	2.60	IME	FIT FOR EMPLOYME
DL-0409	SRINIVASA RAO	MANAGER (PROJECT)	53	41		OME	FIT FOR EMPLOYME
DL-0410	SISHIR KANAR	ASST. COOK	41	36		IME	FIT FOR EMPLOYME
L-0411	PRAVESH KUMAR	DOZER OPERATOR	36	37		IME	FIT FOR EMPLOYME
0L-0412	SANDEEP KUMAR SAHU	OVERMAN(MINING)	37	27	•	ME	FIT FOR EMPLOYME
0L-0412	TAPAS KARMAKAR	INCHARGE(TRANSPORT)	27	33		IME	FIT FOR EMPLOYME
L-0413	BHAGABAN BISWAL	SUPERVISOR(TRANSPORT)	33	41	•	IME	FIT FOR EMPLOYME
L-0414	AMIT KUMAR	HR EXECUTIVE(ADMIN.)	41	45	· •	IME	FIT FOR EMPLOYME
	S RANJAN	STORE EXECUTIVE	46	23 .		IME	FIT FOR EMPLOYME
L-0416	KORAI TRINADHAM	MANAGER (PROJECT)	29	52		IME	FIT FOR EMPLOYME
L-0417	MADHAB CHANDRA MALIK	TRIPER DRIVER	52	36		IME	FIT FOR EMPLOYME
L-0418		ASST. COOK	36	25		IME	FIT FOR EMPLOYME
L-0419	SURESH NAYAK	DRIVER	25	52		IME	FIT FOR EMPLOYME
L-0420	BALAKRUSHNA MALIK	SR. MANAGER(EC & FC)	52	41		IME	FIT FOR EMPLOYME
L-0421	SUNIL SAHU	LMV DRIVER	41	38		IME	FIT FOR EMPLOYME
L-0422	SURECHAN DEEP	VOLVO DRIVER	38	28		IME	FIT FOR EMPLOYME
L-0423	SUSANTA KUMAR MALIK	SUPERVISOR(CIVIL)	28	26	. • U	IME	FIT FOR EMPLOYME
L-0424	YOGENDRA KUMAR CHANDRA	COOK	26	39	· • •	IME	FIT FOR EMPLOYME
L-0425	BHAKTABANDHU SAHOO	EXECUTIVE(PURCHASE)	39	29	· • 9	IME	FIT FOR EMPLOYMEN
L-0426	RUPESH MOHAPATRA	EXECUTIVE(MIS)	29	28		IME	FIT FOR EMPLOYMEN
L-0427	SURAJ PADHI	MANAGER (SURVEY)	28	31		IME	FIT FOR EMPLOYMEN
L-0428	KONDURU SIVA RAMARAJU	SR. HR EXECUTIVE(ADMIN.)	31	32		IME	FIT FOR EMPLOYMEN
L-0429	SUDHIR KUMAR MOHAPATRA	SUPERVISOR(TRANSPORT)	32	30		IME	FIT FOR EMPLOYMEN
L-0430	GNYANA RANJAN JENA	SUPERVISOR(TRANSPORT)	30	25	*	IME	FIT FOR EMPLOYMEN
L-0431	SHIBA PRASANNA SWAIN	ASST. MANAGER(ACCOUNTS)	25	30	low ref	IME	FIT FOR EMPLOYMEN
L-0432	GUDIPUDI RATNABABU	VOLVO DRIVER	30	33		IME	FIT FOR EMPLOYMEN
L-0433	JITENDRA KUMAR MALLIK SARBESWAR MALLIK	VOLVO DRIVER	33	30	· · //	IME	FIT FOR EMPLOYMEN
L-0434	PADDINTI SATYANARAYANA	INCHARGE(TRANSFORT)	30	36		IME	FIT FOR EMPLOYMEN
L-0435	JANA SATISH	HELPER(CPP)	36	20		IME	FIT FOR EMPLOYMEN
L-0436	KARANAM CHANDRASEKHAR	SUPERVISOR(CPP)	20	19	•	IME	FIT FOR EMPLOYMEN
L-0437	LAMBODAR MAHANTA	BLASTING HELPER	19	37		IME	FIT FOR EMPLOYMEN
L-0438		BLASTING HELPER	37	37		IME	FIT FOR EMPLOYMEN
L-0439	RAJESH KUMAR MALLICK	BLASTING HELPER	37	33		IME	FIT FOR EMPLOYMEN
-0440	BIKRAM PATRA	BLASTING HELPER	33	31	1 de	IME	FIT FOR EMPLOYMEN
-0441	RAJESH MOHANTA	MINING MATE(MINING)	31	48		IME	FIT FOR EMPLOYMEN
-0442	UMMADISHETTI VENKATA PULLAIAH	INCHARGE(TRANSPORT)	48	40	-	IME	FIT FOR EMPLOYMEN
-0443	BIJAYA KUMAR PRADHAN	INOUNDE (INVINOPORT)		10.45 m			FOR ENH LOTWER

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# PHOTOGRAPH OF UTKAL-D COAL MINES

#### GARLAND DRAIN





### TOP SOIL DUMP



## <u>OB DUMP</u>



#### WATER SPRINKLING





#### DRILL MACHINE WITH WATER SPRINKLER



SURFACE MINER



### WATER SPRINKLING ON COAL STOCK YARD





### MIST CANON





# SETTLING POND





### **DIVERTION OF NALLAH**





### NALLAH EMBANKMENT



### VEHICLE WHEEL WASHING STATION



# **Transportation**





# **PLANTATION**

