







AGPL NABL Accredited Laboratory certified Compliance for the period from October 2024 to March 2025 was uploaded in Parivesh Portal as well as https://pcb.ap.gov.in/UI/Submission_Compliance_of_EC_CFE_CFO_Direction.a.spx on 30.05.2025 Parivesh Portal – Acknowledgement

	परिवेश PARIVESH ICPC GREEN	पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय Ministry of Environment, Forest and Climate Change				
Dashboard	Environment Clearance	Forest Clearance	Wildlife Clearance	CRZ Clearance	Go To Home Logout	Welcome Anil Kumar Trivedi, Project Proponent
Your (Half Yearly Compliance Report) has been Submitted with following details						
Proposal No	EC21A033AP141550					
Compliance ID	114064307					
Compliance Number(For Tracking)	EC/M/COMPLIANCE/114064307/2025					
Reporting Year	2025					
Reporting Period	01 Jun(01 Oct - 31 Mar)					
Submission Date	30-05-2025					
RO/SRO Name	V Geroge Jenner					
RO/SRO Email	tr025@ifs.nic.in					
State	ANDHRA PRADESH					
RO/SRO Office Address	Integrated Regional Offices, Vijayawada					
Note:- SMS and E-Mail has been sent to V Geroge Jenner, ANDHRA PRADESH with Notification to Project Proponent.						

<https://pcb.ap.gov.in> – Screenshot towards successful submission on 30.05.2025.

	ANDHRA PRADESH POLLUTION CONTROL BOARD ఆంధ్ర ప్రదేశ్ కాలుష్య నియంత్రణ మండలి	
HOME ABOUT US FOR INDUSTRY FOR PUBLIC CONTACT US MEDIA LOGINS		
Compliance of EC/CTE/CTO/Directions For submission of compliance reports by the Industries		
Compliance Type: *	For The Year: *	
EC	2025	
District: *	Name Of Industry: *	Order Number: *
Visakhapatnam	Adani Gangavaram Port Limited	EC21A033AP141550
Order Issued On: *	Issued by: *	Email: *
12/24/2021	MoEF&CC, Delhi	environment.agpl@adani.com
Phone Number: *	Address: *	Status of Compliance: *
9099935902	Adani Gangavaram Port Limited, Gangavaram (P), Pedagantyada (M), Visakhapatnam Dist. 530044 Andhra Pradesh	Complied
Upload the Compliance Report: *		
Choose File	AGPL - Final Draft Audit repor....05.2025 2_compressed (2).pdf	
Note: * <input checked="" type="checkbox"/> Environmental Clearance (EC) : Project proponent shall submit Half-yearly EC Compliance report certified by accredited consultant.(self-certified compliance report in case of small projects)		
g6r7WK	g6r7WK	Submit



ANDHRA PRADESH POLLUTION CONTROL BOARD

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HOME ABOUT US FOR INDUSTRY FOR PUBLIC CONTACT US MEDIA LOGINS

Compliance of EC/CTE/CTO/Directions

For submission of compliance reports by the Industries

Compliance Type: *

--Select--

For The Year: *

--Select--

District: *

--Select--

Name

Please

Order Issued On: *

Please Select Order Date

Issue

--Se

Phone Number: *

Please Enter Phone Number

Addr

Order Number: *

Please Enter Order Number

Email: *

Please Enter Email

Status of Compliance: *

--Select--

Upload the Compliance Report: *

Choose File

No file chosen

Note: *

☐ Environmental Clearance (EC) : Project proponent shall submit Half-yearly EC Compliance report certified by accredited consultant.(self-certified compliance report in case of small projects)

cAMuV9



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Submit



success

EC Compliance Successfully Submitted

OK



Ports and
Logistics

Letter No. AGPL/Env/MoEF&CC/SCC/2025/0017

Dated: 30.05.2025

To

The Integrated Regional Officer (IRO),
Ministry of Environment, Forest & Climate Changes (MoEF&CC),
Green House Complex, Gopal Reddy Road,
Vijayawada, Andhra Pradesh – 520010

Dear Sir,

Sub: - AGPL –NABL Certified Half Yearly Compliance Report on the conditions stipulated in EC & CRZ clearances of MoEF & CC, CTE & CTO of APPCB along with supporting documents for the period of October -2024 to March- 2025– Submission - Reg.

Ref: -

1. MoEF & CC EC Order 10-3/2005-IA.III dated 11.03.2005
2. MoEF & CC EC & CRZ Clearance No.10-14/2009-IA.III, dated 19.03.2010.
3. MoEF & CC EC & CRZ Clearance No. 11-91/2010-IA.III dated 07.02.2012
4. APPCB CFE Order No. APPCB/ VSP/ VSP/ 113/ CFE/ HO/ 2012 – 3923, dated 02.03.2012.
5. APPCB CTO & HWA Order No. APPCB/VSP/VSP/113/CFO/HO/2015, dated 13.01.2016
6. APPCB Auto Renewal CTO Order No APPCB/VSP/ VSP/113/ CFO/HO/2020, 10.09.2020
7. APCZMA NOC No. Letter No. 338/CRZ/Port/2021 24/10/2021, Specific and general conditions
8. MoEF & CC EC & CRZ Clearance No. 10/51/2021-IA.III, dated 24.12.2021.
9. APPCB CTE Order No. APPCB/ VSP/ VSP/ 113/ CFE/ HO/2012, dated 16.08.2022.
10. APPCB CTO (Amendment) Order No. APPCB/VSP/113/CFO/ HO/2015, 13.01.2023
11. APPCB CTE (Amendment) Order No. APPCB/ VSP/ VSP/ 113/ CTE/ HO/ 2012, dated 05.06.2023 (Name Transfer)
12. APPCB CTO Amendment Order No. APPCB/VSP/113/HO/ CTO/ 2023, dated 01.08.2023 (Name Transfer)
13. MoEF & CC EC & CRZ Order F. No. APPCB/VSP/113/HO/ CTO/ 2023, dated 01.08.2023 (Name Transfer)
14. APPCB CTO Order No. APPCB/VSP/113/CFO/ HO/2009, 22.08.2023, valid up to 31.12.2025.
15. APPCB CTO Amendment No. APPCB/VSP/VSP/113/HO/ CTO/2020, dated 05.01.2024
16. APPCB – CTO & HWA (Expansion) Order No. APPCB/VSP/113/CTO/HO/2009, dated 22.08.2024 valid up to 31.07.2029.

We, Adani Gangavaram Port Limited (AGPL), earlier known as Gangavaram Port Limited (GPL) are operating a Port activity at Gangavaram (P), Pedagantyada (M), Visakhapatnam, Andhra Pradesh, with 9 berths and consented 51.0 MMTPA cargo handling capacity.

Complying with the Notifications & Circulars issued by MoEF & CC and APPCB from time to time, the NABL Laboratory Certified Half Yearly Compliance Report for the period October -2024 to March- 2025 were submitted on 30.05.2025 through ecompliance-ap@gov.in and through

Adani Ports and Special Economic Zone Ltd
Adani House
Shantigram, S G Highway
Ahmedabad 382 421
Gujarat, India
CIN: L63090GJ1998PLC034182

Tel +91 79 2656 5555
Fax +91 79 2555 5500
info@adani.com
www.adaniports.com

Registered Office: Adani House, Shantigram, S G Highway, Ahmedabad 382 421, Gujarat, India



Ports and
Logistics

Now, we are submitting the NABL Accredited 3rd Party certified EC & CRZ Clearance Half-yearly compliance along with the CTE & CTO Compliance and monitoring reports report for the period October -2024 to March- 2025.

Thanking you,

Yours sincerely,

For **Adani Gangavaram Port Limited.,**

Encl. NABL Accredited Certified EC & CRZ compliance along with the CTE & CTO Compliance and monitoring reports for the period October -2024 to March- 2025.

CC: To The Environmental Engineer, A.P. Pollution Control Board, Regional Office, Visakhapatnam for kind information.

Adani Ports and Special Economic
Zone Ltd
Adani House
Shantigram, S G Highway
Ahmedabad 382 421
Gujarat, India
CIN: L63090GJ1998PLC034182

Tel +91 79 2656 5555
Fax +91 79 2555 5500
info@adani.com
www.adaniports.com

Registered Office: Adani House, Shantigram, S G Highway, Ahmedabad 382 421, Gujarat, India



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF & SPCB (for the period from October 2024 to March 2025)



CERTIFIED HALF YEARLY COMPLIANCE REPORT ON THE CONDITIONS STIPULATED

In

ENVIRONMENTAL & CRZ CLEARENCE, CONSENT FOR ESTABLISHMENT & CONSENT FOR OPERATION

For the period

From October 2024 to March 2025

Approvals Of

M/s. ADANI GANGAVARAM PORT LIMITED,

**GANGAVARAM (PO) PEDAGANTYADA (V &
M) VISAKHAPATNAM Dist., ANDHRA
PRADESH**

Prepared by



HUBERT ENVIRO CARE SYSTEMS (P) LTD

ENVIRONMENTAL CONSULTANT

CHENNAI

Prepared by:

**M/s. Hubert Enviro Care Systems (P) Ltd.,
(HECS),**

A-21, III Phase, Behind Lions Club School, Thiru
Vi Ka Industrial Estate, Guindy, Chennai – 600
032, Tamilnadu, India.

Phone: 044-43635555.

E-mail : Marketing@hecs.in

Web: WWW.hecs.in


Dr. RAJKUMAR SAMUEL
Director Technical

Authorized Signatory

Submitting to:

Ministry of Environment, Forest & Climate
Change,

A.P. Pollution Control Board, Regional
Office, Visakhapatnam



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF & SPCB (for the period from October 2024 to March 2025)

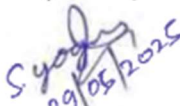


**Certified Half Yearly Compliance Report on the Conditions
Stipulated in Environmental & CRZ clearance, Consent for
Establishment & Consent for Operation**

For the period from October 2024 to March 2025

This report has been prepared by **HUBERT ENVIRO CARE SYSTEMS (P) LTD.**, with all reasonable skill, care and diligence within the terms of the contract with the client, and with the data provided & available, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.

Prepared by


S.YOGESWARAN
Environmental Engineer

Verified by


Dr. DHIVYA P
Project Co-ordinator

Approved by


Dr. RAJKUMAR SAMUEL
Director Technical
Dr. RAJKUMAR SAMUEL
Director



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF &CC and SPCB (for the period from October 2024 to March 2025)



6.1 Conclusion Remarks & Compliance Certification:

The project proponent M/s. Adani Gangavaram Port Limited (AGPL) approached **Hubert Enviro Care Systems (P) Ltd., (HECS)** to undertake Auditing, preparation & Certification of the compliance status of the conditions stipulated in the EC & CRZ Clearance of MoEF & CC, CTE & CTO of APPCB including Monitoring/Sampling of Air, Terrestrial & Marine parameters and Environmental Data analysis for various environmental factors for which HECS accepted the job to Audit, prepare & submit the certified Half-yearly Compliance to MOEF & CC & APPCB.

As per the scope of the work, the Environmental data has been collected for various environmental components

This report comprises with 7 chapters including Annexures covering all the information of the Port activities & updated compliance status of all the conditions stipulated in EC & CRZ of MoEF & CC, CTE & CTO of A.P. Pollution Control Board.

This report has been prepared by **Hubert Enviro Care Systems (P) Ltd., (HECS)**., with all reasonable skill, care and diligence within the terms of the contract with the client, and with the data provided & available, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.

M/s. Hubert Enviro Care Systems (P) Ltd., (HECS),

A-21,III Phase, Behind Lions Club School, Thiru Vi Ka Industrial Estate, Guindy, Chennai – 600 032, Tamilnadu , India.

Phone: 044-43635555.

E-mail : Marketing@hecs.in

Web: WWW.hecs.in



Dr. RAJKUMAR SAMUEL
Director Technical

Dr. Rajkumar Samuel
Director



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF & SPCB (for the period from October 2024 to March 2025)



CERTIFIED HALF YEARLY COMPLIANCE REPORT ON THE CONDITIONS STIPULATED

In

ENVIRONMENTAL & CRZ CLEARANCE, CONSENT FOR ESTABLISHMENT & CONSENT FOR OPERATION

For the period

From October 2024 to March 2025

Approvals Of

M/s. ADANI GANGAVARAM PORT LIMITED,

**GANGAVARAM (PO) PEDAGANTYADA (V &
M) VISAKHAPATNAM Dist., ANDHRA
PRADESH**

Prepared by



HUBERT ENVIRO CARE SYSTEMS (P) LTD

ENVIRONMENTAL CONSULTANT

CHENNAI

Prepared by:

**M/s. Hubert Enviro Care Systems (P) Ltd.,
(HECS),**

A-21, III Phase, Behind Lions Club School, Thiru
Vi Ka Industrial Estate, Guindy, Chennai – 600
032, Tamilnadu, India.

Phone: 044-43635555.

E-mail : Marketing@hecs.in

Web: WWW.hecs.in

Dr. RAJKUMAR SAMUEL
Director Technical

Authorized Signatory

Submitting to:

Ministry of Environment, Forest & Climate
Change,

A.P. Pollution Control Board, Regional
Office, Visakhapatnam



**Certified Half Yearly Compliance Report on the Conditions
Stipulated in Environmental & CRZ clearance, Consent for
Establishment & Consent for Operation**

For the period from October 2024 to March 2025

This report has been prepared by **HUBERT ENVIRO CARE SYSTEMS (P) LTD.**, with all reasonable skill, care and diligence within the terms of the contract with the client, and with the data provided & available, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.

Prepared by

S. Yogeswaran
29/05/2025

S.YOGESWARAN
Environmental Engineer

Verified by

Dr. Dhivya P
29/05/2025

Dr. DHIVYA P
Project Co-ordinator

Approved by

Dr. Rajkumar Samuel
Dr. RAJKUMAR SAMUEL
Director Technical

Dr. RAJKUMAR SAMUEL
Director

1.0 INTRODUCTION

The HECS Laboratory Division operates from a state-of-the-art 10,000 sq. ft. facility, offering comprehensive analytical services in Environmental, Water, and Food testing. Equipped with advanced automated technology, HECS ensures the highest standards of quality and precision in all testing services.

Our laboratory is accredited for Chemical and Biological testing by the National Accreditation Board for Testing and Calibration Laboratories (NABL) as well as by the Food Safety and Standards Authority of India (FSSAI) and the Bureau of Indian Standards (BIS). We strictly follow industry-leading standards, including GLP, ISO 17025:2017, ISO 9001, ISO 45001, and ISO 14001. We proudly serve over 1000 clients in both industrial and service sectors, both in India and internationally.

We employ a wide range of advanced analytical instruments to ensure the highest level of accuracy and precision in our testing. Our laboratory is equipped with cutting-edge equipment, including High-Performance Liquid Chromatography (HPLC), Gas Chromatography (GC), Gas Chromatography-Mass Spectrometry (GC/MSMS), Liquid Chromatography-Mass Spectrometry (LC/MSMS), Ultraviolet-Visible (UV-Vis) Spectroscopy, Infrared (IR) Spectroscopy, Inductively Coupled Plasma Mass Spectrometry (ICP-MS), Atomic Absorption Spectroscopy (AAS), and Fourier Transform Infrared Spectroscopy (FTIR). These instruments enable us to deliver reliable, precise results for a wide range of analyses.



Environmental Testing

Our Environmental Testing Laboratory provides comprehensive analysis of a wide range of environmental parameters, analysing Air, Stack Emissions, Water, Wastewater, Soil, Sediments, Sludge, Noise, Illumination, fugitive emissions, Work Environment, LDAR and Meteorology, all in compliance with MoEF/PCB standards. We also offer specialized soil testing services for construction projects, as well as research and development initiatives in the environmental field.

The lab has been fully upgraded to assess National Ambient Air Quality (NAAQS) 2009 parameters, as specified by the Ministry of Environment, Forest & Climate Change (MoEF & CC). We also conduct testing for all required parameters set by the CPCB (Central Pollution Control Board) and SPCB (State Pollution Control Board). Our facility is equipped with advanced technology for testing Volatile Organic Compounds (VOCs), hydrocarbons, acid mist, polycyclic aromatic hydrocarbons (PAHs), trace metals, pesticides, and heavy metals.

Our BS-2 Microbiology Laboratory specializes in clean room testing, with a strong emphasis on work environment safety and industrial hygiene. We routinely perform toxicity studies and bioassays to assess the quality of treated effluent and sewage water.

Our team comprises over 50 highly qualified Doctorates and Postgraduates, who receive continuous in-house and external training to stay at the forefront of the latest technological advancements. Our dedicated quality control department ensures the highest levels of accuracy and reliability in all testing processes.

Water Testing



Our Water Testing Laboratory provides comprehensive analysis of various water types, including drinking water, packaged drinking water, groundwater, surface water, irrigation water, construction water, cooling tower water, industrial water, and swimming pool water, all in accordance with relevant standards.

Equipped with cutting-edge technology and advanced facilities, the laboratory ensures precise and reliable testing. We specialize in the analysis of pesticides, polycyclic aromatic hydrocarbons, trace metal elements, and general water parameters as per ISO 10500. Our lab is accredited by the Bureau of Indian Standards (BIS) and the National Accreditation Board for Testing and Calibration Laboratories (NABL).

We also conduct microbiological testing for both pathogenic and non-pathogenic bacteria, as well as endotoxin and aflatoxin testing for water used in medicinal applications.

We specialize in the analysis of Physio Chemical parameters, Trace metal elements, Poly Chlorinated Biphenyls (PCBs), Polycyclic aromatic hydrocarbons (PAH), Pesticides, Trihalomethanes, Volatile Organic Compounds (VOCs).



**National Accreditation Board for
Testing and Calibration Laboratories**

CERTIFICATE OF ACCREDITATION

HUBERT ENVIRO CARE SYSTEMS PRIVATE LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

A-21, III PHASE, THIRU VI KA INDUSTRIAL ESTATE, GUINDY, CHENNAI, TAMIL NADU, INDIA

in the field of

TESTING

Certificate Number: TC-12310

Issue Date: 25/09/2023

Valid Until: 24/09/2025

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: HUBERT ENVIRO CARE SYSTEMS PRIVATE LIMITED

Signed for and on behalf of NABL





N. Venkateswaran
Chief Executive Officer

INTERCERT®
CERTIFICATE OF REGISTRATION

INTERCERT hereby certifies that the Quality Management System of

Hubert Enviro Care Systems (P) Ltd.

Head Quarter: No. A21, 81 Phase, TVK Industrial Estate, Guindy, Chennai – 600 032, Tamil Nadu, India.

See Annexure for additional sites and additional site scopes

Has been successfully assessed as per the requirements of

ISO 9001:2015

For the scope of

Provision of Environmental Management Consultancy, Turkey Environmental Management Projects, Operation and Maintenance of ETP (Effluent Treatment Plant) / STP (Sewage Treatment Plant) / WTP (Water Treatment Plant) and Other Environmental Installations, Laboratory Testing Covering Chemicals / Micro Biological / Environmental / Food and Agri Products / Water / Consumer Projects and Allied Activities.

Initial Certification Date: January 18, 2022
Certificate Issue Date: January 13, 2025
Surveillance Validity Date: January 17, 2026
Recertification Date: January 17, 2026

Registration Number: IC-QM-2501115

Page No 01 of 02

Issued on behalf of Intercert Head - Certifications

INTERCERT REGISTERED

ISO 9001

ISO 9001

INTERCERT®
CERTIFICATE OF REGISTRATION

This annexure identifies the locations covered by the management system of:

Hubert Enviro Care Systems (P) Ltd.

This annexure is linked to the Main Certificate # IC-QM-2501115 and cannot be shown nor reproduced without it.

Site Name & Address	Scope
Head Quarter No. A21, 81 Phase, TVK Industrial Estate, Guindy, Chennai – 600 032, Tamil Nadu, India.	Provision of Environmental Management Consultancy, Turkey Environmental Management Projects, Operation and Maintenance of ETP (Effluent Treatment Plant) / STP (Sewage Treatment Plant) / WTP (Water Treatment Plant) and Other Environmental Installations, Laboratory Testing Covering Chemicals / Micro Biological / Environmental / Food and Agri Products / Water / Consumer Projects and Allied Activities.
Mangalore Site #C-45, Industrial Estate, Sakinaka, Mangalore - 575011, Karnataka, India.	Provision of Environmental Management Consultancy, Turkey Environmental Management Projects, Operation and Maintenance of ETP (Effluent Treatment Plant) / STP (Sewage Treatment Plant) / WTP (Water Treatment Plant) and Other Environmental Installations, Laboratory Testing Covering Chemicals / Micro Biological / Environmental / Food and Agri Products / Water / Consumer Projects and Allied Activities.

Note: Validity of this certificate depends on the validity of the main certificate.

Page No 02 of 02

Issued on behalf of Intercert Head - Certifications

INTERCERT REGISTERED

ISO 9001

ISO 9001

INTERCERT®
CERTIFICATE OF REGISTRATION

INTERCERT hereby certifies that the Environmental Management System of

Hubert Enviro Care Systems (P) Ltd.

Head Quarter: No. A21, 81 Phase, TVK Industrial Estate, Guindy, Chennai – 600 032, Tamil Nadu, India.

See Annexure for additional sites and additional site scopes

Has been successfully assessed as per the requirements of

ISO 14001:2015

For the scope of

Provision of Environmental Management Consultancy, Turkey Environmental Management Projects, Operation and Maintenance of ETP (Effluent Treatment Plant) / STP (Sewage Treatment Plant) / WTP (Water Treatment Plant) and Other Environmental Installations, Laboratory Testing Covering Chemicals / Micro Biological / Environmental / Food and Agri Products / Water / Consumer Projects and Allied Activities.

Initial Certification Date: January 18, 2022
Certificate Issue Date: January 13, 2025
Surveillance Validity Date: January 17, 2026
Recertification Date: January 17, 2026

Registration Number: IC-EM-2501116

Page No 01 of 02

Issued on behalf of Intercert Head - Certifications

INTERCERT REGISTERED

ISO 14001

ISO 14001

INTERCERT®
CERTIFICATE OF REGISTRATION

This annexure identifies the locations covered by the management system of:

Hubert Enviro Care Systems (P) Ltd.

This annexure is linked to the Main Certificate # IC-EM-2501116 and cannot be shown nor reproduced without it.

Site Name & Address	Scope
Head Quarter No. A21, 81 Phase, TVK Industrial Estate, Guindy, Chennai – 600 032, Tamil Nadu, India.	Provision of Environmental Management Consultancy, Turkey Environmental Management Projects, Operation and Maintenance of ETP (Effluent Treatment Plant) / STP (Sewage Treatment Plant) / WTP (Water Treatment Plant) and Other Environmental Installations, Laboratory Testing Covering Chemicals / Micro Biological / Environmental / Food and Agri Products / Water / Consumer Projects and Allied Activities.
Mangalore Site #C-45, Industrial Estate, Sakinaka, Mangalore - 575011, Karnataka, India.	Provision of Environmental Management Consultancy, Turkey Environmental Management Projects, Operation and Maintenance of ETP (Effluent Treatment Plant) / STP (Sewage Treatment Plant) / WTP (Water Treatment Plant) and Other Environmental Installations, Laboratory Testing Covering Chemicals / Micro Biological / Environmental / Food and Agri Products / Water / Consumer Projects and Allied Activities.

Note: Validity of this certificate depends on the validity of the main certificate.

Page No 02 of 02

Issued on behalf of Intercert Head - Certifications

INTERCERT REGISTERED

ISO 14001

ISO 14001



1.0 Scope of work:

The project proponent M/s. Adani Gangavaram Port Limited (AGPL) approached **Hubert Enviro Care Systems (P) Ltd., (HECS)** to undertake Auditing, preparation & Certification of the compliance status of the conditions stipulated in the EC & CRZ Clearance of MoEF & CC, CTE & CTO of APPCB including Monitoring/Sampling of Air, Terrestrial & Marine parameters and Environmental Data analysis for various environmental factors for which HECS accepted the job to Audit, prepare & submit the certified Half-yearly Compliance to MOEF & CC & APPCB.

As per the scope of the work, the Environmental data has been collected for various environmental components

This report comprises with 7 chapters including Annexures covering all the information of the Port activities & updated compliance status of all the conditions stipulated in EC & CRZ of MoEF & CC, CTE & CTO of A.P. Pollution Control Board.

This certified compliance comprises with 7 chapters covering all the information of the Port activities & updated compliance status of all the conditions stipulated in EC & CRZ of MoEF & CC, CTE & CTO of A.P. Pollution Control Board.

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Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF & SPCB (for the period from October 2024 to March 2025)



CHAPTER – 1

PORT - INTRODUCTION

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1.0 Preamble:

Adani Gangavaram Port Limited – AGPL (formerly Gangavaram Port Limited) is located at Gangavaram (PO), Pedagantyada (M), Visakhapatnam District of Andhra Pradesh, India.

AGPL has the unique distinction of being one of the few Greenfield port projects in India which has been implemented on schedule. Construction at the site commenced in December 2005 and the Port commenced trial operations in August 2008.

AGPL has been developed as an all-weather, multipurpose port with water depth up to 20.2 meters, making it the deepest and capable of handling fully laden Cape size vessels of up to 200,000 DWT, with its deep draft berths and efficient operations AGPL has become the gateway port for a hinterland spread over 8 states across Eastern, Western, Southern and Central India. Its ability to handle larger vessels efficiently has resulted in substantial savings for trade and port users. Adani Gangavaram Port Limited provides efficient cargo handling services for a variety of bulk and break-bulk cargo groups including Coal, Iron Ore, Fertilizer, Limestone, Bauxite, Raw Sugar, Project Cargo, Alumina, Steel products etc.

The Port, its related facilities and material handling system are among the most advanced in Asia and meet the highest standards in terms of pollution prevention and safety.

AGPL is presently operating with 9 berths and with consented cargo handling capacity of 51 MTPA for variety of Cargos of bulk and break bulk including coal, iron ore, Multi Cargo (Agri products, Slag, Lime stone, Steel products etc.), Fertilizer, Industrial Raw Materials such as Gypsum, Aluminum Ingots and their facilities includes berths, state-of-the-art cargo handling systems, mechanized storage facilities, railway sidings etc., The Port extended to 2800 acres, out of which Port development and operation is in 1800 acres only.

AGPL is an ISO 9001:2015, ISO 14001 2015, ISO 45001:2018 and ISO 50001:2018, ISO 14001-2015 Certified Port for providing Integrated Seaport Facilities and Related Services for Handling, and Storage of Cargo.

[illegible]

1.1 Classification of the Port:

As per the Environment Impact Assessment (EIA) Notification dated 14th September 2006 and the amendments thereof sea-port projects classified as 'Category A' with project or activity type number '7(e).

1.2 Location of Port:

M/s. Adani Gangavaram Port Limited (AGPL) (Formerly M/s. Gangavaram Port Limited) is located at Pedagantyada Village & Mandal, Visakhapatnam District, Andhra Pradesh.

Coordinates: Latitude 17°39'39.162"N to 17°37'41.643"N and
Longitude 83°14'8.411"E to 83°15'44.670"E



Image 2- Location of the Port

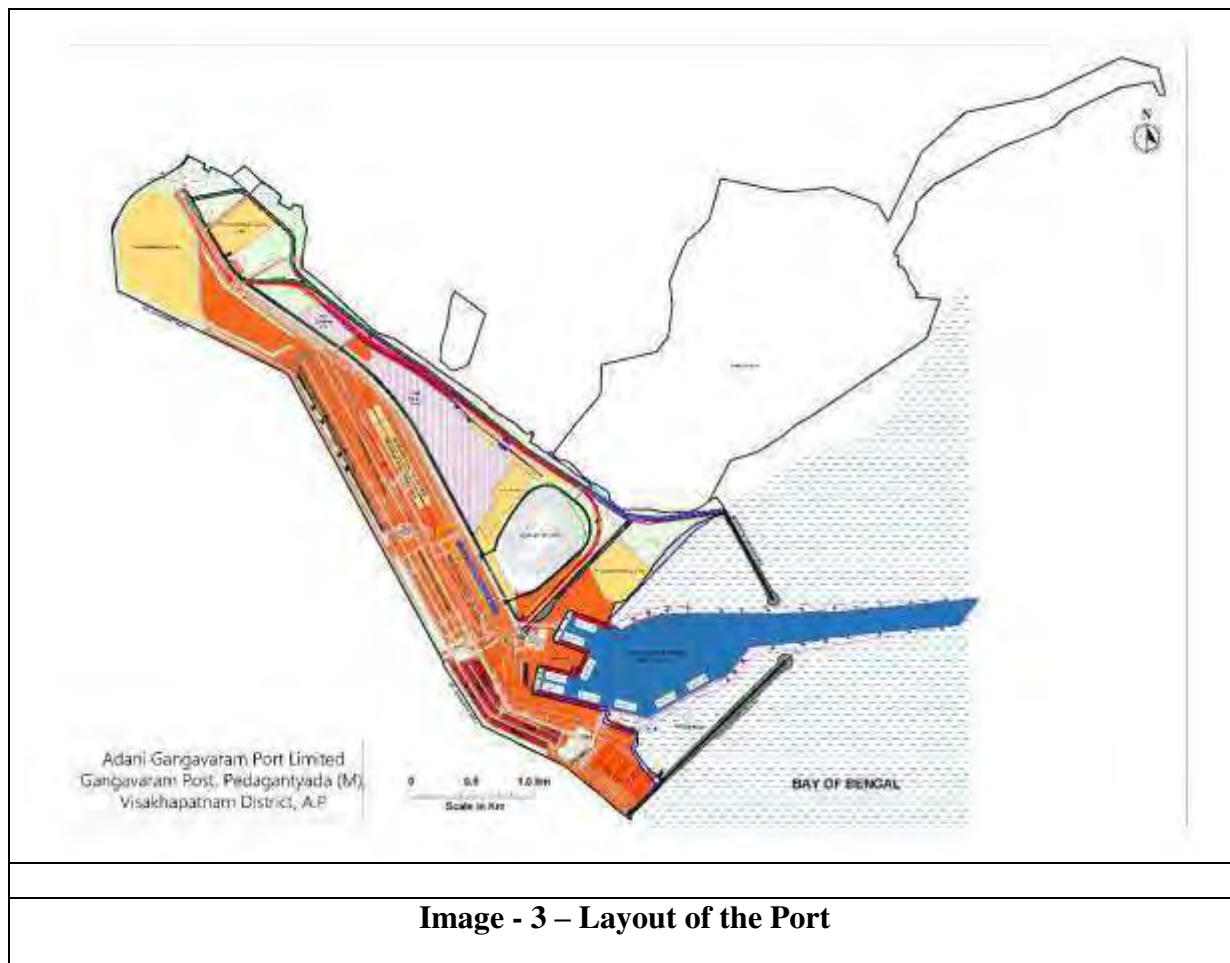


Image - 3 – Layout of the Port

1.3 Advantages of the Port:

Adani Gangavaram Port Limited is located at Visakhapatnam, the industrial nerve center of Andhra Pradesh around Latitude 17° 37' N and Longitude 83° 14' E, about 15 kms south of Visakhapatnam Port

- **Rail Connectivity:**

Railway connectivity has been established connecting the port to the main broad gauge national network of "Chennai-Visakhapatnam-Howrah" rail corridor. The Port has its own independent "Railway Sidings"

- **Road Connectivity:**

Road connectivity to the port has been provided by a 4-lane expressway of 3.8 kms connecting the port with the National Highway No.5 (Chennai - Kolkata)



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF & SPCB (for the period from October 2024 to March 2025)



- **Inland Shipping:**


Cargo unloading from larger vessels and loading into smaller vessels for coastal shipping
Cargo unloading from smaller vessels and loading into bigger vessels to save ocean freight for exports.

- **Port Infrastructure**

Port Capacity: Presently operating with 51.0 MMTPA & capable to handle 60.95 MMTPA with the existing infrastructure:

- ✓ Depth in harbour: 20.2 m
- ✓ Berthing facilities: 9 berths with upto 19.5m water depth
- ✓ Fully mechanized coal terminal with two berths for handling two Capesize Coal Vessels simultaneously
- ✓ One container berth
- ✓ Breakwaters: to provide tranquility within the harbour
- ✓ Maximum vessel size: 200,000 DWT
- ✓ State-of-the-art mechanized bulk material handling systems
- ✓ 20 Railway siding, mechanized stockyards and In-motion-wagon-loading system, SILO Loading and Wagon Tippler
- ✓ Rake loading capacity of up to 25 rakes per day
- ✓ Vast storage area with Coal stackyard capacity of more than 5 MMT cargo
- ✓ 24 x 7 operations

1.4 Policy of the Port:



Environmental Policy

Adani Ports and Special Economic Zone Limited's (APSEZ) environmental responsibilities are driven by its commitment to preserve the environment and are integral to the way we do business. We shall strive to integrate best environmental practices across APSEZ's management and governance systems to minimize environmental impacts and attain a leadership position in environmental stewardship.

APSEZ, its subsidiaries, joint ventures, suppliers, service providers and contractors shall keep its commitment to:

- Build and operate the facilities in compliance with all applicable environmental laws, regulations, obligations and endeavor to go beyond compliances.
- Identify and evaluate environmental and climate impacts and their associated risks for all activities including distribution & logistics and formulate a mitigation strategy.
- Define roles and responsibilities for implementing environmental management policy.
- Conduct training for employees to understand the impacts of business activities on the environment.
- Continually improve the environmental performance by setting objectives, targets and processes for efficient use of natural resources, waste management and minimization, emission reduction, noise level control and pollution prevention.
- Conserve and protect environment in and around of our operational sites in consultation with stakeholders.
- Conduct environmental due diligence for new and expansion of existing projects, mergers and acquisitions by set procedures.
- Create environmental awareness through continuous engagement and training with stakeholders including employees, customers, suppliers, service providers, contractors and local communities.
- Measure, monitor, review and report the environmental performance and issues of the organization in accordance with this policy at regular intervals and audit (internal/ external) before communicating to relevant stakeholders.

Date: August 09, 2023


Karan Adani
 Whole-Time Director & CEO

1.5 Purpose of the Report:

- The MoEF & CC. S.O. 3067 (E) dated 1st December 2009, denotes that - it shall be mandatory for the Project Proponent to submit half-yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.
- The MoEF & CC. S.O. 5845 (E) dated 26th Nov 2018 denotes that - the Project Proponent shall submit half-yearly (six monthly) compliance reports in soft copy instead of hard copy.
- APPCB issued a newspaper notification on 07.09.2019, (Hindu & Eenadu) notifying that - “all the Red & Orange category industries (other than stone crusher & mining units) existing in State of Andhra Pradesh, to furnish the half yearly compliance reports to all the stipulated conditions in Environmental Clearance (EC), and Consent to Establishment (CTE) and Consent to Operation (CTO) through website i.e., <https://pcb.ap.gov.in> by 1st of January and 1st of July of every year.
- The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through NABL accredited third party.
- The MoEF&CC on 15.09.2019, issued a newspaper notification communicating that the project proponent of Andhra Pradesh State shall send their compliance reports to ecompliance-ap@gov.in
- A condition was stipulated in the CTO of APPCB, dated 19.09.2020 accorded to AGPL species that, the industry shall submit half yearly compliance reports to all the stipulated conditions in EC & CRZ Clearance, CTE and CTO through website i.e., <https://pcb.ap.gov.in> by 1st of January and 1st July of every year. The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through NABL accredited third party.
- A condition was stipulated in the CTO Order of APPCB, dated 13.01.2023 issued to AGPL, the industry shall submit Half yearly compliance reports to all the stipulated conditions in EC& CRZ Clearance, CTE and CTO through website i.e., <https://pcb.ap.gov.in> by 1st of January and 1st July of every year. The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through MoEF&CC recognized and National Accreditation Board for Laboratory Testing (NABL) accredited third party.
- The Joint Director, MoEF&CC, Sub-Office, Vijayawada, Andhra Pradesh circulated certain guidelines on 29.03.2024 regarding the submission of Half-yearly compliance:
- It shall be mandatory for the project management to submit half yearly compliance reports in respect of the stipulated prior environmental clearance terms and conditions

in hard and soft copies to the regulatory authority concerned, on 1st June and 1st December of each calendar year.

- It is required to monitor the environmental parameters viz., Stack Emissions, Ambient Air Quality (AAQ), Work Zone Emissions, Noise Level, Water Quality etc by MoEF & CC/NABL accredited laboratory and the monitoring report (copies of reports generated by laboratory) to be submitted along with six monthly compliance reports.

1.6 Statutory Approvals:

AGPL obtained the following statutory approvals:

- **MoEF & CC** – Environmental Clearance for the cargo handling capacity of 16.54 MMTPA vide EC No. 10-3/2005-IA.III dated 11.03.2005 with 4 no. of berths, (1 dry bulk cargo, 1 fertilizer/limestone, 1 container terminal, and 1 break bulk/multipurpose) and one exclusive berth for the port crafts, besides providing warehousing facilities and transit sheds.
- **MoEF & CC** – Environmental Clearance vide No. 10-14/2009-IA.III, dated 19.03.2010 to develop the exclusive berth permitted earlier to accommodate the Port crafts into a full-fledged General Cargo Berth.
- **MoEF & CC** - EC & CRZ clearance for cargo augmentation from 16.54 MMTPA 41.0 MMTPA and 4 additional berths totaling to 9 berths vide Order F.No.11-91/2010-IA-III, dated 07.02.2012.
- **APPCB** - CTE for cargo handling capacity of 40.95 MMTPA vide CFE Order No. APPCB/VSP/VSP/113/CFE/HO/2012 – 3923, dated 02.03.2012.
- **APPCB** - CTO for cargo handling capacity of 40.95 MMTPA vide Order No. APPCB/VSP/VSP/113/CFO/HO/2015, dated 13.01.2016 valid up to 31.12.2020.
- **APPCB** - Consent to Operation (Amendment) No. APPCB/ VSP/VSP/113/CFO/HO/2016, 16.09.2016 for stack height.
- **APPCB** - CTO (Auto Renewal) No. APPCB/VSP/ VSP/113/ CFO/HO/2020, 10.09.2020 valid up to 31.12.2025 for cargo handling capacity of 40.95 MMTPA
- **APCZMA** - Specific and general conditions of Andhra Pradesh Coastal Zone Management Authority (APCZMA) NOC No. Letter No. 338/CRZ/Port/2021, dated 24/10/2021 for cargo handling capacity of 40.95 MMTPA to 60.95 MMTPA.
- **MoEF & CC** - EC & CRZ Clearance for cargo augmentation from the existing 40.95 MMTPA to 60.95 MMTPA vide Order F.No.10/51/2021-IA.III, dated 24.12.2021.
- **APPCB** - CTE for cargo augmentation from the existing 40.95 MMTPA to 60.95 MMTPA vide Order No. APPCB/ VSP/ VSP/ 113/ CFE/ HO/2012, dated 16.08.2022.

- **APPCB** – Bio-Medical Waste Authorization for operating an Occupational Health Centre vide Order No. PCB/ROVSP/BMW/HCE/2022 – 794, dated 20.10.2022.
- **APPCB** - CTO Amendment No. APPCB/VSP/VSP/113/CFO/ HO/2015, dated 13.01.2023 for the enhanced quantity of waste/used oil and inclusion of ship waste oil quantity.
- **APPCB** – CTE (for establishment of Iron Ore (ROM) Screening & Crushing Unit of capacity of 2.0 LT/M) Order No. APPCB/ VSP/ VSP/ 113/ CTE/ HO/ 2012, dated 05.06.2023.
- **APPCB** - Name changed CTE Amendment Order No. APPCB/ VSP/ VSP/ 113/ CTE/ HO/ 2012, dated 05.06.2023.
- **MoEF & CC** - Name transferred EC & CRZ Order F. No. 10/51/2021-IA.III, dated 01.08.2023.
- **APPCB** - Name changed CTO Amendment Order No. APPCB/VSP/113/HO/ CTO/ 2023, dated 01.08.2023.
- **APPCB** - CTO (Expansion) for operating Iron Ore (ROM) Screening & Crushing Unit of capacity of 2.0 LT/M vide Order No. APPCB/VSP/VSP/113/CFO/HO/2009, dated 22.08.2023 valid up to 31.12.2025.
- **APPCB** CTO Amendment No. APPCB/VSP/VSP/113/HO/ CTO/2020, dated 05.01.2024
- **APPCB** – CTO & HWA for cargo handling capacity of 51.00 MMTPA vide Order No. APPCB/VSP/113/CTO/HO/2009, dated 22.08.2024 valid up to 31.07.2029.

1.7 Process description:

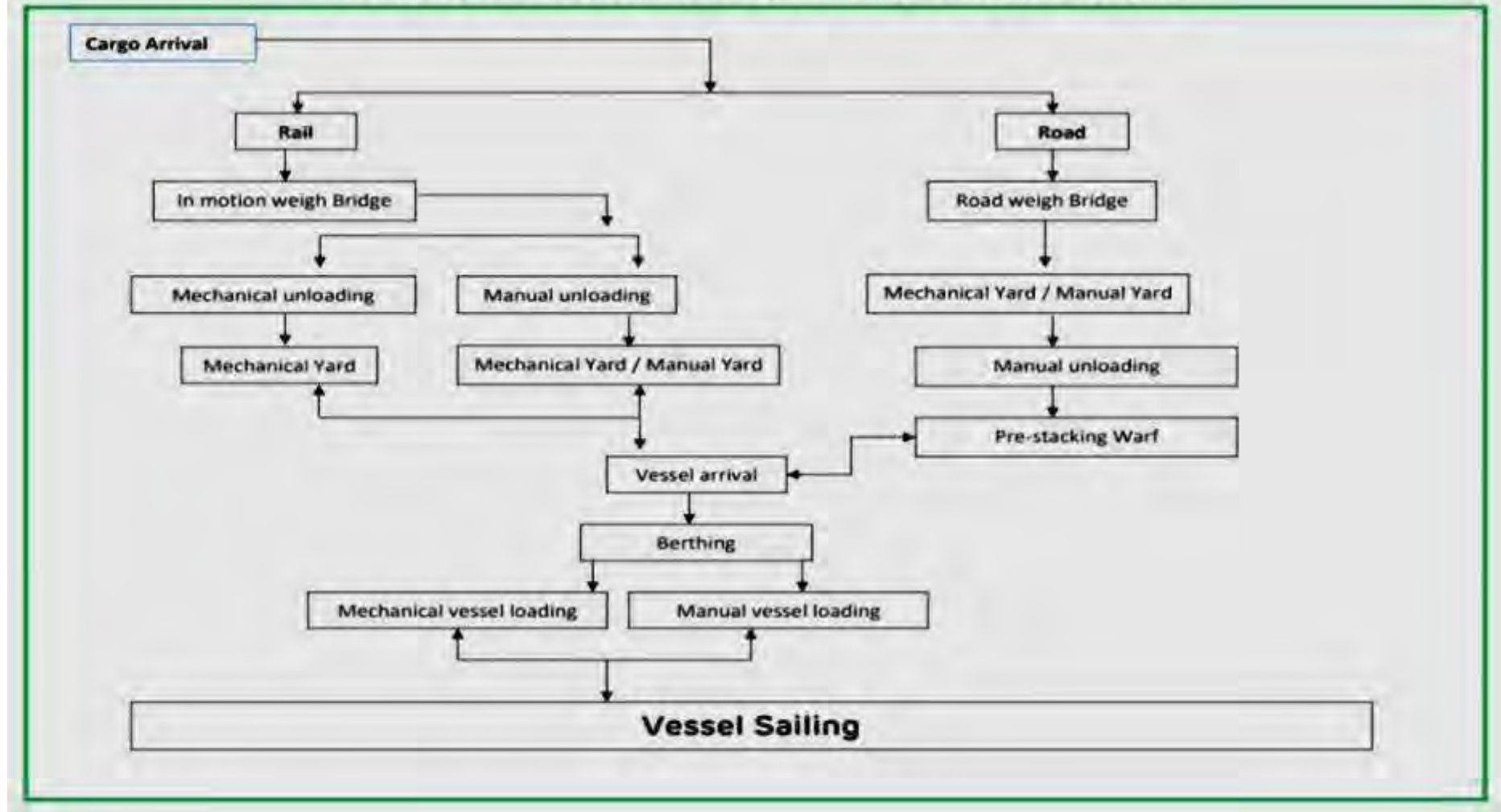
AGPL operates with Consented capacities of 51.0 MMTPA of different cargoes with 9 berths in an extent of 1800 Acres.

- Out of 9 berths, 3 berths (Berth No.4, 5 & 6) are fully mechanized,
- 5 berths (Berth No.1, 2, 3, 7 & 8) are semi-mechanized
- Provides cargo handling services for a variety of bulk and break bulk including coal, iron ore, multipurpose cargo (Agri products, Slag, Limestone, Steel products etc.), and Fertilizer, Industrial Raw Materials etc.
- Berth No. 9 is for container operation.

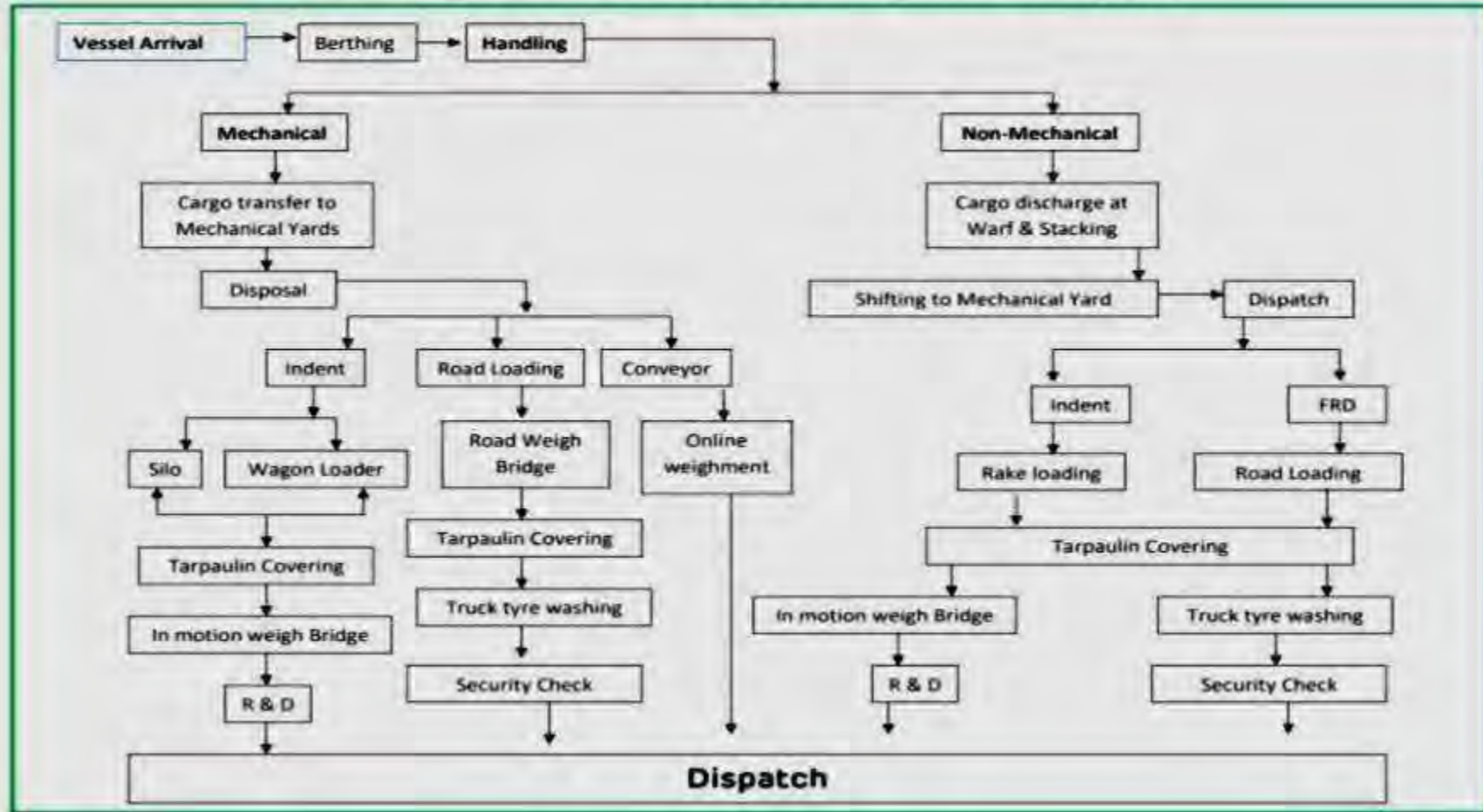


Image - 4 – Existing berths

Adani Gangavaram Port Limited, Cargo Handling - Flow chart - (Export)



Adani Gangavaram Port Limited, Cargo Handling - Flow chart - (Import)





Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to M/s. Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF & SPCB (for the period from October 2024 to March 2025)



CHAPTER 2

PORT OPERATIONS



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF&CC and SPCB (for the period from October 2024 to March 2025)



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2.0 Port Operations & Process of cargo handling:

Most Port operations are carried out through mechanized terminals and through sophisticated cargo handling equipment to avoid cargo spillage and dust emissions during the cargo handling activities.

2.1 Handling of Coal:

- Coal cargo is received from vessels calling at the port and a fully mechanized coal handling system with gantry grab type ship unloaders of required capacity have been installed to unload coal ships.
- It is then conveyed to the stackyard by the connected conveyor system.
- At the stack-yard it is stacked at the designated areas by the stacker in the form of stockpiles.
- For evacuating to the respective importers, the re-claimer reclaims the respective grade of stockpile and conveys it to the wagon loader, which in- turns loads the rakes for onward movement out of the port.
- For evacuating, the re-claimer(s) reclaims the respective grade of stockpile and conveys it to the Transfer Towers through dedicated stream of conveyors, which in turns transfer the cargo to stack-yards.
- The MDSS system is available at all Hoppers & Transfer Towers & at stack yards.

2.2 Handling of Iron ore:

- Iron ore being an export cargo is received at the port by railways.
- Rakes comprising of wagons filled with Iron ore arrive in the port from various origins.
- These wagons are unloaded by wagon tippler sidearm charger and the Iron ore thus unloaded is conveyed by the connecting conveyor system to the stacker for stacking in the stack-yard.
- Subsequently, a re-claimer is used to reclaim the required quantity of iron ore from the available stockpile and is then conveyed to the ship loader at berths for loading of the iron.
- The MDSS system is available at all Hoppers & Transfer Towers & at stack yards.

2.3 Cargo handling equipment at Berths

- One Ship Loader for bulk export of iron ore, Rail mounted, long travelling slewing, shuttling & luffing type with rated capacity of 4500 TPH.
- Four Ship Un-loaders for bulk import of coal, grab type with free digging rated capacity of 2400 TPH each.
- Nine (09) e-RTGs and Three (03) RMQCs to facilitate container handling.
- Seven Mobile Harbour Cranes, mobile hoppers, mobile hopper reclaiming system for bulk/break bulk cargo.
- Associated conveyer systems for transportation to and from coal and iron ore berths & stack yard
- One Stacker for iron ore stack yard, rail mounted, travelling slewing & luffing type with rated capacity of 1800 TPH.
- One Re-claimer for iron ore stack yard, rail mounted, travelling slewing & luffing type with rated capacity of 4500 TPH.
- Three Stackers for coal stack yard, rail mounted, travelling slewing & luffing type with rated capacity of 4800 TPH.
- One Re-claimer for coal stack yard, rail mounted, travelling slewing & luffing type with rated capacity of 1800 TPH (for wagon loading) / 850 TPH (for Visakhapatnam Steel Plant (VSP)).
- Two Re-claimers for coal stack yard, rail mounted, travelling slewing & luffing type with rated capacity of 3840 TPH/1800 TPH (wagon loading)
- One Stacker cum Re-claimer for coal stack yard, rail mounted, travelling slewing & luffing type with rated stacking capacity of 4500 TPH & reclaiming capacity of 1500 TPH (for wagon loading)/ 850 TPH (for VSP).
- One Wagon Tippler with side arm charger, rota-side Wagon type with designed capacity of 24 tips / hour for handling Iron Ore rakes.
- One Wagon Loader, rail mounted, horizontal loading boom with two-way diverter chute, with rated capacity of 1500 TPH for handling coal rakes
- One in motion wagon loading system (Silo) 800 T capacity of 59 wagons/hour

2.4 Storage facilities

- Coal Stack yard of 860,000 T capacity
- Iron Ore Stack yard of 1,080,000 T capacity
- Other dry bulk cargoes like slag, bauxite, limestone are being stacked
- Constructed & operating 12 No. of Closed Cargo Sheds to handle fertilizer, food grains etc.,

2.5 Cargo handling equipment at Yard

- Two Coal Un-loaders at each coal berth
- Mechanized Coal Stack yard with two stackers and two re-claimers
- One mobile hopper reclaiming system at the existing phase I coal yard
- Coal conveyors
- One IMWLS or Silo
- Five mobile harbour cranes at berth no.2 & 3 and two on multipurpose berth no. 8
- Nine Shunting locomotives
- Five Sweeping and Ten Bagging machines
- Wagon tippler: 1
- Wagon loader: 1
- Silo system: 1
- Manual Siding for loading: 3
- Manual Siding for unloading: 2
- Coal conveyor to steel plant
- Limestone is being supplied by rail/road to steel plant.
- Handling the bulk alumina in hoppers and transferred directly to the truck mounted closed tankers.

2.6 Brief description of stock yards:

- AGPL provided the most modern mechanized stock yards supported by scientifically designed Mechanical Dust Suppression System (MDSS) at all yards including coal and iron ore storage areas to suppress dust during stacking of cargo in yards.
- The stock yards are established with 176 numbers of most modern dust suppression water cannons to suppress the dust emission round the clock, controlled by highly sophisticated Programmable logic controllers (PLCs) operated from central control room (CCR).
- The water cannons cover a radius of approx. 50 meters & sprinkles waters up to 15 meters' height and rotates in 360⁰ directions. The distance between two sprinklers is 100mts to cover total cargo stack area.
- Two dedicated Pump houses for DSS system with redundant circuit to meet 24X7 Dust control operations. Storage water reservoir level will be monitored online with PLC and sensor systems. All DSS control systems are being monitored through SCADA from Central control room.

- Maintaining the stacks below 12 mts height where MDSS system available and 10 meters at manual stack yards.

2.7 Mechanized Operations:

1. **Mechanized Terminals:** Majority of Port operations (80%) are carried out through mechanized terminals and through sophisticated cargo handling equipment to avoid cargo spillage and dust emissions during the cargo handling activities.



Container handling equipment



Ship Loader & unloaders



Mechanized Loader & unloaders

2. **Mechanized Cargo Operations:** Sophisticated equipment are established for cargo handling operations of bulk cargo to minimize cargo spillage during operations and the equipment includes Ship Loader for bulk exports, Ship Un-loaders for bulk imports, Mobile Harbour Cranes for handling bulk/break bulk cargo, associated hooded conveyer system for transportation to and from stack yard, Stackers & Re-claimers for stack yard operations and silos , Wagon loader & Wagon tippers for handling Railway rakes.



HMC Equipment

3. **Hooded Conveyor System for internal cargo transport:** More than 80% of the cargo transport from berth to stack yards and vice versa is handled through closed conveyor to prevent cargo emissions into the air.



Hooded conveyor belts



Cladding to conveyor belt



Closed cargo shed

- 4. Mechanized Outbound Transport:** More than 90% outbound cargo from the stack yards is being transported through closed conveyors and railway rakes to avoid possible cargo spillage and dust emission. A dedicated conveyor is provided to transport coal directly to Vizag Steel Plant stack yard.



Silo



Stacker



Staker cum Reclaimer



Mechanized Transfer towers

Mechanized Stacker supported by water sprinkling arrangement





Wagon Tippler House

2.8 Cargo handled

AGPL is presently operating with 9 berths with a consented capacity of 40.95 MMTPA and an Iron Ore Screening & Crushing unit. The consented quantities are as below:

S. No.	Name of the cargo	Existing permitted Commodities
1	Containers	0.25 MMTPA
2	Multi Cargo: Agri products, (Food grains in bags or bulk, Chickpeas, Cereals, Pulses, Sugar, Raw Sugar), Slag, Limestone, Bauxite, Steel Products (Steel Beams, Coils, Billets, Angles, Channels, Project Cargo), Bulk Alumina & Other cargos.	6.20 MMTPA
3	Coal	25.00 MMTPA
4	Iron ore **	3.00 MMTPA
5	Fertilizer	2.50 MMTPA
6	Industrial Raw Material (Ferro silicon, Charge Chrome, Chrome ore, Coal Tar (Bags), Aluminum Ingots, Aluminum Billets, Bentonite, Pig iron, Manganese ore, Wood items, Paper bundles, CP Coke Bauxite, gypsum, clinker, scrap)	3.50 MMTPA
7	Liquid cargo (edible oil, caustic lye) *	0.50 MMTPA

	Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF&CC and SPCB (for the period from October 2024 to March 2025)	
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	Total Cargo handling	40.95 MMTPA
a.	Screened Iron Ore Fines **	1.0 Lakh TPM
b.	Crushed Iron Ore **	1.0 Lakh TPM

* AGPL has not yet started handling liquid cargo

With the Port demonstrating successful operations in terms of volume and diversity of cargoes with many new prospective users and new cargoes in the hinterland of AGPL, augmented the cargo handling capabilities at the port by way of adding new facilities as well as improving upon the existing receipt and dispatch systems, and obtained Environmental & CRZ clearance from MoEF& CC vide EC & CRZ Clearance dated 24.12.2021 for handling up to 60.95 MTPA with wide variety of cargo and due to various demand requirement and detailed engineering assessment.

Further, AGPL obtained CTE from AP Pollution Control Board vide Order dated 16.08.2022. The approved cargo handling capacities are given in Table 1-1.

S. No.	Name of the cargo Existing	Volume (MTPA)
1	Containers	8.00
2	Multi Cargo: Agri products, (Food grains in bags or bulk, Chickpeas, Cereals, Pulses, Sugar, Raw Sugar), Slag, Limestone, Bauxite, Steel Products (Steel Beams, Coils, Billets, Angles, Channels, Project Cargo), Bulk Alumina & Other cargos.	12.70
3	Coal	28.25
4	Iron ore	5.50
5	Fertilizer	2.50
6	Industrial Raw Material (Ferro silicon, Charge Chrome, Chrome ore, Coal Tar (Bags), Aluminum Ingots, Aluminum Billets, Bentonite, Pig iron, Manganese ore, Wood items, Paper bundles, CP Coke Bauxite, gypsum, clinker, scrap)	3.50
7	Liquid cargo (edible oil, caustic lye)	0.50
	Total	60.95

Based on the market requirements, AGPL proposed Phase wise implementation of the project within the approved 60.95 MMTPA and in the process, under Phase – I development obtained CTO from APPCB for the below cargo handling capacities vide Order No: APPCB/VSP/113/CTO/HO/2009 dated 22.08.2024 as furnished in **Table 1-2**.

S. No.	Name of the Cargo Existing	Volume (MTPA)
1	Containers	5.00
2	Multi Cargo: Agri products, (Food grains in bags or bulk, Chickpeas, Cereals, Pulses, Sugar, Raw Sugar), Slag, Limestone, Bauxite, Steel Products (Steel Beams, Coils, Billets, Angles, Channels, Project Cargo), Bulk Alumina & Other cargos.	8.00
3	Coal	26.0
4	Iron ore*	5.50*
5	Fertilizer	2.50
6	Industrial Raw Material (Ferro silicon, Charge Chrome, Chrome ore, Coal Tar (Bags), Aluminum Ingots, Aluminum Billets, Bentonite, Pig iron, Manganese ore, Wood items, Paper bundles, CP Coke Bauxite, gypsum, clinker, scrap)	3.50
7	Liquid cargo (edible oil, caustic lye)	0.50
	Total	51.00
*	Screened Iron Ore Fines (Lakh Tons/ Month)	1.0
*	Crushed Iron Ore (Lakh Tons/ Month)	1.0



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF&CC and SPCB (for the period from October 2024 to March 2025)



Chapter 3

Environment Protection, Conservation, Implementation of EMP & Sustainable Measures.

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3.0 Environment Protection, Conservation, Implementation of EMP & Sustainable Measures.

I. Introduction

Visakhapatnam city is in North-Eastern coast of Andhra Pradesh and a major part of the city lies within two major hill ranges i.e., Yarada and Adavivaram (Simhachalam) hill ranges. The area located between the hill ranges and seacoast acts as a bowl area. There is a possibility of inversion happening in the bowl area due to the location of the hill ranges and seacoast during winter period. The habitation and industries co-exist in the bowl area (Habitation developed in the surroundings of all major industries).

AGPL located outside the bowl area and is a city-based Port surrounded by Human Habitation. Pedagantyada Industrial Estate is in the proximity to AGPL wherein about 20 no. of major & medium scale Red, Orange & Green category of industries including one CFS Facility are in operation. Public Sector Industry is in the upwind direction of the Port emanates huge & thick emissions from its elevated stacks of about 200m which is in upwind direction of AGPL.

Considering the topographical & atmospheric conditions, AGPL is adopting and implementing the required environment measures as per the statutory requirements to prevent the dust pollution and to ensure the pollution parameters are within the permissible limits stipulated by statutory departments.

Details of funds spent towards implementation of Environment Management Plan for the last 3 years (as per Form – V) are as below:

- Rs. 5.28 Cr for the FY 2021 -2022
- Rs. 11.65 Cr for the FY 2022 – 2023
- Rs. 10.66 Cr for the FY 2023 - 2024

The above allocation & spending of huge amounts reveals the commitment of the Management commitment & dedication towards Environment Sustainability & mitigation measures.

3.1 Ambient Air Quality Monitoring:

AGPL has installed & operating 4 Nos. of CAAQM stations to measure the parameters PM10, PM 2.5, SO₂, NO, NO₂, CO at the following locations as approved by APPCB vide letter No.1124/PCB/RO-VSP/2019 – 6299, dated 02.03.2019 within the Port premises and the data is being uploaded to APPCB website and the CAAQMs are being calibrated periodically.

- i. Administrative office towards H.B. Colony (Station 1):
- ii. Project site office building towards Venkannapalem (Station2) – Beta Ray Attenuation Technology
- iii. Watch tower – 4 towards Gangavaram village (Station3).

iv. Silo Location near RINL (Station 4)



Station -1(AOB)

Station -2(Site Office)



Station -3(Watch Tower-4)

Station -4(Silo near RINL)





**ANDHRA PRADESH POLLUTION CONTROL BOARD
REGIONAL OFFICE, VISAKHAPATNAM**

R. LAKSHMI NARAYANA
ENVIRONMENTAL ENGINEER

Plot No.14, Flat No.103 & 104, Journalist Colony,
Marripalem VUDA Colony, Opp: Spencers
Visakhapatnam - 530009. Ph: 0891 - 2755356

Lr. No. 1124/PCB/RO-VSP/2019 - 6299

Date: 02/03/2019

To
M/s. Gangavaram Port Limited,
Visakhapatnam Dist.

Sir,

Sub :- Installation of Ambient Air Quality Stations- Location of the Stations -
Permission - information - Reg.

Ref :- Your Mail Reg. Location of installation of AAQ stations dated 23.02.2019.

With reference to the mail for the relocation of the AAQ stations, the following locations is here permitted.

1. First Location : AOB Stations as it continued, No Change
2. Second Location : 17°39' 09.23" N 83° 12' 42.82" E
3. Third Location : 17°38' 28.22" N 83° 13' 37.03" E

M/s. Gangavaram Port Limited shall comply with the CPCB guidelines for the installation ambient air Quality stations.

Yours faithfully,

Raavi Lakshmi
Narayana
ENVIRONMENTAL ENGINEER

Digitally signed by Raavi
Lakshmi Narayana
Date: 2019.03.02
12:51:56 +05'30'

Latest Calibration Certificate



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to M/s. Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF & SPCB (for the period from October 2024 to March 2025)



Table – T 3.1 –CAAQM Stations Technical details

Sl.	Details	Station -1	Station-2		Station-3	Station-4	
1.	Location	Administrative Office Building (AOB) towards H.B. Colony	Project site office building towards Venkannapalem (V)		Watch tower – 4 towards Gangavaram (V)	Silo Near RINL	
2.	Model No.	5028i	BAM 1020		5028i	5028i	
3.	Make	Thermofisher	ACOEM		Thermofisher	Thermofisher	
4.	Type	Beta Ray Attenuation	Beta Ray Attenuation		Beta Ray Attenuation	Beta Ray Attenuation	
5.	Parameters	PM10	PM 2.5	SO ₂	NO	NO ₂	CO
		PM – Particulate Matter		Sulfur di-oxide	Nitric oxide	Nitrogen Dioxide	Carbon Monoxide
6.	Standards	100 ug/m ³	60 ug/m ³	80 ug/m ³	80 ug/m ³	80 ug/m ³	0-4 mg/m ³
7.	Supplier/AMC	Thermofisher	Swan Environmental Pvt. Ltd.,		Thermofisher	Thermofisher	Thermofisher
8.	Installed on	24.04.2025	24.06.2024		24.04.2025	24.04.2025	
9.	Calibrated on	17.05.2025	22. 05.2025		17.05.2025	17.05.2025	
10.	Valid up to	17.08.2025	21.11.2025		17.08.2025	17.08.2025	
11.	Server	NKSS	G-Lens		NKSS	NKSS	
12.	Connectivity	APPCB website http://aprtpps.ap.gov.in					
13.	Accessibility	Public domain at http://aprtpps.ap.gov.in/publicView/#/ landing/dashboard					

Image I-3.2

**Calibration Certificate – Station – 1
Administrative Office Building (AOB) towards
H.B. Colony**

ThermoFisher Scientific AAOQS Analyzers Calibration Report

Calibration date: 17-05-2024
Valid until: 17-05-2025

ANQMS-3 (AOB - H.B. Colony)
M/s. Adani Gangavaram Port, Pedagantyada Mandal, Visakhapatnam, Andhra Pradesh

Thermo Analyser	Parameter	Analyser Measured Value		Acceptable error in full scale (200 ppb/0.02% NO ₂ and 0.01% SO ₂)
		Standard	Found	
NO	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
NO ₂	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
NO _x	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
SO ₂	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
CO	Zero	0.0	0.0	0.0
	100 ppm	400	400	400

1. All measurements are reported in full scale (200 ppb/0.02% NO₂ and 0.01% SO₂).
2. The acceptable error in full scale (200 ppb/0.02% NO₂ and 0.01% SO₂) is 0.01%.

**Calibration Certificate – Station – 3 - Watch
tower – 4 towards Gangavaram (V)**

ThermoFisher Scientific AAOQS Analyzers Calibration Report

Calibration date: 17-05-2024
Valid until: 17-05-2025

ANQMS-3 (Watch tower - 4 towards Gangavaram (V))
M/s. Adani Gangavaram Port, Pedagantyada Mandal, Visakhapatnam, Andhra Pradesh

Thermo Analyser	Parameter	Analyser Measured Value		Acceptable error in full scale (200 ppb/0.02% NO ₂ and 0.01% SO ₂)
		Standard	Found	
NO	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
NO ₂	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
NO _x	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
SO ₂	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
CO	Zero	0.0	0.0	0.0
	100 ppm	400	400	400

1. All measurements are reported in full scale (200 ppb/0.02% NO₂ and 0.01% SO₂).
2. The acceptable error in full scale (200 ppb/0.02% NO₂ and 0.01% SO₂) is 0.01%.

I-3.4

**Calibration Certificate – Station – 4 – Silo
Near RINL
(Upwind direction)**

ThermoFisher Scientific AAOQS Analyzers Calibration Report

Calibration date: 17-05-2024
Valid until: 17-05-2025

ANQMS-3 (Silo)
M/s. Adani Gangavaram Port, Pedagantyada Mandal, Visakhapatnam, Andhra Pradesh

Thermo Analyser	Parameter	Analyser Measured Value		Acceptable error in full scale (200 ppb/0.02% NO ₂ and 0.01% SO ₂)
		Standard	Found	
NO	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
NO ₂	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
NO _x	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
SO ₂	Zero	0.0	0.0	0.0
	100 ppb	400	400	400
CO	Zero	0.0	0.0	0.0
	100 ppm	400	400	400

1. All measurements are reported in full scale (200 ppb/0.02% NO₂ and 0.01% SO₂).
2. The acceptable error in full scale (200 ppb/0.02% NO₂ and 0.01% SO₂) is 0.01%.

**Calibration Certificate – Station – 2 – Project
site Office towards Venkannapalem(V)**

SWAN ENVIRONMENTAL PVT. LTD.
(ISO 9001:2015 CERTIFIED)

CALIBRATION CERTIFICATE

Certificate No: SWAN/CAL/001/2024
Date of Issue: 17-05-2024

Customer: M/s. Adani Gangavaram Port Limited, Pedagantyada Mandal, Visakhapatnam, Andhra Pradesh

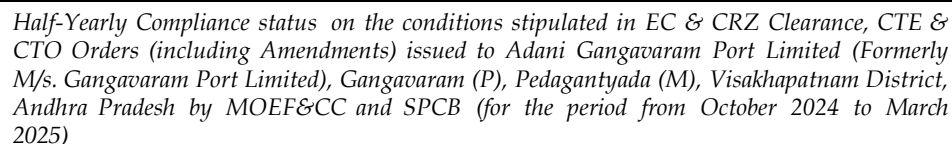
Instrument: AAOQS Analyser
Date of Calibration: 17-05-2024

Calibration File Details:
Station: Watch tower - 4 towards Gangavaram (V)
Calibration File No: 10001

Calibration Results:
Parameter: NO₂
Found Value: 0.01%
Measured Value: 0.01%
% of Error: 0.01%

Accepted Tolerances: ± 2 %

Remarks: The Calibration is successful and the instrument is found to be accurate.





Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to M/s. Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF & SPCB (for the period from October 2024 to March 2025)



The CAAQM stations are connected & data uploading to APPCB website. AGPL is submitting the CAAQM (daily averages) data to APPCB on monthly basis and on Half-yearly basis to MoEF & CC. As per the values, the CAAQM parameters for the period from October 2024 to March 2025 are within the stipulated limits.

T 3.2

Adani Gangavaram Port Limited - CAAQM Monthly Averages for October- 2024 to March- 2025

Date	Station - 1 - Administrative Office Building (AOB)						Station - 2 - Project Site Office						
	PM10	PM 2.5	SO ₂	NO	NO ₂	CO	PM10	PM 2.5	SO ₂	NO	NO ₂	CO	Nox
Oct-24	65.26	37.27	20.78	13.09	10.48	0.05	42.28	21.15	2.4	4.14	15.51	0.53	24.66
Nov-24	55.98	32.04	12.95	34.16	27.37	1.08	55.6	33.37	1.68	1.06	21.19	0.65	22.22
Dec-24	54.5	46.63	21.22	0.03	0.03	0.02	43.36	25.51	2.91	2.08	25.03	0.7	27.09
Jan-25	64.75	43.58	18.52	0.05	0.04	0.03	82.6	47.12	9.16	6.19	22.28	0.82	29.35
Feb-25	60.9	35.02	3.46	0.01	0.01	0.03	64.98	31.22	11.09	7.25	12.86	0.71	20.05
Mar-25	NA	NA	NA	NA	NA	NA	53.03	20.27	6.61	4.91	20.04	0.76	24.91
6 Months Avg	60.28	38.91	15.39	9.47	7.59	0.24	56.98	29.77	5.64	4.27	19.49	0.70	24.71
Date	Station - 3 - Watch Tower - 4						Station - 4 AGPL_Site_UP_WindDirection_Towards_RINL-CO						
	PM10	PM 2.5	SO ₂	NO	NO ₂	CO	PM10	PM 2.5	SO ₂	NO	NO ₂	CO	
Oct-24	72.79	41.04	23.38	11.46	14.08	0.03	76.99	40.55	32.37	14.08	12.77	0.05	
Nov-24	70.13	41.75	7.17	22.51	26.47	0.58	73.2	42.85	14.19	24.47	19.6	0.88	
Dec-24	50.61	42.74	7.75	0.04	0.06	0.02	60.34	48.57	6.79	0.04	0.04	0.02	
Jan-25	64.26	41.23	6.64	0.05	0.05	0.03	69.61	44.96	15.03	0.07	0.03	0.03	
Feb-25	62.37	35.02	1.57	0.02	0.01	0.03	63.48	36.87	4.4	0.01	0.01	0.02	
Mar-25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
6 Months Avg	64.03	40.36	9.30	6.82	8.13	0.14	68.72	42.76	14.56	7.73	6.49	0.20	

3.2 Water Source, Consumption & Management:

- The main source of Water is Visakhapatnam Industrial Water Supply Company (VIWSCO). The fresh from Yeleru Left Bank Canal (YLBC) will reach to the Port by gravity through Kaniti balance reservoir of AGPL and from there to Underground Reservoir (UGR) of AGPL.
- AGPL has been purchasing fresh water from VIWSCO @ 1600 KL per day.
- The water from Kanithi Reservoir is efficiently channeled to Under Ground Reservoir (UGR) tanks in the AGPL premises by gravity flow.
- The UGR Tanks have a cumulative capacity of 2000KL, partitioned into 3 chambers of 2 X 750 KL capacity and 1 No. 500 KL capacity. Water is being pumped from Underground Reservoir to:
 - DSS-1 Pump House from which the water is distributed to
 - 80 No's Canon Sprinklers starting from Yard 1 to 6
 - Filling Point No. 6
 - Tower Exchangers
 - Reclaimers & Stackers
 - DSS -2 has a tank of 1500 KL capacity to receive water through gravity from UG Reservoir sump. The Water from DSS-2 is distributed to
 - 96 No's Canon Sprinklers starting from Yard 7 to 10
 - Filling Point, no 5 & 7
 - Transfer Tower Exchangers
 - Reclaimers & Stackers
 - OHT tank of 200KL cater the fresh water needs viz., Staff Toilets, Hooper's cleaning, Fire tender & Utilities etc.,

Details of Fresh (VIWSCO) Water for the period from October 2024 to March 2025 are as below:

T 3.3

Month & Year	Source - Fresh water (VIWSCO)			
	Agreement Quantity KL		Actual Withdrawal Quantity KL	
	Per Month	Per Day	Per Month	Per Day (Average)
October – 2024	49600	1600	37338	1204
November – 2024	48000		39693	1323
December– 2024	49600		27644	892
January - 2025	49600		38479	1241
February - 2025	48400		47596	1700
March - 2025	49600		49392	1593
Total	294800		240142	1326



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF &CC and SPCB (for the period from October 2024 to March 2025)



As per the consent, the following quantities are permitted for different application:

T 3.4

SL. No.	Purpose	CFO Quantity KLD
1	Gardening	92.00
2	Dust Suppression, Truck tyre washing etc.	1373.00
3	Ship supply	50.00
4	Miscellaneous	10.00
5	Domestic	75.00
	Total	1600.00
	Industrial	1525.00
	Domestic	75.00

Application wise utilization of water against the consented quantities for the last six months (from October 2024 to March 2025) as below:

T 3.5

Month	Gardening	Dust Suppression, Truck tyre washing etc.	Ship	Miscellaneous	Domestic	Total
CTO Quantity(Day)	92	1373	50	10	75	1600
October – 2024	452	33249	1248	218	2172	37338
November – 2024	794	35601	1200	214	1884	39693
December– 2024	828	23529	1000	223	2064	27644
January -2025	1212	33735	1250	218	2064	38479
February - 2025	2208	42403	1110	195	1680	47596
March - 2025	2460	43361	1139	236	2196	49392
Total	7954	211878	6947	1303	12060	240142
Average	1326	35313	1158	217	2010	40024

The daily average water consumption for the period from October 2024 to March 2025 was 1319.46 KLD for industrial purpose & 66.26 KLD for domestic utilization.

3.3 Waste management & disposal - Solid waste

- AGPL has provided collection bins at about 76 locations within the port premises for collection of dry & wet solid & domestic waste.



-
- AGPL planned with GVMC, for daily collecting and disposing of the domestic solid waste to GVMC dump site. Copy of the GVMC Agreement attached as **Annexure – 10**



GREATER VISAKHAPATNAM MUNICIPAL CORPORATION
VISAKHAPATNAM

From
Zonal Commissioner,
Zone-VI, GVMC,
Gajuwaka,
Visakhapatnam.

To
The Chairman,
Gangavaram Port Limited,
Gajuwaka,
Visakhapatnam.

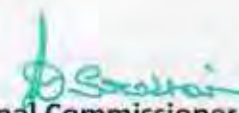
Sir,

Sub: GVMC – Zone-VI – PH Section – Dumping Wet & Dry Waste at Transfer Station, Gajuwaka from Gangavaram Port Limited – Rs. 12,000/- Monthly service charges - Orders – Regarding.

Ref: Letter from Gangavaram Port Limited vide Rc. No. 787/F1/PH/Zone-VI, Dt: 09-08-2021.

In the above reference cited, Gangavaram Port Limited requested GVMC, Zone-VI to Permission Dumping Wet & Dry Waste at Transfer Station, Gajuwaka to our own vehicle as per your notified service charges.

Hence the above request consider and Permission Dumping Wet & Dry Waste at Transfer Station, Gajuwaka to our own vehicle on the payment mode per month Rs. 12,000/- effected with the month of Aug-2021.


Zonal Commissioner
Zone-VI, GVMC


SS/VI

The GVMC segregates the material into dry and wet waste.

- The dry waste viz., Plastic, glass, iron, aluminum, cardboard, wooden etc., are separated with the help of dry resource collection center.
- The wet material will be treated with window fermentation with a specific cluster, which converts the wet waste into useful organic mixture by emitting low CO₂ level.
- The whole process is under Solid Waste Management Rules 2016 & amendments thereafter for environmental sustainability.

The details of solid waste disposed during the period from October 2024 to March 2025 are as below:

T 3.6

Sl. No.	Month	Quantity (Tons)
1.	October – 2024	15.2
2.	November – 2024	15.1
3.	December– 2024	22.36
4.	January - 2025	20.5
5.	February - 2025	22.1
6.	March - 2025	24.98
	Total	120.24
Average per month		20.04
Average per day		0.67

3.4 Organic waste

Organic waste is being collected on a regular basis within the Port and used for vermi-compost preparation. The vermin-compost is being used for captive nursery development.



3.5 Plastic waste

Plastic waste is being collected and disposed to APPCB authorized plastic waste recycling units. AGPL imposed & implementing ban on usage of single use plastic within the port premises from 1st September 2021 and implementing with strict vigilance.



3.6 E – Waste

E – Waste is being collected and disposed to SPCB authorized E-waste recyclers and submitting the details in Form – 3 to SPCB regularly. The latest submission for FY 2023-24 is on 27.06.2024. (Attached as Annexure -4).

3.7 Hazardous waste (Waste oil)

- **APPCB** CTO Amendment No. APPCB/VSP/VSP/113/HO/ CTO/2020, dated 05.01.2024 for the following quantities of waste/used oil and inclusion of ship waste oil quantity.
 - In-house generated waste/used oil @ 25 MTA
 - Onboard ship waste oil @ 1200 MTA.
- AGPL collects and stores the in-house generated waste oil in a closed shed with elevated platform & disposing the same through APEMCL to APPCB authorized Waste oil recyclers.
 - AGPL has disposed In-house generated waste/used oil of 16.80 Tons FY 2023-24- & 17.67-Tons during August 2024 of M/s. Jyothi Lubricants, Plot No.185, IDA, Kondapalli, Vijayawada, through APEMCL against the permitted quantity of 25 MTA
- AGPL is not storing any onboard ship generated waste oil. The waste oil recyclers will collect the same directly from the berthed ship.
- For the period from October - 2024 to March 2025, AGPL has disposed 523.22 Tons of ship generated waste/used oil against the permitted quantity of 1200 MTA through APEMCL to the following APPCB authorized Recycling units.

T 3.7

Sl. No.	Name of the Recycling Unit	From October - 2024 to March 2025
1	Navya Waste and Used Oil Re-refining and Recycling Industry, Visakhapatnam	461.0
2	Krishna Lubricants	11.81
3	Sri Venkateswara Lubricants	22.89
2	Zen Waste oil Recycling Industry, Visakhapatnam	20.32
	Total	523.22

The latest submission for FY 2023-24 is on 27.06.2024. (Attached as Annexure - 5).

3.8 The environment monitoring measures adopted by AGPL are summarised:

a. Mechanical Dust Suppression System (MDSS)

Mechanical Dust Suppression System (MDSS) is mounted on each of the mobile hoppers. Plain water fog systems are provided at receipt points. A dry fog system is installed at the discharge point. The system consists of one water tank mounted on a hopper, two (1 working + 1 standby) pumps for each mobile hopper are provided.



Dust control is achieved by blending dust particles with finely atomized water droplets. The collision between the water droplets and dust particles plays an important role in the process of blending and heavier mass thus formed settles down to the source.

Plain water dust suppression has been considered for the top of the Mobile hopper & Truck receipt area discharge chute. The system has been designed to control dust nuisance of the working environment during un-loading of coal from Grab & at the peripheral location of discharge chute of belt feeder towards wagon or rake.

b. PLC based Mechanical Dust Control System:

AGPL provided PLC based Mechanical Dust Suppression System to control the fugitive emission from the dry bulk cargo storage areas i.e., coal and iron ore stockyards and handling areas.

The total area covered with the water sprinkler system of the facility is classified into seven sections or segments. Two types of sprinklers are provided in the water sprinkling system. Water is sprayed through 176 no.of cannons. The cannons are operated in a cycle for the period of approximately 10 to 15 minutes per shift.



All the 8 sections shall be operated sequentially. The operation of MDSS will be 6 times per day during dry weather conditions and twice per day in the winter season.

There are two types of sprinklers/cannons. Type 1 sprinklers are 9.5mm/h and Type 2 sprinklers are 6mm/h respectively. The Type 1 sprinkler line will be operated for 10 minutes and the Type 2 sprinkler line will be operated for 15 minutes. The sprinklers are mounted on sprinkler posts of 6 meters height. It enables uniform water sprinkling on stockpiles height of approximately 13 meters.

AGPL provided 176 numbers of sprinklers at stack yards. The throw distance is 50 meters at a working pressure of 6.0 kg/cm². The sprinklers are of the swiveling type.

Water will be sprayed over the stockpile through 1800 swiveling type (Part or half Circle) sprinklers mounted on pipe taping raised to a height of 2 to 2.5 meters above ground level with one solenoid valve & one butterfly valve. These are on both sides of the stockpile to effectively cover the entire stockpile area and form a blanket of mist and the mist captures the dust emissions that become heavier and settle down. The formed mist would not allow any dust to fly along with wind. The mist formation facilitates maintaining required moisture levels in the cargos and lasts for longer period.

- The water cannons cover a radius of approx. 50 meters & sprinkles waters up to 15 meters' height and rotate in 360⁰ directions. The distance between two sprinklers is 100mts to cover total cargo stack area.
- Two dedicated Pump houses for DSS system with redundant circuit to meet 24X7 Dust control operations. Storage water reservoir level will be monitored online with PLC and sensor systems. All DSS control systems are being monitored through SCADA from Central control room.

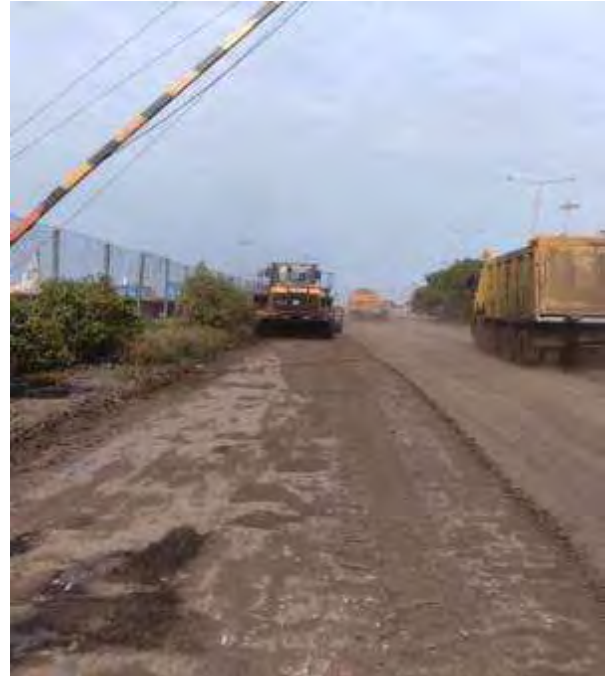
PLC based MDSS in the Yards





c. Dozing the Cargo spillages:

AGPL has been lifting the cargo spillages if any, during the transit within the Port.



d. Mobile Dust Suppression:

Deployed 20 Mobile DSS cannon mounted tankers for dust suppression at berth area, back up areas, at all transfer points & roads, for which AGPL is operating water pump houses at 8 Locations for water distribution throughout the Port through DSS Tankers.

Dust suppression through Tankers





e. Maintaining tarpaulin coverage on cargo heaps.

AGPL has been maintaining the tarpaulin covering on the cargos to the extent possible to avoid fugitive emissions.



f. Deployment of Road Sweeping Machines

Laid BT roads internally and 5 No. of sweeping machines were deployed for the cleaning of berths, back up areas and roads.



Road Sweeping machines

Road Sweeping machines

The sweeping machines are being operated during nighttime also



g. Mechanical & Manual Cleaning of roads outside the Port

AGPL has been cleaning the internal roads including the operational areas & 4 Lane Road manually on regular basis in addition to the mechanical clearing (through Sweeping Machines) to avoid fugitive emissions.



h. Truck/Tarpaulin Covering:

- AGPL established 16 No. of semi mechanized truck tarpaulin covering stations at various locations within the Port to facilitate and ensure all the outgoing cargos by Trucks are covered with tarpaulin.
- AGPL ensuring that the tarpaulin is covered in all sides of the truck and tightly tied with rope so that the tarpaulin should not be uncovered while traveling until the truck reaches the destination without any transit spillage.





For this innovative invention, AGPL received “Industrial Safety Excellence Award – 2021 from the Confederation of Indian Industry (CII.)



i. Railway Wagon Tarpaulin Covering Station

AGPL established a semi mechanized railway wagon tarpaulin covering station at Silo location within the Port to facilitate and ensure all the outgoing cargo rakes are covered with tarpaulin and tightly tied with rope so that the tarpaulin should not be uncovered while traveling until the wagon reaches the destination without any transit spillage.



j. Truck Tyre washing facility

Provided 2 no. of automatic sensor-based truck/tyre washing facilities to ensure two stage wheels washing of all the outgoing vehicles to avoid dust passage on to outside roads.



The 2nd automatic sensor-based truck tyre washing facility is established with advanced technology which has cleaning water recycling & reusing system with oil skimmer facility.

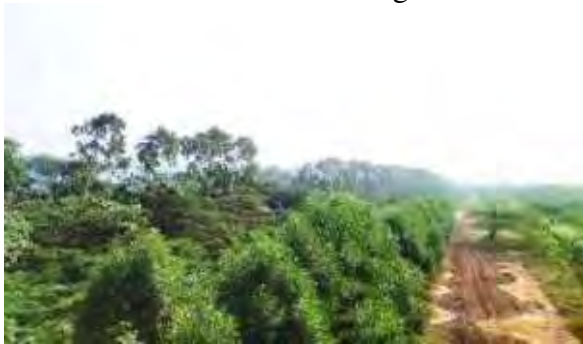


k. Specific measures towards Habitation:

Erected wind breaking walls towards Gangavaram village and HB Colony to prevent any dust transfer to habitation and a thick green belt developed supporting to the wind breaking wall, 10 layers in North-West direction to arrest the dust emissions to the villages.



Wind breaking wall towards HB Colony & Gangavaram (V)



Plantation at - GPL Site Office & all along North boundary wall side plantation supporting Wind screen towards Gangavaram village, towards Kongapalem & Venkannapalem Villages

3.9 Monitoring of air quality in the settlement areas around the project site at four locations, covering upwind and downwind directions:

i. As per the condition no.14 stipulated in Schedule – B of CTO Order dated 22.04.2024 under Air Pollution

The facility shall maintain 4 CAAQMs with online connectivity to APPCB and maintain records.

Complying with the Consent Condition, AGPL established & operating 4 No. of Continuous Ambient Air Quality Monitoring stations within the Port premises, at the below mentioned locations as suggested by APCB vide letter dated 02.03.2019 to monitor the parameters viz., PM 10, PM 2.5, SO₂, NO, NO₂, CO and the data is being uploaded to APPCB website & the parameter values are meeting the Board standards.

Downwind directions towards habitation

- a. Administrative office towards H.B. Colony (Station 1):
- b. Project site office building towards Venkannapalem (Station2)
- c. Watch tower – 4 towards Gangavaram village (Station-3).

Upwind direction towards RINL

- d. At New Pump House (upwind directions) – Station - 4

In addition, APPCB also conducts the Ambient Air Quality Monitoring within and outside the Port area during the statutory inspections & randomized inspections periodically through Mobile CAAQM Station. The parameter values meet the Board standards.

ii. As per the condition no.35 stipulated in Schedule – B of CTO Order dated 22.04.2024 under General Conditions

The facility shall comply with the conditions stipulated in the EC order dt.24.12.2021 issued by the MoEF, CC & GoI & CTE orders dated 02.03.2012 & 16.08.2022 and CTO orders dated 13.01.2016, 22.08.2023 issued by APPCB.

To meet the compliance status of the conditions stipulated EC, CTE & CTO orders, AGPL shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the project area at least at four locations, covering upwind and downwind directions.

Monitoring of air quality in the settlement areas around the project site at four locations, covering upwind and downwind directions, at the following locations within 1 KM Radius of Port Boundary covering all the habitation areas falling in the down wind direction.

- i. At Silo Gate –upwind - South – West direction from Port.
- ii. Near to Novus Residential Apartment – West wind direction from Port
- iii. Near to PedagantyadaJn. – North - West wind direction from Port.
- iv. Near /at Gangavaram (V) – North wind direction from Port.

As per the CPCB Guidelines for the Measurement of Ambient Air Pollutants – Manual Sampling & Analysis, the frequenting is as below:

iii. Monitoring frequency as per CPCB Guidelines for the Measurement of Ambient Air Pollutants – Manual Sampling & Analysis

Sl. No.	Parameter	Time Weighted Average	Concentration in Ambient Air for industrial, residential, rural & other areas.	Method of Measurement
1.	Particulate Matter (Size Less than 10 $\mu\text{g}/\text{m}^3$ or PM 10 $\mu\text{g}/\text{m}^3$)	Annual* 24 Hours**	60 100	- Gravimetric - TEOM - Beta attenuation
2.	Particulate Matter (Size Less than 2.5 $\mu\text{g}/\text{m}^3$ or PM 2.5 $\mu\text{g}/\text{m}^3$)	Annual* 24 Hours**	40 60	- Gravimetric - TEOM - Beta attenuation
3.	Sulphur Dioxide (SO_2), $\mu\text{g}/\text{m}^3$	Annual* 24 Hours**	50 80	- Improved West and Gaeke Method - Ultraviolet Florescence
4.	Nitrogen Dioxide (NO_2), $\mu\text{g}/\text{m}^3$	Annual* 24 Hours**	40 80	- Jacob &Hochheiser modified (NaOH-NaAsO ₂) Method - Gas Phase Chemiluminescence
5.	Carbon Monoxide (CO) mg/m^3	8 Hours* 1 Hour**	02 04	- Nondispersive Infrared (NDIR) Spectroscopy
*	Annual Arithmetic means of minimum 104 measurements in a year at a particular site taken twice in a week 24 hourly at uniform intervals.			
**	24 hourly or 8 hourly or 1 hourly monitored value, as applicable, shall be complied with 98% of the time in a year. 2% of the time, they may exceed the limits but not on two consecutive days of monitoring.			
i.e.,	416 Monitoring samples			

- To install and operate equipment to monitor the Ambient Air Quality at the above locations and to note the values of parameters PM 10, PM 2.5, SO_2 , NO_2 , CO on 24-hour basis twice in a week for a period of one year.
- All the surrounding activities viz., vehicular movement, construction activity, garage activities, commercial establishment & industrial activities to be clearly noted & considered while monitoring,
- The recorded raw data is to be furnished within 2 days after completion of the monitoring.
- The reviewed data/values to get certified by a Retired Professor of Andhra University.
- The duly certified final data soft & hard copies to be submitted within 4 days after review of the raw data.

iv. Benefits of the study:

Conducting Ambient Air Quality (AAQ) monitoring within human settlements near port operations will have the following benefits:

- i. **Air pollution assessment:** Measures the impact of port activities on local air quality, identifying potential pollution hotspots.
- ii. **Compliance monitoring:** Verifies whether port operations meet regulatory air quality standards, ensuring environmental compliance.
- iii. **Source apportionment:** Upwind and downwind monitoring helps distinguish between port-related emissions and other local sources.
- iv. **Impact mitigation:** Informed decision-making for reducing emissions and implementing control measures to minimize air pollution effects.
- v. **Environmental management:** Integrates air quality monitoring into port operations, promoting sustainable practices and environmental responsibility.
- vi. **Community engagement:** Transparency and awareness about air quality issues, fostering collaboration between port authorities, residents, and stakeholders.
- vii. **Health risk evaluation:** Helps assess the exposure of nearby communities to harmful air pollutants, enabling health risk assessments and mitigation strategies.
- viii. **Data-driven policy making:** Provides valuable data for policymakers to develop targeted regulations and air quality management plans.

By monitoring AAQ in both upwind and downwind directions within a 1 km radius will help a comprehensive understanding of port operations' impact on local air quality, enabling proactive measures to protect public health and the environment besides meeting the statutory compliance.

Study/Monitoring Locations google map:



A. Locations of the study

Location – 1 - Near Gangavaram village

- North Direction
- Latitude – 83°13'59.71"E (17.644804)
- Longitude – 83°13'59.71"E (83.233254)

- Location Status at Gangavaram (V)

- Located towards North-West and in the downwind direction from the Port
- Residential area nearest to Port Boundary with Vehicular movement, Construction & Commercial activities



Location – 2 - Near Novus Apartments

- West Direction
- Latitude – 17°39'57.00"N (17.665834) &
- Longitude – 83°11'17.78"E (83.188273)
- Located towards Southern and in the downwind direction from the Port

Location Status around Novus Apartments

- Common road for AGPL, RINL, and the industries located in Pedagantyada Industrial Park and public.
- Establishment & operation of garages, fly ash brick units throughout the Port Road both sides up to "Y" Jn.



Location – 3 - Near Pedagantyada village.

- West - North Direction
- Latitude – 17°40'8.65"N (17.669069)
- Longitude – 83°12'27.32"E (83.207588)

Location Status at Pedagantyada (V)

- Located towards Western and in the downwind direction from the Port
- Industrial, Commercial & Residential area nearest to Port with heavy Vehicular movement, Construction & Commercial activities
- Common road for AGPL, RINL, and the industries located in Pedagantyada Industrial Park and public.
- About 20 no. of major & medium scale Red, Orange & Green category of industries including one CFS Facility are in operation in Pedagantyada Ancillary Industrial Area



- **Outside the Port Boundary Near to AGPL SILO.**
- South - West Upwind direction
- Latitude – 17°37'51.39"N (17.630942) Longitude – 83°13'4.16"E (83.217822)
- **Location Status near to AGPL Silo**
- Located towards Eastern and in the upwind direction from the Port
- Barren land followed by Public Sector Industry (RINL) is in the upwind direction of the Port



As per the Ambient Air Quality monitoring process conducted within the human settlements, covering both upwind and downwind directions within the 1.0 KM radius of the Port operations, the results provided valuable insights into the current state of air quality in the monitored area indicates that all criteria pollutants, including particulate matter (PM10 and PM2.5), sulfur dioxide (SO2), carbon monoxide (CO), and ozone (O3), are well within the prescribed limits at all locations and times, demonstrating a high level of air quality compliance.

3.10 Environmental Monitoring Programme in AGPL

As per the statutory guidelines AGPL has appointed an authorized 3rd party agency, for continuous monitoring of the environmental parameters of the Port as well as and port surroundings.

Sl. No.	Particulars		Monitoring Frequency	Monitoring Parameters
1.	Ambient Noise Levels dB (A) - 4 locations			(Fortnightly)
	1	1. Cargo handling area 2. Gangavaram	3. Peda Gantyada/GPL Security Gate 4. HB Colony	
2.	Ground / Surface Water			
	1)	Two locations 1. Gangavaram 2. North Boundary Wall Open well	Monthly	As per the parameters specified by CPCB/APPCB
	Parameters - Temperature, pH, Total Hardness, Calcium (as Ca), Magnesium (as Mg), Chlorides, Manganese, Copper, Total Alkalinity, Total Dissolved Solids, Sulphate, Dissolved Oxygen, Nitrite (as NO ₂), Iron, Fluoride, Oil & Grease, Chromium (as Cr ⁺⁶), Cyanide, Zinc, Phenolic Compound, Free Residual Chlorine, Total Coli forms Count & E.coli			
3.	STP (Inlet & Outlet)			Fortnightly
		Physico – chemical Parameters - pH, Total Suspended Solids, Total Dissolved Solids, Oil & Grease, COD, BOD & Chloride.		
4.	Sewage water (GVMC) entering into the Port waters from outside the port boundary			Monitoring Frequency
		1 Gangavaram (V) at Culvert – 11 2 Kanithi gedda nalla near Visakhapatnam Steel Plant		Monthly
		Physico-chemical Parameters – pH, Total Suspended Solids, Total dissolved Solids, Oil & Grease, COD, BOD, Ammonical Nitrogen, Phenolic Compounds, Nitrate, Nitrite, Sulphide,		

Sl. No.	Particulars	Monitoring Frequency	Monitoring Parameters
	Phosphate, Cyanide, Iron, Aluminium, Copper, Chromium, Zinc, Lead, Manganese, Nickel, Mercury & Cadmium		

A. Noise Monitoring

Noise monitoring is being carried out fortnightly as per the statutory regulations for the four locations by AGPL and the reports are well within the statutory limits and the same are being submitted to the APPCB monthly.

1. Cargo handling area (as source),
2. Gangavaram
3. Peda Gantyada/Security Gate,
4. HB colony



At HB Colony



At Gangavaram (V)



At Port operational area



At Port Main Gate

S. No.	Parameter	Unit	Location	Industrial	
1.	Noise	Decibels	Cargo area	Day time (6.00 AM to 10 PM) 75 dB (A)	Night time (10.00 PM to 6.00 AM) 70 dB (A)
2.	Level	Decibels	Peda Gantyada/ Security Gate		
Day time			Night time	Residential	
3.	Noise	Decibels	Gangavaram	55 (6.00 AM to 10 PM) 75 dB (A)	45 (6.00 AM to 10 PM) 75 dB (A)
4.	Level	Decibels	HB Colony		

T 3.8

Month	Time	Location			
		Cargo area	Gangavaram	Peda Gantyada/GPL Security Gate	HB Colony
October 2024	Day	78	66	56	46
	Night	68	64	36	48
November 2024	Day	74	66	52	48
	Night	66	54	34	46
December 2024	Day	76	64	58	44
	Night	66	62	38	46
January 2025	Day	72	68	50	48
	Night	64	56	38	40
February 2025	Day	72	68	48	52
	Night	64	56	36	42

March 2025	Day	70	68	46	54
	Night	64	56	38	40

B. Surface & Ground water monitoring

As per the statutory regulations & requirement, Surface & Ground water quality is being monitoring by AGPL on monthly basis at Gangavaram (Village) and reports being submitted to the APPCB, and to MoEF & CC along with Half-yearly EC Compliance

1. Gangavaram (Village)
2. North Boundary Wall (NBW) open well.



Open well at Gangavaram (V)



Bore well at Gangavaram (V)

Ground water sampling details - Open well at AGPL North Boundary Wall									
S. No.	Parameter	Standard	Unit	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
1	Temperature	15-30	°C	22.4	22.8	22.6	22.4	24.8	29
2	pH	6.5-8.5	H+ concen.	7.46	7.46	7.48	7.48	7.36	7.48
3	Total Hardness	300-600	mg/l	224	226	225	214	208	214
4	Calcium (as Ca)	75-200	mg/l	35	38	36	38	42	46
5	Magnesium (as Mg)	30-100	mg/l	26	24	28	24	26	24
6	Chlorides	250-1000	mg/l	46	486	48	48	56	52
7	Manganese	0.1-0.5	mg/l	0.01	0.02	0.02	0.02	0.02	0.02
8	Copper	0.05-1.5	mg/l	0.018	0.015	0.016	0.016	0.014	0.014
9	Total Alkalinity	200-600	mg/l	46	44	48	132	128	136
10	Total Dissolved Solids	500-2000	mg/l	448	436	446	320	342	386
11	Sulphate	200-400	mg/l	46	48	48	68	60	54
12	Dissolved Oxygen	-	mg/l	3.6	3.4	3.4	
13	Nitrite (as	0-1.0	mg/l	0.014	0.018	0.016	0.016	0.014	0.016

	NO ₂)								
14	Iron	0.3-1.0	mg/l	0.134	0.136	0.138	0.136	0.18	0.18
15	Fluoride	0.5-1.0	mg/l	0.6	0.2	0.8	0.8	0.6	0.6
16	Oil & Grease	0.01	mg/l	BDL	BDL	BDL	BDL	BDL	BDL
17	Chromium - (as Cr+6)	0.05	mg/l	0.04	0.02	0.02	0.02	0.02	0.02
18	Cyanide	0.05	mg/l	NIL	Nil	Nil	Nil	Nil	Nil
19	Zinc	5	mg/l	0.2	0.4	0.4	0.4	0.6	0.8
20	Phenolic Compound	0.002	mg/l	NIL	Nil	Nil	Nil	Nil	Nil
21	Free Residual Chlorine	0.2	mg/l	0.02	0.04	0.03	
22	Total Coli forms Count	Absent	Cfu/ml	Absent	Absent	Absent	Absent	Absent	Absent
23	E.coli	Absent	Cfu/ml	Absent	Absent	Absent	Absent	Absent	Absent

Ground water sampling details - Gangavaram (V)

S. No.	Parameter	Standard	Unit	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
1	Temperature	15-30	°C	32.4	32.4	32.6	22.6	25.4	28.6
2	pH	6.5-8.5	H+ concen.	7.4	7.2	7.8	7.8	7.76	7.82
3	Total Hardness	300-600	mg/l	246	256	248	248	260	268
4	Calcium (as Ca)	75-200	mg/l	46	46	48	48	54	56
5	Magnesium (as Mg)	30-100	mg/l	24	24	26	26	28	28
6	Chlorides	250-1000	mg/l	124	159	126	126	118	124
7	Manganese	0.1-0.5	mg/l	0.002	0.004	0.004	0.004	0.004	0.004
8	Copper	0.05-1.5	mg/l	0.014	0.018	0.016	0.018	0.016	0.015
9	Total Alkalinity	200-600	mg/l	86	86	88	104	112	118
10	Total Dissolved Solids	500-2000	mg/l	348	346	346	346	368	416
11	Sulphate	200-400	mg/l	48	46	46	46	44	46

12	Dissolved Oxygen	-	mg/l	3.6	3.2	3.8	
13	Nitrite (as NO ₂)	0-1.0	mg/l	0.04	0.04	0.02	0.08	0.08	0.08
14	Iron	0.3-1.0	mg/l	0.3	0.5	0.2	0.4	0.6	0.14
15	Fluoride	0.5-1.0	mg/l	0.2	0.1	0.4	0.4	0.4	0.5
16	Oil & Grease	0-0.01	mg/l	BDL	BDL	BDL	BDL	BDL	BDL
17	Chromium - (as Cr+6)	0.05-0.05	mg/l	0.04	0.02	0.03	0.06	0.06	0.06
18	Cyanide	0-0.05	mg/l	NIL	Nil	Nil	Nil	Nil	Nil
19	Zinc	0.1-5.0	mg/l	0.2	0.1	0.1	0.4	0.5	0.6
20	Phenolic Compound	0-0.002	mg/l	NIL	Nil	Nil	Nil	Nil	Nil
21	Free Residual Chlorine	0.2	mg/l	0.14	0.16	0.16
22	Total Coli forms Count	Absent	MPN Index/100 ml	Absent	Absent	Absent	Absent	Absent	Absent
23	E.coli	Absent	Cfu/ml	Absent	Absent	Absent	Absent	Absent	Absent

C. Sewage Water Monitoring:

AGPL is monitoring the Sewage water of the following locations:

1. Gangavaram (V) at Culvert – 11
2. Kanithi gedda nalla near Visakhapatnam Steel Plant



S. No.	Parameters	Unit	Standard	Kanithi Gedda nalla Near M/s. Visakhapatnam Steel Plant					
				October 2024	November 2024	December 2024	January 2025	February 2025	March 2025
1.	Temperature	⁰ C	20-30					26.2	28.2
2.	pH	H+Conc	5.0 – 9.0	5.48	5.46	5.46	5.46	5.94	6.04
3.	Total Suspended Solids	mg/l	10-100	246	234	248	248	228	236
4.	Total Dissolved Solids	mg/l	500-2000	2634	2548	2636	2634	3628	3420
5.	Oil & Grease	mg/l	01-10	7.6	7.6	7.8	7.8	6.4	6.8
6.	COD	mg/l	50-250	468	465	468	466	456	406
7.	BOD	mg/l	03-30	64	64	66	65	72	68
8.	Ammonia Nitrogen	mg/l	01-05	16	16	18	02	0.2	0.3
9.	Phenolic Compounds	mg/l	0-0.002	0.4	0.4	0.4	0.1	0.1	0.1
10.	Nitrate	mg/l	10-20	46	48	48	48	36	30
11.	Nitrite	mg/l	0-1.0	0.4	0.6	0.6	0.6	0.6	0.4
12.	Sulphide	mg/l	0-1.0	0.2	0.4	0.4	0.4	0.8	0.8
13.	Phosphate	mg/l	0.5-2.0	3.4	3.6	3.6	1.6	1.4	1.6
14.	Cyanide	mg/l	0.0-05	Nil	Nil	Nil	Nil	Nil	Nil
15.	Iron	mg/l	0.3-1.0	2.4	2.6	2.6	1.0	1.0	1.0
16.	Aluminium	mg/l	0.03-0.2	1.6	1.8	1.8	1.4	1.2	1.0
17.	Copper	mg/l	0.05-1.5	1.8	1.6	1.6	1.6	1.4	1.2
18.	Chromium	mg/l	0.05-0.05	1.6	1.4	1.8	1.8	1.2	1.0
19.	Zinc	mg/l	0.1-5.0	2.6	2.8	2.4	2.8	2.8	2.6
20.	Lead	mg/l	0-0.1	0.04	0.02	0.02	0.06	0.06	0.06
21.	Manganese	mg/l	0.1-0.5	1.6	1.4	1.4	1.4	1.0	1.0

	se								
22.	Nickel	mg/	0.02-0.1	1.8	1.2	1.6	1.6	1.6	1.4
23.	Mercury	mg/	0-0.001	0.002	<0.01	0.001	0.001	0.001	0.001
24.	Cadmium	mg/	0-0.05	0.002	<0.01	0.002	0.006	0.006	0.006

S. No.	Parameters	Unit	Standard	Culvert -11					
				October 2024	November 2024	December 2024	January 2025	February 2025	March 2025
1.	Temperature	°C	20-30					26.8	29.2
2.	pH	H+Conc	5.0 – 9.0	6.14	6.24	6.18	6.26	6.6	6.46
3.	Total Suspended Solids	mg/l	10-100	88	86	86	114	86	118
4.	Total Dissolved Solids	mg/l	500-2000	1434	1458	1436	1632	1436	1436
5.	Oil & Grease	mg/l	01-10	3.4	3.4	3.6	3.8	3.6	3.6
6.	COD	mg/l	50-250	236	246	238	262	234	248
7.	BOD	mg/l	03-30	24	28	26	44	4.4	41.6
8.	Ammonia Nitrogen	mg/l	01-05	4.3	4.8	4.3	4.0	4.4	3.6
9.	Phenolic Compounds	mg/l	0-0.002	0.4	0.2	0.4	0.6	0.8	0.8
10.	Nitrate	mg/l	10-20	26	26	28	28	24	28
11.	Nitrite	mg/l	0-1.0	0.4	0.6	0.2	0.6	0.6	0.4
12.	Sulphide	mg/l	0-1.0	0.6	0.4	0.8	0.8	0.8	0.8
13.	Phosphate	mg/	0.5-2.0	4.6	4.8	4.4	3.8	4.8	3.6
14.	Cyanide	mg/	0.0-05	Nil	Nil	Nil	Nil	Nil	Nil
15.	Iron	mg/	0.3-1.0	1.6	1.4	1.8	1.0	1.4	1.0
16.	Aluminium	mg/	0.03-0.2	0.1	0.2	0.2	0.2	0.2	0.2
17.	Copper	mg/	0.05-1.5	0.16	0.18	0.18	0.6	0.4	0.8
18.	Chromium	mg/	0.05-	0.2	0.6	0.4	0.4	0.6	0.4

	m		0.05						
19.	Zinc	mg/	0.1-5.0	1.4	1.6	1.6	1.6	1.6	1.2
20.	Lead	mg/	0-0.1	0.02	0.04	0.08	0.02	0.02	0.02
21.	Manganese	mg/	0.1-0.5	0.2	0.2	0.4	0.8	0.8	0.6
22.	Nickel	mg/	0.02-0.1	0.1	0.6	0.1	0.4	0.4	0.4
23.	Mercury	mg/	0-0.001	<0.04	<0.01	<0.04	<0.04	<0.04	<0.04
24.	Cadmium	mg/	0-0.05	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02

D. Marine water /sediment monitoring

The marine water and sediment quality monitoring is being carried out fortnightly basis of tidal sampling for the Four locations as

1. Harbor Basin
2. Port entrance channel
3. South break wall outside
4. North break wall outside

Physical, chemical, and biological parameters were analyzed for water as well as for sediment to assess the quality and the same is being submitted to the APPCB. The reports are indicating that the waters are not having any noticeable contamination

Marine Waters Monitoring Locations



S. N	Location	Activity	Latitude	Longitude
1.	Harbour Basin	Marine Monitoring / Sample Collection	17°37'15.24"N	83°14'9.24"E
2.	Port Entrance Channel		17°37'34.32"N	83°14'42.36"E
3.	North Break Water		17°37'48.00"N	83°14'53.16"E
4.	South Break Water		17°37'15.24"N	83°14'51.36"E

Sl. No.	Particulars	Monitoring Frequency	Monitoring Parameters
1.	Water		
	A. Marine Water Quality	Fortnightly	
	1. Tidal sampling at 4 locations - Marine water (Low Tide/High Tide)		
	1. Harbour basin,	3. Outside the South brake wall	
	2. Port entrance channel,	4. Outside the North break wall	
	1. Physical Analysis – (Low Tide & High Tide)		
	Parameters - Temperature, pH, Salinity, Turbidity, Total Suspended Solids, Transparency & Electrical Conductivity,		
	2. Chemical Analysis - (Low Tide & High Tide)		
	Parameters - Dissolved Oxygen, Biological Oxygen Demand, Oil & Grease, Sulphate, Nitrate, Chloride, Chromium, Mercury, Zinc, Iron, Manganese, Cadmium		
	3. Marine Biological Analysis		
	a. Phytoplankton	(b) Zooplankton	
	B. Sediment		
	Physico-chemical Parameters - pH, Organic matter, Nitrate, Phosphate, Oil & Grease, Iron, Manganese, Nickel, Chromium, Mercury, Zinc, Lead, Arsenic, and Selenium & Copper.		
	Sediment – Benthic Faunal Diversity		



Marine waters Low Tied & High Tide Physical parameters sampling values for the period from October 2024 to March-2025

Location wise Low Tide values for the October 2024									
Parameter	Unit	Harbour Basin		Port Entrance Channel		South Break Wall Outside		North Break Wall Outside	
		Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
Temperature	⁰ C	31.6	32.6	32.8	32.6	32.6	32.4	32.8	32.6
pH	H + conc	8.24	8.28	8.16	8.28	8.18	8.25	8.26	8.34
Salinity	%	34.8	36	35.8	46	35.4	35.8	35.6	35.8
Turbidity	NTU	36	48	14	16	16	18	20	22
Total Suspended Solids	mg/l	56	64	35	44	26	28	16	24
Transparency	Mts.	0.2	1.6	1.6	1.8	1.6	1.8	1.8	2.2
Electrical Conductivity	mMHo	32.6	34.8	32.4	33.6	32.6	32.8	32.6	34.6

Location wise Low Tide values for the November 2024									
Parameter	Unit	Harbour Basin		Port Entrance Channel		South Break Wall Outside		North Break Wall Outside	
		Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
Temperature	⁰ C	31.4	32.6	32.6	32.8	32.4	32.4	32.8	32.4
pH	H + conc	8.26	8.26	8.16	8.26	8.16	8.16	8.24	8.28
Salinity	%	34.6	34.6	35.6	48	35.6	36.4	35.6	35.8
Turbidity	NTU	38	38	18	16	18	16	14	14
Total Suspended Solids	mg/l	58	65	26	68	22	28	18	16
Transparency	Mts.	0.4	1.2	1.6	1.8	1.6	1.8	1.4	1.6
Electrical Conductivity	mMHo	32.4	34.8	32.4	33.4	32.6	32.8	32.6	34.8

Location wise Low Tide values for the December 2024

Parameter	Unit	Harbour Basin		Port Entrance Channel		South Break Wall Outside		North Break Wall Outside	
		Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
Temperature	⁰ C	31.4	32.8	32.6	32.8	32.4	32.4	32.8	32.6
pH	H + conc	8.26	8.26	8.18	8.26	8.16	8.28	8.26	8.34
Salinity	%	34.6	38	35.6	48	35.6	35.8	35.6	35.8
Turbidity	NTU	38	46	16	18	18	18	24	28
Total Suspended Solids	mg/l	58	66	38	46	24	28	16	26
Transparency	Mts.	0.4	1.4	1.6	1.6	1.8	1.8	1.8	2.4
Electrical Conductivity	mMHo	32.4	34.6	32.6	33.4	32.4	32.8	32.6	34.8

Location wise Low Tide values for the January 2025

Parameter	Unit	Harbour Basin		Port Entrance Channel		South Break Wall Outside		North Break Wall Outside	
		Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
Temperature	⁰ C	27.6	26.0	26.8	28.4	28.8	25.9	26.6	28.4
pH	H + conc	8.20	8.26	8.18	8.26	8.16	8.26	8.24	8.36
Salinity	%	34.6	35	35.6	35	35.6	35.9	35.8	35.6
Turbidity	NTU	12	08	10	14	10	06	12	14
Total Suspended Solids	mg/l	68	42	36	46	38	24	40	26
Transparency	Mts.	0.4	1.4	1.6	1.8	1.8	1.9	1.6	2.4
Electrical Conductivity	mMHo	38.4	38.8	36.6	38.6	38.8	36.4	32.4	34.8

Location wise Low Tide values for the February 2025

Parameter	Unit	Harbour Basin		Port Entrance Channel		South Break Wall Outside		North Break Wall Outside	
		Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
Temperature	⁰ C	26.8	26.6	27.0	27.4	27.8	26.6	27.0	27.4
pH	H + conc	8.22	8.20	8.24	8.16	8.20	8.18	8.24	8.22
Salinity	%	35	35	35.2	34.8	35.6	34.9	35.0	35.2
Turbidity	NTU	14	10	08	12	08	10	12	14
Total Suspended Solids	mg/l	86	54	38	42	44	48	56	60
Transparency	Mts.	0.8	1.0	1.4	1.8	1.6	2.0	1.6	2.0
Electrical Conductivity	mMHo	38.8	37.0	37.6	38.0	39.4	40.2	38.8	39.8

Location wise Low Tide values for the March 2025

Parameter	Unit	Harbour Basin		Port Entrance Channel		South Break Wall Outside		North Break Wall Outside	
		Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
Temperature	⁰ C	28.9	29.0	28.6	28.8	28.6	29.2	28.8	27.8
pH	H + conc	8.20	8.18	8.24	8.16	8.14	8.18	8.20	8.16
Salinity	%	33	33	32	33	34	33	34	33
Turbidity	NTU	16	14	10	12	12	10	16	12
Total Suspended Solids	mg/l	40	48	54	36	56	42	38	44
Transparency	Mts.	1.0	1.2	1.4	1.4	1.4	1.2	1.6	1.4
Electrical Conductivity	mMHo	38.6	37.0	37.8	38.0	37.6	37.0	36.8	37.2

Marine waters Low Tied & High Tide Chemical parameters sampling values for the period from October – 2024 to March-25

Location wise Low Tide Minimum & Maximum values for the period from October 2024

Sl. No.	Parameter	Unit	Harbour Basin		Port Entrance Channel		South brake Wall Outside		North brake Wall Outside	
			Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
1	Dissolved Oxygen	mg/l	3.4	4.2	3.4	4.6	3.4	4.4	4.4	4.6
2	Biological Oxygen Demand	mg/l	1.2	1.8	1.6	1.6	1.4	1.6	1.6	1.8
3	Oil & Grease	mg/l	1.4	1.6	1.8	2.2	1.4	1.6	1.4	0.4
4	Sulphate	mg/l	1076	1222	1246	1266	1236	1326	1045	1062
5	Phosphate	mg/l	0.18	0.28	0.18	0.34	0.16	0.24	0.16	0.24
6	Nitrate	mg/l	4.02	4.2	4.2	4.4	4.2	4.6	2.6	2.8
7	Nitrite	mg/l	0.016	0.012	0.014	0.020	0.016	0.018	0.028	0.024
8	Chloride	mg/l	2348	3482	26486	22956	2243	2624	28088	2649
			6	8			6	4		8
9	Chromium	ppm	0.016	0.024	0.024	0.026	0.018	0.024	0.024	0.026
10	Mercury	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11	Zinc	Ppm	0.24	0.26	0.26	0.28	0.24	0.26	0.24	0.26
12	Iron	ppm	0.024	0.028	0.001	0.002	0.026	0.028	0.001	0.028
					6	4			8	
13	Manganese	ppm	0.026	0.029	0.028	0.028	0.028	0.026	0.026	0.026
14	Cadmium	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Location wise Low Tide Minimum & Maximum values for the period from November 2024

Sl. No.	Parameter	Unit	Harbour Basin		Port Entrance Channel		South brake Wall Outside		North brake Wall Outside	
			Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
1	Dissolved Oxygen	mg/l	3.6	4.8	3.4	4.4	3.4	4.8	4.6	4.8
2	Biological Oxygen Demand	mg/l	1.4	1.6	1.8	1.6	1.4	1.6	1.6	1.9
3	Oil & Grease	mg/l	1.4	1.4	1.2	1.6	1.6	1.8	1.4	0.2
4	Sulphate	mg/l	1056	1234	1246	1265	1246	1288	1046	1074
5	Phosphate	mg/l	0.16	0.21	0.26	0.36	0.14	0.26	0.18	0.14
6	Nitrate	mg/l	4.1	4.2	2.4	2.8	4.4	4.6	4.1	4.4
7	Nitrite	mg/l	0.014	0.016	0.026	0.01	0.018	0.021	0.028	0.048
8	Chloride	mg/l	22456	34836	27456	24536	22434	26025	28088	26448
9	Chromium	ppm	0.018	0.026	0.026	0.024	0.016	0.026	0.026	0.022
10	Mercury	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11	Zinc	Ppm	0.26	0.24	0.24	0.26	0.26	0.28	0.26	0.24
12	Iron	ppm	0.022	0.024	0.0018	0.0024	0.024	0.026	0.0024	0.026
13	Manganese	ppm	0.026	0.028	0.024	0.021	0.026	0.028	0.026	0.029
14	Cadmium	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Location wise Low Tide Minimum & Maximum values for the period from December 2024

Sl. No.	Parameter	Unit	Harbour Basin		Port Entrance Channel		South brake Wall Outside		North brake Wall Outside	
			Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
1	Dissolved Oxygen	mg/l	3.6	4.4	3.4	4.6	3.4	4.4	4.4	4.6
2	Biological Oxygen Demand	mg/l	1.4	1.6	1.6	1.6	1.6	1.8	1.4	1.8
3	Oil & Grease	mg/l	1.6	1.6	1.8	2.2	1.0	1.6	1.4	0.4
4	Sulphate	mg/l	1078	1222	1246	1266	1236	1326	1045	1062
5	Phosphate	mg/l	0.16	0.28	0.18	2.2	0.16	0.24	0.16	0.24
6	Nitrate	mg/l	4.04	4.2	4.6	4.4	4.2	4.6	2.6	2.8
7	Nitrite	mg/l	0.018	0.012	0.014	0.020	0.016	0.018	0.028	0.024
8	Chloride	mg/l	2348	3482	26466	22856	2243	2624	28086	2649

			8	8			6	4		6
9	Chromium	ppm	0.014	0.024	0.028	0.032	0.018	0.024	0.026	0.028
10	Mercury	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11	Zinc	Ppm	0.26	0.26	0.26	0.28	0.24	0.26	0.24	0.26
12	Iron	ppm	0.028	0.028	0.001 6	0.002 4	0.026	0.028	0.001 8	0.026
13	Manganese	ppm	0.028	0.029	0.028	0.028	0.028	0.026	0.026	0.028
14	Cadmium	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Location wise Low Tide Minimum & Maximum values for the period from January 2025

Sl. No.	Parameter	Unit	Harbour Basin		Port Entrance Channel		South brake Wall Outside		North brake Wall Outside	
			Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
1	Dissolved Oxygen	mg/l	3.6	4.4	3.8	4.6	3.8	4.2	4.4	4.6
2	Biological Oxygen Demand	mg/l	1.2	1.6	1.6	1.6	1.4	1.8	1.6	1.8
3	Oil & Grease	mg/l	1.4	1.8	1.8	2.2	1.4	1.6	1.4	0.4
4	Sulphate	mg/l	1076	1226	1248	1266	1236	1326	1045	1062
5	Phosphate	mg/l	0.18	0.26	0.18	0.34	0.16	0.24	0.16	0.24
6	Nitrate	mg/l	4.04	4.4	4.2	4.4	4.2	4.6	2.6	2.8
7	Nitrite	mg/l	0.018	0.021	0.014	0.020	0.016	0.018	0.028	0.024
8	Chloride	mg/l	2348 8	2482 6	26488	22956	2243 6	2624 4	28089	2649 6
9	Chromium	ppm	0.018	0.026	0.026	0.026	0.018	0.024	0.024	0.026
10	Mercury	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11	Zinc	Ppm	0.26	0.28	0.24	0.28	0.24	0.26	0.24	0.24
12	Iron	ppm	0.028	0.029	0.001 6	0.002 4	0.026	0.026	0.001 8	0.026
13	Manganese	ppm	0.029	0.028	0.028	0.028	0.028	0.028	0.026	0.028
14	Cadmium	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Location wise Low Tide Minimum & Maximum values for the period from February 2025

Sl. No.	Parameter	Unit	Harbour Basin		Port Entrance Channel		South brake Wall Outside		North brake Wall Outside	
			Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
1	Dissolved	mg/l	3.8	3.4	4.0	4.2	4.2	4.0	3.8	4.0

	Oxygen									
2	Biological Oxygen Demand	mg/l	1.4	1.6	1.8	1.8	1.8	1.6	1.4	1.8
3	Oil & Grease	mg/l	1.0	1.2	0.8	1.4	1.0	1.6	1.2	0.8
4	Sulphate	mg/l	1048	984	1126	1018	1206	1186	1068	1104
5	Phosphate	mg/l	0.14	0.2	0.16	0.24	0.16	0.2	0.18	0.24
6	Nitrate	mg/l	4.8	4.6	3.8	4.4	3.8	4.6	3.6	4.0
7	Nitrite	mg/l	0.014	0.021	0.016	0.020	0.016	0.014	0.028	0.02
8	Chloride	mg/l	1948 4	2084 6	2201 4	2086 2	2142 8	2086 2	22024	2168 2
9	Chromium	ppm	0.018	0.024	0.026	0.028	0.018	0.026	0.024	0.02
10	Mercury	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11	Zinc	Ppm	0.24	0.28	0.24	0.26	0.28	0.26	0.22	0.24
12	Iron	ppm	0.022	0.026	0.002	0.024	0.024	0.02	0.001 8	0.016
13	Manganese	ppm	0.024	0.028	0.022	0.02	0.022	0.028	0.02	0.018
14	Cadmium	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Location wise Low Tide Minimum & Maximum values for the period from March 2025

Sl. No.	Parameter	Unit	Harbour Basin		Port Entrance Channel		South brake Wall Outside		North brake Wall Outside	
			Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide	Low Tide	High Tide
1	Dissolved Oxygen	mg/l	4.2	3.8	4.0	4.0	4.0	4.0	4.4	4.0
2	Biological Oxygen Demand	mg/l	1.8	1.6	1.4	1.8	1.8	1.6	2.0	1.8
3	Oil & Grease	mg/l	1.4	1.2	1.0	1.2	0.8	1.0	1.2	1.4
4	Sulphate	mg/l	1124	1068	994	1036	1168	1086	1124	1082
5	Phosphate	mg/l	0.16	0.18	0.2	0.24	0.16	0.26	0.16	0.24
6	Nitrate	mg/l	4.0	3.6	3.8	4.2	4.8	4.0	3.8	4.0
7	Nitrite	mg/l	0.016	0.022	0.018	0.020	0.012	0.014	0.026	0.02
8	Chloride	mg/l	20416	21068	20814	21264	21046	21636	22048	21860
9	Chromium	ppm	0.024	0.02	0.026	0.022	0.016	0.022	0.024	0.02
10	Mercury	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11	Zinc	Ppm	0.22	0.28	0.2	0.26	0.24	0.26	0.2	0.24
12	Iron	ppm	0.024	0.026	0.014	0.024	0.026	0.02	0.018	0.022
13	Manganese	ppm	0.028	0.024	0.022	0.02	0.024	0.028	0.02	0.016
14	Cadmium	ppm	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Environmental monitoring report is enclosed as **Annexure -8a**

E. Beach nourishment

AGPL carried-out a study on Shoreline Change Assessment Study during November 2022 through the Department of Civil Engineering, Andhra University, College of Engineering, Visakhapatnam, Andhra Pradesh. The Conclusion remarks revealed that:

- i. An increase in overall stretch of stable and accreting coastal stretches are observed post construction of Port.
- ii. Post construction of port, the coast on the Southern side of Port is in stable to accreting condition.
- iii. The immediate northern side of the Port is accreting followed by stable coast.
- iv. The Shoreline and beach profile analysis results indicate that suitable Nourishment has improved the stability of beaches in the immediate North.



3.11 Water – Treatment & disposal (Sewage Treatment Plants)

AGPL operating 2 No. of Sewage Treatment Plants to cater the needs of sewage water treatment.

1. 5 KLD capacity STP at AGPL Main gate location – will receive the domestic sewerage from AOB Building & Security posts.
2. 30 KLD capacity STP at AGPL Harbour gate location – will receive the domestic sewerage from the COB, ERA, POB Location cluster buildings & Canteen

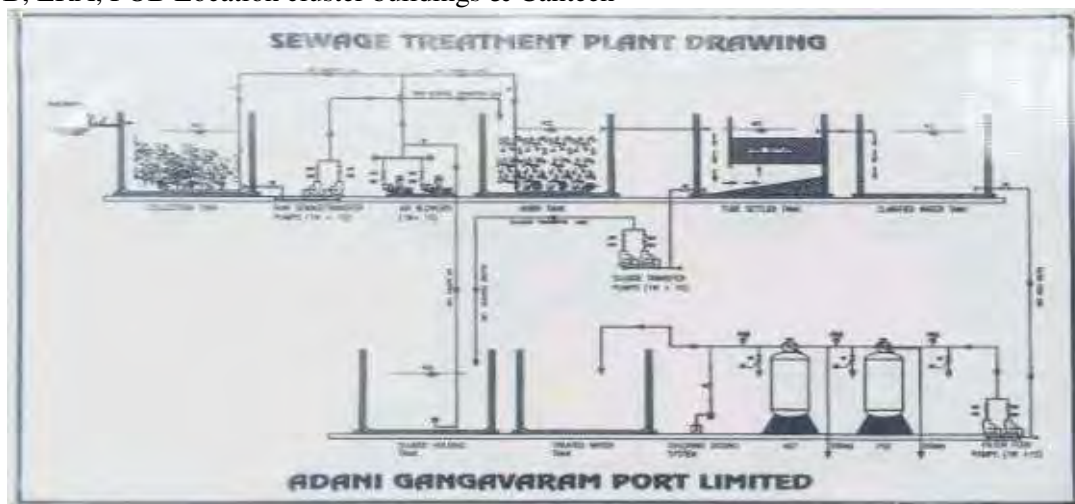


Image – I 3.5

Image – I 3.6(5 KLD (1 X5 KLD) AND 30 KLD- STP Flow Meters Calibration Certificate)

30 KLD STP Verification Report		5 KLD STP Verification Report	
Figure:	30 KLD	Figure:	5 KLD
Basic error:	0.001	Basic error:	0.001
Repeatability:	0.001	Repeatability:	0.001
Linearity:		Linearity:	
Instrument Coefficient:	0.0000	Instrument Coefficient:	0.0000
NO1:	NO2:	NO1:	NO2:
NO3:	NO4:	NO3:	NO4:
NO5:	NO6:	NO5:	NO6:
Operation Pressure:	0.1 MPa	Operation Pressure:	0.1 MPa
Signal output:	4-20mA	Signal output:	4-20mA
Verification conditions		Verification conditions	
Location:	Flow Laboratory	Location:	Flow Laboratory
Medium:	Water	Medium:	Water
Environmental Temperature:	25°C	Environmental Temperature:	25°C
Environmental Humidity:	70%	Environmental Humidity:	70%

30 KLD STP Verification Certificate		5 KLD STP Verification Certificate	
Instrument name	Coriolis Flow Meter	Instrument name	Coriolis Flow Meter
Model	CM2000/CM1000	Model	CM2000/CM1000
Measurement Range	0.0000 to 30.0000	Measurement Range	0.0000 to 5.0000
Serial No.	0000001	Serial No.	0000001
Test Basis	ISO 9001:2015	Test Basis	ISO 9001:2015
Conclusion	Accuracy: 0.1	Conclusion	Accuracy: 0.1
Manufacturer	ENDRESS+HAUSER	Manufacturer	ENDRESS+HAUSER
Verification Date	2024.09.27	Verification Date	2024.09.27
Valid Date	2025.09.27	Valid Date	2025.09.27
Operator:	Check01	Operator:	Check01



5KLD STP



30 KLD STP

- The treated water is being used for greenbelt development within the Port premises.
- The STP flow meters are being calibrated periodically for better performance

The details of water treated and reused for greenbelt/dust suppression during the period from October 2024 to March -2025 are as below:

T 3.9

Sl. No.	Month/Year	STP Treated water withdrawal & utilization			
		5 KLD	30 KLD	KL/ Month	Average per day KL
1	October 2024	112	500	612	19.74
2	November 2024	104	476	580	19.33
3	December 2024	112	436	548	17.67
4	January 2025	108	396	504	16.25
5	February 2025	100	396	496	17.71
6	March 2025	116	532	648	20.9
	Total	652	2736	3388	18.6

The STP inlet & outlet water is being analyzed through a 3rd party agency on a fortnight basis and as per the analysis reports, the values are meeting the prescribed standards of APPCB.



30 KLD STP Inlet & Outlet sampling

5 KLD STP Inlet & Outlet

Parameters	Out let Standard	October 2024 - Values		November 2024 - Values		December 2024 - Values		January 2025 - Values		February 2025 - Values		March 2025 - Values	
		15 KLD STP(OLD)		15 KLD STP(OLD)		15 KLD STP(OLD)		15 KLD STP(OLD)		15 KLD STP(OLD)		15 KLD STP(OLD)	
		Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
pH	6.5 – 9.0	5.80	6.68	6.16	6.46	5.60	6.66	6.18	6.68	6.14	6.68	6.14	6.82
Total Suspended Solids (TSS)	30-50	226.00	96.00	276.00	96.00	224.00	98.00	226.00	42.00	220.00	24.00	164.00	28.00
Total Dissolved Solids (TDS)	500-2000	666.00	586.00	656.00	588.00	548.00	566.00	668.00	482.00	568.00	86.00	586.00	86.00
COD	250-500	348.00	238.00	346.00	148.00	246.00	234.00	346.00	146.00	356.00	48.00	356.00	48.00
BOD	20-	47.	24.	47.	29.	42.	23.	47.	28.	59.	16.	60.	18.

	30	60	00	60	00	60	50	80	00	30	00	60	00
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Parameters	Out let Standard	October 2024 - Values		November 2024 - Values		December 2024 - Values		January 2025 - Values		February 2025 - Values		March 2025 - Values	
		15 KLD STP(NE W)		15 KLD STP(NE W)		15 KLD STP(NE W)		15 KLD STP(NE W)		15 KLD STP(NE W)		15 KLD STP(NE W)	
		Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
pH	6.5 – 9.0	5.80	6.80	6.16	7.28	5.60	6.60	6.18	7.48	610.00	670.00	6.14	6.78
Total Suspended Solids (TSS)	30-50	226.00	86.00	276.00	66.00	224.00	88.00	226.00	42.00	220.00	22.00	164.00	26.00
Total Dissolved Solids (TDS)	500-2000	666.00	546.00	656.00	536.00	548.00	476.00	668.00	432.00	568.00	90.00	612.00	80.00
COD	250-500	348.00	158.00	348.00	168.00	246.00	126.00	346.00	156.00	246.00	46.00	364.00	42.00
BOD	20-30	42.80	21.60	47.60	24.00	42.60	21.80	47.80	26.00	40.60	16.4	60.60	16.00

Parameters	Out let Standard	October 2024 - Values		November 2024 - Values		December 2024 - Values		January 2025 - Values		February 2025 - Values		March 2025 - Values	
		5 KLD STP		5 KLD STP		5 KLD STP		5 KLD STP		5 KLD STP		5 KLD STP	
		Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
pH	6.5 – 9.0	6.18	6.46	6.38	6.68	6.40	6.48	6.48	6.52	6.32	6.62	6.48	6.68
Total Suspended Solids (TSS)	30-50	236.00	96.00	263.00	96.00	236.00	98.00	202.00	38.00	218.00	20.00	224.00	24.00
Total Dissolved Solids (TDS)	500-2000	628.00	598.00	546.00	426.00	626.00	596.00	548.00	418.00	586.00	94.00	586.00	94.00
COD	250-	298.00	148.00	298.00	148.00	296.00	148.00	298.00	146.00	292.00	46.00	292.00	46.00

	500												
BOD	20-30	42.60	26.40	43.80	24.00	42.80	26.80	43.80	26.00	50.60	22.00	48.60	24.00

3.12 Bio-Medical Waste

Bio-Medical Waste - operating an Occupational Health Centre (OHC) to provide First Aid facility to the victims and generate very less quantity of Bio-Medical Waste.

- **AGPL** obtained Bio-Medical Waste Authorization for operating the OHC vide Order No.PCB/ROVSP/BMW/HCE/2022 – 794, dated 20.10.2022.
- **AGPL** made an agreement with M/s. Vasistha Environ Care an authorized Bio-medical waste Treatment Facility, Safe Collection, Transportation & disposal of properly segregated and packed BMW and/or Bio-Hazardous waste as per APPCB, CPCB norms. (**Attached as Annexure - 9**)
- The details of Bio-Medical waste disposed for the period from October 2024 to March 2025 are as below:

T 3.10

Sl. No.	Month	Quantity (Kgs)
1.	October 2024	8.45
2.	November 2024	2.12
3.	December 2024	1.15
4.	January 2025	1.75
5.	February 2025	1.37
6.	March 2025	1.92
	Total	16.76
	Average per day	0.092

3.13 Bio-toilets:

- Provided 20 Bio Toilets at Berths, CS Godowns, yards, and other operational locations to cater the needs of the contractual employees with a cost of 80.00 Lakhs



3.14 Weather & meteorological monitoring:

- CWC, Visakhapatnam installed an Automatic Weather Station (AWS) within AGPL premises as per the IMD guidelines to know the weather forecast.

- AGPL is one and only Port having the IMD Automatic Weather Station (AWS) installed by the Indian Meteorological Department, Visakhapatnam within the Port premises which is available in the domain IP address <http://aws.imd.gov.in.8091>



- Installed another two Automatic Weather stations on the top of Signal Station, Vellametta and at Berth for weather forecasting & meteorological data generation.

3.15 Water conservation measures:

Settling ponds provided at yards for collection of yards runoff and the supernatant water is being used for dust suppression.



A natural pond is available in the Nursery area for collection of rain/runoff water. The water is utilized for nursery development.



Rainwater harvesting pits around the buildings are being maintained.

Rainwater drains are being maintained periodically & pre-monsoon season to avoid stagnation & free flow of water and the water is used for dust suppression to the possible extent.





3.16 Greenbelt development within the Port:

Development of greenbelt is a continuous process in AGPL. As of now the total plantation in the Port is about 320 Acres.

- Green cover needs to reduce the pollution levels
- Improve the standard of Ambient Air Quality
- Meet the statutory requirements & compliance.
- Reduce the carbon emissions

The environment department is fixing its own targets besides statutory requirements and achieving the targets from time to time.

The land available in AGPL is mostly unfertile land and salt pans which are not supportive for plantation.

AGPL developed a good plantation with saplings suitable for the available land and achieved good results.

In the process of developing greenbelt, AGPL encountered the following severe cyclones wherein the existing greenbelt was damaged badly.

- Hud Hud Cyclone 12th to 14th October 2014
- Titli Cyclone – 8th October 2018

iii. Gulab Cyclone – 26th & 27th September 2021

To achieve good and dense plantation, AGPL adopted Miyawaki plantation on the advice of APPCB

High Density Plantation (Miyawaki)

Miyawaki afforestation / plantation involves several different types of native plants closely just to form a Green Wall and a completely chemical free forest in an organic way that sustains itself, supports local biodiversity, and attracts birds and insects.

In 'Miyawaki' forests, the trees grow more quickly and absorb more CO₂ than plantations grown for timber.

Its benefits include lowering temperature, making soil nutritious, supporting local wildlife and sequestration of carbon.

With the spirit of Miyawaki type plantation, AGPL continued further plantation in Miyawaki method in the other locations viz., Weigh Bridge – 3, MRSS Location, Quarry yard, 3.75 Acres location in an extent of about 5.0 Acres.

Below details show the periodical development of Greenbelt during the last 3 years:

Sl. No.	Financial Year	Target	Achieved	Survival Rate (%)
1.	2022-23	50,000	51,840	95%
2.	2023-24	2,00,000	2,01,904	95%
3.	2024-25	50000	40634	96%
	Total	3,00,000	2,94,378	

Greenbelt Photographs:





Greenbelt in and around the Port Boundary

Greenbelt within the Port premises covering yards & berths





Greenbelt covering berths





Greenbelt within the Port premises all along the 4-lane road of 5 Km and at Port approach road.





Greenbelt all along along the southboundry wall and port approach road



3.17 Statutory returns/ compliance reports

The Environment Department headed by Vice President with supporting Officers, Jr. Officers, Executives & Field staff is taking care for periodical submission of the following statutory returns/ compliance reports to the concerned statutory departments i.e., MoEF & CC and APPCB:

- **Monthly** - Submitting Consent compliance reports to APPCB with Air Quality Monitoring, Marine & Terrestrial Monitoring reports along with water consumption details (Form – 1) under the Water (Prevention and Control of Pollution) Cess Act, 1977 and amendments thereof. Copies of the compliance reports for the period from October 2024 to March -2025 are attached as **Annexure – 8**.

- **Half-Yearly** - Submitting half yearly compliance of the conditions stipulated in EC, CTE & CTO Orders issued by MoEF&CC and APPCB.
 - NABL Accredited Agency Certified Half-Yearly compliance report for the period from October 2023 to March 2024 submitted on 18.05.2024. (Parivesh Portal Acknowledgement & screen shot of successful submission attached as **Annexure - 11**).
 - Self-Certified Half-yearly compliance report for the period from April 2024 to September 2024 submitted on 26.11.2024 screen shot of successful submission attached as **Annexure -11**)
- **Annual/Yearly** –
 - Submitting the Annual Returns of Generation, Storage & Disposal of E – Waste in **Form- 3** as per the E-Waste (Management) Rules, 2016 and amendments thereof. The latest submission for FY 2023-24 is on 27.06.2024. (**Attached as Annexure - 4**).
 - Submitting the Annual Returns of Generation, Storage & Disposal of Hazardous Waste (Waste/Used Oil) in **Form- 4** as per the Hazardous and other Waste (Management and Transboundary Movement) Rules, 2016 (HOWM Rules, 2016) and amendments thereof. The latest submission for FY 2023-24 is on 27.06.2024. (**Attached as Annexure -5**).
 - Submitting of Environmental Statement **Form – 5** as per Rule No.14 of E (P) Rules,1986 & amendments thereof. The latest submission for the FY 2023-24 is on 28.09.2024. (**Attached as Annexure -6**).
 - Submitting the Annual Returns of Generation, Storage & Disposal of Used Batteries in **Form- 8** as per the Batters (Management & Handling) Rules, 2010 and amendments thereof to the APPCB. The latest submission for FY 2023-24 is on 27.06.2024. (**Attached as Annexure -7**).

3.18 Statutory Inspections

- i. The AGPL Randomized Inspection was conducted on 08.06.2024 by Sri Narendra Babu, SEE, APPCB & Sri Ch. Jyothi Manohar – Environmental Engineer, Zonal Office, Tirupathi.
- ii. The site inspection & compliance status was verified by the inspecting officers and reported that AGPL has been complying with the conditions stipulated in CTO and implementing the Environment and Sustainable measures.

- iii. A Team of Visakhapatnam APPCB Officials (Senior Environmental Engineer, from Zonal Office, Environmental Engineer & Asst. Environmental Engineer from Regional Office) visited AGPL on 31.07.2024 for compliance verification followed by site inspection in connection with the CTO Application for 51.0 MMTPA from the existing 49.95 MMTPA.



3.19 Awareness visits:

Prof. P. Sunitha, Head, Department of Meteorology & Oceanography, Andhra University, Visakhapatnam visited AGPL site on 06.07.2024 to assess and improve the WRF-ARW model weather forecast skill at various spatial and temporal scales using different statistical techniques and to prepare WRF model base location specific weather forecast for the Adani Gangavaram Port activities.



Chapter 4

Awareness Programmes



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF &CC and SPCB (for the period from October 2024 to March 2025)



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4.0 Awareness Programmes:

AGPL is conducting many Environment Awareness programmes & activities to create awareness among the Port Employees along with Associates on Environment & Sustainability:

1. World Environment Day 5th June

- Details of weeklong Awareness campaign:

On the occasion of World Environment Day, June 5, 2024, Adani Gangavaram Port Limited (AGPL) demonstrated its commitment to environmental sustainability by organizing a week-long awareness campaign from May 30 to June 5, 2024, with the Theme - ***Focus on land restoration, desertification and drought resilience*** under the slogan “***Our land - Our future***”.

The activities included:

- Single-use plastic awareness and discard campaign
- Plastic clearance drive
- Housekeeping initiatives
- Beachfront cleaning
- Awareness competitions for employees and their children (Quiz, Essay, Slogan writing, and Drawing)
- Green Walk
- Massive plantation of 2000 saplings

30.05.2024 – 4th CAAQM Inauguration

AGPL installed its 4th Continuous Ambient Air Quality Monitoring (CAAQM) station with advanced Beta Ray Attenuation technology, in addition to the existing three stations. AGPL has consistently complied with statutory requirements, implementing advanced technology to control fugitive emissions and dust mitigation methods, ensuring a cleaner environment around the Port.



Awareness campaign on discarding of single use plastic



30.05.2024 - Day – 1 - Awareness programs conducted in various departments and functions in port premises.



31.05.2024 - Housekeeping drive

Organized Housekeeping drive at PMC Cluster Buildings, Mechanical Yard & Stores location and collected about 1.0 Ton of Plastic waste and disposed to GVMC MSW Site.



01.06.2024 - Plastic Waste Collection drive

Organized plastic drive from Main gate to Harbour Gate and collected about 2.0 Tons of Plastic waste and disposed to GVMC MSW Site.



02.06.2024 – Competitions

Quiz Competition was conducted among the AGPL Employees on the 2024 World Environment Day Theme and their children on Environment Slogan, Essay writing & Drawing competitions.



03.06.2024 – Sea Front cleaning

Organized Sea front cleaning drive at North Break Point and collected plastic and other wastes of 20 full bags. The collected waste disposed to GVMC MSW site.



04.06.2024 – Green Rally & Prize distribution Event

Event on the occasion of World Environment Day 2024 at COB.

During the event, while addressing the participants, the COO, AGPL emphasized the importance of Environment where we live & work and the commitment of AGPL towards implementation of suitable mitigation measures for the best Environment & sustainability.





05.06.2024 – Massive plantation drive

Massive plantation drive was taken-up on the occasion of World Environment Day and planted 2000 saplings at Nursery Location within AGPL.





World Environment Day celebration by Adani Port

World Environment Day - Adani Gangavaram Port Limited celebrated World Environment Day on 5th June 2024. The primary objective of the celebration was to raise awareness about the importance of the environment and the role of the port in sustainable development. The event was held in the presence of the Port Manager, Adani Gangavaram Port Limited, and other senior management. The employees participated in various activities, including tree planting, waste management, and environmental education. The Port Manager emphasized the commitment of Adani Gangavaram Port Limited to sustainable development and the importance of environmental protection. The event was a success and the employees showed great enthusiasm and participation.

World Environment Day - Adani Gangavaram Port Limited celebrated World Environment Day on 5th June 2024. The primary objective of the celebration was to raise awareness about the importance of the environment and the role of the port in sustainable development. The event was held in the presence of the Port Manager, Adani Gangavaram Port Limited, and other senior management. The employees participated in various activities, including tree planting, waste management, and environmental education. The Port Manager emphasized the commitment of Adani Gangavaram Port Limited to sustainable development and the importance of environmental protection. The event was a success and the employees showed great enthusiasm and participation.

2. World Ocean Day 8th June

Organized Plastic cleaning drive at Beach front of South Boundary wall



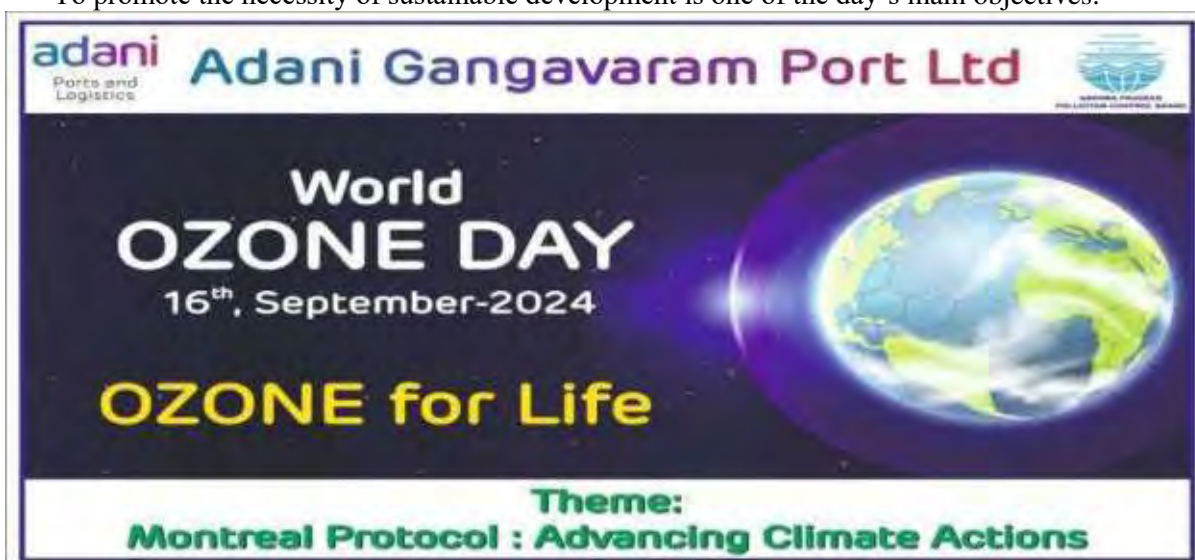


3. Ozone Day – 16th September

Performed Awareness programmes on the occasion of Ozone Day 16th September, 2024 within the Port premises to express commitment towards environment protection and environment sustainability.

Awareness campaign on Ozone Day:

- Reduce waste by recycling, composting, and using reusable products.
- Switch to energy-efficient light bulbs, reduce water usage,
- Use public transportation or carpool to reduce carbon footprint.
- To safeguard and preserve the environment and natural resources.
- To make a commitment to taking action to build a sustainable future for ourselves and future generations.
- To promote the necessity of sustainable development is one of the day's main objectives.





4.1 Implementation of Fire & safety aspects:

- AGPL is giving utmost importance for safety and strictly following by creating awareness programmes, organizing periodical mock drills to draw the attention of the employees and to create the awareness of safety issues.
- Organizing periodical fire & safety trainings as a part of preparedness to face the challenges.



- Awareness by Conducting workshops/seminars by top management involving all the employees & stakeholders to create the awareness of safety issues and preventive measures.



4.2 Implementation of Marine safety aspects & Oil spill Mock drill



4.3 Tool Box Talk & Safety Walk

Conducting Toolbox Talk & Safety awareness programs regularly involving all the field & operational employees & associates to ensure safety work environment by focusing on the following:

- ✓ To follow strictly the SOP of the respective works and strictly following NO SOP – NO WORK policy for effective implementation of safety culture.
- ✓ To wear PPE while at working location and to follow in regular life

- ✓ To avoid negligence while using implements by emphasizing its impact.
- ✓ To maintain speed limit within the Port area and outside too.
- ✓ To be cautious while working in bushy areas as there are chances of snake bites.
- ✓ To avoid using earphones during working in the site.
- ✓ To follow speed limits, avoid cell phone driving, drunk & drive etc., within the port premises & Impacts of negligence while driving
- ✓ To take precautions while working at heights
- ✓ To use wheel chokers & back horns to the trucks & vans
- ✓ To use safety cones while working on road & Traffic locations



4.4 As a part of employee's welfare & social responsibility conducted Blood donation camps & Practical Training on CPR Techniques etc.

S. No.
1.

Programme details



Organized Mega Blood Donation program collaboration with the Indian Red Cross Society from 20.06.2024 to 21.06.2024

2.



Organized International Yoga Day celebrations on 21.06.2024. Employees were participated and acquired knowledge about yoga.

3.



Organized First Aid One Day Training program collaboration with the Indian Red Cross Society on 11.06.2024.

4.



As a part of promotion of Environment sustainability, AGPL has distributed 2000 No. of Clay Ganesh Idols among Port employees & associates at free of cost.

5.



Organized two days training program on 5S Reporting and Auditing.

6.





4.5 Observation & Performance of National Integrity Programmes:

AGPL is observing & performing national integrity programmes/activities in a big way within the Port involving all the employees including associates to create awareness on national integrity.

15th August Celebrations



4.6 Recognition & Rewards:

Organizing Town Hall Recognition programmes and encouraging the employees & Associates on their individual outstanding performance, Innovative ideas, Safety, Achieve outstanding results & Continuous improvements and safety implementations.





4.7 CSR Activates:

Under Corporate Social Responsibility, the activities performed/contributed by AGPL are as below:

S. No.	Activity/contribution
1.	International Plastic Bag Free day celebrated and distributed cloth bags at Dibbapalem & Gangavaram 320 students.





2. Financial support provided to renovation of the KGH District Govt Hospital



Adani Port donates Rs 90 lakh for paediatric healthcare at KGH

FOR INFORMATION: Adani Gangavaram Port Limited has stepped forward with a generous contribution of Rs 90 lakh towards the renovation of King George Hospital (KGH), the pillar of paediatric healthcare in the city. The donation, which is being handed over to the KGH, will be used for the renovation of the hospital's paediatric ward, ensuring that the facility is equipped with the latest medical equipment and comfortable for the young patients. The KGH is a premier healthcare institution in the city, serving thousands of patients annually. This donation is a testament to Adani's commitment to social responsibility and its dedication to improving the quality of life in the community. The renovation project is expected to be completed within a few months, after which the hospital will be able to provide better care to its young patients. Adani's contribution is a significant step towards ensuring that the KGH remains a leading healthcare provider in the region.

- 3.



Evening School to the school dropouts at Gangavaram & Dibbapalem (V)

4.



Constructed Community hall at Dibbapalem

5.



Provided Openair Gym, Children park and Walking track at Srinagar

6.



7. Financial support for self-employment



8. Adani Ports contributed Andhra Pradesh for flood relief



9.



10.





4.8 Awards & Appreciations:

1. Sri Amit Malik Sir, CEO, and Dr.D. Jyothi, Vice President – Environment , Adani Gangavaram Port Limited were falcitated by The Department of Meteorology and Oceanography, Andhra University during their Platinum Jubilee celebrations titled ‘Current trends in atmospheric and oceanic processes related to climate change studies’.



2. Adani Gangavaram Port secured the first prize in the 19th edition of the Continuous Improvement (Kaizen) competition organised by the Confederation of Indian Industry (CII) southern region. This achievement highlights the port's dedication to innovate and operational excellence.

The competition featured a diverse range of participants, representing various sectors, showcasing the widespread implementation of Kaizen principles across industries.





Adani Gangavaram Port receiving the prize at the 19th edition of the Continuous Improvement competition organised by the Confederation of Indian Industry, Southern Region

HIGHLIGHTS

Adani Gangavaram Port secured the first prize in the 19th edition of the Continuous Improvement (Kaizen) competition organised by the Confederation of Indian Industry (CII) southern region.

Visakhapatnam: Adani Gangavaram Port secured the first prize in the 19th edition of the Continuous Improvement (Kaizen) competition organised by the Confederation of Indian Industry (CII) southern region. This achievement highlights the port's dedication to innovate and operational excellence.

The competition featured a diverse range of participants, representing various sectors, showcasing the widespread implementation of Kaizen principles across industries.

4.9 Environmental Leadership - Certifications and Awards

Sr.	Name of Award	Awarded by (Name of Organization)	City	Country	Year
1.	CSR India Award	Greentech Foundation	Guwahati	India	2022
2.	EHS Best Practices	Greentech Foundation	GOA	India	2023
3.	5 S Certificate	National Productive Council	-	India	2023
4.	Environment Excellence	Greentech Foundation	Sonmarg (J & K)	India	2023
5.	Environment Excellence	Apex India Green leaf Platinum Award	New Delhi	India	2023
6.	PCWR - 2024	Greentech Foundation	Guwahati	India	2024







Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF &CC and SPCB (for the period from October 2024 to March 2025)



Chapter 5

Compliance Status

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Sl. No.	Compliance status on the conditions stipulated in	Page No.
1.	EC Order 10-3/2005-IA.III dated 11.03.2005	127
2.	EC & CRZ Clearance No.10-14/2009-IA.III, dated 19.03.2010.	137
3.	EC and CRZ Clearance 11-91/2010-IA-III dated 07.02.2012	144
4.	CFE (Expansion) Order No. APPCB/ VSP/ VSP/ 113/ CFE/ HO/ 2012 – 3923, dated 02.03.2012 Schedule–B conditions.	150
5.	CFO & HWA Order No. APPCB/VSP/VSP/113/CFO/HO/2015, dated 13.01.2016, valid up to 31.12.2020 Schedule A, B & C conditions	157
6.	CFO Auto Renewal Order No. APPCB/ VSP/VSP/113/CFO/ HO/ 2020- 10/09/2020, valid up to 31.12.2025.	167
7.	APCZMA NOC No. Letter No. 338/CRZ/Port/2021 24/10/2021, Specific and general conditions	169
8.	EC & CRZ Clearance No. 10/51/2021-IA.III, dated 24.12.2021.	175
9.	CFE (augmentation from the existing 40.95 MMTPA to 60.95 MMTPA) Order No. APPCB/ VSP/ VSP/ 113/ CFE/ HO/2012, dated 16.08.2022.	189
10.	CFO (Amendment) APPCB/VSP/113/CFO/ HO/2015, 13.01.2023 for the enhanced quantity of waste/used oil and inclusion of ship waste oil quantity.	194
11.	CFO & HWA (ROM) Order No. APPCB/VSP/113/CFO/ HO/2009, 22.08.2023, valid up to 31.12.2025.	195
12.	CTO & HWA for cargo handling capacity of 51.00 MMTPA vide Order No. APPCB/VSP/113/CTO/HO/2009, dated 22.08.2024 valid up to 31.07.2029.	201

Compliance Status:

This chapter covers the Compliance status of the conditions stipulated in the following EC & CRZ Clearance, CTE & CTO approvals including amendments.

I. EC & CRZ Clearances issued by MoEF & CC:

1. Order 10-3/2005-IA.III dated 11.3.2005
 - a. Order No.10-14/2009-IA.III, dated 19.03.2010
2. Order F.No.11-91/2010-IA-III, dated 07.02.2012,
3. Order F.No.10/51/2021-IA.III, dated 24.12.2021 for cargo handling capacity of 40.95 MMTPA

II. APCZMA

1. NOC No. Letter No. 338/CRZ/Port/2021 24/10/2021,

III. Consent to Establishment issued by A.P. Pollution Control Board (APPCB)

- Order No. APPCB/VSP/VSP/113/CFE/HO/2012 – 3923, dated 02.03.2012
- Order No. APPCB/VSP/VSP/113/CFE/HO/2012, dated 16.08.2022.

IV. Consent to Operation issued by State Pollution Control Board (APPCB)

1. Order No. APPCB/VSP/VSP/113/CFO/HO/2015, dated 13.01.2016 valid up to 31.12.2020.
2. Order No. APPCB/VSP/VSP/113/CFO/HO/2020, dated 10.09.2020, valid up to 31.12.2025
3. Amendment Order No. APPCB/VSP/113/CFO/ HO/2015, 13.01.2023 for enhanced quantity of waste/used oil and inclusion of ship waste oil quantity.
4. Order No. APPCB/VSP/VSP/113/CFO/HO/2009, dated 22.08.2023 valid up to 31.12.2025
5. Order No. APPCB/VSP/113/CTO/HO/2009, dated 22.08.2024 valid up to 31.07.2029.

1.0 Compliance status of conditions stipulated in the EC Order 10-3/2005-IA.III, dated 11.03.2005

Sl. No.	Condition	Compliance submitting to statutory departments
A.	Specific Conditions	
1.	The project proponent shall not undertake any destruction of mangroves during construction and operation of project.	<p>AGPL has complied with the condition.</p> <p>AGPL has completed all the Phase-I construction/developments by August, 2008.</p> <p>As per AGPL no mangroves were in the Port limits.</p>
2.	All the conditions stipulated by Andhra Pradesh pollution control board in their consent letter no 113/PCB/C. Esst/ RO-VSP/ AEE-n/ 2002-1225, dated 24.7.2003 shall be effectively implemented	<p>AGPL has complied with the condition.</p> <p>AGPL has Implemented all the conditions stipulated in the consent issued by APPCB.</p>
3.	Littoral drift management using rainbow technique should be adopted for beach nourishment on the northern side of north break water to combat coastal erosion problems.	<p>AGPL has complied with the condition.</p> <p>AGPL has created a sand trap near the South breakwater. The material trapped in the sand trap is being lifted and the same is being used for beach nourishment on the north side of the North Boundary Wall.</p>
4.	Random wave plump test should be conducted to check the stability of breakwater section and round head. Before commencement of work.	<p>AGPL has complied with the condition.</p> <p>AGPL had carried out the Wave flume tests through HR Wallingford, UK, to check the stability of breakwater section and round head before commencement of work.</p>

Sl. No.	Condition	Compliance submitting to statutory departments
5.	Large quantities of stones are proposed to be quarried from Yarada hill. Environment management and rehabilitation plan of the quarry site should be worked out and implemented.	<p>AGPL has complied with the condition.</p> <p>AGPL had implemented Environment management and Rehabilitation plan at quarry site with the development of Greenbelt in an area of 40 acres.</p>
6.	Marine ecology monitoring shall be done regularly during construction of breakwater and dredging operation.	<p>AGPL has complied with the condition.</p> <p>AGPL has been carrying out the Marine ecology monitoring through an ISO certified Agency on fortnight basis and the reports are being submitted to APPCB on monthly basis.</p>
7.	Regular monitoring of air quality shall be done in the settlement areas around the project site and appropriate safeguard measures shall be taken to ensure that the population is not subjected to higher levels of air pollution.	<p>Condition is Being Complied by AGPL.</p> <p>AGPL has established & operating 4 No. of Continuous Ambient Air Quality Monitoring stations within the Port premises, at the below mentioned locations as suggested by APCB vide letter dated 02.03.2019 to monitor the parameters viz., PM 10, PM 2.5, SO₂, NO, NO₂, CO and the data is being uploaded to APPCB website & the parameter values are meeting the Board standards.</p> <p>Downwind directions towards habitation</p> <p>a. Administrative office towards H.B. Colony (Station 1)</p> <p>b. Project site office building towards Venkannapalem (Station2)</p>

Sl. No.	Condition	Compliance submitting to statutory departments
		<p>c. Watch tower – 4 towards Gangavaram village (Station-3).</p> <p>Upwind direction towards RINL</p> <p>d. At New Pump House (upwind directions) – Station - 4</p> <p>The locations are as per the instructions of APPCB to monitor the parameters viz., PM 10, PM 2.5, SO₂, NO, NO₂, CO.</p> <p>The CAAQM data has been linked to APPCB website. AGPL is submitting the daily average data on monthly basis to APPCB & Half-yearly basis to MoEF &CC.</p>
8.	Sewage arising in the port area shall be disposed of after adequate treatment to conform to the standard stipulated by APPCB and shall be utilized/re-cycled for gardening, plantation and irrigation.	<p>AGPL has complied with the condition.</p> <p>AGPL has established & operating STP of 30 KLD and 5 KLD capacities to treat the sewage generated from the utilities.</p> <p>The treated water is being used for the dust suppression / green belt development only.</p> <p>The AGPL has appointed an ISO Certified agency to collect & analyze the STP water. As per the data for the last 6 months i.e., October – 2024 to March – 2025 the outlet values are within the stipulated standards.</p> <p>The monthly averages for the period from October 2024 to March 2025 are furnished in chapter – 3</p>

Sl. No.	Condition	Compliance submitting to statutory departments
9.	The relocation of the fisherman Community will be done strictly in accordance with the norms prescribed by the state Environment. The relocated fishermen community will be provided with all facilities including health care, education, sanitation and livelihood.	<p>AGPL has complied with the condition.</p> <p>The R&R package to the PDFs & PAFs had finalized & completed by the Government of Andhra Pradesh with due concurrence of the fisherman community.</p>
10.	Adequate plantation shall be carried out along the roads of the port premises and a green belt shall be developed.	<p>AGPL has complied with the condition.</p> <ul style="list-style-type: none"> Completed plantation of 40,654 saplings during the financial year 2024-25. As of now AGPL developed plantation with more than 5.5 Lakhs saplings in about 320 acres within the Port premises besides existence of Prosopis in an extent of about 150 Acres covering periphery of all yards, roads, buildings and all along conveyor belt. Maintaining 50 m width of green belt towards North and North-West direction with special emphasis towards habitation i.e., HB Colony, Pedagantyada, Venkannapalem, Kongapalem & Gangavaram village. Maintaining thick greenbelt at Port Approach Road, Railway track side and at Truck parking area along the wind breaking wall towards HB Colony. Maintaining exclusive nursery with to maintain and improve the green belt on continuous basis.
11.	Project proponent shall regularly update the disaster management plan from time to time	<p>AGPL has complied with the condition.</p> <ul style="list-style-type: none"> The On-Site / Off Site Emergency

Sl. No.	Condition	Compliance submitting to statutory departments
		Plans was revised on 01.11.2023. • Conducting Mock drills periodically.
12.	Firefighting arrangements are examined to the new proposal.	AGPL has complied with the condition. Conducting the mock drills periodically.
13.	There shall be no withdrawal of ground water in CRZ area, for this project. The proponent shall ensure that as a result of the proposed constructions, ingress of saline water into ground water does not take place. Piezometers shall be installed for regular monitoring for this purpose at appropriate locations on the project site.	AGPL has complied with the condition. There is no groundwater withdrawal within the Port area and the Port is purchasing the required quantity of water from (VIWSCO) GVMC.
14.	The project shall not be commissioned till the requisite water supply and electricity to the project are provided by the PWD/ Electricity Department.	AGPL has complied with the condition. Water supply and power supply are provided / commissioned by GoAP through GVMC and APTRANSCO on 11.12.2008 prior to the commencement of port operations.
15.	Specific arrangements for rain water harvesting should be made in the project design and the rain water so harvested should be optimally utilized. Details in this regard should be furnished to this Ministry's Regional Office at Bangalore within 3 months.	AGPL has complied with the condition. Provision has been provided for rain water harvesting within the Port premises & utilizing the supernatant water for dust suppression. The details were furnished to MOEF vide GPL letter No. GPL/GEN/002.dated 09.06.2005.
16.	The facilities to be constructed in the CRZ area as part of this project should be strictly in conformity with the provisions of the CRZ Notification. 1991 as amended subsequently.	Complied with CRZ Notification 1991 as amended subsequently
17.	Land reclamation shall be carried out only to the extent that it is essential for this project.	AGPL has complied with the condition.
18.	Green buffer zone shall be provided all around the project area in consultation with local forest department and the report	AGPL has complied with the condition.

Sl. No.	Condition	Compliance submitting to statutory departments
	submit to this Ministry's Regional Office at Bangalore.	
19.	No product other than those permissible in the Coastal Regulation Zone Notification, 1991 shall be stored in the Coastal Regulation Zone area.	AGPL has complied with the condition.
B.	General Conditions	
1.	Construction of the proposed structures should be undertaken meticulously conforming to the existing Central/ local rules and regulations including Coastal Regulation Zone Notification 1991 & its amendments. All the construction designs/ drawings relating to the proposed construction activities must have approvals of the concerned State Government Departments/ Agencies.	AGPL has complied with the condition. AGPL has carried-out a construction designs / drawings related to construction activity are approved by State government of A.P & regulations including Coastal Regulation Zone Notification 1991 & its amendments.
2.	Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. should be ensured for construction workers during the construction phase of the project so as to avoid felling of trees/ mangroves and pollution of water and the surroundings.	AGPL has complied with the condition. No colonies were established for construction workers in the port area as all of them were residing in the nearby residential colonies outside the project area.
3.	<p>The project authorities must make necessary arrangements for disposal of solid wastes and for the treatment of effluents by providing a proper wastewater treatment plant outside the CRZ area.</p> <p>The quality of treated effluents, solid wastes and noise level etc. must conform to the standards laid down by the competent authorities including the Central/ State Pollution Control Board and the Union</p>	AGPL has complied with the condition. <ul style="list-style-type: none"> AGPL has provided collection bins at about 76 locations within the port premises for collection of dry & wet solid & domestic waste. Provision was arranged for daily collecting and disposing of the domestic solid waste to GVMC dump site.

Sl. No.	Condition	Compliance submitting to statutory departments
	Ministry of Environment and Forest under the Environment (Protection) Act, 1986, whichever are more stringent.	<ul style="list-style-type: none"> The GVMC segregates the material into dry and wet waste. The dry waste viz., Plastic, glass, iron, aluminum, cardboard, wooden etc., are separated with the help of dry resource collection center. The wet material will be treated with window fermentation with a specific cluster, which convert the wet waste into useful organic mixture by emitting low CO2 level. The whole process is under Solid Waste Management Rules 2020 (Amendment) for environment sustainability. Organic waste is being collected on regular basis within the Port and using for vermin-compost preparation. Sludge from STP - utilizing as manure for plants. Noise monitoring is being carried through a 3rd party agency and submitting the report to SPCB on monthly basis & on Half-yearly basis to MoEF & CC.
4.	The proponent shall obtain the requisite consents for discharge of effluents and	AGPL has complied with the condition.

Sl. No.	Condition	Compliance submitting to statutory departments
	emissions under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (prevention and Control of Pollution) Act, 1981 from the Andhra Pradesh Pollution Control Board before commissioning of the project and a copy of each of these shall be sent to this Ministry.	
5.	The proponents shall provide for a regular monitoring mechanism so as to ensure that the treated effluents conform to the prescribed standards. The records of analysis reports must be properly maintained and made available for inspection to the concerned State/ Central officials during their visits.	AGPL has complied with the condition. AGPL established & operating STP of 30 KLD and 5 KLD capacities to treat the sewage generated and maintaining records and made available for inspection to the concerned State/ Central officials during their visits.
6.	In order to carry out the environmental monitoring during the operational phase of the project, the project authorities should provide an environmental laboratory well equipped with standard equipment and facilities and qualified manpower to carry out the testing of various environmental parameters.	AGPL has complied with the condition. AGPL has appointed an ISO certified agency to carry-out Environmental monitoring parameters on terrestrial as well as marine water quality and submitting the report to RO, A.P. Pollution Control Board on monthly basis and MoEF&CC on half-yearly basis. As per the results, the parameters are within the standards.
7.	The sand dunes and mangroves, if any, on the site should not be disturbed in any way.	AGPL has complied with the condition. No sand dunes and mangroves located in the port limits.
8.	A copy of the clearance letter will be marked to the concerned Panchayat/ local	AGPL has complied with the condition.

Sl. No.	Condition	Compliance submitting to statutory departments
	NGO. If any, from whom any suggestion/representation has been received while processing the proposal.	
9.	The Andhra Pradesh Pollution Control Board should display a copy of the clearance letter at the Regional Office. District Industries Centre and Collector's Office/ Tehsildar's Office for 30 days.	AGPL has complied with the condition.
10.	The funds earmarked for environment protection measures should be maintained, in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry's Regional Office at Bangalore and the SPCB.	AGPL has complied with the condition. AGPL has been reporting the Funds & expenditure incurred for environment protection measures in Form – V Environmental Statement and submitting the same to MoEF& CC, and APPCB.
11.	Full support should be extended to the officers of this Ministry's Regional Office at Bangalore and the officers of the Central and State Pollution Control Boards by the project proponent's during their inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.	Condition is Being Complied by AGPL.
12.	In case of deviation or alteration in the project including the implementing agency, afresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection.	Condition is Being Complied by AGPL.
13.	This Ministry reserves the right to revoke this clearance, if any of the conditions	AGPL informed that they have noted and will comply with the

Sl. No.	Condition	Compliance submitting to statutory departments
	stipulated are not complied with to the satisfaction of this Ministry.	condition.
14.	This Ministry or any other competent authority may stipulate any other additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.	Noted the condition.
15.	The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment& Forests at http://www.envfornic.in . The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to Regional Office of this Ministry at Bangalore.	AGPL has complied with the condition.
16.	The Project proponents should inform the Regional Office at Bangalore as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of start of Land Development Work.	AGPL has complied with the condition.

2. Compliance status of conditions stipulated in the EC & CRZ Clearance No.10-14/2009-IA.III, dated 19.03.2010.

Sl. No.	Condition	Compliance submitting to statutory departments
A.	Specific Conditions	
i.	No construction work other than those Permitted in Coastal Regulation Zone Notification,1991 shall be carried out in Coastal Regulation Zone area.	AGPL has complied with the condition. Phase-I construction was completed by August, 2008
ii.	Sewage shall be treated and the Treatment Facility shall be provided in Accordance with the Coastal Regulation Zone Notification,1991. The disposal of Treated water shall confirm the regulation of Andhra Pradesh State Pollution Control Board.	AGPL has complied with the condition. Established & operating STP of 30 KLD and 5 KLD capacities to treat the sewage generated and the treated water is being used for the dust suppression / green belt development only.
iii.	Oil spills if any shall be properly collected and disposed as per the Rules.	Being complied.
iv.	The approach channel shall be properly Demarcated with lighted buoys for safe Navigation and adequate traffic control guidelines shall be framed. The fishermen shall be suitably educated and informed about the traffic guidelines.	AGPL has complied with the condition. AGPL demarcated the approach channel with lighted buoys for safe navigation and patrolling boats are continuously watching the channels and fishermen are well informed.
v.	The project proponent shall set up Separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.	AGPL has complied with the condition.
vi.	The project proponent shall take up Mangrove plantation/green belt in the Project area, wherever possible. Adequate budget shall be provided in the Environment Management Plan for such mangrove development.	AGPL has complied with the condition. ➤ Completed ever highest plantation of 2,01,904 saplings during the financial year 2023-24. ➤ For the FY 2024-25 AGPL

Sl. No.	Condition	Compliance submitting to statutory departments
		<p>completed plantation of 11,808 up to 30.09.2024.</p> <p>➤ As of now AGPL developed plantation with morethan 5.5 Lakhs saplings in about 320 acres within the Port premises besides existance of Prosopis in an extent of about 150 Acres covering periphery of all yards, roads, buildings and all along conveyor belt.</p> <p>➤ Maintaining 50 m width of green belt towards North and North-West direction with special emphasis towards habitation i.e., HB Colony, Peda Gantyada, Venkannapalem, Kongapalem & Gangavaram village.</p> <p>➤ Maintaining thick greenbelt at Port Approach Road, Railway track side and at Truck parking area along the wind breaking wall towards HB Colony.</p> <p>Maintaining exclusive nursery to maintain and improve the green belt on continuous basis.</p>
vii.	The funds earmarked for the environment management plan shall be included in the budget and this shall not be diverted for any other purposes.	AGPL has complied with the condition.
B.	General Conditions	
i.	Adequate provision, for infrastructure facilities including water supply, fuel and sanitation must be ensured for construction workers during the construction phase of the project to avoid any damage to the environment.	<p>AGPL has complied with the condition.</p> <p>No colonies were established for construction workers in the port area as all of them were residing in the</p>

Sl. No.	Condition	Compliance submitting to statutory departments
		nearby residential colonies outside the project area.
ii.	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.	AGPL has complied with the condition.
iii.	<p>Borrow sites for each quarry sites for road construction material and dump sites must be identified keeping in view the following:</p> <p>a. No excavation or dumping on private property is carried out without written consent of the owner</p> <p>b. No excavation or dumping shall be allowed on wetlands, forest areas or other ecologic valuable or sensitive locations.</p> <p>c. Excavation work shall be done in close consultation with the Soil Conservation and Watershed Development Agencies working in the area, and</p> <p>d. Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate watercourses and the dumpsites for such materials must be secured so that they shall not leach into the ground water.</p>	<p>AGPL has complied with the condition.</p> <p>No wet lands/forests area exists within in the port.</p> <p>AGPL has complied with the condition.</p> <p>AGPL has complied with the condition.</p>
iv.	The construction material shall be obtained only from approved quarries. In case new quarries are to be opened, specific approvals from the competent authority shall be obtained in this regard.	AGPL has complied with the condition.
v.	Adequate precautions shall be taken during transportation of the construction material so that it does not affect the environment adversely.	AGPL has complied with the condition.
vi.	Full support shall be extended to the officers of this Ministry/ Regional Office at Bangalore by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of	AGPL has complied with the condition.

Sl. No.	Condition	Compliance submitting to statutory departments
	mitigation measures and other environmental protection activities.	
vii.	Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.	AGPL informed that they have noted the condition and is Being Complied
viii.	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.	AGPL informed that they have noted the condition and is Being Complied
ix.	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the MoEF.	AGPL informed that they have noted the condition and is Being Complied
x.	The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.	AGPL has complied with the condition.
xi.	Andhra Pradesh Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's Office / Tahasildar's office for 30days,	AGPL has complied with the condition.
xii.	These stipulations would be forced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the Amendments and rules made thereafter.	AGPL informed that they have noted the condition and is Being Complied
xiii.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife	Condition is Being Complied by AGPL

Sl. No.	Condition	Compliance submitting to statutory departments
	(Protection)Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities,	
xiv.	The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language in forming that the project has been accorded Environmental Clearance and copies of clearance letters are available with the APPCB and may also be seen on the website of the MoEF at http://www.envfor.nic.in . The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bangalore.	AGPL has complied with the condition.
xv.	Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil)No.460 of 2004 as may be applicable to this project.	AGPL informed that they have noted the condition and is Being Complied
xvi.	Any appeal against this Environmental Clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under Section11 of the National Environment Appellate Act,1997.	AGPL informed that they have noted the condition and is Being Complied
xvii.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	AGPL has complied with the condition.
xviii.	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their	AGPL has complied with the condition.

Sl. No.	Condition	Compliance submitting to statutory departments
	website and shall up-date the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectorial parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	
xix.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	<p>AGPL has complied with the condition.</p> <ul style="list-style-type: none"> Submitted Self-certified half-yearly compliance report for the period from April 2024 to September 2024 on 26.11.2024 through ecompliance-ap@gov.in web site. Also uploaded through Parivesh portal on 26.11.2024 Submitted NABL-3rd party certified half-yearly compliance report for the period from October-2023 to March-2024 on 18.05.2024 through ecompliance-ap@gov.in web site & through Parivesh portal. Submitted Self-certified half-yearly compliance report for the period from April 2023 to September 2023 on 27.11.2023 through ecompliance-ap@gov.in web site. Also uploaded through Parivesh portal on 28.11.2023.
xx.	The environmental statement for each financial year ending 31 st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the	<p>AGPL has complied with the condition.</p> <ul style="list-style-type: none"> Submitting the Environmental Statement Form-V regularly to



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF &CC and SPCB (for the period from October 2024 to March 2025)



Sl. No.	Condition	Compliance submitting to statutory departments
	Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall, also be sent to the respective Regional Offices of MoEF by e-mail.	APPCB and RO, MoEF & CC <ul style="list-style-type: none">The latest Environment Audit Statement (FORM-V) submitted on 28.09.2024 for the FY 2023-2024.

3. Compliance status of conditions stipulated in the Environment and CRZ Clearance 11-91/2010-IA-III dated 07.02.2012

Sl. No.	Condition	Compliance submitting to statutory departments
Specific Conditions: -		
1.	"Consent for Establishment" shall be obtained from State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site	AGPL has complied with the condition. AGPL has obtained Consent to Establishment (CTE) from SPCB vide order number: APPCB/ VSP/VSP/113/ CFE/HO/2012-3923 dated 02.03.2012 and copy of the same was submitted to Ministry's Regional Office, vide letter no. GPL/MoEF/021 dated 12.05.2012.
2.	As the development is conceived in several stages to reach the full designed/planned capacity of the port, it shall be necessary to prepare and put in place a master EMP for the full scale development and fit in the phase-wise creations as modules forming part of the entire system. This shall facilitate a harmonious planning of environmental requirements to be put in place in a phased manner in accordance with preset goal and objective as outlined in the overall environmental plan for the port in its totality.	AGPL has complied with the condition. The Cargo based master plan will be finalized during the future expansion based on market need. Submitted the EMP for cargo handling capacities of 40.95 MMTPA in EIA report.
3.	The 4.88 million cum of dredged material shall be used for shore reclamation subject to its suitability. Any unsuitable/ excess dredged material shall be disposed at dumpsite. Port shall identify suitable dumping spot for disposal of unsuitable material offshore on the basis of appropriate modeling study.	AGPL has complied with the condition. The dredge material was used for filling low lying land within port area for shore reclamation purpose and same work was completed.
4.	The green belt area proposed is about 10 % only. Proponent shall enhance the area of green belt. Width of the green belt shall be minimum 50 m. The present stage of	AGPL has complied with the condition.

Sl. No.	Condition	Compliance submitting to statutory departments
	development of 40 acres of land for green belt which should have been completed before January 2011 shall be reported to the Ministry together with the programme adopted for implementation.	
5.	<p>There will be a quantum jump of port traffic from the existing level of 16.54 MTPA to 41 MTPA after completion of the proposed developments and this is likely to register further leap when full scale planned capacity is reached later; it is therefore necessary even now to plan appropriate measures to ensure that will be no mismatch between the planned capacity and the external logistic requirements in the overall transportation chain/network commensurate with the demand.</p> <p>A long range vision would be necessary to achieve a smooth flow of cargo traffic both within and outside port limits.</p>	<p>AGPL has complied with the condition.</p> <p>AGPL has provided the following infrastructure facilities to cater to the transport needs & for smooth cargo evacuation of 40.95 MMTPA</p> <ul style="list-style-type: none"> • Provided adequate railway sidings • Provided second railway line • Silos and In-motion wagon loader are established for faster evacuation.
6.	<p>The Company should enhance the allocation for the CSR activities from 2. 5 to 5 % of the total cost and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.</p>	<p>AGPL has complied with the condition.</p> <p>AGPL had submitted the action plan to MoEF, Chennai on 04/09/2015 vide Lr. No. GPL/MoEF/024.</p>
7.	All the recommendation of the EMP and DMP shall be complied with letter and spirit.	<p>Condition is Being Complied by AGPL</p> <p>The Port has been meeting the recommendations of EMP and DMP.</p>
8.	Construction activity shall be carried out strictly as per the provisions of CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be	<p>AGPL has complied with the condition.</p> <p>There is no construction activity other than permitted activity according to the CRZ clearance.</p>

Sl. No.	Condition	Compliance submitting to statutory departments
	carried out in Coastal Regulation Zone area	
9.	The project shall be executed in such a manner that there shall not be any disturbance to the fishing activity	AGPL has complied with the condition.
10.	It shall be ensured that there is no displacement of people, houses or fishing activity as a result of the project	AGPL has complied with the condition.
11.	The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive	AGPL has complied with the condition.
12.	The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.	AGPL has complied with the condition.
	General Conditions	
13.	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality	Condition is Being Complied by AGPL
14.	Full support shall be extended to the officers of this Ministry/ Regional Office at Bangalore by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.	Condition is Being Complied by AGPL
15.	A six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bangalore regarding the implementation of the stipulated conditions	Condition is Being Complied by AGPL.
16.	Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the	Condition is Being Complied by AGPL

Sl. No.	Condition	Compliance submitting to statutory departments
	existing ones, if necessary in the interest of environment and the same shall be complied with.	
17.	The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry	Condition is Being Complied by AGPL
18.	In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to MoEF.	Condition is Being Complied by AGPL
19.	The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work	AGPL has complied with the condition.
20.	A copy of the clearance letter shall be marked to concerned Panchayat /local NGO, if any, from whom any suggestion/ representation has been made received while processing the proposal.	AGPL has complied with the condition. The EC & CRZ Clearance was displayed in local Panchayat and Mandal offices on 01.03.2012 and advertised in newspapers on 27.02.2012 Vaartha (Telugu) & The New Indian Express (English).
21.	State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's Office/ Tehsildar's office for 30 days.	AGPL has complied with the condition.
	Other Conditions	
22.	These stipulations would be enforced among others under the provisions of Water (Prevention and control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981. The Environment (Protection) Act, 1986, the public liability (Insurance) Act 1991 and EIA notification 1994 including amendments and rules made thereafter.	Condition is Being Complied by AGPL
23.	All other statutory clearances such as the	The provisions of Forest Conservation

Sl. No.	Condition	Compliance submitting to statutory departments
	approval for storage of diesel from chief controller of explosive, Fire department, Civil aviation department, Forest conservation act 1980 and Wild life (protection) act 1972 etc. Shall be obtained, as applicable by project proponents from the respective competent authorities.	Act, 1980 and Wildlife (Protection) Act, 1972 is not applicable for the Port project, as per the Lr. No. Rc.No.453/2004 dated 19/11/2004.
24.	The project proponent shall advertise in at least two local newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded environmental clearance and copies of clearance letters are available with the state pollution control boards and may also be seen on the website of the Ministry of Environment and Forests at http://www.envfor.inc.in . The Advertisement should be made within 10 days from the date of receipt of the clearance letter and a copy of the same should be forwarded to the regional office of this Ministry, Bangalore.	AGPL has complied with the condition.
25.	Environment Clearance is subject to final order of the honorable supreme court of India in the matter of Goa foundation Vs Union of India in writ petition (Civil) number 460 of 2004 as may be applicable to this project.	Condition is Being Complied by AGPL
26.	Status of compliance to the various stipulated Environmental conditions and Environmental safe guards will be uploaded by the project proponent in its website.	Condition is Being Complied by AGPL.
27.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parisat/ Municipal Corporation, urban local body, local NGO, if any, from	AGPL has complied with the condition.

Sl. No.	Condition	Compliance submitting to statutory departments
	whom suggestions/ Representations, if any where received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	
28.	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.	Condition is Being Complied by AGPL.
29.	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the Company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail. MoEF by e-mail.	Condition is Being Complied by AGPL

4. Compliance status of Schedule - B conditions stipulated in the CFE (Expansion) Order No. APPCB/ VSP/ VSP/ 113/ CFE/ HO/ 2012 – 3923, dated 02.03.2012.

Sl. No	Condition					Compliance submitting to statutory departments
1	The source of water is Visakhapatnam Industrial Water Supply project and the maximum permitted water consumption after expansion is 1504.18 KLD.					Condition is Being Complied by AGPL
	S. no	Purpose	Existing Quantity	Proposed quantity	Total quantity	
			KLD			
	1	Gardening/ Irrigation.	---	25 KLD	25	
	2	Dust Suppression	500	796.32	1296.32	
	3	Domestic	40	70	110	
	4	Ship supply	---	32.54	32.54	
	5	Miscellaneous	---	40.608	40.608	
	Total		540	964.18	1504.18	
2	The-maximum Waste Water Generation (KLD) shall not exceed the following after expansion.					Condition is Being Complied by AGPL
		Purpose	Existin g quantit y	Propose d quantity	Total quantity	
	A	Domesti c	40 KLD	100 KLD	140 KLD	
	Treatment & Disposal:					
	Source of effluent	Treatment	Mode of final disposal			
	Domestic effluents	STP	Dust suppression/ Green belt development / industrial use within the Port area			
3.	All the units of the STP shall be impervious to					Condition is Being Complied

Sl. No	Condition	Compliance submitting to statutory departments
	prevent ground water pollution. The treated waste water shall be re-used or recycled to the maximum extent possible.	by AGPL.
4.	The domestic sewage shall be treated to the onland for irrigation standards, stipulated under Environment (Protection) Rules, 1986, notified and published by Ministry of Environment and Forests, Government of India as specified in Schedule VI vide G.S.R. 422 (E), dt. 19.05.1993 and its amendments thereof.	<p>Condition is Being Complied by AGPL.</p> <p>AGPL appointed an ISO Certified agency to collect & analyze the STP water of 30 KLD and 5 KLD capacities established & operating within the Port premises to treat the sewage generated.</p> <p>The treated water is being used for the dust suppression / green belt development.</p>
5.	The Industry shall provide settling pond for collecting the storm water runoff from the proposed coal berth in addition to the existing settling pond.	<p>AGPL has complied with the condition.</p> <p>AGPL has provided 6 No. of settling ponds i.e., 3 nos. at Transfer Tower – 8 location & 3 at Yard no.5 & 6 locations for collection of yards runoff.</p>
6.	<p>Separate meters with necessary pipe line shall be provided for assessing the quantity of water used for each of the purposes mentioned below.</p> <p>a. Domestic purposes.</p> <p>b. Processing, whereby water sets polluted and pollutants are easily bio- degradable.</p> <p>c. Processing, whereby water gets polluted and the pollutants are not easily bio-degradable.</p>	<p>AGPL has complied with the condition.</p> <p>Provided flow meters for quantifying the water consumption.</p>
7.	The Air pollution Control equipment shall be installed along with the commissioning of the activity	Condition is Being Complied by L
8.	<p>The proponent shall comply with the following for controlling fugitive emissions</p> <ul style="list-style-type: none"> ➤ Fully mechanized handling equipment for loading & unloading operations for dusty cargo. ➤ Closed conveyor belt with water sprinkling arrangement for suppression of dust while conveying dusty cargos like Coal, Iron ore & Alumina ➤ Vehicle, movement shall be minimized eliminated by implementing mechanical operation. 	<p>Condition is Being Complied by AGPL</p> <p>AGPL has been adopting and implementing the following measures to control the air pollution:</p> <ul style="list-style-type: none"> • Established fully mechanized and closed operations associated with mist sprinkling system to prevent fugitive

Sl. No	Condition	Compliance submitting to statutory departments
	<ul style="list-style-type: none"> ➤ All the vehicles involved in transportation of cargo shall be covered with tarpaulin ➤ Traffic management measures shall be adopted to avoid traffic congestion and shall provide empty dusting vehicle washing/dry cleaning system to clean all out going cargo vehicles. ➤ Based on traffic density / vehicular movements anticipated from the port, parking fatalities shall be provided. ➤ Automated mechanical water sprinkling shall be provided on roads and at dusty cargo storage limas, for suppression of dust. 	<p>emissions.</p> <ul style="list-style-type: none"> • Provided Dust suppression systems at Hoppers, discharge/feeding points of belt conveyors at each transfer tower. • Provided and operating Stacker cum re-claimers for loading and unloading the coal. Dedicated mist sprinklers are provided to prevent fugitive emissions. • Provided mechanical loading facility for railway wagons. • Provided 16 nos. of semi mechanized facilities for covering tarpaulin on the trucks & railway rake and ensuring all the outgoing Trucks & Railway rakes are covered with tarpaulin. • Established PLC based Mechanical Dust Suppression System (MDSS) with 176 No. of water cannons at stack yards for dust suppression and same is under operation at the time of inspection. • Provided water cannons at 100 meters' intervals which covers a horizontal radius of approx. 50 meters and reaches a height up to 15 meters and rotates in 360 degrees. • Continuous water is being sprinkling on berths and other back up areas, yards and hauls roads through mobile dust suppression tankers. • Operating 5 No. of heavy-duty sweeping machines for cleaning of berths, back up areas and roads. • Provided automatic sensor-based truck tyre washing

Sl. No	Condition	Compliance submitting to statutory departments
		<p>facility.</p> <ul style="list-style-type: none"> Established fully automatic advanced technology 2nd automatic sensor-based truck tyre washing facility in addition to the existing one without disturbing the existing facility.
9.	<p>The proponent shall implement the following measures in the cargo handling and stacking area</p> <ol style="list-style-type: none"> The ship un-loader shall be provided with in situ water sprinkling system and unloading hoppers shall be provided with covers on three sides to control fugitive emissions. Mechanical stackers cum re-claimer for staking transfer and re-claiming and conveyors to transfer of materials to stop manual handling and no involvement of mobile machines. MDSS at transfer points and staking areas. 	<p>Condition is Being Complied by AGPL</p> <p>AGPL implemented the following measures in the cargo handling and stacking area</p> <ol style="list-style-type: none"> Provided Dust suppression systems at Hoppers, discharge/feeding points of belt conveyors at each transfer tower. Provided and operating Stacker cum re-claimers for loading and unloading the coal. Dedicated mist sprinklers are provided to prevent fugitive emissions. Established PLC based Mechanical Dust Suppression System (MDSS) with 176 No. of water cannons at stack yards for dust suppression and same is under operation at the time of inspection. The water cannon is provided at 100 meters intervals which cover a horizontal radius of approx. 50 meters and reach a height up to 15 meters and rotate in 360 degrees.
10.	All the transfer points, loading/ unloading points and conveyer systems shall be housed completely with leak proof arrangements. Adequate dust suppression and containment Measures shall be implemented for effective control of fugitive emissions.	Condition is Being Complied by AGPL
11.	The proponent shall ensure compliance of the National Ambient Air quality standards notified by MOEF, Gol vide notification No. GSR 0261E), dated. 16/11/2009 during construction and regular operational phase of the project.	Condition is Being Complied by AGPL

Sl. No	Condition				Compliance submitting to statutory departments
12.	The generator shall be installed in a closed area with a silencer and suitable noise absorption systems. The ambient noise level shall not exceed 75 dB(A) during day time and 70 dB(A) during night time.				Operating 1 x 320 KVA & 1 x 62.5 KVA DG Sets for emergency power backup & installed in a closed area with silencer and suitable noise absorption systems.
13.	S. No.	Type of solid waste	Quantity (TPM)	Mode of disposal	Condition is Being Complied by AGPL <ul style="list-style-type: none">Domestic solid waste disposing to GVMC dump site.Disposing the plastic waste to the authorized plastic waste recyclers.STP sludge is being used as manure for greenbelt development.Purchasing the Lead acid batters on buy-back basis.Waste oil is being disposed through APEMCL
	1.	Domestic solid waste	10	Shall be collected, segregated and disposed as per MSW Rules in consultation with GVMC Authorities	
	2.	Discarded material, plastic material	10	Shall be disposed to authorized recyclers only	
	3.	Sludge from STP	1.0	Shall be composted and used in green belt programme	
	4.	Lead acid batteries	---	Shall be disposed to authorized recyclers	
	5.	Waste oil (including Bilge oil)	---	Shall be disposed to authorized recyclers.	
14.	Fire detection and firefighting facilities with adequate water storage facility shall be provided in fire prone area in consultation with Directorate of Fire Firefighting.				Condition is Being Complied by AGPL. Provided fire detection and firefighting facilities including fire tender at fire prone areas.
15.	Onsite & offsite Disaster Management plan shall be prepared to meet any eventuality in case of any accident. Mock drills shall be conducted at least twice a year and modifications required if any shall be incorporated in Disaster Management Plan.				Condition is Being Complied by AGPL The On-Site / Off Site Emergency Plans was revised on 01.11.2023 Conducting Mock drills periodically.
16.	The proponent shall not allow unauthorized hazardous wastes (for recycling/ reprocessing) through the port.				Condition is Being Complied by AGPL
17.	The proponent shall not store any hazardous cargo containers within the premises.				AGPL has complied with the condition.
18.	In case of any leakage container of hazardous cargo is found, permission shall be obtained from the Board for disposals alter establishing type and quantity of the waste.				AGPL has complied with the condition.

Sl. No	Condition	Compliance submitting to statutory departments
19.	The following rules and regulations notified by the MOE&F, GOI shall be implemented. a. Hazardous waste (Management, Handling & Transboundary) rules.2008. b. Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989, c. Batteries (Management & Handling) Rules, 2010.	Condition is Being Complied by AGPL. AGPL is having valid Hazardous Waste Authorization up to 31.07.2029. AGPL is purchasing the Lead acid batters on buy back basis.
20.	Thick green belt shall be developed along the boundary of the port. The proponent shall develop 100 mts wide thick green belt on road side & habitation side particularly towards north-west & west directions. The proponent shall develop green belt with three-year-old plants. Existing Green belt shall not be disturbed in the proposed expansion activity.	AGPL has complied with the condition.
21.	The proponent shall not establish any other stock yards other than designated stock yards.	Condition is Being Complied by AGPL.
22.	The industry shall procure additional sweeping machine within three months of time as committed vide Ir.dt. 29/02/2012 and report the compliance to the E.E., R 0. Visakhapatnam.	Condition is Being Complied by AGPL
23.	The proponent shall restrict its cargo handling and storage of commodities permitted. In any Case, the non-permitted commodities and other dusting cargo shall not be handled and stored in the propose activity without prior permission from the Board.	Condition is Being Complied by AGPL
25.	In any case, the cargo stacking height shall not be more than 6 m from the ground level as directed by the Board vide order dt. 18/06/2011 and as committed by the industry during CFE Committee meeting held on 29/02/2012.	Condition is Being Complied by AGPL. AGPL is maintaining 12 meters' height where MDSS system is available and maintaining 10 meters at manual stack yards"
26.	The solid waste arises from dredging shall be disposed in Environmental sound manner. The details of actual solid waste generation and disposal mode shall be submitted to the Board While commissioning of construction activity.	Noted the condition.
27.	The proponent shall implement Mechanical Dust Suppression system (MDSS) to control fugitive emissions at all potential sources in entire activity.	AGPL has complied with the condition.
28.	Dry fogging / water sprinkling shall be implemented and maintained effectively at all transfer points, cargo handling area and stacking areas	Condition is Being Complied by AGPL
29.	The industry shall not stack alumina on berth and the same should be stored in silos only.	Condition is Being Complied by AGPL. The Port is handling the alumina in hoppers and transferred directly to the truck mounted closed tankers.

Sl. No	Condition	Compliance submitting to statutory departments
30.	The industry shall provide standby centrifugal pump so as to ensure uninterrupted operated of MDSS	AGPL has complied with the condition. Provided 4 no. Centrifugal pumps as standby to ensure uninterrupted operated of MDSS.
31.	All types of the fertilizers shall be stored in the closed warehouses only. The proponent shall ensure that there shall not be any open storage of urea or any other fertilizer materials and all urea & fertilizer material handling warehouses shall be provided with effluent treatment plant.	Condition is Being Complied by AGPL. Constructed 12 No. of closed warehouses with RCC lined flooring & leachate collection for storing & handling of the fertilizer cargo
32.	The proponent shall comply with all the directions issued by the Board from time to time	Condition is Being Complied by AGPL.
33.	Concealing the factual data or submission of false information / fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant pollution control acts.	Noted the condition.
34.	The Board reserves its right to modify above condition are stipulate any additional conditions in the interest of environment protection.	Noted the condition.

5. Compliance status of Schedule A, B & C conditions stipulated in the CFO & HWA Order No. APPCB/VSP/VSP/113/CFO/HO/2015, dated 13.01.2016, valid up to 31.12.2020.

Compliance of Schedule - A

Sl. No	Condition	Compliance submitting to statutory departments
1.	Any up-set condition in any plant/plants of the industry, which result in, increased effluent/ emission discharge and/ or violation of standards stipulated in this order shall be informed to this Board, under intimation to the Collector and District Magistrate and take immediate action to bring down the discharge / emission below the limits.	Noted the condition
2.	The industry should carryout analysis of waste water discharges or emissions through chimneys for the parameters mentioned in this order on quarterly basis and submit to the Board.	<p>Condition is Being Complied by AGPL AGPL appointed an ISO Certified agency to collect & analyze the STP water of 30 KLD and 5 KLD capacities established & operating within the Port premises to treat the sewage generated.</p> <p>The treated water is being used for the dust suppression / green belt development.</p>
3.	All the rules & regulations notified by Ministry of Law and Justice, Government of India regarding Public Liability Insurance Act, 1991 should be followed as applicable.	Noted the condition
4.	The industry should put up two sign boards (6×4 ft. each)at publicly visible places at the main gate indicating the products, effluent discharge standards, air emission standards, hazardous waste quantities and validity of CFO and exhibit the CFO order at a prominent place in the factory premises.	AGPL has complied with the condition.
5.	Notwithstanding anything contained in this consent order, the Board here by reserves the right and powers to review / revoke any and / or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.	Noted the condition
6.	The industry shall file the water cess returns	Condition is Being Complied by AGPL.

Sl. No	Condition	Compliance submitting to statutory departments
	in Form-I as required under section (5) of water (Prevention and Control of Pollution) cess Act, 1977 on or before the 5 th of every calendar month, showing the quantity of water consumed in the previous monthly along with water meter readings. The industry shall remit water cess as per the assessment order as and when issued by Board.	The Port has been submitting on monthly water consumption details. in Form – 1 After introduction of GST, APPCB has instructed all the industries are not required to remit water cess charges from 1 st July, 2017 onwards.
7.	The applicant shall submit Environment statement in Form V before 30 th September every year as per Rule No.14 of E(P) Rules,1986 & amendments thereof.	AGPL has complied with the condition. Environment statement in Form V was Submitted on 28.09.2024 for the FY 2023-2024
8.	The applicant should make applications through Online for renewal of Consent (under Water Air Acts) and Authorization under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts and detailed compliance of CFO conditions for obtaining Consent & HW Authorization of the board. The industry should immediately submit the revised application for consent to this Board in the event of any change in the raw material used, processes employed, quantity of trade effluents & quantity of emissions. Any change in the management shall be informed to the Board. The person authorized should not let out the premises / lend / sell / transfer their industrial premises without obtaining prior permission of the state Pollution Control Board.	AGPL has complied with the condition.
9.	Any person aggrieved by an order made by the state board under section 25,section 26,section 27 of water Act, 1974 or section 21 of Air Act,1981 may within thirty days	Noted the condition.

Sl. No	Condition	Compliance submitting to statutory departments
	from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules,1976 and Air Rules 1982, to Appellate authority constituted under section 28 of the Water (prevention and control of pollution) Act,1974 and section 31 of the Air (prevention and control of pollution) Act,1981.	

Sl. No	Condition	Compliance submitting to statutory departments																																							
	Compliance of Schedule – B																																								
	Water Pollution																																								
1.	<p>The water consumption quantities are mentioned below:</p> <table border="1"> <thead> <tr> <th>S. No</th><th>Purpose</th><th>Quantity KLD</th></tr> </thead> <tbody> <tr> <td>1</td><td>Gardening/irrigation</td><td>25</td></tr> <tr> <td>2</td><td>Dust suppression</td><td>1296.0</td></tr> <tr> <td>3</td><td>Domestic</td><td>40</td></tr> <tr> <td>4</td><td>Ship supply</td><td>32.5</td></tr> <tr> <td>5</td><td>miscellaneous</td><td>40.6</td></tr> <tr> <td></td><td>Total</td><td>1434.1</td></tr> </tbody> </table> <p>Source of water is Visakhapatnam industrial water supply Co. the following is the permitted water consumption.</p> <table border="1"> <thead> <tr> <th>S. No</th><th>Purpose</th><th>Quantity KLD</th></tr> </thead> <tbody> <tr> <td>1</td><td>Dust suppression</td><td>1296.0</td></tr> <tr> <td>2</td><td>Domestic purpose</td><td>40.00</td></tr> <tr> <td>3</td><td>Process, where by water gets polluted and pollutants are easily bio degradable.</td><td>73.1</td></tr> <tr> <td>4</td><td>Processing , where by water gets polluted and pollutants are not easily bio degradable</td><td>--</td></tr> <tr> <td></td><td>Total</td><td>1409.1</td></tr> </tbody> </table> <p>Separate water meters shall be maintained for the assessing the quantity of water used for each of the purpose mentioned above for Cess</p>	S. No	Purpose	Quantity KLD	1	Gardening/irrigation	25	2	Dust suppression	1296.0	3	Domestic	40	4	Ship supply	32.5	5	miscellaneous	40.6		Total	1434.1	S. No	Purpose	Quantity KLD	1	Dust suppression	1296.0	2	Domestic purpose	40.00	3	Process, where by water gets polluted and pollutants are easily bio degradable.	73.1	4	Processing , where by water gets polluted and pollutants are not easily bio degradable	--		Total	1409.1	Condition is Being Complied by AGPL .
S. No	Purpose	Quantity KLD																																							
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	assessment purpose.	
2.	The Gangavaram Port Limited (GPL) shall provide separate energy meters for Sewage Treatment Plant (STP) and for Air pollution Control equipment to record energy consumption.	AGPL has complied with the condition.
	Air Pollution	
1.	The Gangavaram Port Limited (GPL) shall comply with ambient air quality standards of PM ₁₀ (Particulate matter size less than 10 µm) - 100µg /m ³ ; PM _{2.5} (Particulate matter size less than 2.5 µm) - 60µg / m ³ : SO ₂ - 80µg /m ³ : NO _x - 80µg /m ³ , outside the port premises at the periphery of the industry. Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009 Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A) Night time (10 PM to 6 AM) - 70 dB (A).	Condition is Being Complied by AGPL.
2.	The Gangavaram port limited (GPL) shall maintain 3 CAAQMs with online connectivity to APPCB and maintain records.	Condition is Being Complied by AGPL
3.	The Gangavaram Port Limited (GPL) shall Maintain wind breaking wall all along the Gangavaram village side up to a height 10 mts as wind speed is high in this area	AGPL has complied with the condition. AGPL Erected wind breaking wall of height 6m on the compound wall of height 3m near Gangavaram village and HB Colony to prevent any dust nuisance towards habitation & maintaining about 50 m width of green belt along port compound wall near Gangavaram (V).
4.	The Gangavaram Port Limited (GPL) shall not establish any other stock yards other than designated stock yards.	AGPL has complied with the condition.
5.	The Gangavaram Port Limited (GPL) shall	AGPL has complied with the

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	1	Domestic solid waste	10 T/m	Shall be collected segregated and disposed as per MSW Rules in consultation with GVMC Authorities	
	2.	Discarded material, plastic material	10 T/m	Shall be disposed to authorized recyclers only	
	3.	Sludge from STP	1.0 T/m	Shall be composted and used in green belt programme	
	4.	Lead acid batteries	---	Shall be disposed to authorized recyclers	
3.	The Gangavaram Port Limited (GPL) shall maintain green belt in 50 meters width as stipulated in the EC order dated 07-02-2012.				AGPL has complied with the condition.
4.	The Gangavaram Port Limited (GPL) shall not store/ handle any hazardous cargo containers within premises.				Condition is Being Complied by AGPL
5.	All types of the fertilizers shall be stored in the closed warehouses only. The port shall ensure that there shall not be any open storage of urea or any other fertilizer materials and all urea & fertilizer material handling warehouses shall be maintained with effluent collection pits for collection and treatment and then used for green belt in the premises after meeting the standards.				AGPL has complied with the condition.
6.	The Gangavaram Port Limited (GPL) shall store fuel oils used for construction equipment vessels / vehicles in a well-				AGPL has complied with the condition.

	designed manner and protect them against fire hazards by construction of compound wall to prevent access to unauthorized elements. The surface run off from storage area shall pass through oil water separator before being discharging. The Gangavaram Port Limited (GPL) shall store fuel oils used for construction equipment vessels / vehicles in a well-designed manner and protect them against fire hazards by construction of compound wall to prevent access to unauthorized elements. The surface run off from storage area shall pass through oil water separator before being discharging.	
7.	The Gangavaram Port Limited (GPL) shall maintain the Malaria control programme and Health facilities in the operation phase. Vector control programmes. Control of all breeding ground shall be carried out by the use of larvicide's in addition to control of adult mosquitoes. The health team should include a trained entomologist.	AGPL has complied with the condition. No malaria cases were reported as of now and all the anti-malarial measures are taken.
8.	The Gangavaram Port Limited (GPL) shall maintain a task force to check the vehicle emissions on permanent basis The Gangavaram Port Limited (GPL) shall maintain a task force to check the vehicle emissions on permanent basis	AGPL has complied with the condition.
9.	The Gangavaram Port Limited (GPL) shall constitute an Environment Management cell with qualified and trained staff.	AGPL has complied with the condition.
10.	The Gangavaram Port Limited (GPL) shall maintain onsite and offsite emergency action plan after carrying out risk analysis and hazop studies	AGPL has complied with the condition.
11.	The Gangavaram Port Limited (GPL) with VUDA shall ensure that no slum development and unauthorized construction occur in the surrounding area.	Condition is Being Complied by AGPL.
12.	The Gangavaram Port Limited (GPL) shall handle alumina in completely closed	AGPL has complied with the condition.

	enclosures. It shall also furnish an action plan to install mechanized system.	
13.	<p>The Gangavaram Port Limited (GPL) shall implement following for controlling fugitive emission:</p> <ol style="list-style-type: none"> Adequate dust controlling measures should be undertaken for loading and unloading operations for dusty cargo. Closed conveyor belt with water sprinkling arrangement for suppression of dust while conveyor dusty cargo likes coal, iron ore & alumina. Vehicle movement minimized / eliminated by implementing mechanical operations. All the vehicles involved in transportation of cargo shall be covered with tarpaulin. Traffic management measures adopted to avoid traffic congestion and provide empty dusting vehicle washing / dry cleaning system to clean all out going cargo vehicles. Sufficient parking facilities based on traffic density / vehicular movements anticipated from the port. Adequate water sprinkling provided on roads and at dusty cargo storage areas for suppression of dust 	Condition is Being Complied by AGPL.
14.	<p>The Gangavaram Port Limited (GPL) shall implement the following measures in the cargo handling and stacking area:</p> <ol style="list-style-type: none"> The ship un-loader maintained with in-situ water sprinkling system and unloading hoppers provided with covers on three sides to control fugitive emissions. Iron ore shall be unloaded through wagon tipplers. Mechanical stackers cum re-claimers for stacking, transfer and reclamation; Conveyors for transfer of materials to 	Condition is Being Complied by AGPL.

	stop manual handling / mobile machines. c. MDSS in stacking areas.	
15.	The Gangavaram Port Limited (GPL) shall ensure AAQ standards of the Board on all environmental conditions without fail.	Condition is Being Complied by AGPL.
16.	The Gangavaram Port Limited (GPL) shall maintain standby centrifugal pump so as to ensure uninterrupted operation of MDSS.	AGPL has complied with the condition.
17.	The Gangavaram Port Limited (GPL) shall maintain compliance of all other conditions of CFE orders issued by the Board	AGPL has complied with the condition.
18.	Gangavaram Port Limited (GPL) shall comply with TF and other directions issued by the Board from time to time.	AGPL has complied with the condition.

Compliance of Schedule – C

Sl. No	Condition	Compliance submitting to statutory departments
1.	All the rules and regulations notified by Ministry of Environment & Forests, Government of India under the E (P) Act, 1986 in respect of management, handling, transportation and storage of the Hazardous waste should be followed.	All the rules and regulations notified by Ministry of Environment & Forests, Government of India under the E(P) Act, 1986 in respect of management, handling, transportation and storage of the Hazardous waste are being followed.
2.	The Gangavaram Port Limited (GPL) shall not store hazardous waste for more than 90 days as per the Hazardous Wastes (Management, Handling and Tran boundary Movement) Rules, 2008 and amendments thereof.	AGPL has complied with the condition.
3.	The Gangavaram Port Limited (GPL) shall dispose Used Lead Acid Batteries to the manufacturers / dealers on buyback basis	Lead acid batteries are disposed to the supplier. Submitted the annual returns in Form-8 on 27.06.2024 for the period 2023-2024.
4.	The Gangavaram Port Limited (GPL) shall maintain 6 copy manifest system for transportation of waste generated and a copy shall be submitted to concern Regional Office of APPCB. The driver who transports Hazardous Waste should be well acquainted about the procedure to be	AGPL obtained amendment for waste oil quantities & inclusion of Ship oil and disposing the same through APEMCL Portal.

	followed in case of an emergency during transit. The transporter should carry a Transport Emergency (TREM) Card.	
5.	The Gangavaram Port Limited (GPL) shall maintain proper records for Hazardous Wastes stated in Authorization in FORM-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 22(2) of the Hazardous Wastes (Management, Handling & Tran boundary Movement) Rules, 2008 and amendments thereof	Maintaining records for Hazardous Wastes stated in Authorization in Form- 3 of CFO Order and filing annual returns in Form- 4 to APPCB.
6.	The Gangavaram Port Limited (GPL) shall submit the condition wise compliance report of the conditions stipulated in Schedule A, B & C of this Order on half yearly basis to Board Office, Hyderabad and concerned Regional Office	AGPL has complied with the condition.

6. Compliance of the conditions stipulated in CFO Auto Renewal Order No. APPCB/ VSP/VSP/113/CFO/HO/2020- 10/09/2020, valid up to 31.12.2025.

Sl. No	Condition	Compliance submitting to statutory departments
1.	All other conditions mentioned in Schedules A, B & C of the combined CFO&HWA order issued by the Board vide order dated 13.01.2016 will remain same.	AGPL said they have noted and will comply with the condition
2.	The facility shall comply with the standards issued by MoEF&CC / CPCB from time to time.	Condition is Being Complied by AGPL.
3.	The industry shall submit Half yearly compliance reports to all the stipulated conditions in Environmental Clearance (EC), Consent for Establishment (CFE) and Consent for Operation (CFO) through website i.e., https://pcb.ap.gov.in by 1st of January and 1st July of every year. The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through NABL accredited third party failing which the Consent Order issued will be cancelled.	Condition is Being Complied by AGPL.
4.	The facility shall ensure that dedicated fund is allotted towards Environment Relief Fund (ERF) in the Public Liability Insurance policy and submit a copy of the policy at the Regional Office: Visakhapatnam every year.	AGPL has complied with the condition.
5.	In case of false certification, noncompliance of conditions / directions and discrepancy in furnishing the information by the industry, the Board can withdraw the auto renewed consent and take action under provisions of relevant Acts & Rules.	Noted the condition
6.	The facility shall inventorize the storage quantities of hazardous chemicals as per the hazard nature of reactivity / toxicity / flammability / explosive stored/handling in the premises as defined in the Management of Storage, Import of Hazardous Chemicals (MSIHC) Rules, 1989 and the details shall be furnished to the Factories Department and to the Regional Office, APPCB on monthly basis duly certifying the same.	Condition is Being Complied by AGPL.

7.	The facility shall identify major accident hazard chemicals & list out the hazardous chemicals endangered to human health & environment and the details shall be furnished to the Factories Department and to the Regional Office, APPCB time to time duly certifying the same by the industry. Further the facility shall extend training to the working personnel's while handling hazardous chemicals for prevention of accidents and necessary antidotes to ensure the safety, as per the MSIHC Rules, 1989.	Condition is Being Complied by AGPL.
8.	The facility shall submit the copy of the safety audit report and On-Site / Off Site Emergency Plans as applicable after being certified by the Factories Department/concerned authority, to the APPCB, Regional Office from time to time, if the storage quantity of hazardous chemicals is equal to or, in excess of the threshold quantities specified in schedule 2 & 3 of MSIHC Rules, 1989.	Condition is Being Complied by AGPL.
9.	The facility shall carryout calibration of safety equipments and leak detection systems at regular intervals and shall certify the same with the Factories Department/concerned authority. That certified copy shall be submitted to the APPCB, Regional Office. The facility shall install fluorescent Wind Vane at the highest point in the facility premises.	Condition is Being Complied by AGPL.
10.	The facility shall inventorize the hazardous wastes and its quantities stored within the facility premises as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 (HOWM Rules, 2016) and shall furnish the details to Regional Office, APPCB on monthly basis duly certifying the same by the industry.	Condition is Being Complied by AGPL. At present AGPL is not handling any Hazardous cargo/ Containers/ Chemicals.
11.	The facility shall allow import of hazardous cargoes only after the importer complies with the MSIHC Rules, 1989.	Condition is Being Complied by AGPL. At present AGPL is not handling any Hazardous cargo/ Containers/ Chemicals.

7. Specific and general conditions of Andhra Pradesh Coastal Zone Management Authority (APCZMA) NOC No. Letter No. 338/CRZ/Port/2021, 24/10/2021

Sl. No	Condition	Compliance submitting to statutory departments
PART A: Specific Conditions:		
1.	The proposed constructions shall conform to the norms prescribed in CRZ Notification issued by the Ministry of Environment and Forests, Government of India S. O. No.19(E), dated 06-01-2011 and shall not affect the coastal ecology of the area.	AGPL is not carrying-out any constructions in the present cargo enhancement proposal.
2.	No activity on ground shall be undertaken without obtaining Environmental Clearance from the Ministry of Environment and Forests, Government of India as per S. O. No.19(E), dated 06-01-2011.	AGPL has complied with the condition.
3.	The Port authorities shall continue to nourish the beaches located on the northern side of North Breakwaters within the Port limits, which are vulnerable to sea erosion during monsoon season and also during cyclone.	Condition is Being Complied by AGPL.
4.	Dredged materials shall be utilized for shore protection, beach nourishment depending on its suitability.	Condition is Being Complied by AGPL.
5.	The project proponent while executing this project shall not disturb any of the ecologically sensitive areas like mangroves, sand heaps, sand dunes, disturbance to fishing activity etc.	Condition is Being Complied by AGPL.
6.	The applicant shall ensure that Continuous monitoring of all likely affected parameters including air/ water quality/ waste water discharges are monitored and monthly report is to be submitted to the APPCB.	Condition is Being Complied by AGPL.
7.	Priority to be given to the maintenance of storm water drains from the surrounding area to prevent possible flooding of the surrounding areas.	AGPL has complied with the condition.
8.	The proponent shall not increase the number of berths (existing berths – 9 nos.) and also no	AGPL is not carrying-out any constructions both land & marine side in

Sl. No	Condition	Compliance submitting to statutory departments
	marine side construction activity is to be carried out under this modernization program.	the present cargo enhancement proposal.
9.	Mechanization of Port operations shall be taken up to improve the Air quality area. SPM levels to be maintained within the standards stipulated by the APPCB / CPCB. All the conveyors shall be closed.	Noted and will comply with the condition.
10.	Oil spills if any shall be properly collected and disposed as per the Rules. Project proponent shall install necessary oil spill mitigation measures.	Condition is Being Complied by AGPL.
11.	No solid waste shall be disposed in the Coastal Regulation Zone area. The solid waste shall be properly collected, segregated and disposed as per the provision of Solid Waste (Management and Handling) Rules, 2000 and amendment thereof.	Condition is Being Complied by AGPL.
12.	Ground water shall not be drawn from deep bore well within the CRZ area. As per the details provided, fresh water has to be sourced from Visakhapatnam Industrial Water Supply Company Limited (VISCOW) only.	Condition is Being Complied by AGPL.
13.	Raising and maintenance of Green belt within and outside the port area to be taken up on priority and necessary assistance shall be extended to the local agencies involved in the implementation of aforestation programme.	Noted and will comply with the condition.
14.	The Project Proponent shall submit the half - yearly compliance reports of CRZ Clearance duly audited by the accredited consultants on the degree of compliance by the project proponent during and after construction of the project.	Condition is Being Complied by AGPL.
15.	The proponent shall implement all the mitigation measures as mentioned in the Marine EIA report.	Condition is Being Complied by AGPL.
16.	All the dusty cargo shall be appropriately covered during transportation and storage in the port premises. Settling ponds shall be provided	AGPL has complied with the condition.

Sl. No	Condition	Compliance submitting to statutory departments
	in coal storage area & the supernatant water shall be used for dust suppression.	AGPL has provided 6 No. of settling ponds i.e., 3 nos. at Transfer Tower – 8 location & 3 at Yard no.5 & 6 locations for collection of yards' runoffs.
17.	The project proponent shall obtain all necessary clearances/ permission from the concerned authorities as applicable.	AGPL has complied with the condition.
18.	Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.	Noted and will comply with the condition.
PART B: General Conditions:		
1.	A copy of the clearance letter shall also be displayed on the website of the AP Pollution Control Board. The Clearance letter shall also be displayed at the AP Pollution Control Board Regional Office, District Industries Centre and District Collector Office/ Mandal Revenue Office for 30 days.	AGPL has complied with the condition.
2.	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the Andhra Pradesh Coastal Zone Management Authority (APCZMA) and AP Pollution Control Board Regional Office.	Condition is Being Complied by AGPL.
3.	Concealing factual data by the project proponent, any Officer on behalf of the project proponent and consultants hired by the project proponent or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted and will comply with the condition.
4.	Consent for Establishment (CFE) and Consent	Obtained CTE & CTO of APPCB.

Sl. No	Condition	Compliance submitting to statutory departments
	for Operation (CFO), as may be applicable, shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	
5.	All waste (liquid and solid) arising from the proposed development shall be disposed of as per the norms prescribed by State Pollution Control Board. There shall not be any disposal of untreated effluent into the sea/coastal water bodies.	Noted and will comply with the condition.
6.	Full co-operation shall be extended to the officials from the APCZMA, APPCB and Regional Office of MoEF&CC, during monitoring of implementation of environmental safeguards stipulated. It shall be ensured that documents/data sought pertinent is made available to the monitoring team. A complete set of all the documents submitted to APCZMA shall be forwarded to the AP Pollution Control Board Regional Office.	Noted and will comply with the condition.
7.	In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the APCZMA.	Noted and will comply with the condition.
8.	The APCZMA reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking of the CRZ clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.	Noted and will comply with the condition.
9.	All other statutory clearances shall be obtained, as applicable by project proponents from the respective competent authorities.	Noted and will comply with the condition.
10.	The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project	AGPL has complied with the condition.

Sl. No	Condition	Compliance submitting to statutory departments
	has been accorded CRZ Clearance and copies of clearance letters are available with the AP Pollution Control Board and may also be seen on the website of APCZMA. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the AP Pollution Control Board Regional Office.	
11.	This Clearance is subject to any order passed by any Hon'ble Courts, as may be applicable to this project.	Noted and will comply with the condition.
12.	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.	AGPL has complied with the condition.
13.	The proponent shall upload the status of compliance of the stipulated conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the AP Pollution Control Board Regional Office and the APPCB, Head Office.	Condition is Being Complied by AGPL
14.	The Project Proponent shall ensure that there is no destruction of mangroves, if any, during the construction as well as the operation phase of the project.	No mangroves within the Port surroundings.
15.	There shall be no dressing or alteration of the sand dunes and natural features, including landscape changes for beautification, recreation and other such purpose.	Condition is Being Complied by AGPL
16.	No permanent labour camp, machinery and material storage shall be allowed in CRZ area.	Noted and will comply with the condition.
17.	There shall no ground water drawl within CRZ without prior approval of the State Ground Water Authority.	Condition is Being Complied by AGPL



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF &CC and SPCB (for the period from October 2024 to March 2025)



Sl. No	Condition	Compliance submitting to statutory departments
18.	Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority	Noted and will comply with the condition.

8. Compliance of the conditions stipulated in EC & CRZ Clearance No. 10/51/2021-IA.III, dated 24.12.2021.

Sl. No	Condition	Compliance submitting to statutory departments
	SPECIFIC CONDITIONS	
i.	No construction activity beyond the existing layout area shall be undertaken for the project. Only modernization/ mechanization as envisaged in the present proposal shall be permissible.	AGPL has complied with the condition. Not started any construction activity in the existing layout area.
ii.	Erosion of shoreline has been noted at the project location and adjoining areas due to existing port and hence Shore Management plan and beach nourishment plan need to be prepared and an implementation report needs to be submitted to the Ministry as a part of 6 monthly compliance report. Beach Nourishment strategy has to be developed with the help from a reputed scientific institute specialized in the subject.	AGPL has complied with the condition.
iii.	All the recommendations and conditions specified by the Andhra Pradesh Coastal Zone Management Authority (APCZMA) vide letter No 338/CRZ/Port/2021 dated 24 th October 2021 shall be complied with.	AGPL has complied with the condition.
iv.	Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.	AGPL has complied with the condition.
v.	Necessary approvals to be taken during implementation and commissioning from statutory bodies concerned.	Condition is Being Complied by AGPL
vi.	Continuous online monitoring of air and water covering the total area shall be carried out and the compliance report of the same shall be submitted along with the 6 monthly compliance reports to the regional office of MoEF&CC.	Condition is Being Complied by AGPL.

Sl. No	Condition	Compliance submitting to statutory departments
vii.	Spillage of fuel / engine oil and lubricants from the site are a source of organic pollution which impacts marine life, particularly benthos. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.	Condition is Being Complied by AGPL
viii.	Necessary arrangements for the treatment of the effluents and solid wastes/ facilitation of reception facilities under MARPOL must be made and it must be ensured that they conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986. The provisions of Solid Waste Management Rules, 2016. E- Waste Management Rules, 2016, and Plastic Waste Management Rules, 2016 shall be complied with.	Condition is Being Complied by AGPL.
ix.	Necessary arrangement for general safety and occupational health of people should be done in letter and spirit.	AGPL has complied with the condition.
x.	The dust suppression measures for the proposed increase in the cargo should be ensured through mechanized handling of cargo and conveyance.	Condition is Being Complied by AGPL
xi.	The waste water from oil spillage or cargo should be treated and disposed.	Condition is Being Complied by AGPL.
xii.	As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory Afforestation etc, either proposed by the project proponent based on the social impact assessment and	Noted and will comply with the condition.

Sl. No	Condition	Compliance submitting to statutory departments
	R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also be implemented and become part of EMP	
	STANDARD CONDITIONS:	
	Statutory compliance:	
i.	Construction activity shall be carried out strictly according to the provisions of CRZ Notification, 2011 and the State Coastal Zone Management Plan as drawn up by the State Government. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.	AGPL has completed Phase – I & II construction as per the provision under CRZ Notification. 1991 as amended subsequently and project is in operation from Aug 2008.
ii.	A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.	AGPL has complied with the condition.
iii.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Coast Guard, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.	Condition is Being Complied by AGPL
	Air quality monitoring and preservation:	
iv.	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the project area at least at four locations, covering upwind and downwind directions.	AGPL has complied with the condition.
v.	Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply	Condition is Being Complied by AGPL.

Sl. No	Condition	Compliance submitting to statutory departments
	prescribed emission standards.	
vi.	Shrouding shall be carried out in the work site enclosing the dock/proposed facility area. This will act as dust curtain as well achieving zero dust discharge from the site. These curtain or shroud will be immensely effective in restricting disturbance from wind in affecting the dry dock operations, preventing waste dispersion, improving working conditions through provision of shade for the workers.	Condition is Being Complied by AGPL.
vii.	Dust collectors shall be deployed in all areas where blasting (surface cleaning) and painting operations are to be carried out, supplemented by stacks for effective dispersion.	Being a port facility, no blasting activities are involved.
xiii.	The Vessels shall comply the emission norms prescribed from time to time.	Condition is Being Complied by AGPL.
xiv.	Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.	Condition is Being Complied by AGPL. AGPL permitted to operate the following capacities of DG sets 3 X 320 KVA, 3 X 1250 KVA 1 X 800 KVA, 2 X 380 KVA, 1 X 200 KVA DG Sets which are being used for emergency power backup.
xv.	A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this	AGPL has complied with the condition.

Sl. No	Condition	Compliance submitting to statutory departments
	05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.	
III.	Water quality monitoring and preservation:	
xvi.	The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.	AGPL has complied with the condition.
xvii.	Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality. Silt curtains shall be used to contain the spreading of suspended sediment during dredging within the dredging area.	AGPL has complied with the condition.
xviii.	No ships docking at the proposed project site will discharge its on-board waste water untreated in to the estuary/ channel. All such wastewater load will be diverted to the proposed Effluent Treatment Plant of the project site.	AGPL has complied with the condition.
xix.	Measures should be taken to contain, control and recover the accidental spills of fuel and cargo handle.	Noted and will comply with the condition.
xx.	The project proponents will draw up and implement a plan for the management of temperature differences between intake waters and discharge waters.	There is no intake and withdrawal of sea water is involved in the Port operations.
xxi.	Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life. This shall be prevented by suitable	Condition is Being Complied by AGPL.

Sl. No	Condition	Compliance submitting to statutory departments
	precautions and also by providing necessary mechanisms to trap the spillage.	
xxii.	Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.	Condition is Being Complied by AGPL.
xxiii.	Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused for horticulture, flushing, backwash, HVAC purposes and dust suppression.	Condition is Being Complied by AGPL. AGPL has been operating 2 Nos. of STPs of 5 KL & 30 KL capacity for treating the wastewater.
xxiv.	A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.	AGPL has complied with the condition.
xxv.	No diversion of the natural course of the river shall be made without prior permission from the Ministry of Water resources.	AGPL has complied with the condition.
xxvi.	All the erosion control measures shall be taken at water front facilities. Earth protection work shall be carried out to avoid erosion of soil from the shoreline/boundary line from the land area into the marine water body.	AGPL has complied with the condition.
IV.	Noise monitoring and prevention:	
xxvii.	Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.	Condition is Being Complied by AGPL.
xxviii.	Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipment.	Condition is Being Complied by AGPL.
xxix.	Acoustic enclosures for DG sets, noise	Condition is Being Complied by AGPL.

Sl. No	Condition	Compliance submitting to statutory departments
	barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.	AGPL permitted to operate the following capacities of DG sets 3 X 320 KVA, 3 X 1250 KVA 1 X 800 KVA, 2 X 380 KVA, 1 X 200 KVA DG Sets which are being used for emergency power backup.
xxx.	The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.	Condition is Being Complied by AGPL.
V.	Energy Conservation measures:	
xxxi.	Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;	Noted and will comply with the condition to the extent possible.
xxxii.	Provide LED lights in offices and project areas.	Noted and will comply with the condition to the extent possible.
VI.	Waste management:	
i.	Dredged material shall be disposed safely in the designated areas.	Condition is Being Complied by AGPL.
ii.	Shoreline should not be disturbed due to dumping. Periodical study on shore line changes shall be conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring reports.	AGPL has complied with the condition.
iii.	Necessary arrangements for the treatment of the effluents and solid wastes must be made and it must be ensured that they conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986.	Condition is Being Complied by AGPL.
iv.	The solid wastes shall be managed and disposed as per the norms of the Solid Waste Management Rules, 2016.	Condition is Being Complied by AGPL.
v.	Any wastes from construction and	Condition is Being Complied by AGPL.

Sl. No	Condition	Compliance submitting to statutory departments
	demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.	
vi.	A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.	AGPL has complied with the condition.
vii.	Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.	Condition is Being Complied by AGPL.
viii.	Oil spill contingency plan shall be prepared and part of DMP to tackle emergencies. The equipment and recovery of oil from a spill would be assessed. Guidelines given in MARPOL and Shipping Acts for oil spill management would be followed. Mechanism for integration of terminals oil contingency plan with the overall area contingency plan under the co-ordination of Coast should be covered.	Condition is Being Complied by AGPL.
VII.	Green Belt:	
i.	Green belt shall be developed in area as provided in project details with a native tree species in accordance with CPCB guidelines.	Condition is Being Complied by AGPL.
ii.	Top soil shall be separately stored and used in the development of green belt.	Condition is Being Complied by AGPL.
VIII.	Marine Ecology:	
iii.	Dredging shall not be carried out during the fish breeding and spawning seasons.	Condition is Being Complied by AGPL.
iv.	Dredging, etc shall be carried out in the confined manner to reduce the impacts on marine environment.	Condition is Being Complied by AGPL.
v.	The dredging schedule shall be so planned that the turbidity developed is dispersed	Condition is Being Complied by AGPL.

Sl. No	Condition	Compliance submitting to statutory departments
	soon enough to prevent any stress on the fish population.	
vi.	While carrying out dredging, an independent monitoring shall be carried out through a Government Agency/Institute to assess the impact and necessary measures shall be taken on priority basis if any adverse impact is observed.	Noted and will comply with the condition.
vii.	A detailed marine biodiversity management plan shall be prepared through the NIO or any other institute of repute on marine, brackish water and fresh water ecology and biodiversity and submitted to and implemented to the satisfaction of the State Biodiversity Board and the CRZ authority. The report shall be based on a study of the impact of the project activities on the intertidal biotopes, corals and coral communities, molluscs, sea grasses, sea weeds, sub-tidal habitats, fishes, other marine and aquatic micro, macro and mega flora and fauna including benthos, plankton, turtles, birds etc. as also the productivity. The data collection and impact assessment shall be as per standards survey methods and include underwater photography.	AGPL has complied with the condition.
viii.	Marine ecology shall be monitored regularly also in terms of sea weeds, sea grasses, mudflats, sand dunes, fisheries, echinoderms, shrimps, turtles, corals, coastal vegetation, mangroves and other marine biodiversity components including all micro, macro and mega floral and faunal components of marine biodiversity.	Condition is Being Complied by AGPL.
ix.	The project proponent shall ensure that water traffic does not impact the aquatic wildlife sanctuaries that fall along the stretch of the river.	Condition is Being Complied by AGPL
IX.	Public hearing and human health issues:	

Sl. No	Condition	Compliance submitting to statutory departments
i.	The work space shall be maintained as per international standards for occupational health and safety with provision of fresh air respirators, blowers, and fans to prevent any accumulation and inhalation of undesirable levels of pollutants including VOCs.	Condition is Being Complied by AGPL.
ii.	Workers shall be strictly enforced to wear personal protective equipment like dust mask, ear muffs or ear plugs, whenever and wherever necessary/ required. Special visco-elastic gloves will be used by labour exposed to hazards from vibration.	Condition is Being Complied by AGPL.
iii.	In case of repair of any old vessels, excessive care shall be taken while handling Asbestos & Freon gas. Besides, fully enclosed covering should be provided for the temporary storage of asbestos materials at site before disposal to CTSDF.	Condition is Being Complied by AGPL.
iv.	Safety training shall be given to all workers specific to their work area and every worker and employee will be engaged in fire hazard awareness training and mock drills which will be conducted regularly. All standard safety and occupational hazard measures shall be implemented and monitored by the concerned officials to prevent the occurrence of untoward incidents/ accidents.	Condition is Being Complied by AGPL.
v.	Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.	Condition is Being Complied by AGPL.
vi.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed	Condition is Being Complied by AGPL.

Sl. No	Condition	Compliance submitting to statutory departments
	after the completion of the project.	
vii.	Occupational health surveillance of the workers shall be done on a regular basis.	Condition is Being Complied by AGPL.
X.	Environment Responsibility:	
i.	The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/ deviation/ violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.	Condition is Being Complied by AGPL.
ii.	A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.	AGPL has complied with the condition.
iii.	Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.	Condition is Being Complied by AGPL.

Sl. No	Condition	Compliance submitting to statutory departments
iv.	Self-environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.	AGPL has complied with the condition.
XI.	Miscellaneous:	
v.	The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.	AGPL has complied with the condition.
vi.	The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.	AGPL has complied with the condition.
vii.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.	AGPL has complied with the condition.
viii.	The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.	AGPL has complied with the condition.
ix.	The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.	AGPL has complied with the condition.

Sl. No	Condition	Compliance submitting to statutory departments
x.	The criteria pollutant levels namely; PM2.5, PM10, SO2, NOx (ambient levels) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	Condition is Being Complied by AGPL.
xi.	The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.	AGP is yet to start implementation of cargo enhancement project.
xii.	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.	Noted and will comply with the condition.
xiii.	The project proponent shall abide by all the commitments and recommendations made in the EIA/ EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.	Noted and will comply with the condition.
xiv.	No further expansion or modifications In the project shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	Noted and will comply with the condition.
xv.	Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Noted and will comply with the condition.
xvi.	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory	Noted and will comply with the condition.

Sl. No	Condition	Compliance submitting to statutory departments
	manner.	
xvii.	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	Noted and will comply with the condition.
xviii.	The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.	Noted and will comply with the condition.
xix.	The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.	Noted and will comply with the condition.
xx.	Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted and will comply with the condition.

9. Compliance of the conditions stipulated in APPCB - Consent to Establishment for cargo augmentation from the existing 40.95 MMTPA to 60.95 MMTPA vide Order No. APPCB/ VSP/ VSP/ 113/ CFE/ HO/2012, dated 16.08.2022.

Sl. No	Condition	Compliance submitting to statutory departments																													
	ANNEXURE																														
1.	The port facility shall obtain consents for operation (CFO) from APPCB, as required under sec.25/26 of the water (P&C of P) act, 1974 and under sec. 21/22 of the air (P&C of P) act, 1981, before commencement of the expansion activity.	Condition is Being Complied by AGPL																													
2.	Compensation is to be paid for any environmental damage caused by it, as fixed by the collector and district magistrate as civil liability.	Noted and will comply with the condition.																													
3.	The Rules and Regulations notified by Ministry of Law and Justice, GoI, regarding the public liability insurance act, 1991 shall be followed.	Noted and will comply with the condition.																													
	<u>Water:</u>																														
4.	The source of water supply is from gvmc and the maximum permitted water consumption after proposed expansion activity is as following: <table><tr><th>S. No</th><th>Purpose</th><th>Qty as per CFO order dt.13.01.2016 (KLD)</th><th>Qty as per EC order dt.24.12.2021 & Proposed CFE expansion (KLD)</th><th>Total quantity after expansion (KLD)</th></tr><tr><td>1.</td><td>Gardening</td><td>25.00</td><td rowspan="4">360.00</td><td rowspan="4">1754.10</td></tr><tr><td>2.</td><td>Dust suppression</td><td>1296.00</td></tr><tr><td>3.</td><td>Ship supply</td><td>32.50</td></tr><tr><td>4.</td><td>Miscellaneous</td><td>40.60</td></tr><tr><td>5.</td><td>Domestic</td><td>40.00</td><td>18.00</td><td>58.00</td></tr><tr><td></td><td>Total</td><td>1434.10</td><td>378.00</td><td>1812.10</td></tr></table>		S. No	Purpose	Qty as per CFO order dt.13.01.2016 (KLD)	Qty as per EC order dt.24.12.2021 & Proposed CFE expansion (KLD)	Total quantity after expansion (KLD)	1.	Gardening	25.00	360.00	1754.10	2.	Dust suppression	1296.00	3.	Ship supply	32.50	4.	Miscellaneous	40.60	5.	Domestic	40.00	18.00	58.00		Total	1434.10	378.00	1812.10
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	Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes viz., dust suppression, domestic, miscellaneous, development of greenbelt																														
	Compliance: AGPL is in the process of providing separate meters for assessing the quantity of water used for each of the purposes viz., dust suppression, domestic, miscellaneous, development of greenbelt.																														

5.	The maximum waste water generation (KLD) shall not exceed the following:				
	S. No	Source	Qty as per CFO order Dt.13.01.2016 (KLD)	Qty as per EC order Dt:24.12.2021 & as Per CFE expansion (KLD)	Total qty after Expansion (KLD)
	1.	Domestic waste after treatment in STP	32.00	14.40	46.40
		Total	32.00	14.40	46.40
	Treatment & disposal:				
	S. No.	Effluent description	Treatment	Disposal	
	1	Domestic effluent	Stps of capacity – 50 KLD (Existing STP – 35 KLD Proposed STP – 15 KLD)	The treated water shall be utilised for green belt development in own premises.	
	Compliance: AGPL is yet to start implementation of cargo enhancement project.				
6.	The effluent / sewage shall be treated to the onland for irrigation standards, as stipulated under schedule vi of Environment (Protection) Rules, 1986, notified by Ministry Of Environment And Forests, Government Of India vide g.s.r.422 (e), dt.19.05.1993 and its amendments thereof. The treated waste water shall be used for development of greenery, dust suppression, re-used for various purposes within the premises.			Condition is Being Complied by AGPL.	
7.	Air: Existing:				
	S. No.	Details of stack		Stack -1 & 2	
	A.	Attached to:		Dg sets	
	B.	Capacity		3 x 320 KVA & 1 x 62.5 KVA	
	C.	Stack height above ground		4m & 6m	
	D.	Air pollution control equipment:		Acoustic enclosure	
	Additional DG Sets not proposed in the expansion project.				
	Compliance: AGPL obtained CTO vide order dated 22.08.2024 to operate the following capacities of DG sets 3 X 320 KVA, 3 X 1250 KVA 1 X 800 KVA, 2 X 380 KVA, 1 X 200 KVA DG Sets which are being used for emergency power backup.				
8.	The port facility shall ensure compliance of the National Ambient Air quality standards notified by MoE&F, GoI vide notification No. GSR 826(E), dated. 16.11.2009 during construction and regular operational phase of the project.			Condition is Being Complied by AGPL.	
9.	The port facility shall comply with the following for controlling fugitive emissions Vehicle			Noted and will comply with the condition.	

	movement shall be minimized / eliminated by implementing mechanical operation. a. All the vehicles involved in transportation of cargo shall be covered with tarpaulin. b. Vehicles shall be managed to avoid traffic congestion and shall provide empty dusting vehicle washings / dry cleaning system to clean all out going cargo vehicles. c. Based on traffic density/ vehicular movements anticipated from the port, parking facilities shall be provided.																															
10.	All the transfer points, loading / unloading points and conveyer systems shall be housed completely with leak proof arrangements. Adequate dust suppression and containment measures shall be implemented for effective control of fugitive emissions.	Noted and will comply with the condition.																														
	Hazardous / Solid Waste details:																															
11.	The Port Authority shall comply with the following w.r.t disposal of solid waste:																															
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Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF &CC and SPCB (for the period from October 2024 to March 2025)



						belt development
	5	Lead acid batteries	---	---	---	Shall be disposed to authorized recyclers routed through M/s APEMCL
Status of Compliance: Condition is Being Complied by AGPL.						

	<u>Other Conditions:</u>	
12.	The Gangavaram port facility shall comply with the conditions stipulated in the EC order dt.24.12.2021 issued by the MoEF, CC & GoI.	Condition is Being Complied by AGPL.
13.	The Gangavaram port facility shall provide the 4th Continuous Ambient Air quality (CAAQM)station with Beta Ray Attenuation technology as per the EC order condition and as committed in the CFE Committee meeting.	AGPL has complied with the condition.
14.	The Gangavaram port facility shall get a study carried out by Andhra University or any other reputed institute clearly establishing the Ambient Air Quality Levels with existing system and projected levels if tube conveyor system is not provided considering the proposed expansion activities within 6 months.	AGPL has complied with the condition.
15.	The Gangavaram port shall Conduct Health camps jointly with medical and health departments Govt. AP in the nearby villages.	AGPL has complied with the condition.
16.	Fire detection and firefighting facilities with adequate water storage facility shall be provided in fire prone area in consultation with competent authorities.	AGPL has complied with the condition.
17.	Onsite & offsite Disaster Management plan shall be prepared to meet any eventuality in case of any accident. Mock drills shall be conducted atleast twice a year and modifications required if any shall be incorporated in Disaster Management Plan and shall submit to Board	AGPL has complied with the condition.
18.	The following rules and regulations notified by the MOE&F, GOI shall be implemented. a. Regulation of Persistent Organic Pollutants Rules, 2018.	AGPL has complied with the condition.

	<ul style="list-style-type: none"> b. Hazardous waste and other wastes (Management and Transboundary Movement) Rules, 2016. c. Plastic Waste Management Rules, 2016. d. Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 e. Fly Ash Notification, 2016. f. Batteries (Management & Handling) Rules, 2010. g. E-Waste (Management) Rules, 2016. h. Construction and Demolition Waste Management Rules, 2016. i. Solid Waste Management Rules, 2016. j. The Public Liability Insurance Act, 1991 and its amendments thereof. 	
19.	The Port facility shall obtain prior permission from MoEF&CC, GoI and APPCB for any changes in the cargo type / capacity.	Noted and will comply with the condition.
20.	DO levels in the sea water at the dredging area shall be monitored at regular interval and the dredging time shall be suitably regulated to prevent depletion of DO levels in the sea water.	Noted and will comply with the condition.
21.	Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant pollution control Acts.	Noted and will comply with the condition.
22.	Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec. 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to revoke the order, to review any or all the conditions imposed herein and to make such modifications as deemed fit and stipulate any additional conditions.	Noted and will comply with the condition.
23.	Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on	Noted and will comply with the condition.

	which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules, 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of Water (Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981.	
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10. Compliance of the additional conditions stipulated in APPCB Consent to Operation Amendment No. APPCB/VSP/113/CFO/ HO/2015, 13.01.2023 for the enhanced quantity of waste/used oil and inclusion of ship waste oil quantity.

Sl. No	Condition	Compliance submitting to statutory departments
1.	The industry shall install digital display boards at publicly visible places at the main gate with validity of CTO; and exhibit the CTO order at a prominent place in the factory premises, as per Hon'ble Supreme Court order	AGPL has installed two sign boards (6×4 ft. each) at publicly visible places at the main gate indicating the products, effluent discharge standards, air emission standards, hazardous waste quantities and validity of CFO.
2.	The industry shall submit Half yearly compliance reports to all the stipulated conditions in Environmental Clearance (EC), Consent to Establishment (CTE) and Consent to Operation (CTO) through website i.e., https://pcb.ap.gov.in by 1st of January and 1st July of every year. The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through MoEF&CC recognized and National Accreditation Board for Laboratory Testing (NABL) accredited third party.	AGPL has complied with the condition.

11. Compliance status on the conditions stipulated in APPCB Consent to Operation No. APPCB/VSP/113/CFO/ HO/2009, 22.08.2023, valid up to 31.12.2025.

Sl. No	Condition	Compliance submitting to statutory departments
	Schedule - A	
1.	Any up-set condition in any industrial plant / activity of the industry, which result in, increased effluent / emission discharge and/ or violation of standards stipulated in this order shall be informed to this Board, under intimation to the Collector and District Magistrate and take immediate action to bring down the discharge / emission below the limits.	Noted and will comply with the condition.
2.	The industry should carryout analysis of waste water discharges or emissions through chimneys for the parameters mentioned in this order on quarterly basis and submit to the Board.	AGPL appointed an ISO certified 3 rd party agency and carrying out the Terrestrial & Marine parameters analysis on fortnight basis and submitting the analysis reports to APPCB on monthly basis and to MoEF &CC on Half-yearly basis.
3.	Notwithstanding anything contained in this consent order, the Board hereby reserves the right and powers to review / revoke any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.	Noted and will comply with the condition.
4.	The industry shall ensure that there shall not be any change in the process technology, source & composition of raw materials and scope of working without prior approval from the Board.	Noted and will comply with the condition.
5.	The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.	AGPL has complied with the condition. <ul style="list-style-type: none"> Submitting the Environmental Statement Form-V regularly to APPCB and RO, MoEF & CC
6.	The applicant should make applications through Online for renewal of Consent (under	Noted and will comply with the condition.

	Water and Air Acts) and Authorization under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts and detailed compliance of CFO conditions for obtaining Consent & HW Authorization of the Board.	
7.	The industry should immediately submit the revised application for consent to this Board in the event of any change in the raw material used, processes employed, quantity of trade effluents & quantity of emissions. Any change in the management shall be informed to the Board. The person authorized should not let out the premises / lend / sell / transfer their industrial premises without obtaining prior permission of the State Pollution Control Board.	Noted and will comply with the condition.
8.	Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to Appellate authority constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.	Noted and will comply with the condition.
9.	The industry shall be liable to pay Environmental Compensation / Other Environmental Taxes, if any environmental damage caused to the surroundings, as fixed by the Collector & District Magistrate or any other competent authority as per the Rules in vogue.	Noted and will comply with the condition.
10.	The industry may explore the possibility of tapping the solar energy for their energy requirements.	Noted and will comply with the condition.
11.	The industry should educate the workers and nearby public of possible accidents and remedial measures.	Noted and will comply with the condition.
1.	M/s. Adani Gangavaram Port Limited shall comply with the conditions stipulated in the CTO & HWA order dt. 13.01.2016 and its auto renewal order dt. 10.09.2020.	AGPL has been complying with all the conditions of the CTO & HWA.
2.	The source of water is Visakhapatnam Industrial	Condition is Being Complied by AGPL

	<p>Water Supply Co. The following is the permitted water consumption:</p> <p>After Expansion</p> <table border="1"> <thead> <tr> <th>Sl. No.</th><th>Purpose</th><th>After Expansion the Quantity (KLD)</th></tr> </thead> <tbody> <tr> <td>1.</td><td>Gardening</td><td>30.00</td></tr> <tr> <td>2.</td><td>Dust suppression</td><td>1301.00</td></tr> <tr> <td>3.</td><td>Ship supply</td><td>32.50</td></tr> <tr> <td>4.</td><td>Miscellaneous</td><td>40.60</td></tr> <tr> <td>5.</td><td>Domestic</td><td>40.00</td></tr> <tr> <td></td><td>Total</td><td>1444.10</td></tr> </tbody> </table> <p>Separate meters shall be maintained for assessing the quantity of water used for each of the purposes mentioned above purpose.</p>	Sl. No.	Purpose	After Expansion the Quantity (KLD)	1.	Gardening	30.00	2.	Dust suppression	1301.00	3.	Ship supply	32.50	4.	Miscellaneous	40.60	5.	Domestic	40.00		Total	1444.10	
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3.	<p>The effluent discharged shall not contain constituents in excess of the tolerance limits mentioned below:</p> <table border="1"> <thead> <tr> <th>Outlet</th><th>Parameter</th><th>Limiting Standards (mg/l except for pH)</th></tr> </thead> <tbody> <tr> <td rowspan="5">1</td><td>pH</td><td>6.50 – 8.50</td></tr> <tr> <td>Oil and Grease</td><td>10</td></tr> <tr> <td>Biochemical Oxygen Demand</td><td>≤30</td></tr> <tr> <td>Total Suspended Solids</td><td><100</td></tr> <tr> <td>Fecal Coliform (FC) (Most Probable Number per 100 milliliter, MPN/100ml)</td><td><1000 MPN/100 ml</td></tr> </tbody> </table>	Outlet	Parameter	Limiting Standards (mg/l except for pH)	1	pH	6.50 – 8.50	Oil and Grease	10	Biochemical Oxygen Demand	≤30	Total Suspended Solids	<100	Fecal Coliform (FC) (Most Probable Number per 100 milliliter, MPN/100ml)	<1000 MPN/100 ml	<ul style="list-style-type: none"> Condition is Being Complied by AGPL 							
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4.	The industry shall maintain Electro Magnetic flow meters with totalisers for water consumption, effluent generation mentioned in the Order.	Installed Digital flow meters.																					
5.	The Port shall ensure compliance of the National Ambient Air quality standards notified by MoE&F, GoI vide notification No. GSR 826(E), dated. 16.11.2009 during construction and regular operational phase of the project.	Condition is Being Complied by AGPL.																					
6.	<p>The Port shall maintain comply with the following for controlling fugitive emissions</p> <p>a. Vehicle movement shall be minimized / eliminated by implementing mechanical operation.</p>	Condition is Being Complied by AGPL.																					

	<p>b. All the vehicles involved in transportation of cargo shall be covered with tarpaulin.</p> <p>c. Vehicles shall be managed to avoid traffic congestion and shall provide empty dusting vehicle washings / dry cleaning system to clean all out going cargo vehicles.</p> <p>d. Based on traffic density/ vehicular movements anticipated from the port, parking facilities shall be provided.</p>	
7.	All the transfer points, loading / unloading points and conveyer systems shall be housed completely with leak proof arrangements. Adequate dust suppression and containment measures shall be implemented for effective control of fugitive emissions	Complied.
	<u>General</u>	
8.	<p>The Port shall maintain the following:</p> <p>a. The Port shall provide cladding / cover to the screen, conveyors and crusher.</p> <p>b. Sprinklers shall be provided to suck emissions at transfer points of conveyors.</p> <p>c. The Port shall maintain ambient air quality within the Board standards.</p> <p>d. The Port shall co-ordinate with traffic police and GVMC for regular cleaning of roads upto National Highway to suppress the dust emissions.</p> <p>e. The Port shall strictly comply with the directions of the Hon'ble NGT issued, if any, in O.A. No .571/2022.</p>	<p>a. AGPL has complied with the condition.</p> <p>b. AGPL haProvided.</p> <p>c. Condition is Being Complied by AGPL.</p> <p>d. Condition is Being Complied by AGPL.</p> <p>e. AGPL has achieved 100% compliance and submitted the latest status report to APPCB on 08.04.2025 for the period from Jan-25 to March-25.</p>
9.	Fire detection and firefighting facilities with adequate water storage facility shall be provided in fire prone area in consultation with competent authorities.	Condition is Being Complied by AGPL.
10.	Onsite & offsite Disaster Management plan shall be prepared to meet any eventuality in case of any accident. Mock drills shall be conducted atleast twice a year and modifications required if any shall be incorporated in Disaster Management Plan and shall submit to Board.	Condition is Being Complied by AGPL.
11.	The Port Authorities shall obtain prior permission	Noted and will comply with the condition.

	from MoEF&CC, GoI and APPCB for any changes in the cargo type / capacity.	
12.	DO levels in the sea water at the dredging area shall be monitored at regular interval and the dredging time shall be suitably regulated to prevent depletion of DO levels in the sea.	AGPL appointed an ISO certified 3 rd party agency and carrying out the Terrestrial & Marine parameters analysis on fortnight basis and submitting the analysis reports to APPCB on monthly basis and to MoEF &CC on Half-yearly basis.
13.	The Port shall comply with the conditions stipulated in the EC order dt.24.12.2021 issued by the MoEF, CC & GoI.	Condition is Being Complied by AGPL.
14.	The industry shall maintain valid PLI policy which includes Environmental Relief Fund (ERF) and submit copy to RO, Visakhapatnam on yearly base.	AGPL has complied with the condition.
15.	The industry shall install digital display boards at publicly visible places at the main gate indicating the products manufactured Vs permitted quantities, Treated effluent concentrations Vs discharge standards, Stack emission & AAQ concentrations Vs standards, hazardous waste generation, disposed, stock Vs permitted quantities and validity of CTO; and exhibit the CTO order at a prominent place in the factory premises, as per Hon'ble Supreme Court order.	AGPL has installed two sign boards (6×4 ft. each) at publicly visible places at the main gate indicating the products, effluent discharge standards, air emission standards, hazardous waste quantities and validity of CFO. AGPL also installed the digital display board, providing electrical & LAN connections are in progress.
16.	The conditions are stipulated without prejudice to the rights and contentions of this Board in any Hon'ble Court of Law.	----
	<u>SCHEDULE – C</u>	
1.	The authorized person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.	Noted and will comply with the condition.
2.	The authorization shall be produced for inspection at the request of an officer authorized by the State Pollution Control Board.	Noted and will comply with the condition.
3.	The person authorized shall not rent, lend, sell, transfer or otherwise transport the hazardous and other wastes except what is permitted through this authorization.	Noted and will comply with the condition.
4.	Any unauthorized change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.	Noted and will comply with the condition.
5.	The person authorized shall implement Emergency Response Procedure (ERP) for which	Noted and will comply with the condition.

	this authorization is being granted considering all site specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time;	
6.	The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on “Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty”.	Noted and will comply with the condition.
7.	It is the duty of the authorized person to take prior permission of the State Pollution Control Board to close down the facility.	Noted and will comply with the condition.
8.	The industry shall comply with the provisions of HWM Rules, 2016 in terms of interstate transport of Hazardous Waste and manifest document prescribed Under Rule 18 and 19 of the HWM Rules, 2016.	Noted and will comply with the condition.
9.	The industry shall not store hazardous waste for more than 90 days as per the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.	Noted and will comply with the condition.
10.	The industry shall maintain 7 copy manifest system for transportation of waste generated and a copy shall be submitted to concerned Regional Office of APPCB. The driver who transports Hazardous Waste should be well acquainted about the procedure to be followed in case of an emergency during transit. The transporter should carry a Transport Emergency (TREM) Card.	Condition is Being Complied by AGPL.
11.	The industry shall maintain proper records for Hazardous and Other Wastes stated in Authorization in Form-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form-4 as per Rule 20 (2) of the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.	AGPL has complied with the condition. For the FY – 2023-24, the Annual Returns viz., Form – 3 E-Waste, Form – 4 Hazardous Waste & Form – 8 Used batteries returns were submitted on 28.06.2024.
12.	The industry shall route the all the hazardous wastes through M/s. APEMC.	Condition is Being Complied by AGPL.

12. Condition-wise compliance status on the conditions stipulated in the CTO & HWA Order No. APPCB/VSP/113/CTO/HO/2009, dated 22.08.2024, valid up to 31.12.2029.

S. No.	Condition	Compliance
	SCHEDULE-A	
1.	Any up-set condition in any industrial plant / activity of the facility, which result in, increased effluent / emission discharge and/ or violation of standards stipulated in this order shall be informed to this Board, under intimation to the Collector and District Magistrate and take immediate action to bring down the discharge / emission below the limits.	Noted the condition and will be followed.
2.	The facility should carryout analysis of wastewater discharges or emissions through chimneys for the parameters mentioned in this order on quarterly basis and submit to the Board.	<p>Condition is Being Complied by AGPL.</p> <ul style="list-style-type: none"> AGPL established & operating 2 No. of Sewage Treatment Plants of 1 X 30 KLD & 1 X 5.0 KLD to treat the domestic sewage generated within the Port and carrying out the analysis of the treated water through a 3rd party laboratory and submitting the reports to APPCB on monthly basis and to MoEF &CC on Half-yearly basis. As per the reports, the values are within the stipulated standards. Being a Port activity, no Chimneys exist.
3.	Notwithstanding anything contained in this consent order, the Board hereby reserves the right and powers to review / revoke any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.	Noted the condition.
4.	The facility shall ensure that there shall not be any change in the process technology, source & composition of raw materials and scope of working without prior approval from the Board.	Noted the condition and will be followed.
5.	The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.	<p>Condition is Being Complied by AGPL.</p> <p>AGPL has submitted Environment Statement – Form – V is on 28.09.2024 for the FY 2023-2024.</p>
6.	The applicant should make applications through Online for renewal of Consent	Noted the condition and will be followed.

	(under Water and Air Acts) and Authorization under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts and detailed compliance of CTO conditions for obtaining Consent & HW Authorization of the Board.	
7.	The facility should immediately submit the revised application for consent to this Board in the event of any change in the raw material used, processes employed, quantity of trade effluents & quantity of emissions. Any change in the management shall be informed to the Board. The person authorized should not let out the premises / lend / sell / transfer their industrial premises without obtaining prior permission of the State Pollution Control Board.	Noted the condition and will be followed.
8.	Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to Appellate authority constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.	Noted the condition.
9.	The facility shall be liable to pay Environmental Compensation / Other Environmental Taxes, if any environmental damage caused to the surroundings, as fixed by the Collector & District Magistrate or any other competent authority as per the Rules in vogue.	Noted the condition.
10.	The facility may explore the possibility of tapping the solar energy for their energy requirements.	AGPL is in the process of power purchase agreement from renewables (Wind and Solar) through AP Transco via Interstate Power Transmission system.
11.	The facility should educate the workers and nearby public of possible accidents and remedial measures.	AGPL is conducting safety TBT on regular basis to the employees, port users and Mock drills periodically.
S. No.	SCHEDULE-B	
	The issue of CTO&HWA (Expansion) to the facility was placed in the Consent Management Committee meeting held on 08.08.2024. The facility shall comply with the following conditions:	
1.	The facility shall install the digital display board at Port premises.	Installed digital display board at Port premises.

2.	The facility shall ensure the energy conservation measures by solar power generation.	AGPL is in the process of power purchase agreement from renewables (Wind and Solar) through AP Transco via Interstate Power Transmission system.																																																								
3.	The facility shall comply with the Task Force directions dated 27.04.2023, and conditions stipulated in CTO order dated 22.08.2023 and the control measures proposed by the facility as committed vide letter dated 05.08.2024. The details are as follows:																																																									
<table><tr><th>S. No</th><th>Project Details</th><th>Project Term</th><th>Target Date</th><th>Status</th></tr><tr><td>1.</td><td>Replacement of the existing 3 No. of CAAQM Stations with Beta Ray Attenuation Technology</td><td>Short Term</td><td>November, 2024</td><td>PO Released 23.08.2024 CAAQM Stations received at site. Civil work completed. Providing electrical and other installation is in progress.</td></tr><tr><td>2.</td><td>Separate / individual digital water meters to be provided at Critical locations</td><td>Short Term</td><td>November, 2024</td><td>PO Released on 30.08.2024.</td></tr><tr><td>3.</td><td>Replacement of existing Analog meters with Digital Water Flow Meters for 2 STP Outlet and New tyre washing outlet purpose.</td><td>Short Term</td><td>November, 2024</td><td rowspan="2">Material reached site. Providing electrical and installation is in progress.</td></tr><tr><td>4.</td><td>Replacement of existing Analog meters with IOT and digital flow meters.</td><td>Short Term</td><td>November, 2024</td></tr><tr><td>5.</td><td>DG set retrofitting as per the CPCB / SPCB directions to the existing DG sets</td><td>Short Term</td><td>November, 2024</td><td>Vendor negotiations are in progress.</td></tr><tr><td>6.</td><td>Pre & Post dredging marine ecological study to be taken-up separately.</td><td>Short Term</td><td>January 2025.</td><td>PO issued and Pre-dredging sampling proposed on 20.10.2024</td></tr><tr><td>7.</td><td>Extension of the wind break wall provided towards Gangavaram (V) for another 350 meters.</td><td>Medium</td><td>March-2025.</td><td>Vendor negotiations are in progress.</td></tr><tr><td>8.</td><td>In addition to the closed shed for storage of waste oils & other solid wastes, additional storage shed for storage of Non-Hazardous and Hazardous waste to cater the storage needs for 3 months storage</td><td>Long term</td><td>12 Months</td><td><ul style="list-style-type: none">Vendor negotiations are in progress.Site allocation & finalizing the drawings are in progress.</td></tr><tr><td>9.</td><td>Under Mechanization & Modernization – to upgrade the Stack yards with MDSS System in addition to the existing 176 no. of PLC based MDSS System</td><td>Long term</td><td>18 Months</td><td><ul style="list-style-type: none">Vendor negotiations are in progress.Site allocation & finalizing the drawings are in progress.</td></tr><tr><td>10.</td><td>Further strengthening the existing drainage system along with collection pits.</td><td>Long term</td><td>18 Months</td><td>Budget allocation & vendor negotiations are in progress.</td></tr></table>					S. No	Project Details	Project Term	Target Date	Status	1.	Replacement of the existing 3 No. of CAAQM Stations with Beta Ray Attenuation Technology	Short Term	November, 2024	PO Released 23.08.2024 CAAQM Stations received at site. Civil work completed. Providing electrical and other installation is in progress.	2.	Separate / individual digital water meters to be provided at Critical locations	Short Term	November, 2024	PO Released on 30.08.2024.	3.	Replacement of existing Analog meters with Digital Water Flow Meters for 2 STP Outlet and New tyre washing outlet purpose.	Short Term	November, 2024	Material reached site. Providing electrical and installation is in progress.	4.	Replacement of existing Analog meters with IOT and digital flow meters.	Short Term	November, 2024	5.	DG set retrofitting as per the CPCB / SPCB directions to the existing DG sets	Short Term	November, 2024	Vendor negotiations are in progress.	6.	Pre & Post dredging marine ecological study to be taken-up separately.	Short Term	January 2025.	PO issued and Pre-dredging sampling proposed on 20.10.2024	7.	Extension of the wind break wall provided towards Gangavaram (V) for another 350 meters.	Medium	March-2025.	Vendor negotiations are in progress.	8.	In addition to the closed shed for storage of waste oils & other solid wastes, additional storage shed for storage of Non-Hazardous and Hazardous waste to cater the storage needs for 3 months storage	Long term	12 Months	<ul style="list-style-type: none">Vendor negotiations are in progress.Site allocation & finalizing the drawings are in progress.	9.	Under Mechanization & Modernization – to upgrade the Stack yards with MDSS System in addition to the existing 176 no. of PLC based MDSS System	Long term	18 Months	<ul style="list-style-type: none">Vendor negotiations are in progress.Site allocation & finalizing the drawings are in progress.	10.	Further strengthening the existing drainage system along with collection pits.	Long term	18 Months	Budget allocation & vendor negotiations are in progress.
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	11.	To control the fugitive emissions, supporting with rows of greenbelt, propose to provide windshields around the individual operational areas	Long term	12 Months	<ul style="list-style-type: none">Air quality monitoring study for installation of wind shield was completed.Budget allocation & vendor negotiations are in progress.
	12.	All the existing Phase – I & II stack yards intermediate peripheral retaining wall for each stack pile in the yards for further protection of stockpiles.	Long term	18 Months	Site clearance & drawing finalization is in progress.
Water Pollution:					
4.	The source of water is Visakhapatnam Industrial Water Supply Co. The following is the permitted water consumption:			Condition is Being Complied by AGPL. The average water consumption for September 2024 was 926 KLD	
	S. No.	Purpose	Quantity (KLD)		
	1.	Gardening	92		
	2.	Dust Suppression, Truck tyre washing etc.	1373		
	3.	Ship supply	50		
	4.	Miscellaneous	10		
	5.	Domestic	75		
		Total	1600 KLD		
	Separate meters shall be maintained for assessing the quantity of water used for each of the purposes mentioned above purpose.				
5.	The effluent discharged shall not contain constituents more than the tolerance limits mentioned below:			<ul style="list-style-type: none">AGPL established & operating 2 No. of Sewage Treatment Plants of 1 X 30 KLD & 1 X 5.0 KLD to treat the domestic sewage generated within the Port and carrying out the analysis of the treated water through a 3rd party laboratory and submitting the reports to APPCB on monthly basis and to MoEF &CC on Half-yearly basis.As per the reports, the values are within the stipulated standards.	
	Out let	Parameter	Limiting Standards (mg/l except for pH)		
	1	pH	6.50 – 8.50		
		Oil and Grease	10		
		Biochemical Oxygen Demand	30		
		Total Suspended Solids	<100		
		Fecal Coliform (FC) (Most Probable Number per 100 milliliter, MPN/100ml)	<1000 MPN/100 ml		
6.	The facility shall maintain Electro Magnetic flow meters with totalizers for water consumption, effluent generation mentioned in the Order.			PO Released on 30.08.2024. Material yet to receive.	
7.	The facility shall provide & maintain separate energy meters for Sewage Treatment Plant			Maintaining separate energy meters for Sewage Treatment Plant.	

	(STP) and for Air pollution Control equipment to record energy consumption.	
8.	The effluent / sewage shall be treated to the on land for irrigation standards, as stipulated under schedule VI Environment (Protection) Rules, 1986, notified by Ministry of Environment And Forests, Government Of India vide G.S.R.422 (e), dt.19.05.1993 and its amendments thereof. The treated wastewater shall be used for development of greenery, dust suppression, re-used for various purposes within the premises.	Condition is Being Complied by AGPL.
9.	DO levels in the sea water at the dredging area shall be monitored at regular interval and the dredging time shall be suitably regulated to prevent depletion of DO levels in the sea	AGPL carrying out the Terrestrial & Marine parameters analysis on fortnight basis through 3 rd party agency and submitting the analysis reports to APPCB on monthly basis and to MoEF &CC on Half-yearly basis.
	Air Pollution:	
10.	The facility shall ensure compliance of the National Ambient Air quality standards notified by MoE&F, GoI vide notification No. GSR 826(E), dated. 16.11.2009 during construction and regular operational phase of the project.	<p>AGPL installed & operating 4 No. of CAAQM stations were installed to measure the parameters PM 10, PM 2.5, SO₂, NO, NO₂, CO at the following locations and data connected to APPCB website.</p> <p>Downwind directions towards habitation</p> <ol style="list-style-type: none"> Administrative office towards H.B. Colony (Station 1): Project site office building towards Venkannapalem (Station2) Watch tower – 4 towards Gangavaram village (Station-3). <p>Upwind direction towards RINL</p> <ol style="list-style-type: none"> At New Pump House (upwind directions) – Statin - 4 <p>As per the data, the SPM values are within Board standards.</p>
11.	<p>The facility shall comply with ambient air quality standards of PM₁₀ (Particulate Matter size less than 10mm) - 100 mg/ m³; PM_{2.5} (Particulate Matter size less than 2.5 mm) - 60 mg/ m³; SO₂- 80 mg/ m³; NO_x - 80 mg/m³, outside the factory premises at the periphery of the facility.</p> <p>Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009.</p> <p>Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A) Nighttime (10 PM to 6 AM) - 70 dB (A)</p>	<p>Condition is Being Complied by AGPL.</p> <p>AGPL installed & operating 4 No. of CAAQM stations were installed to measure the parameters PM 10, PM 2.5, SO₂, NO, NO₂, CO at the following locations and data connected to APPCB website.</p> <p>Downwind directions towards habitation</p> <ol style="list-style-type: none"> Administrative office towards H.B. Colony (Station 1): Project site office building towards Venkannapalem (Station2) Watch tower – 4 towards Gangavaram village (Station-3).

		<p>Upwind direction towards RINL</p> <p>iv. At New Pump House (upwind directions) – Statin - 4</p> <p>As per the data, the SPM values are within Board standards.</p>
12.	The facility shall comply with emission limits for DG sets of capacity upto 800 KW as per the Notification G.S.R. 804(E), dated 03.11.2022, under the Environment (Protection) Act Rules. In case of DG sets of capacity more than 800 KW shall comply with emission limits as per the Notification G.S.R.489 (E), dated 09.07.2002 at serial no.96, under the Environment (Protection) Act, 1986.	<p>AGPL permitted to operate the following capacities of DG sets</p> <p>3 X 320 KVA, 3 X 1250 KVA 1 X 800 KVA, 2 X 380 KVA, 1 X 200 KVA DG Sets which are being used for emergency power backup.</p>
13.	The facility shall comply with the noise limits for DG sets (upto 1000 KVA) as per G.S.R.520 (E), dated 01.07.2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Act Rules.	<p>AGPL permitted to operate the following capacities of DG sets</p> <p>3 X 320 KVA, 3 X 1250 KVA 1 X 800 KVA, 2 X 380 KVA, 1 X 200 KVA DG Sets which are being used for emergency power backup.</p>
14.	The facility shall maintain 4 CAAQMs with online connectivity to APPCB and maintain records.	Condition is Being Complied by AGPL.
15.	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the project area at least at four locations, covering upwind and downwind directions.	<p>Condition is Being Complied by AGPL.</p> <p>AGPL installed & operating 4 No. of CAAQM stations were installed to measure the parameters PM 10, PM 2.5, SO², NO, NO², CO at the following locations and data connected to APPCB website.</p> <p>Downwind directions towards habitation</p> <ol style="list-style-type: none"> Administrative office towards H.B. Colony (Station 1): Project site office building towards Venkannapalem (Station2) Watch tower – 4 towards Gangavaram village (Station-3). <p>Upwind direction towards RINL</p> <p>iv. At New Pump House (upwind directions) – Statin - 4</p> <p>As per the data, the SPM values are within Board standards.</p>
16.	The facility shall not stack the materials more than 12 meters height where MDSS system is available and shall maintain stack height of 10 meters at manual stack yards.	Condition is Being Complied by AGPL.
17.	The facility shall maintain wind breaking wall all along the Gangavaram village side up to a	Erected wind breaking wall of height 6m on the compound wall of height 3m near

	height 10 mts as wind speed is high in this area.	Gangavaram village and HB Colony to prevent any dust nuisance towards habitation & maintaining about 50 m width of green belt along port compound wall near Gangavaram (V).
18.	The facility shall not establish any other stock yards other than designated stock yards.	Being followed.
19.	The facility shall maintain Telescopic chute at ship loading points	Maintaining Telescopic chute at ship loading points.
20.	The facility shall maintain dusty cargo operations if the wind velocity crosses 20 KMPH and all MDSS sprinklers shall start immediately to maintain AAQ standards.	Being followed.
21.	The facility shall maintain fully mechanized handling equipment for loading and unloading operations for dusty cargo to the maximum extent possible.	Condition is Being Complied by AGPL.
22.	The facility shall handle alumina in completely closed enclosures.	Condition is Being Complied by AGPL.
23.	<p>The facility shall maintain comply with the following for controlling fugitive emissions</p> <ol style="list-style-type: none"> Vehicle movement shall be minimized / eliminated by implementing mechanical operation. All the vehicles involved in transportation of cargo shall be covered with tarpaulin. Vehicles shall be managed to avoid traffic congestion and shall provide empty dusting vehicle washings / dry cleaning system to clean all out going cargo vehicles. Based on traffic density/ vehicular movements anticipated from the port, parking facilities shall be provided. 	<p>Condition is Being Complied by AGPL.</p> <ol style="list-style-type: none"> Established mechanical conveyor system for handling coal & Iron ore to prevent the spillage of cargo and provided closed hoods for the conveyor system to curb fugitive emissions of coal/iron ore particles into the air. Stacker cum re-claimers is being used for loading and unloading the coal. The railway wagons are being loaded mechanically. Established 16 No. of semi mechanized truck tarpaulin covering stations at various locations within the Port to facilitate and ensure all the outgoing cargos by Trucks are covered with tarpaulin. Ensuring that the tarpaulin is covered in all sides of the truck and tightly tied with rope so that the tarpaulin should not be uncovered while traveling until the truck reaches the destination without any transit spillage. Provided dedicated truck/tyre washing facility to wash all the outgoing vehicles Provided dedicated truck parking facility.
24.	All the transfer points, loading / unloading	Established mechanical conveyor system for

	points and conveyer systems shall be housed completely with leak proof arrangements. Adequate dust suppression and containment measures shall be implemented for effective control of fugitive emissions.	handling coal & Iron ore to prevent the spillage of cargo and provided closed hoods for the conveyor system to curb fugitive emissions of coal/iron ore particles into the air.																
25.	The facility shall maintain the following: a. The facility shall provide cladding / cover to the screen, conveyors and crusher. b. Sprinklers shall be provided to suck emissions at transfer points of conveyors. c. The facility shall maintain ambient air quality within the Board standards. d. The facility shall co-ordinate with traffic police and GVMC for regular cleaning of roads upto National Highway to suppress the dust emissions.	 f. Complied. g. Provided. h. Condition is Being Complied by AGPL. i. Condition is Being Complied by AGPL.																
	General:																	
26.	The facility shall not handle any un-consented cargo and not exceed the quantities mentioned in this order, without CTE & CTO order of the Board.	Condition is Being Complied by AGPL. AGPL has handled the consented cargoes 1.52 MMT during September 2024.																
27.	<div>The facility shall not dispose any non-hazardous waste outside the facility premises. The facility shall dispose other non-hazardous wastes as per the disposal option specified below:<table><tr><th>S. No</th><th>Name of the solid waste</th><th>Quantity</th><th>Method of Disposal</th></tr><tr><td>1.</td><td>Domestic solid waste</td><td>13.60 TPM</td><td>Shall be collected segregated and disposed as per MSW Rules in consultation with GVMC authorities</td></tr><tr><td>2.</td><td>Discarded</td><td>10.25 TPM</td><td>Shall be disposed to authorised recyclers only</td></tr><tr><td>3.</td><td>Sludge from STP</td><td>1.165 TPM</td><td>Shall be composted and used in green belt program</td></tr></table></div>	S. No	Name of the solid waste	Quantity	Method of Disposal	1.	Domestic solid waste	13.60 TPM	Shall be collected segregated and disposed as per MSW Rules in consultation with GVMC authorities	2.	Discarded	10.25 TPM	Shall be disposed to authorised recyclers only	3.	Sludge from STP	1.165 TPM	Shall be composted and used in green belt program	Condition is Being Complied by AGPL.
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	<p>recycled/reused and disposed to CETP.</p> <p>c. Logbooks for pollution control systems.</p> <p>d. Characteristics of effluents and emissions.</p> <p>e. Hazardous/non-hazardous solid waste generated and disposed.</p> <p>f. Inspection book.</p> <p>g. Manifest copies of effluents / hazardous waste.</p>	<p>b. Being maintained.</p> <p>c. The CAAQM Stations are connected to APPCB website.</p> <p>d. AGPL carrying-out the Terrestrial & Marine monitoring on fortnightly and submitting the Analysis reports to APPCB on Monthly basis.</p> <p>e. AGPL is disposing the waste oil through APEMCL only.</p> <p>f. Condition is Being Complied by AGPL.</p> <p>g. AGPL is disposing the waste oil through APEMCL only.</p>
29.	<p>The following rules and regulations (as amended and upgraded from time to time) notified by the MoEF&CC, GoI shall be implemented.</p> <p>a. Regulation of Persistent Organic Pollutants Rules, 2018.</p> <p>b. Hazardous waste and other wastes (Management and Transboundary Movement) Rules, 2016.</p> <p>c. Plastic Waste Management Rules, 2022.</p> <p>d. Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989</p> <p>e. Fly Ash Notification, 2016.</p> <p>f. Battery Waste Management Rules, 2022.</p> <p>g. E-Waste (Management) Rules, 2022.</p> <p>h. Construction and Demolition waste Management Rules, 2016.</p> <p>i. Solid Waste Management Rules, 2016.</p> <p>j. The Public Liability Insurance Act, 1991 and its amendments thereof.</p> <p>k. Bio Medical Waste Management Rules, 2016.</p>	<p>Condition is Being Complied by AGPL.</p> <p>a. Noted and being a port activity, there will not be any organic pollutants.</p> <p>b. Condition is Being Complied by AGPL and disposing the waste oil / used oil through APEMCL only.</p> <p>c. Disposing the plastic waste to Authorized Recycler only.</p> <p>d. Not handling any Hazardous chemicals.</p> <p>e. Being port activity, no fly ash generation involved.</p> <p>f. Disposing the used batteries to authorized recycler only.</p> <p>g. Disposing the E-waste to the authorized recycler only.</p> <p>h. Condition is Being Complied by AGPL.</p> <p>i. The solid waste generated is being disposed to MSW Site on regular basis.</p> <p>j. AGPL is having Public liability Insurance Policy No: 41094403, dated 23.09.2024, Valid till 13/09/2025 with Premium of Rs-5161/- & ERF of Rs.5161/-</p> <p>k. AGPL is operating a OHC to provide first-aid to the needy and the Bio-Medical waste is being disposed to M/s. Vasishtha Environ Care, the authorized</p>

		recycler.
30.	Spillage of fuel / engine oil and lubricants from the site are a source of organic pollution which impacts marine life, particularly benthos. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.	AGPL is following the updated oil spillage contingency plan & conducting mock drills from time to time.
31.	Shrouding shall be carried out in the work site enclosing the dock/proposed facility area. This will act as dust curtain as well achieving zero dust discharge from the site. These curtain or shroud will be immensely effective in restricting disturbance from wind in affecting the dry dock operations, preventing waste dispersion, improving working conditions through provision of shade for the workers.	Established mechanical conveyor system for handling coal & Iron ore to prevent the spillage of cargo and provided cladding & closed hoods for the conveyor system to curb fugitive emissions of coal/iron ore particles into the air.
32.	The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.	Condition is Being Complied by AGPL.
33.	The facility shall obtain prior permission from MoEF&CC, GoI and APPCB for any changes in the cargo type / capacity.	Noted and being complied.
34.	The facility shall comply with the conditions stipulated in the EC order dt.24.12.2021 issued by the MoEF, CC & GoI & CTE orders dated 02.03.2012 & 16.08.2022 and CTO orders dated 13.01.2016, 22.08.2023 issued by APPCB.	Noted and being complied.
35.	The facility shall maintain green belt as stipulated in the EC order.	<ul style="list-style-type: none"> ➤ Completedt plantation of 40,634 saplings during the financial year 2024-25. ➤ For the FY 2024-25 AGPL completed plantation of 11,808 up to 30.09.2024. ➤ As of now AGPL developed plantation with morethan 5.5 Lakhs saplings in about 320 acres within the Port premises besides existance of Prosopis in an extent of about 150 Acres covering periphery of all yards, roads, buildings and all along conveyor belt. ➤ Maintaining 50 m width of green belt towards North and North-West direction with special emphasis towards habitation i.e., HB Colony, Peda Gantyada, Venkannapalem, Kongapalem & Gangavaram village. ➤ Maintaining thick greenbelt at Port Approach Road, Railway track side and

		<p>at Truck parking area along the wind breaking wall towards HB Colony.</p> <p>➤ Maintaining exclusive nursery with 80,000 saplings and employed 183 people to maintain and improve the green belt on continuous basis.</p>
36.	The facility shall maintain valid PLI policy which includes Environmental Relief Fund (ERF) and submit copy to RO, Visakhapatnam on yearly base.	AGPL is having Public liability Insurance Policy No: 41094403, dated 23.09.2024, Valid till 13/09/2025 with Premium of Rs-5161/- & ERF of Rs.5161/-
37.	The facility shall maintain digital display boards at publicly visible places at the main gate indicating the products manufactured Vs permitted quantities, treated effluent concentrations Vs discharge standards, stack emission & AAQ concentrations Vs standards, hazardous waste generation, disposed, stock Vs permitted quantities and validity of CTO; and exhibit the CTO order at a prominent place in the factory premises, as per Hon'ble Supreme Court order.	Complied.
38.	The facility shall strictly comply with the directions of the Hon'ble NGT issued, if any, in O.A. No .571/2022.	<p>Complied.</p> <p>AGPL has achieved 100% compliance and submitted the latest status report to APPCB on 14.08.2024 for the period from April to June 2024.</p>
39.	The conditions are stipulated without prejudice to the rights and contentions of this Board in any Hon'ble Court of Law.	Noted the condition.
	Special conditions:	
40.	Fire detection and firefighting facilities with adequate water storage facility shall be provided in fire prone area in consultation with competent authorities.	Condition is Being Complied by AGPL.
41.	Onsite & offsite Disaster Management plan shall be prepared to meet any eventuality in case of any accident. Mock drills shall be conducted atleast twice a year and modifications required if any shall be incorporated in Disaster Management Plan and shall submit to Board.	<p>An onsite and offsite emergency action plan has been prepared and submitted to APPCB, RO, and VSP.</p> <p>Organizing periodical mock drills to draw the attention of the employees and to create the awareness of safety issues.</p> <ul style="list-style-type: none"> Organizing periodical fire & safety trainings as a part of preparedness to face the challenges. Conducting workshops/seminars by top management involving all the employees & stakeholders to create the awareness of safety issues and preventive measures. Organizing Safety awareness through mobile video van at workplace, Conducting Tool Box Talk at work place

		involving employees & associates on regular basis.
42.	The facility shall prepare a safety report and carry out an independent safety audit report of the respective industrial activities including chemical storages / isolated storages by an expert not associated with such industrial activity as required under Rule 10 of MSIHC Rules, 1989 and get it approved by the Factories Dept., and submit the compliance along with copy of the safety report, safety audit report and safety certificate at concerned Regional Office, APPCB.	<p>An onsite emergency action plan has been prepared and submitted to APPCB, RO, and VSP.</p> <p>Mock drills are being conducted periodically.</p>
43.	The facility shall extend training to the working personnel for the prevention of accidents and necessary antidotes to ensure safety, as per the MSIHC Rules, 1989.	<p>Condition is Being Complied by AGPL.</p> <ul style="list-style-type: none"> Organizing periodical fire & safety trainings as a part of preparedness to face the challenges. Conducting workshops/seminars by top management involving all the employees & stakeholders to create the awareness of safety issues and preventive measures. Organizing Safety awareness through mobile video van at workplace, Conducting Toolbox Talk at workplace involving employees & associates on regular basis.
44.	The facility shall carryout calibration of safety equipment and leak detection systems at regular intervals and shall certify the same with the Factories Department. That certified copy shall be submitted to the APPCB, Regional Office.	Noted and this condition.
45.	The facility shall submit Risk analysis and risk assessment covering worst scenario clearly describing impact within the facility premises and outside the facility premises and emergency response system.	AGPL is maintaining onsite emergency plan and updated during November 2023.
46.	The facility shall submit the copy of the safety audit report and On-Site / Off Site Emergency Plans as applicable after being certified by the Factories Department to the APPCB, Regional Office from time to time, if the storage quantity of hazardous chemicals is equal to or, in excess of the threshold quantities specified in schedule 2 & 3 of MSIHC Rules, 1989.	AGPL is maintaining onsite emergency plan and updated during November 2023.

SCHEDULE – C

S. No.	Condition	Compliance
1.	The authorized person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.	Condition is Being Complied by AGPL.
2.	The authorization or its renewal shall be produced for inspection at the request of an officer authorized by the State Pollution Control Board.	Condition is Being Complied by AGPL.
3.	The person authorized shall not rent, lend, sell, transfer or otherwise transport the Hazardous and other wastes except what is permitted through this authorization.	Condition is Being Complied by AGPL.
4.	Any unauthorized change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.	Noted the condition and will be followed.
5.	The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site-specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.	Noted the condition and will be followed.
6.	The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on “Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty”.	Noted the condition and will be followed.
7.	It is the duty of the authorized person to take prior permission of the State Pollution Control Board to close down the facility.	Noted the condition and will be followed.
8.	An application for the renewal of an authorization shall be made as laid down under these Rules.	Noted the condition and will be followed.
9.	Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.	Noted the condition and will be followed.
10.	Annual return shall be filed by June 30th for the period ensuring 31st March of the year.	For the FY – 2023-24, the Annual Returns viz., Form – 3 E-Waste, Form – 4 Hazardous Waste & Form – 8 Used batteries returns were submitted on 28.06.2024.
11.	The authorized person shall not store hazardous waste for more than 90 days as per the Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016.	Noted the condition and will be followed.

12.	The authorized person shall store Used /Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal to the manufacturers / dealers on buy back basis.	Used battery returns Annual returns Form-8 for the period 2023-2024 submitted on 28.06.2024
13.	The authorized person shall maintain 7 copy manifest system for transportation of waste generated and a copy shall be submitted to concerned Regional Office of APPCB. The driver who transports Hazardous Waste should be well acquainted about the procedure to be followed in case of an emergency during transit. The transporter should carry a Transport Emergency (TREM) Card.	The Used / Waste oil is being disposed through APEMCL duly following the SOP.
14.	The authorized person shall maintain proper records for Hazardous & other wastes stated in Authorization in Form-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 6 (5) of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 and amendments thereof by June 30th for the period ensuring 31st March of the year.	For the FY – 2023-24, the Annual Returns viz., Form – 3 E-Waste, Form – 4 Hazardous Waste were submitted on 28.06.2024.
15.	The authorized person shall submit the condition wise compliance report of the conditions stipulated in Schedule A, B &C of this Order on half yearly basis to Board office and concerned Regional office.	Being submitted.
16.	The industry shall route all the hazardous waste through M/s. APEMC.	Condition is Being Complied by AGPL.

Chapter 6

Conclusion Remarks



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF &CC and SPCB (for the period from October 2024 to March 2025)



6.1 Conclusion Remarks & Compliance Certification:

The project proponent M/s. Adani Gangavaram Port Limited (AGPL) approached **Hubert Enviro Care Systems (P) Ltd., (HECS)** to undertake Auditing, preparation & Certification of the compliance status of the conditions stipulated in the EC & CRZ Clearance of MoEF & CC, CTE & CTO of APPCB including Monitoring/Sampling of Air, Terrestrial & Marine parameters and Environmental Data analysis for various environmental factors for which HECS accepted the job to Audit, prepare & submit the certified Half-yearly Compliance to MOEF & CC & APPCB.

As per the scope of the work, the Environmental data has been collected for various environmental components

This report comprises with 7 chapters including Annexures covering all the information of the Port activities & updated compliance status of all the conditions stipulated in EC & CRZ of MoEF & CC, CTE & CTO of A.P. Pollution Control Board.

This report has been prepared by **Hubert Enviro Care Systems (P) Ltd., (HECS)**., with all reasonable skill, care and diligence within the terms of the contract with the client, and with the data provided & available, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.


M/s. Hubert Enviro Care Systems (P) Ltd., (HECS).

A-21,III Phase, Behind Lions Club School, Thiru Vi Ka Industrial Estate, Guindy, Chennai – 600 032, Tamilnadu , India.

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E-mail : Marketing@hecs.in

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Dr. RAJKUMAR SAMUEL
Director Technical

Dr. Rajkumar Samuel
Director

6.2 Compliance Audit Remarks:

1. AGPL is an ISO 9001:2015, ISO 14001 2015, ISO 45001:2018 and ISO 50001:2018, ISO 14001-2015 Certified Port for providing Integrated Seaport Facilities and Related Services for Handling, Storage and Delivery of Cargo.
2. AGPL is having valid consent of A.P. Pollution Control Board up to 31.12.2025 and the cargo handled for the FY 2023-24 is within the limits of the consented volume.
3. Majority of Port operations (80%) are carried out through mechanized terminals and through sophisticated cargo handling equipment so as to avoid cargo spillage and dust emissions during the cargo handling activities.
4. Provided hooded conveyer system for transportation of bulk dusty cargo.
5. Bulk alumina is being handled through closed containers.
6. AGPL developed infrastructure facilities for handling Container Cargo and presently the facility is not handling any liquids.
7. Constructed & operating 12 No. of Closed Cargo Sheds to handle fertilizer, food grains etc.,
8. The source of water is VIWSCO and the storm drain water for dust suppression of internal haul roads & yards. The water quantities are within the permitted quantities.
9. AGPL has been operating 4 No. of CAAQM stations at the locations advised APPCB to measure the parameters PM 10, PM 2.5, SO₂, NO, NO₂, CO and data connected to APPCB website. The values are within the prescribed standards.
10. AGPL has been maintaining the stacks height below 12 mts height where MDSS system available and 10 meters at manual stack yards as per the CTO Amendment Order dated 16.09.2016.
11. AGPL has been operating a PLC based Mechanical Dust Suppression System comprising with 176 No. of cannons for wetting the stacks in the stack yards and 20 No. of tankers are being used for dust suppression for ensuring continuous wetting of internal roads.
12. Provided 16 No. of semi mechanized truck tarpaulin covering stations at various locations within the Port and Rail Wagon tarpaulin covering facility at Silo to ensure all the outgoing cargos by Trucks are covered with tarpaulin. The facility is one of its kind established 1st time in India and received "Industrial Safety Excellence Award-2021 from the Confederation of Indian Industry (CII)
13. Operating an automatic sensor-based truck tyre washing facility on 24/7 basis, and established & operating 2nd automatic sensor based truck tyre. washing facility of fully advanced technology in addition to the existing one
14. Operating 5 No. of heavy duty sweeping machines for cleaning of berths, back up areas & roads and cleaning the haulage roads manually

15. AGPL appointed an ISO 9001-2015 Certified Agency to carry-out monitoring parameters of terrestrial as well as marine water quality and submitting the report to A.P. Pollution Control Board on monthly basis. The values are found to be within the prescribed standards.
16. Analyses reports of marine water and sediment quality showed that all the parameters are within normal value. The parameters like DO, BOD, COD, Ammonia, Organic loads, etc., are within the prescribed limits. The results indicate no gross changes in water and sediment component by port activities.
17. Maintaining/ cleaning the storm water drain periodically by removing the settled sludge to avoid contamination in surrounding water bodies.
18. Provided collection bins at about 76 locations within the port premises for collection of dry & wet solid & domestic waste, and disposing the waste to GVMC dumpsite.
19. Provided Settling ponds at yards for collection of yards' runoff and the supernatant water is being used for dust suppression.
20. A natural pond is available in Nursery area for collection of rain/runoff water. The water is utilizing for nursery development
21. Imposed ban on usage of single use plastic and consumption of tobacco products within the Port premises.
22. The IMD Department has established a continuous weather monitoring system in the port premises and AGPL is one and only Port having the IMD Automatic Weather Station (AWS) Installed by the Indian Meteorological Department. Visakhapatnam within the Port premises which is available in the domain IP address <http://aws.imd.gov.in> 8091.
23. The Port also established 2 more weather stations to know the forecast
24. Maintaining exclusive nursery with about 60 to 70,000 saplings of Avenue, Ornamental & Fruit bearing species
25. A thick green belt developed with about 5.50 lakhs plants within the Port area in an extent of about 320 Acres covering periphery of all yards, roads, buildings and all operational areas and maintaining 50 m width of green belt towards North and North-West direction with special emphasis towards habitation
26. AGPL has planted ever highest plantation of 2,02,000 during the FY 2023-24
27. AGPL has been continuing development of High Density Plantation (Miyawaki) within the Port premises as earlier carried out in an extent of 1.0 Acre with 12,120 no. of plantation, as directed by APPCB.
28. Maintaining a Vermi Compost unit and the compost is being used for nursery. development.

29. Operating 2 No. of Sewage Treatment Plants to cater the needs of sewage water treatment and the treated water is being used for greenbelt. development/Dust suppression within the Port premises.
30. STP Treated water has been utilizing for greenbelt development/dust suppression
31. There is no Ground Water withdrawal within the Port premises.
32. Provided Bio-Tollets Considering the welfare of the regular employees 8 Associates all operational areas to cater to the needs.
33. Operating an Occupational Health Centre (OHC) to provide First Aid facility and disposing the Bio-Medical waste to authorized BMWTF Operator.
34. Submitting all the monthly, half-yearly and annual compliance reports viz., Form1 Water Consumption, Form 3, E-waste, Form 4 Hazardous Waste, Form 5 Annual Environment Statement, MoEF & CC Half yearly compliance reports within the stipulated date.
35. Complying with all the conditions 8 directions issued by the statutory departments.
36. Conducting seminars/workshops/programmes/competitions & rallies on Environment & Sustainability among the employees & associates as a part of promoting awareness.
37. Organizing periodical mock drills, fire 8 safety trainings workshops/seminars involving all the employees & stakeholders to create the awareness of safety Issues and preventive measures.
38. AGPL has been focusing on safety aspects and maintaining SOP (Standard Operating Procedure) for every minor or major works, and strictly implementing "No 50P-No Work" policy.
39. Provided safety barricades from Port main gate to Harbour gate all along the 4 Lane road both side for pedestrians as well as two wheelers.
40. All the activities are closely monitored through an Integrated Security Control Room (ISCR).
41. A study was carried out through the Department of Environmental Science, Engineering and Management, Andhra University to establishing the Ambient Air Quality Levels with existing system. As per the e study recommendations, the replacement of existing covered conveyor system with tube conveyor system is not necessary.
42. As per the Carbon Stock and Sequestration Potential of the Green Belt Plantation study, the total carbon generation from the 318.21acres (128.77 ha) is 24857.9 tons and based on the CO₂ stock in trees data, the total oxygen generated by the trees in the port is estimates as 17611.27 tons/year
43. AGPL is the Platinum Award winner of Aped India Green Leaf Award 2023 for Environment Excellence for the year 2023-2024. Earlier AGPL won the Greentech International Foundation Award in the categories viz., EHS Best Practices & Environment Excellency consecutively for the years 2022 & 2023.




Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF &CC and SPCB (for the period from October 2024 to March 2025)



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Dr. RAJKUMAR SAMUEL
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Dr. Rajkumar Samuel
Director



Half-Yearly Compliance status on the conditions stipulated in EC & CRZ Clearance, CTE & CTO Orders (including Amendments) issued to Adani Gangavaram Port Limited (Formerly M/s. Gangavaram Port Limited), Gangavaram (P), Pedagantyada (M), Visakhapatnam District, Andhra Pradesh by MOEF &CC and SPCB (for the period from October 2024 to March 2025)



Chapter 7

Attachments

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No.10/3/2005-1A-III
 Government of India
 Ministry of Environment and Forests.

Paryavaran Bhavan,
 C.G.O. Complex, Lodi Road,
 New Delhi-110003

Dated the 11th March, 2005

Sub: Development of Port at Gangavaram near Visakhapatnam by M/s Gangavaram Port Limited - Environmental Clearance -regarding.

Reference is invited to the letter No.6762/SADA/2004, dated 16.12.2004 from Government of Andhra Pradesh, Environment Forests Science and Technology Department regarding the subject mentioned. Further letters from M/s Gangavaram Port Limited received vide letter No.Nil, dated 30.12.2004 have also been considered.

The proposed project involves setting up of deep-water multipurpose port at Gangavaram, Visakhapatnam district suitable for handling different types of cargos. The land requirement for the project is 1800 acres, which is being made available by Government of Andhra Pradesh. The site of the port is located at Latitude 17°37' N and Longitude 83°14' E near Dibbapalem village, Pedaganryada.

The proposal envisages construction of South Break Water of 1.3 km length, North Break Water of 1.1 km length and 4 berths, (1 dry bulk cargo, 1 fertilizer/lime stone, 1 container terminal, and 1 break bulk/multipurpose) and one exclusive berth for the port crafts, besides providing ware housing facilities and transit sheds. The project involves capital dredging of 8 million cubic metres, which will pumped to the shore for reclamation of back up area. The project is classified as Coastal Regulation Zone-III category and the inter tidal zone falling in between High Tide Line and Low Tide Line is categorized as Coastal Regulation Zone-I(ii). The total cost of the project is Rs.1459 crores.

The Andhra Pradesh Pollution Control Board has accorded NOC for the project vide their letter No.113/PCB/C.Esst/RO-VSP/AEE-N/2002-1225, dated 24.7.2003.

The proposal has been examined and environmental clearance under the provisions of Coastal Regulation Zone Notification, 1991 as amended from time to time is hereby accorded to this project subject to effective implementation of the following conditions:-

(A) Specific Conditions:

- (i) The project proponent shall not undertake any destruction of mangroves during construction and operation of the project.
- (ii) All the conditions stipulated by Andhra Pradesh Pollution Control Board in their consent letter No.113/PCB/C.Esst/RO-VSP/AEE-N/2002-1225, dated 24.7.2003 shall be effectively implemented.

- (iii) Littoral drift management using Rainbow Technique should be adopted for beach nourishment on the northern side of north Break Water to combat coastal erosion problems.
- (iv) Random wave plume test should be conducted to check the stability of Breakwater section and Round Head, before commencement of work.
- (v) A large quantity of stones are proposed to be quarried from Yerada hill. Environment Management and rehabilitation plan of the quarry site should be worked out and implemented.
- (vi) Marine ecology monitoring shall be done regularly during construction of Breakwater and dredging operation.
- (vii) Regular monitoring of air quality shall be done in the settlement areas around the project site and appropriate safeguard measures shall be taken to ensure that the population is not subjected to higher levels of air pollution.
- (viii) Sewage arising in the port area shall be disposed off after adequate treatment to conform to the standards stipulated by APPCB and shall be utilized/re-cycled for gardening, plantation and irrigation.
- (ix) The Relocation of the fishermen community will be done strictly in accordance with the norms prescribed by the State Government. The relocated fishermen community will be provided with all facilities including health care, education, sanitation and livelihood.
- (x) Adequate plantation shall be carried out along the roads of the Port premises and a green belt shall be developed.
- (xi) Project proponent shall regularly update the Disaster Management Plan from time to time.
- (xii) Fire Fighting arrangements are examined to the new proposal.
- (xiii) There shall be no withdrawal of ground water in CRZ area, for this project. The proponent shall ensure that as a result of the proposed constructions, ingress of saline water into ground water does not take place. Piezometers shall be installed for regular monitoring for this purpose at appropriate locations on the project site.
- (xiv) The project shall not be commissioned till the requisite water supply and electricity to the project are provided by the PWD/Electricity Department.
- (xv) Specific arrangements for rain water harvesting should be made in the project design and the rain water so harvested should be optimally utilised. Details in this regard should be furnished to this Ministry's Regional Office at Bangalore within 3 months.

- (xvi) The facilities to be constructed in the CRZ area as part of this project should be strictly in conformity with the provisions of the CRZ Notification, 1991 as amended subsequently.
- (xvii) Land reclamation shall be carried out only to the extent that it is essential for this project.
- (xviii) Green buffer zone shall be provided all around the project area in consultation with local forest department and the report submitted to this Ministry's Regional Office at Bangalore.
- (xix) No product other than those permissible in the Coastal Regulation Zone Notification, 1991 shall be stored in the Coastal Regulation Zone area.

B. General Conditions

- (i) Construction of the proposed structures should be undertaken meticulously conforming to the existing Central/local rules and regulations including Coastal Regulation Zone Notification 1991 & its amendments. All the construction designs / drawings relating to the proposed construction activities must have approvals of the concerned State Government Departments / Agencies.
- (ii) Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. should be ensured for construction workers during the construction phase of the project so as to avoid felling of trees/mangroves and pollution of water and the surroundings.
- (iii) The project authorities must make necessary arrangements for disposal of solid wastes and for the treatment of effluents by providing a proper wastewater treatment plant outside the CRZ area. The quality of treated effluents, solid wastes and noise level etc. must conform to the standards laid down by the competent authorities including the Central/State Pollution Control Board and the Union Ministry of Environment and Forests under the Environment (Protection) Act, 1986, whichever are more stringent.
- (iv) The proponent shall obtain the requisite consents for discharge of effluents and emissions under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (prevention and Control of Pollution) Act, 1981 from the Andhra Pradesh Pollution Control Board before commissioning of the project and a copy of each of these shall be sent to this Ministry.
- (v) The proponents shall provide for a regular monitoring mechanism so as to ensure that the treated effluents conform to the prescribed standards. The records of analysis reports must be properly maintained and made available for inspection to the concerned State/Central officials during their visits.
- (vi) In order to carry out the environmental monitoring during the operational phase of the project, the project authorities should provide an environmental laboratory well equipped with standard equipment and facilities and qualified manpower to carry out the testing of various environmental parameters.

- (vii) The sand dunes and mangroves, if any, on the site should not be disturbed in any way.
- (viii) A copy of the clearance letter will be marked to the concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (ix) The Andhra Pradesh Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industries Centre and Collector's Office/Tehsildar's Office for 30 days.
- (x) The funds earmarked for environment protection measures should be maintained, in a separate account and there should be no diversion of these funds for any other purpose. A year-wise expenditure on environmental safeguards should be reported to this Ministry's Regional Office at Bangalore and the State Pollution Control Board.
- (xi) Full support should be extended to the officers of this Ministry's Regional Office at Bangalore and the officers of the Central and State Pollution Control Boards by the project proponents during their inspection for monitoring purposes, by furnishing full details and action plans including the action taken reports in respect of mitigative measures and other environmental protection activities.
- (xii) In case of deviation or alteration in the project including the implementing agency, a fresh reference should be made to this Ministry for modification in the clearance conditions or imposition of new ones for ensuring environmental protection.
- (xiii) This Ministry reserve the right to revoke this clearance, if any of the conditions stipulated are not complied with to the satisfaction of this Ministry.
- (xiv) This Ministry or any other competent authority may stipulate any other additional conditions subsequently, if deemed necessary, for environmental protection, which shall be complied with.
- (xv) The project proponent should advertise at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen at Website of the Ministry of Environment & Forests at <http://www.envformic.in>. The advertisement should be made within 7 days from the date of issue of the clearance letter and a copy of the same should be forwarded to the Regional Office of this Ministry at Bangalore.
- (xvi) The Project proponents should inform the Regional Office at Bangalore as well as the Ministry the date of financial closure and final approval of the project by the concerned authorities and the date of start of Land Development Work.

The above mentioned stipulations will be enforced among others under the Water Prevention and Control of Pollution Act, 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (protection) Act, 1986, the Hazardous Chemicals (Manufacture, Storage and Import) Rules, 1989, the Coastal Regulation Zone Notification, 1991 and its subsequent amendments and the Public Liability Insurance Act, 1991 and the Rules made

thereunder from time to time. The project proponents should also ensure that the proposal complies with the provisions of the approved Coastal Zone Management Plan of Andhra Pradesh State and the Supreme Court's order dated 18th April, 1996 in the Writ Petition No.664 of 1993 to the extent the same are applicable to this proposal.


(A. Senthil Vel)
Joint Director

To

✓
Shri K. Upendra Rao.
President,
Gangavaram Port Limited,
Plot No.208, Road No.14,
Jubilee Hills, Hyderabad-500033.
Andhra Pradesh.

Copy to:

1. Chief Conservator of Forests, Ministry of Environment & Forests, Regional Office (SZ), Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road, II Block, Koramangala, Bangalore - 560034.
2. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110032.
3. Shri T. Chatterjee, IAS, Principal Secretary to Government, Environment Forests Science and Technology Department, Secretariat, Hyderabad - 500022.
4. DIG (SU), Regional Office Cell, Ministry of Environment & Forests, New Delhi.
5. The Chairman, Andhra Pradesh State Pollution Control Board, Hyderabad.
6. Director EI Division, Ministry of Environment & Forests, New Delhi
7. Guard File.
8. Monitoring Cell.


(A. Senthil Vel)
Joint Director

No. 10-14/2009-IA.III
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi - 110 003.

Dated: 19th March, 2010.

To
M/s. Gangavaram Port Limited,
Hansa Crest, 1st Floor,
Plot No.62, Road No.1,
Jubilee Hills,
Hyderabad - 500 033,
Andhra Pradesh.

Subject: Environmental and CRZ Clearance for the construction of 5th Berth in Visakhapatnam Andhra Pradesh by M/s. Gangavaram Port Ltd. - Reg.

This has reference to the letter No: 6586/CZMA/2008, dated 24.12.2008 of Special Chief Secretary, E.F.S. & T. Department, Govt. of Andhra Pradesh and subsequent letter dated 25.05.2009 and 02.11.2009 received on 07.12.2009 seeking prior Environmental and CRZ Clearance for the above project under the EIA Notification - 2006 and CRZ Notification, 1991. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification - 2006 and subsequent amendment in 2009 and CRZ Notification, 1991 on the basis of the mandatory documents enclosed with the application viz., the Questionnaire, EIA, EMP and the additional clarifications furnished in response to the observations of the Expert Appraisal Committee constituted by the competent authority in its meetings held on 23rd - 24th April, 2009 and 21st - 23rd December, 2009.

2. It is interalia, noted that the original project was accorded Environmental Clearance for the construction of four berths and one exclusive berth for the port crafts besides providing ware housing facilities and transit sheds on 07.11.2008. The present proposal intends to develop the exclusive berth permitted earlier to accommodate the Port crafts into a full fledged General Cargo Berth with a draft of 14.50 m as part of augmenting the facilities to ensure better utilization of the constructed space. The total extent of the port area is 2,800 acres. The present proposal pertains to change of Cargo profile, to allow bigger vessels in the port, increase in number of berths, change of dimensions of berths, changes in cargo storage area etc. with an additional investment of Rs. 250 crores with a cumulative projected cost being in the order of Rs. 1650 crores.

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3. The revised scope of the project includes the changes in the orientation of breakwaters, which is based on currents, and wave pattern of the sea. The estimated quantum of net annual littoral drift is assessed to be of the order of 9,00,000 cum moving from south to north. As per the Mathematical modeling, the long shore current along the southern breakwater indicates that sediments transport takes place along the breakwater towards the entrance channel. In the case of Gangavaram the average net sediment transport is estimated to be in the order of 0.9 million cum per year. The sand trap has been provided. The sand trap is designed between - 6.0 m and - 14.0 m contours outside the south breakwater to trap 0.5 to 0.6 million Cum of sediments per year. The starting point of the southern breakwater is shifted towards southern hill known as Meraka Mettta without any adverse impacts on shore. The length of southern breakwater is indicated as 1750 meters and oriented at 46° - 234° . The northern breakwater is 800 m long and oriented 153° - 333° . The orientation of the entrance channel to the port has been fixed at 84° - 264° . The width of the approach channel as per the report is 200 m with a dredged depth of - 20.2 m below CD and maneuvering area is -19.3 m below CD. The General Cargo berth will be 240 m. length, 21 m. width and with 14.50 m. draft.

4. As per the approved Coastal Zone Management Plan (CZMP), the entire port area is classified as CRZ-III. The Environmental Impact Assessment Report, Detailed Feasibility Report, Risk Assessment and Oil Spill Response Plan on Emergency Action Plan, Report on Demarcation of LTL, HTL, and CRZ Lines by National Institute of Oceanography, carried out. (The Andhra Pradesh Pollution Control Board issued Consent Order for Establishment (CFE) through Order No. 113/PCB/CFE/RO-VSP/HO/2008, dt. 11.08.2008,) for conversion of Berth earmarked for Port crafts into General Cargo Berth to handle containers and other dry cargo like agriculture products.

5. The Environment, Forests, Science and Technology Department, Govt. of Andhra Pradesh recommended the proposal vide letter No.6586/CZMA/2008, dated 24.12.2008 for the issue of Environmental Clearance.

6. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, have recommended for the grant of Environmental and CRZ Clearance for the project. Accordingly, the Ministry hereby accord necessary Environmental and CRZ Clearance for the above project as per the provisions of Environmental Impact Assessment Notification - 2006 and CRZ Notification, 1991 and its subsequent amendment in 2009, subject to strict compliance of the terms and conditions as follows:

7. **Specific Conditions :**

- (i) No construction work other than those permitted in Coastal Regulation Zone Notification, 1991 shall be carried out in Coastal Regulation Zone area.
- (ii) Sewage shall be treated and the Treatment Facility shall be provided in accordance with the Coastal Regulation Zone Notification, 1991. The disposal of treated water shall confirm the regulation of Andhra Pradesh State Pollution Control Board.
- (iii) Oil spills if any shall be properly collected and disposed as per the Rules.
- (iv) The approach channel shall be properly demarcated with lighted buoys for safe navigation and adequate traffic control guidelines shall be framed. The fishermen shall be suitably educated and informed about the traffic guidelines.
- (v) The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
- (vi) The project proponent shall take up mangrove plantation/green belt in the project area, wherever possible. Adequate budget shall be provided in the Environment Management Plan for such mangrove development.
- (vii) The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.

8. **General Conditions:**

- (i) Adequate provision for infrastructure facilities including water supply, fuel and sanitation must be ensured for construction workers during the construction phase of the project to avoid any damage to the environment.
- (ii) Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.
- (iii) Borrow sites for each quarry sites for road construction material and dump sites must be identified keeping in view the following:
 - (a) No excavation or dumping on private property is carried out without written consent of the owner.

- (b) No excavation or dumping shall be allowed on wetlands, forest areas or other ecologically valuable or sensitive locations.
- (c) Excavation work shall be done in close consultation with the Soil Conservation and Watershed Development Agencies working in the area, and
- (d) Construction spoils including bituminous material and other hazardous materials must not be allowed to contaminate water courses and the dump sites for such materials must be secured so that they shall not leach into the ground water.
- (iv) The construction material shall be obtained only from approved quarries. In case new quarries are to be opened, specific approvals from the competent authority shall be obtained in this regard.
- (v) Adequate precautions shall be taken during transportation of the construction material so that it does not affect the environment adversely.
- (vi) Full support shall be extended to the officers of this Ministry/ Regional Office at Bangalore by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.
- (vii) Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.
- (viii) The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.
- (ix) In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.
- (x) The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of land development work.

- (xi) Andhra Pradesh Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's Office/Tehsildar's office for 30 days.

9. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.

10. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

11. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the Andhra Pradesh State Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bangalore.

12. Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

13. Any appeal against this Environmental Clearance shall lie with the National Environment Appellate Authority, if preferred, within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.

14. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.

15. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO₂, NO_x (ambient levels as well as stack emissions) or critical sectoral

parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

16. The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.

17. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

(Bharat Bhushan)
Director (IA-III)

Copy to:

- (1) The Secretary, Department of Environment, Government of Andhra Pradesh, Secretariat, Hyderabad.
- (2) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 110 032.
- (3) The Chairman, Andhra Pradesh Coastal Zone Management Authority and Principal Secretary, Environment, Forests and Sciences and Technology, Government of Andhra Pradesh, Hyderabad.
- (4) The Member Secretary, Andhra Pradesh Pollution Control Board, Hyderabad.
- (5) The CCF, Regional Office, Ministry of Environment & Forests(SZ), Kendriya Sadan, IVth floor, E&F wings, 17th Main Road, Koramangala II Block, Bangalore - 560 034.
- (6) IA - Division, Monitoring Cell, MOEF, New Delhi - 110003.
- (7) Guard file.

(Bharat Bhushan)
Director (IA-III)

F.No.11-91/2010-IA-III
Government of India
Ministry of Environment & Forests
(IA Division)

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi - 110 003.

Dated: 7th February, 2012.

To,
M/s Gangavaram Port Ltd,
Hansa Crest, 1st Floor,
Plot No. 62, Road No.1,
Jubilee Hills,
Hyderabad

Subject: Environment and CRZ Clearance for the development of Phase -II of Gangavaran Port, Visakhapatnam District, Andhra Pradesh by M/s Gangavaram Port Ltd.-Reg.

This has reference to letter No: GPL/EFS&T/014 dated 10.08.2010 seeking prior Environmental and CRZ Clearance for the above project under the EIA Notification - 2006 and Coastal Regulation Zone (CRZ) Notification, 1991. The proposal has been appraised as per prescribed procedure in the light of provisions under the EIA Notification - 2006 and Coastal Regulation Zone Notification, 1991/2011 on the basis of the mandatory documents enclosed with the application viz., the Questionnaire, recommendation of State Coastal Zone Management Authority, EIA, EMP and the additional clarifications furnished in response to the observations of the Expert Appraisal Committee constituted by the competent authority in its meeting held on 17th -19th August, 2011.

2. It is interalia, noted that the proposal involves development of Phase -II of Gangavaran Port, Visakhapatnam District, Andhra Pradesh. Gangavaram Port is developed as all weather multipurpose deepest port in India to handle super cape size vessels located on the East coast of India approximately 15 km south of Visakhapatnam Port and acting like gateway port to the existing and green field projects in the hinterland. At Gangavaram Port presently five berths are under operation to handle variety of cargoes such as Coal / Iron ore, Fertilizer, Limestone, Food Grains, and Steel Products etc. It is proposed to expand the port facilities from 16.54 MTPA to 41 MTPA to cater for future cargo within the existing port premises at Gangavaram Village, Pedagantyada mandal, Visakhapatnam District, Andhra Pradesh. The existing Project already received Environmental Clearance under EIA & CRZ notifications vide letter No.10-14/2009-IA.III dt.19th March, 2010. The following facilities proposed to be planned at Gangavaram port to handle the above mentioned future traffic up to year 2015, (i) One mechanized coal berth to handle cape

size coal carrier and (ii) Three multipurpose berths to handle multipurpose/General cargo.

3. Dredging to the extent of 4.88 million cubic meters will be carried out in front of the berths and near the turning basin. The dredged material will be pumped onshore for reclamation of the port backup areas. The other associated facilities like Buildings, Storage, roads, railways, water, power, drainage, sewage, pollution control including Dust suppression system, greenery fire fighting system etc. are planned to be provided.

4. Additional Rail sidings will be developed within port premises to take on additional cargo evacuation. No additional land requirement as sufficient land is available within existing port premises. The water requirement will be 1000 m³/day in addition to existing 600 m³/day of Phase I and will be sourced from Visakha International Water Supply Company. The Power requirement will be 5 MVA in addition to 9 MVA of existing Phase - I and will be sourced from APTRANSCO. Adequate dust suppression measures will be installed in addition to existing sprayers. Zero waste water discharge shall be maintained by utilising treated waste water for dust suppression & green belt development. Total development green belt is 106 acres and further 40 acres will be developed before January, 2011. The total cost of the project is Rs. 800 crores.

5. TOR for the project was finalized by the EAC in its 94th Meeting held on 30 November, 1st - 2nd December, 2010. Public Hearing was conducted on 12.05.2011 near the main Gate of the Port, Gangavaram.

6. The Andhra Pradesh Coastal zone Management Authority has recommended the project vide letter dated 3687/CZMA/2011 dated 27.07.2011.

7. The Expert Appraisal Committee, after due consideration of the relevant documents submitted by the project proponent and additional clarifications furnished in response to its observations, have recommended for the grant of Environmental and CRZ Clearance for the project. Accordingly, the Ministry hereby accord necessary Environmental Clearance for the above project as per the provisions of Environmental Impact Assessment Notification - 2006 and Coastal Regulation Zone Notification, 2011, subject to strict compliance of the terms and conditions as follows:

8. SPECIFIC CONDITIONS :

(i) "Consent for Establishment" shall be obtained from State Pollution Control Board under Air and Water Act and a copy shall be submitted to the Ministry before start of any construction work at the site.

(ii) As the development is conceived in several stages to reach the

full designed/planned capacity of the port, it shall be necessary to prepare and put in place a master EMP for the full scale development and fit in the phase-wise creations as modules forming part of the entire system. This shall facilitate a harmonious planning of environmental requirements to be put in place in a phased manner in accordance with preset goal and objective as outlined in the overall environmental plan for the port in its totality.

- (iii) The 4.88 million cum of dredged material shall be used for shore reclamation subject to its suitability. Any unsuitable/excess dredged material shall be disposed at dumpsite. Port shall identify suitable dumping spot for disposal of unsuitable material offshore on the basis of appropriate modeling study.
- (iv) The green belt area proposed is about 10 % only. Proponent shall enhance the area of green belt. Width of the green belt shall be minimum 50 m. The present stage of development of 40 acres of land for green belt which should have been completed before January 2011 shall be reported to the Ministry together with the programme adopted for implementation.
- (v) There will be a quantum jump of port traffic from the existing level of 16.54 MTPA to 41 MTPA after completion of the proposed developments and this is likely to register further leap when full scale planned capacity is reached later; it is therefore necessary even now to plan appropriate measures to ensure that will be no mismatch between the planned capacity and the external logistic requirements in the overall transportation chain/network commensurate with the demand. A long range vision would be necessary to achieve a smooth flow of cargo traffic both within and outside port limits.
- (vi) The Company shall enhance the allocation for the CSR activities from 2.5 to 5 % of the total cost and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
- (vii) All the recommendation of the EMP and DMP shall be complied with letter and spirit.
- (viii) Construction activity shall be carried out strictly as per the provisions of CRZ Notification, 2011. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.

- (ix) The project shall be executed in such a manner that there shall not be any disturbance to the fishing activity.
- (x) It shall be ensured that there is no displacement of people, houses or fishing activity as a result of the project.
- (xi) The project proponent shall set up separate environmental management cell for effective implementation of the stipulated environmental safeguards under the supervision of a Senior Executive.
- (xii) The funds earmarked for environment management plan shall be included in the budget and this shall not be diverted for any other purposes.

9. GENERAL CONDITIONS:

- (i) Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality.
- (ii) Full support shall be extended to the officers of this Ministry/Regional Office at Bengaluru by the project proponent during inspection of the project for monitoring purposes by furnishing full details and action plan including action taken reports in respect of mitigation measures and other environmental protection activities.
- (iii) A six-Monthly monitoring report shall need to be submitted by the project proponents to the Regional Office of this Ministry at Bengaluru regarding the implementation of the stipulated conditions.
- (iv) Ministry of Environment & Forests or any other competent authority may stipulate any additional conditions or modify the existing ones, if necessary in the interest of environment and the same shall be complied with.
- (v) The Ministry reserves the right to revoke this clearance if any of the conditions stipulated are not complied with the satisfaction of the Ministry.
- (vi) In the event of a change in project profile or change in the implementation agency, a fresh reference shall be made to the Ministry of Environment and Forests.
- (vii) The project proponents shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval

of the project by the concerned authorities and the date of start of land development work.

- (viii) A copy of the clearance letter shall be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/representation has been made received while processing the proposal.
- (ix) State Pollution Control Board shall display a copy of the clearance letter at the Regional Office, District Industries Center and Collector's Office/Tehsildar's office for 30 days.

10. These stipulations would be enforced among others under the provisions of Water (Prevention and Control of Pollution) Act 1974, the Air (Prevention and Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, the Public Liability (Insurance) Act, 1991 and EIA Notification 1994, including the amendments and rules made thereafter.

11. All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Civil Aviation Department, Forest Conservation Act, 1980 and Wildlife (Protection) Act, 1972 etc. shall be obtained, as applicable by project proponents from the respective competent authorities.

12. The project proponent shall advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded Environmental Clearance and copies of clearance letters are available with the State Pollution Control Board and may also be seen on the website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>. The advertisement should be made within 10 days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the Regional office of this Ministry at Bangalore.

13. Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No.460 of 2004 as may be applicable to this project.

14. Status of compliance to the various stipulated environmental conditions and environmental safeguards will be uploaded by the project proponent in its website.

15. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.



16. The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB.

17. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.


(Lalit Kapur)
Director (IA-III)

Copy to:

1. The Chairman, Andhra Pradesh Coastal Zone Management Authority, IAS, Special Chief Secretary to Government, E.F.S & T. Department Government of Andhra, Pradesh Secretariat, Hyderabad-500 002
2. The Chairman, CPCB, Parivash Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32.
3. The Member Secretary, Andhra Pradesh Coastal Zone Management Authority, IAS, Special Chief Secretary to Government, E.F.S & T. Department Government of Andhra, Pradesh Secretariat, Hyderabad-500 002
4. The Chairman, Andhra Pradesh Pollution Control Board, Parvarama Bhawan, A-III, Industrial Area, Sanathnagar, Hyderabad - 500 018, Andhra Pradesh.
5. The C.C.F., Regional Office (SZ), Ministry of Environment & Forests, Kendriya Sadan, IV Floor, Environment & Forests Wings, Office (SZ), 7th Main Road, 3rd Block, Koramangala, Bangalore - 560 034.
6. Guard File.
7. Monitoring Cell.

(Lalit Kapur)
Director (IA-III)



Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

To,

The Vice President Environment

M/S. GANGAVARAM PORT LIMITED

M/s.Gangavaram Port Limited Peda Gantyada Mandal, Visakhapatnam
District,,Visakhapatnam,Andhra Pradesh-530044

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity
under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/AP/NCP/237816/2021 dated 10 Nov 2021. The particulars of the environmental clearance granted to the project are as below.

- | | |
|---|--|
| 1. EC Identification No. | EC21A033AP141550 |
| 2. File No. | 10/51/2021-IA.III |
| 3. Project Type | Expansion7 |
| 4. Category | A |
| 5. Project/Activity including Schedule No. | 7(e) Ports, Harbours |
| 6. Name of Project | Environment & CRZ Clearance under Clause 7 (ii) of EIA Notification, 2006 and amendments thereafter – Increase in cargo handling capacity from 40.95 to 60.95 MTPA with existing 9 berths and within approved project area of 1800 acre through modernisation/mechanisation at Gangavaram Port |
| 7. Name of Company/Organization | M/S. GANGAVARAM PORT LIMITED |
| 8. Location of Project | Andhra Pradesh |
| 9. TOR Date | N/A |

The project details along with terms and conditions are appended herewith from page no 2 onwards.

(e-signed)
Amardeep Raju
Scientist E
IA - (INFRA-1 sector)

Date: 24/12/2021

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

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2. Gangavaram Port obtained Environmental and CRZ Clearance for a cargo handling capacity of 16.54 MTPA for the construction of four berths (dry bulk cargo-1, Fertilizer/limestone-1, container terminal-1 and break/multipurpose-1) and one exclusive berth for port crafts besides providing warehousing facilities and transit sheds vide EC No. 10-3/2005-IA.III dated 11.03.2005. Subsequently for development of fifth berth, GPL obtained EC & CRZ Clearance vide order F.No.10-14/2009-IA.III dated 19.03.2010.
3. EC & CRZ clearance for Phase – II was obtained vide Order F.No.11-91/2010-IA-III, dated 07.02.2012 with capacity augmentation from 16.54 MTPA to 40.95 MTPA and four additional berths (one mechanized coal berth to handle cape-size coal carrier and three multipurpose berths), for which, environmental public consultation was held on 12.05.2011 as per EIA notification, 2006 (as amended).
4. At present stage, Gangavaram port is operating with nine berths and provides cargo handling services for a variety of bulk and break bulk including coal, iron ore, Multi Cargo (Agri products, Slag, Lime stone, Steel products etc.), Fertilizer, Industrial Raw Materials such as Gypsum, Aluminum Ingots, Gypsum etc. During the last six years' cargo handling has been increased upto 34.45 MTPA. By increasing the operational efficiency of existing port infrastructure without any marine infrastructure development, cargo handling capacity can be enhanced from approved capacity of 40.95 MTPA to 60.95 MTPA.
5. An application has been made by GPL for environmental and CRZ clearance under Clause 7(ii) for prior Environmental Clearance (EC) under Expansion or Modernization or Change of product mix in existing projects, of EIA notification, 2006 and amendments thereafter as:
- No additional marine infrastructure such as berths, capital dredging, breakwater, reclamation is proposed. No additional land is proposed as sufficient land is available within already approved port boundary of 1800-acre area,
 - No CRZ -I (A) area present within port area as well as port limit and only material handling systems such as cranes and permissible back-up infrastructure will be created within CRZ - II area of port area.
 - Development /modernization of port back-up area is majorly in non CRZ area and partially falling in CRZ-II area of approved 1800-acre area. CRZ from 1 application along with EIA report submitted to APCZMA and recommendation from APCZMA was obtained vide Letter No. 338/CRZ/Port/2021 dated 24/10/2021.
 - No addition of any new cargo type in the current proposal and only increase in cargo handling capacity through modernization/mechanization of approved cargo profile (type) in the current proposal. Approximately 70 % of proposed 20 MTPA, 7.75 MTPA is non-dusty cargo (container, steel products, agri-products etc.)
 - Modernization/mechanization of port will lead to reduction in carbon emissions due to increase in cargo evacuation through railway and up-gradation as well as addition of material handling systems including covered conveyor etc. will reduce inter-carting.
6. Public consultation has been already carried out for 9 berths and 1800-acre area as per EIA Notification, 2006 and amendments thereafter. Points raised during public hearing such as providing jobs, dust control measures, greenbelt development and CSR activities like support on health, education medical were addressed properly and there is no major grievance from public/regulatory authorities.



7. Following are the Cargo Handling Capacity through Modernization:

S. No.	Name of the cargo	Existing Cargo (MTPA) (Consented Quantity)	Additional Cargo (MTPA)	Total Cargo (MTPA)
1	Containers	0.25	7.75	8.00
2	Multi Cargo: Agri products, (Food grains in bags or bulk, Chickpeas, Cereals, Pulses, Sugar, Raw Sugar), Slag, Lime Stone, Bauxite, Steel Products (Steel Beams, Coils, Billets, Angles, Channels, Project Cargo), Bulk Alumina & Other cargos.	6.20	6.50	12.70
3	Coal	25.00	3.25	28.25
4	Iron ore	3.00	2.50	5.50
5	Fertilizer	2.50	0	2.50
6	Industrial Raw Material (Ferro silicon, Charge Chrome, Chrome ore, Coal Tar (Bags), Aluminum Ingots, Aluminum Billets, Bentonite, Pig iron, Manganese ore, Wood items, Paper bundles, CP Coke Bauxite, gypsum, clinker, scrap)	3.50	0	3.50
7	Liquid cargo (edible oil, caustic lye)	0.50	0	0.50

8. The proposed project falls under 7(e), Category-A, Ports, Harbours as per EIA Notification 2006. The proposed project is for expansion under Clause 7(ii) of EIA Notification, 2006 (as amended). Total investment/cost of the project is about Rs 5055 Crores.

9. Geo-coordinates of the project site is as following:

From: 17°39'39.162"N	To: 17°37'41.643"
From: 83°14'8.411" E	To: 83°15'44.670"E

10. Land use /Land breakup of the proposed project site is as following:

Sl. No.	LU/LC	Area (Ha)	Percentage %
1	Built up - Port	314.69	43.2
2	Vegetated/Open Area	359.95	49.41
3	Rocky Area	40.46	5.56
4	Open Scrub land	11.82	1.62
5	Water Reservoir	1.51	0.21
Total		728.43	100

11. Terrain and topographical features: Eastern boundary of the port ground level varies from 0.8 m to 1.0 m and towards the western boundary of port location ground levels are higher than 2.0 m with respect to MSL.

12. Water requirements: The total water requirement during construction period is 1.0 MLD. The water required for proposed expansion/modernisation activity is 378 KLD which

will be sourced from treated water of STP (10 KLD) and remaining 368 KLD shall be sourced from VISCOW. Permission for withdrawal of 1200 KLD from VISCOW is available and additional water requirement application is filed to VISCOW.

13. Waste Management: It is estimated that domestic solid waste generated will be ~3.6 T/m. Discarded material and plastic material waste is estimated to be 0.25 T/m. The solid waste sludge from STP is ~ 5.5 kg/day. Used oil, spent oil, Wastes/Residue containing oil, Oil soaked rags, cotton waste, discarded containers, barrels & used battery will be collected and disposed to approved vendors and same will be continued to proposed project. Hazardous wastes generated at the port shall be disposed-off through authorized vendors duly adhering under guidelines of Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and its amendment.

14. STP Details: The sewage generated at the project site will be treated in existing STP. GPL is operating two STPs of capacity 30 KLD near to harbour gate location beside stores and 5 KLD near Main gate. Another 15 KLD STP is proposed to meet the modernization/mechanisation plan. Treated water will be utilized for green belt.

15. Tree cutting: Clearance of vegetation shall be carried out as per project requirement. Clearance of scrub vegetation with few tree species such as *Phoenix sylvestris* (Etha), *Acacia Nilotic* (Nalla tumma) and *Borassus flabellifer* (Thadi) is envisaged near the proposed backup area.

16. Green Belt development: Greenbelt/area is developed in an extent of 318.21 Acres within the port range covering periphery of yards, roads, buildings and along conveyor belt. In total, Greenbelt has been developed more than 10% of the total area and 50m width in the boundary of the port.

17. CRZ details: The project falls majorly in Non CRZ area and partly falling in CRZ-II as per approved CZMP map (Map Nos. AP 114,115 and 116) and the activities proposed within CRZ area are permissible as per CRZ notification, 2011. No marine side construction activity is proposed under this modernization. APCZMA recommendations obtained vide Letter no. 338/CRZ/Port/2021 dated 24/10/2021.

18. Foreshore details: No additional marine infrastructure such as berths, breakwater, capital dredging and reclamation is proposed.

19. Employment potential: Total man power requirement during the construction phase is approximately 200 to 250 workers. During operation phase, direct employment of 100 and indirect employment of 500 workers are envisaged.

20. Benefits of the project: The proposed expansion project will have major positive impact on Induced development, Improved Socio-economic conditions, Quality of Life, Employment Opportunities, Revenue Generation, Corporate Social Responsibility etc.

21. Details of court cases: No court cases are pending against the proposed project.

22. The EAC based on the information submitted and clarifications provided by the project proponent and detailed discussions held on all the issues in its 281st meeting on 24th - 25th November, 2021, recommended the project for grant of environmental and CRZ clearance under clause 7(ii) of EIA Notification, 2006, with stipulated specific conditions along with other Standard EC Conditions.

23. The Ministry of Environment, Forest and Climate Change has considered the proposal based on the recommendations of the Expert Appraisal Committee (Infrastructure, CRZ and other Miscellaneous projects) and hereby decided to grant Environmental Clearance for the “*Increase in cargo handling capacity from 40.95 to 60.95 MTPA with existing 9 berths and within approved project area of 1800 acre through modernisation/mechanisation at Gangavaram Port, Pedagantyada Mandal, Visakhapatnam District, Andhra Pradesh by M/s Gangavaram Port Limited*” under Clause 7(ii) of EIA Notification, 2006 (as amended) and CRZ Notification 2011, subject to strict compliance of the following specific conditions, in addition to all standard conditions applicable for such projects.

SPECIFIC CONDITIONS

- i. No construction activity beyond the existing layout area shall be undertaken for the project. Only modernization/mechanization as envisaged in the present proposal shall be permissible.
- ii. Erosion of shoreline has been noted at the project location and adjoining areas due to existing port and hence Shore Management plan and beach nourishment plan need to be prepared and an implementation report needs to be submitted to the Ministry as a part of 6 monthly compliance report. Beach Nourishment strategy has to be developed with the help from a reputed scientific institute specialized in the subject.
- iii. All the recommendations and conditions specified by the Andhra Pradesh Coastal Zone Management Authority (APCZMA) vide letter No 338/CRZ/Port/2021 dated 24th October 2021 shall be complied with.
- iv. Consent to Establish/Operate for the project shall be obtained from the State Pollution Control Board as required under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.
- v. Necessary approvals to be taken during implementation and commissioning from statutory bodies concerned.
- vi. Continuous online monitoring of air and water covering the total area shall be carried out and the compliance report of the same shall be submitted along with the 6 monthly compliance reports to the regional office of MoEF&CC.
- vii. Spillage of fuel / engine oil and lubricants from the site are a source of organic pollution which impacts marine life, particularly benthos. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.
- viii. Necessary arrangements for the treatment of the effluents and solid wastes/ facilitation of reception facilities under MARPOL must be made and it must be ensured that they conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986. The provisions of Solid Waste Management Rules, 2016. E- Waste Management Rules, 2016, and Plastic Waste Management Rules, 2016 shall be complied with.

- ix. Necessary arrangement for general safety and occupational health of people should be done in letter and spirit.
- x. The dust suppression measures for the proposed increase in the cargo should be ensured through mechanized handling of cargo and conveyance.
- xi. The waste water from oil spillage or cargo should be treated and disposed.
- xii. As per the Ministry's Office Memorandum F. No. 22-65/2017-IA.III dated 30th September, 2020, the project proponent shall abide by all the commitments made by them including pollution control, environmental protection and conservation, R&R, wildlife and forest conservation/protection measures including the NPV, Compensatory Afforestation etc, either proposed by the project proponent based on the social impact assessment and R&R action plan carried out during the preparation of EIA report or prescribed by EAC, shall also be implemented and become part of EMP

STANDARD CONDITIONS:

I. Statutory compliance:

- (i) Construction activity shall be carried out strictly according to the provisions of CRZ Notification, 2011 and the State Coastal Zone Management Plan as drawn up by the State Government. No construction work other than those permitted in Coastal Regulation Zone Notification shall be carried out in Coastal Regulation Zone area.
- (ii) A certificate of adequacy of available power from the agency supplying power to the project along with the load allowed for the project should be obtained.
- (iii) All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire Department, Coast Guard, Civil Aviation Department shall be obtained, as applicable by project proponents from the respective competent authorities.

II. Air quality monitoring and preservation:

- (i) The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM₁₀ and PM_{2.5} in reference to PM emission, and SO₂ and NO_x in reference to SO₂ and NO_x emissions) within and outside the project area at least at four locations, covering upwind and downwind directions.
- (ii) Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed emission standards.
- (iii) Shrouding shall be carried out in the work site enclosing the dock/proposed facility area. This will act as dust curtain as well achieving zero dust discharge from the site. These curtain or shroud will be immensely effective in restricting disturbance from wind in affecting the dry dock operations, preventing waste dispersion, improving working conditions through provision of shade for the workers.

- (iv) Dust collectors shall be deployed in all areas where blasting (surface cleaning) and painting operations are to be carried out, supplemented by stacks for effective dispersion.
- (v) The Vessels shall comply the emission norms prescribed from time to time.
- (vi) Diesel power generating sets proposed as source of backup power should be of enclosed type and conform to rules made under the Environment (Protection) Act, 1986. The height of stack of DG sets should be equal to the height needed for the combined capacity of all proposed DG sets. Use of low sulphur diesel. The location of the DG sets may be decided with in consultation with State Pollution Control Board.
- (vii) A detailed traffic management and traffic decongestion plan shall be drawn up to ensure that the current level of service of the roads within a 05 kms radius of the project is maintained and improved upon after the implementation of the project. This plan should be based on cumulative impact of all development and increased habitation being carried out or proposed to be carried out by the project or other agencies in this 05 Kms radius of the site in different scenarios of space and time and the traffic management plan shall be duly validated and certified by the State Urban Development department and the P.W.D./ competent authority for road augmentation and shall also have their consent to the implementation of components of the plan which involve the participation of these departments.

III. Water quality monitoring and preservation:

- (i) The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.
- (ii) Appropriate measures must be taken while undertaking digging activities to avoid any likely degradation of water quality. Silt curtains shall be used to contain the spreading of suspended sediment during dredging within the dredging area.
- (iii) No ships docking at the proposed project site will discharge its on-board waste water untreated in to the estuary/ channel. All such wastewater load will be diverted to the proposed Effluent Treatment Plant of the project site.
- (iv) Measures should be taken to contain, control and recover the accidental spills of fuel and cargo handle.
- (v) The project proponents will draw up and implement a plan for the management of temperature differences between intake waters and discharge waters.
- (vi) Spillage of fuel / engine oil and lubricants from the construction site are a source of organic pollution which impacts marine life. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.
- (vii) Total fresh water use shall not exceed the proposed requirement as provided in the project details. Prior permission from competent authority shall be obtained for use of fresh water.
- (viii) Sewage Treatment Plant shall be provided to treat the wastewater generated from the project. Treated water shall be reused for horticulture, flushing, backwash, HVAC purposes and dust suppression.



- (ix) A certificate from the competent authority for discharging treated effluent/ untreated effluents into the Public sewer/ disposal/drainage systems along with the final disposal point should be obtained.
- (x) No diversion of the natural course of the river shall be made without prior permission from the Ministry of Water resources.
- (xi) All the erosion control measures shall be taken at water front facilities. Earth protection work shall be carried out to avoid erosion of soil from the shoreline/boundary line from the land area into the marine water body.

IV. Noise monitoring and prevention:

- (i) Noise level survey shall be carried as per the prescribed guidelines and report in this regard shall be submitted to Regional Officer of the Ministry as a part of six-monthly compliance report.
- (ii) Noise from vehicles, power machinery and equipment on-site should not exceed the prescribed limit. Equipment should be regularly serviced. Attention should also be given to muffler maintenance and enclosure of noisy equipments.
- (iii) Acoustic enclosures for DG sets, noise barriers for ground-run bays, ear plugs for operating personnel shall be implemented as mitigation measures for noise impact due to ground sources.
- (iv) The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Energy Conservation measures:

- (i) Provide solar power generation on roof tops of buildings, for solar light system for all common areas, street lights, parking around project area and maintain the same regularly;
- (ii) Provide LED lights in offices and project areas.

VI. Waste management:

- (i) Dredged material shall be disposed safely in the designated areas.
- (ii) Shoreline should not be disturbed due to dumping. Periodical study on shore line changes shall be conducted and mitigation carried out, if necessary. The details shall be submitted along with the six monthly monitoring reports.
- (iii) Necessary arrangements for the treatment of the effluents and solid wastes must be made and it must be ensured that they conform to the standards laid down by the competent authorities including the Central or State Pollution Control Board and under the Environment (Protection) Act, 1986.
- (iv) The solid wastes shall be managed and disposed as per the norms of the Solid Waste Management Rules, 2016.
- (v) Any wastes from construction and demolition activities related thereto shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.



- (vi) A certificate from the competent authority handling municipal solid wastes should be obtained, indicating the existing civic capacities of handling and their adequacy to cater to the M.S.W. generated from project.
- (vii) Used CFLs and TFLs should be properly collected and disposed off/sent for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid mercury contamination.
- (viii) Oil spill contingency plan shall be prepared and part of DMP to tackle emergencies. The equipment and recovery of oil from a spill would be assessed. Guidelines given in MARPOL and Shipping Acts for oil spill management would be followed. Mechanism for integration of terminals oil contingency plan with the overall area contingency plan under the co-ordination of Coast should be covered.

VII. Green Belt:

- (i) Green belt shall be developed in area as provided in project details with a native tree species in accordance with CPCB guidelines.
- (ii) Top soil shall be separately stored and used in the development of green belt.

VIII. Marine Ecology:

- (i) Dredging shall not be carried out during the fish breeding and spawning seasons.
- (ii) Dredging, etc shall be carried out in the confined manner to reduce the impacts on marine environment.
- (iii) The dredging schedule shall be so planned that the turbidity developed is dispersed soon enough to prevent any stress on the fish population.
- (iv) While carrying out dredging, an independent monitoring shall be carried out through a Government Agency/Institute to assess the impact and necessary measures shall be taken on priority basis if any adverse impact is observed.
- (v) A detailed marine biodiversity management plan shall be prepared through the NIO or any other institute of repute on marine, brackish water and fresh water ecology and biodiversity and submitted to and implemented to the satisfaction of the State Biodiversity Board and the CRZ authority. The report shall be based on a study of the impact of the project activities on the intertidal biotopes, corals and coral communities, molluscs, sea grasses, sea weeds, sub-tidal habitats, fishes, other marine and aquatic micro, macro and mega flora and fauna including benthos, plankton, turtles, birds etc. as also the productivity. The data collection and impact assessment shall be as per standards survey methods and include underwater photography.
- (vi) Marine ecology shall be monitored regularly also in terms of sea weeds, sea grasses, mudflats, sand dunes, fisheries, echinoderms, shrimps, turtles, corals, coastal vegetation, mangroves and other marine biodiversity components including all micro, macro and mega floral and faunal components of marine biodiversity.
- (vii) The project proponent shall ensure that water traffic does not impact the aquatic wildlife sanctuaries that fall along the stretch of the river.

IX. Public hearing and human health issues:

- (i) The work space shall be maintained as per international standards for occupational health and safety with provision of fresh air respirators, blowers, and fans to prevent any accumulation and inhalation of undesirable levels of pollutants including VOCs.
- (ii) Workers shall be strictly enforced to wear personal protective equipments like dust mask, ear muffs or ear plugs, whenever and wherever necessary/ required. Special visco-elastic gloves will be used by labour exposed to hazards from vibration.
- (iii) In case of repair of any old vessels, excessive care shall be taken while handling Asbestos & Freon gas. Besides, fully enclosed covering should be provided for the temporary storage of asbestos materials at site before disposal to CTSDF.
- (iv) Safety training shall be given to all workers specific to their work area and every worker and employee will be engaged in fire hazard awareness training and mock drills which will be conducted regularly. All standard safety and occupational hazard measures shall be implemented and monitored by the concerned officials to prevent the occurrence of untoward incidents/ accidents.
- (v) Emergency preparedness plan based on the Hazard identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
- (vi) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (vii) Occupational health surveillance of the workers shall be done on a regular basis.

X. Environment Responsibility:

- (i) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest /wildlife norms/ conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- (ii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- (iii) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- (iv) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.



XI. Miscellaneous:

- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- (ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.
- (iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- (iv) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- (v) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- (vi) The criteria pollutant levels namely; PM_{2.5}, PM₁₀, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
- (vii) The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- (viii) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- (ix) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- (x) No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- (xi) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- (xii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.
- (xiii) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.



- (xiv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- (xv) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- (xvi) Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

22. This issues with the approval of the Competent Authority.



(Amardeep Raju)
Scientist-E

Copy to:

1. The Principal Secretary, Department of Environment, Forest, Science & Technology, Government of Andhra Pradesh, Hyderabad, A.P.
2. The Member Secretary, AP Pollution Control Board, Chalamalavaii Street, Kasturibaipet, Vijayawada - 520 010.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi -32
4. The Additional Principal Chief Conservator of Forests (C), Aranya Bhavan, K.M. Munshi Road, Nagarampalem, Guntur-522 004, Andhra Pradesh.
5. Monitoring Cell, MoEF&CC, Indira Paryavaran Bhavan, New Delhi.
6. Guard File/Record File
7. Notice Board.



(Amardeep Raju)
Scientist-E



**Andhra Pradesh Coastal Zone Management Authority
(APCZMA)**

Andhra Pradesh

**Ministry of Environment Forests & Climate Change
Government of India**

D.No.33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre,
Chalamavari Street, Kasturibaipet, Vijayawada-520010

Letter No. 338/CRZ/Port/2021

24/10/2021

To

The Secretary,

Ministry of Environment and Forests and Climate Change,

Indira Paryavaran Bhavan, Jorbagh Road,

New Delhi - 110 003.

Sir,

Sub : APCZMA – CRZ – M/s. Gangavaram Port Limited (GPL) at Gangavaram (V), Pedagantyada (M), Visakhapatnam District, A.P. – Proposal for Modernisation/ Mechanisation of cargo handling at Gangavaram Port, thus capacity increase from 40.95 MTPA to 60.95 MTPA – Recommendations of No Objection under the provisions CRZ Notification, 2011- Communicated - Reg.

Ref : 1. Proposal of M/s. Gangavaram Port Limited, Visakhapatnam received on 21.09.2021.
2. APCZMA meeting held on 11.10.2021 at Visakhapatnam.

1. M/s. Gangavaram Port Limited (GPL) at Gangavaram (V), Pedagantyada (M), Visakhapatnam District, A.P. is operating with 9 berths with consented capacity of 40.95 MTPA for handling different cargo/commodities. It provides cargo handling services for a variety of bulk and break bulk including coal, iron ore, Multi Cargo (Agri products, Slag, Lime stone, Steel products etc.), Fertilizer, Industrial Raw Materials such as Gypsum, Aluminum Ingots, Gypsum etc., Their facilities include 9 berths, state-of-the-art cargo handling systems, mechanized storage facilities, railway sidings etc.
2. In the reference 1st cited, M/s. GPL has submitted the proposal for Modernisation/ Mechanisation of cargo handling at Gangavaram Port, thus capacity increase from 40.95 MTPA to 60.95 MTPA by

increasing the operational efficiency of existing port Infrastructure. No marine side construction activity is proposed under this modernization. The cost of the proposed project is Rs. 5055 Crores. The applicant sought clearance under the provisions of CRZ Notification, 2011.

3. The proposed expansion plan comprise the following facilities:
 1. Construction of Container yard behind the existing berth - 9
 - a) 60 acres of yard area development
 - b) 750 m long container railway handling yard
 2. Construction of Iron Ore terminals
 - a) Approx. 18.0 acres of Iron ore yard with conveyor, stacker & reclaimer and other facilities.
 - b) 1 no. of wagon tippler for handling the iron ore cargo.
 3. Equipment installation for jetty area and yard area.
 4. Development of coal stack yard in area of 188 acres.
 5. CFS development in an area of 47 acres.
 6. Liquid storage in an area of 21 acres.
 7. Construction of open storage yard and warehouse for Multi commodity Cargo.
 8. Internal road & rail corridor along with railway sidings.

The details of existing and proposed Cargo Handling Capacity are as follows:

S. No.	Name of the cargo	Existing Cargo (MTPA) (Consented Quantity)	Proposed Cargo (MTPA)	Total Cargo (MTPA)
1.	Iron ore	3.00	2.50	5.50
2.	Coal	25.00	3.25	28.25
3.	Multi Cargo Agri products, (Food grains in bags or bulk, Chic-peas, Cereals, Pulses, Sugar, Raw Sugar), Slag, Lime Stone, Bauxite, Steel Products (Steel Beams, Coils, Billets, Angles, Channels, Project Cargo), Bulk Alumina & Other cargos	6.20	6.50	12.70
4.	Containers	0.25	7.75	8.00
5.	Fertilizer	2.50	0	2.50
6.	Industrial Raw Material (Ferro silicon, Charge Chrome, Chrome	3.50	0	3.50

	ore, Coal Tar (Bags), Aluminum Ingots, Aluminum Billets, Bentonite, Pig iron, Manganese ore, Wood items, Paper bundles, CP Coke Bauxite, gypsum, clinker, scrap)			
7.	Liquid cargo	0.50	0	0.50
	Total	40.95	20.00	60.95

4. M/s. Institute of Remote Sensing (IRS), Anna University, Chennai was engaged for demarcation of HTL, LTL and CRZ area. As per the report, the project site located in Pedagantyada Mandal of Visakhapatnam District and proposed Modernization and Expansion in Cargo Handling capacity of the Gangavaram Port in Visakhapatnam District falls partly in **CRZ - II** as per approved CZMP (Map Nos. AP 114, 115 and 116). The area statistics of proposed activities in various CRZ Zones are as below

Description	CRZ - Classification	Area in Acres	Total Area in Acres
Proposed Port Backup Area	CRZ - II	95.40	550.00
	Outside CRZ	454.60	
Existing Port Area, Road, Railway and including Muchukonda Hill	CRZ - II	220.19	1250.00
	Outside CRZ	1029.81	
Grand Total			1800.00

5. The Project proposal of M/s. Gangavaram Port Limited (GPL) was placed in the 49th Andhra Pradesh Coastal Zone Management Authority (APCZMA) meeting held on 11.10.2021 at Visakhapatnam. The Project Proponent along with their consultant M/s. L&T Infra Engineering attended the meeting and explained about the proposal. **After examination on the remarks, comments/suggestions received from the Members, the Authority decided to send the recommendations of No Objection to MoEF&CC, GoI, New Delhi pertaining to the proposal of M/s. Gangavaram Port Limited (GPL) for**

Modernization/Mechanisation of cargo handling at Gangavaram Port thus increasing capacity from 40.95 MTPA to 60.95 TPA by increasing the operational efficiency of existing port Infrastructure at a notified existing port located Gangavaram Village, Peda gantiyada Mandal, Visakhapatnam District, Andhra Pradesh with the following specific and general conditions:

PART A: Specific Conditions:

- i. *The proposed constructions shall conform to the norms prescribed in CRZ Notification issued by the Ministry of Environment and Forests, Government of India S. O. No.19(E), dated 06-01-2011 and shall not affect the coastal ecology of the area.*
- ii. *No activity on ground shall be undertaken without obtaining Environmental Clearance from the Ministry of Environment and Forests, Government of India as per S. O. No.19(E), dated 06-01-2011.*
- iii. *The Port authorities shall continue to nourish the beaches located on the northern side of North Breakwaters within the Port limits, which are vulnerable to sea erosion during monsoon season and also during cyclone.*
- iv. *Dredged materials shall be utilized for shore protection, beach nourishment depending on its suitability.*
- v. *The project proponent while executing this project shall not disturb any of the ecologically sensitive areas like mangroves, sand heaps, sand dunes, disturbance to fishing activity etc.*
- vi. *The applicant shall ensure that Continuous monitoring of all likely affected parameters including air/ water quality/ waste water discharges are monitored and monthly report is to be submitted to the APPCB.*
- vii. *Priority to be given to the maintenance of storm water drains from the surrounding area to prevent possible flooding of the surrounding areas.*
- viii. *The proponent shall not increase the number of berths (existing berths - 9 nos.) and also no marine side construction activity is to be carried out under this modernization program.*

- ix. *Mechanization of Port operations shall be taken up to improve the Air quality area. SPM levels to be maintained within the standards stipulated by the APPCB / CPCB. All the conveyors shall be closed.*
- x. *Oil spills if any shall be properly collected and disposed as per the Rules. Project proponent shall install necessary oil spill mitigation measures.*
- xi. *No solid waste shall be disposed in the Coastal Regulation Zone area. The solid waste shall be properly collected, segregated and disposed as per the provision of Solid Waste (Management and Handling) Rules, 2000 and amendment thereof.*
- xii. *Ground water shall not be drawn from deep bore well within the CRZ area. As per the details provided, fresh water has to be sourced from Visakhapatnam Industrial Water Supply Company Limited (VISCOW) only.*
- xiii. *Raising and maintenance of Green belt within and outside the port area to be taken up on priority and necessary assistance shall be extended to the local agencies involved in the implementation of afforestation programme.*
- xiv. *The Project Proponent shall submit the half -yearly compliance reports of CRZ Clearance duly audited by the accredited consultants on the degree of compliance by the project proponent during and after construction of the project.*
- xv. *The proponent shall implement all the mitigation measures as mentioned in the Marine EIA report.*
- xvi. *All the dusty cargo shall be appropriately covered during transportation and storage in the port premises. Settling ponds shall be provided in coal storage area & the supernatant water shall be used for dust suppression.*
- xvii *The project proponent shall obtain all necessary clearances/ permission from the concerned authorities as applicable.*
- xvii *Disposal of muck during construction phase should not*
 - i. *create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.*

PART B: General Conditions:

- i. *A copy of the clearance letter shall also be displayed on the website of the AP Pollution Control Board. The Clearance letter shall also be displayed at the AP Pollution Control Board Regional Office, District Industries Centre and District Collector Office/ Mandal Revenue Office for 30 days.*
- ii. *The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to the Andhra Pradesh Coastal Zone Management Authority (APCZMA) and AP Pollution Control Board Regional Office.*
- iii. *Concealing factual data by the project proponent, any officer on behalf of the project proponent and consultants hired by the project proponent or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.*
- iv. *Consent for Establishment (CFE) and Consent for Operation (CFO), as may be applicable, shall be obtained from State Pollution Control Board under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974.*
All waste (liquid and solid) arising from the proposed development shall be disposed of as per the norms prescribed by State Pollution Control Board. There shall not be any disposal of untreated effluent into the sea/coastal water bodies.
- v. *Full co-operation shall be extended to the officials from the APCZMA, APPCB and Regional Office of MoEF&CC, during monitoring of implementation of environmental safeguards stipulated. It shall be ensured that documents/data sought pertinent is made available to the monitoring team. A complete set of all the documents submitted to APCZMA shall be forwarded to the AP Pollution Control Board Regional Office.*
- vi. *In the case of any change(s) in the scope of the project, the project would require a fresh appraisal by the APCZMA.*
- vii. *The APCZMA reserves the right to add additional safeguard measures subsequently, if found necessary, and to take*

action including revoking of the CRZ clearance under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time bound and satisfactory manner.

- viii. All other statutory clearances shall be obtained, as applicable by project proponents from the respective competent authorities.*
- ix. The project proponent should advertise in at least two local Newspapers widely circulated in the region, one of which shall be in the vernacular language informing that the project has been accorded CRZ Clearance and copies of clearance letters are available with the AP Pollution Control Board and may also be seen on the website of APCZMA. The advertisement should be made within Seven days from the date of receipt of the Clearance letter and a copy of the same should be forwarded to the AP Pollution Control Board Regional Office.*
- x. This Clearance is subject to any order passed by any Hon'ble Courts, as may be applicable to this project.*
- xi. A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, ZillaParisad/Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the company by the proponent.*
- xii. The proponent shall upload the status of compliance of the stipulated conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the AP Pollution Control Board Regional Office and the APPCB, Head Office.*
- xiii. The Project Proponent shall ensure that there is no destruction of mangroves, if any, during the construction as well as the operation phase of the project.*
- xiv. There shall be no dressing or alteration of the sand dunes and natural features, including landscape changes for beautification, recreation and other such purpose.*
- xv. No permanent labour camp, machinery and material storage shall be allowed in CRZ area.*
- xvi. There shall no ground water drawal within CRZ without*

prior approval of the State Ground Water Authority.

- xvii *Disposal of muck during construction phase should not create any adverse effect on the neighbouring communities and be disposed taking the necessary precautions for general safety and health aspects of people, only in approved sites with the approval of competent authority.*

6. In view of the above, **Recommendations of No Objection** for the proposal **of M/s. Gangavaram Port Limited (GPL) for Modernization/Mechanisation of cargo handling at Gangavaram Port thus increasing capacity from 40.95 MTPA to 60.95 TPA by increasing the operational efficiency of existing port Infrastructure at a notified existing port located Gangavaram Village, Peda gantyada Mandal, Visakhapatnam District, Andhra Pradesh**, in accordance with CRZ Notification, 2011 and subject to the conditions as mentioned at Para No.5 above, is hereby communicated to the Ministry of Environment and Forests and Climate Change, Govt. of India, New Delhi for further necessary action.

Yours faithfully,

Vijay Kumar Gsrkr Ias
Member Secretary
APCZMA

Encl:

1. CRZ Form I
2. EIA Report
3. CRZ Report
4. Copy of the Minutes of the APCZMA Meeting.

Copy to the Dr. D. Jyothi, Vice President (Environment), M/s. Gangavaram Port Limited, Pedagantyada Mandal, Gangavaram (Post), Visakhapatnam - 530044, Andhra Pradesh for information.



REGD.POST WITH ACK.DUE

CONSENT ORDER FOR ESTABLISHMENT

Order No. APPCB/VSP/VSP/113/CFE/HO/2012 - 3923

DL02.03.2012

Sub: PCB - CFE - M/s. Gangavaram Port Ltd., Gangavaram (V), Pedagantyada (M), Visakhapatnam District - Consent for Establishment of the Board for expansion under Sec.25 of Water (P & C of P) Act, 1974 and Under Sec.21 of Air (P&C of P) Act, 1981 - Issued - Reg.

Ref: 1) Environmental Clearance for expansion dt. 07.02.2012 issued by MOEF,GOI
2) Industry's application received through SWCC on 09.02.2012
3) R.O's inspection report dt. 18.02.2012
4) CFE Committee meeting held on 29.02.2012
5) Industry's ltr.dt. 29.02.2012

1. In the reference 2nd cited, an application was submitted to the Board seeking Consent for Establishment (CFE) for expansion of cargo profile, cargo storage area and to build 4 more berths and increase the total no. of berths to 9 with an additional investment of Rs.995.6 Crores

a) Traffic to be handled at Gangavaram Port:

S. No	Line of Activity (Name of the Cargo)	Existing (MMTPA)	Expansion (MMTPA)	Total (MMTPA)
1	Liquid bulk	0.5	1.0	1.5
2	Iron Ore	3.5	2.5	6.0
3	Coal	8.0	9.0	17.0
4	Agri products	0.25	1.0	1.25
5	Slag	0.50	0.5	1.0
6	Containers	0.5	0.5	1
7	Fertilizer	1.54	0.46	2.0
8	Lime stone	0.75	0.75	1.5
9	Steel products	0.5	0.7	1.2
10	Industrial raw material	0.50	5.0	5.5
11	Bulk Alumina		3.0	3.0
	Total	16.54	24.41	40.95

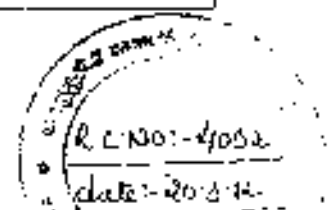
b) Vessels sizes:

S. No	Type of Vessel	Existing	Expansion	Total
1	Iron ore, coal coke	2,00,000 DWT	---	2,00,000 DWT
2	Other dry bulk and general cargo	80,00 DWT	---	80,00 DWT

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c) Berth Requirements after expansion:

S. No	Berth	Total Nos.
1	Coal berth (Mechanized)	2
2	Iron ore berth (Mechanized)	1
3	Other dry bulk berth (lime stone / Fertilisers, etc)	1
4	General cargo berth	1
5	Multi purpose berth (General cargo / Multipurpose cargo)	4
	Total	9

d) Dimensions of berths after expansion:

S. No	Name of the berth	Length	Width	Draft
1	Coal berth (Mechanized)	320	25	19.5
2	Iron ore berth (Mechanized)	316	25	19.5
3	Other dry bulk berth	285	31	15.5
4	Multi purpose berth	275	31	15.5
5	General cargo berth	240	21	14
6	Dry bulk (coal) (Mechanized)	350	25	20.5
7	Multi purpose berth (General cargo / Multipurpose cargo)	285	28	15.5

e) Cargo storage Areas:

i. Storage area requirement for dry bulk and other dry bulk cargo:

Sl.	Cargo	Existing		Expansion		Total	
		Storage demand (T)	Storage area Required (Sq. M)	Storage demand (T)	Storage area Required (Sq. M)	Storage demand (T)	Storage area Required (Sq. M)
1	Coal	8,00,000	1,20,000	0.8 million Tons	2,25,600	1516000.8	478350
2	Iron Ore	3,75,000	64,000				
3	Fertilisers / Agri products	1,75,000	48,750				
4	Limestone	83,000	10,000				
5	Slag	83,000	10,000	0.8	2,25,600	15,16,000.8	4,78,350
	Total	1516000	252750				

ii. Storage area requirement for break bulk cargo:

Items		Existing	Proposed	Total
		Quantity		
Through put Storage Demand	Open	1.0 (MTPA) 33000 T	1.0 (MTPA) 0.8 million T	2.0 (MTPA) 66000.08
	Covered	33000 T		
Storage area required including aisle space factor	Open	33000 Sq. m	2,25,600 sq. m	258600 sqm
	Covered	33000 Sq. m	18000 sq. m	51,000 sqm

f) Storage Area requirement for Container Cargo:

Sl. No.	Cargo	Storage area Required (Sq. M)		
		Existing	Proposed	Total
1	Container cargo	Container parking yard -- 2,00,000	---	Container parking yard -- 2,00,000
		Container freight station - 96,000	---	Container freight station -- 96,000

- As per the application, the above expansion activity is to be located within the existing premises located at Gangavaram (V), Pedagantyada (M), Visakhapatnam District in an area of 1800 Acres.
- The above site was inspected by the Environmental Engineer and Asst. Environmental Engineer, Regional office, Visakhapatnam, A.P Pollution Control Board on 14.02.2012 and observed that the activity is surrounded by

North : Gangavaram (V) & Yarada hills
South : Steel Plant
East : Sea
West : Pedagantyada (V)
- The Board, after careful scrutiny of the application and verification report of Regional Officer, hereby issues **CONSENT FOR ESTABLISHMENT FOR EXPANSION** to your activity Under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. **This order is issued to the activity as mentioned at para (1) only.**
- This Consent Order now issued is subject to the conditions mentioned in Schedule 'A' and Schedule 'B'.
- This order is issued from pollution control point of view only. Zoning and other regulations are not considered.

Encl: Schedule 'A'
Schedule 'B'

Sd/-
MEMBER SECRETARY

To,
**M/s. Gangavaram Port Ltd., (Expansion),
Gangavaram (V), Pedagantyada (M)
Visakhapatnam District.**

Copy to: 1 The JCEE, Z.O., Visakhapatnam for information and necessary action.
2. The E.E., R.O, Visakhapatnam for information and necessary action.

/// T.C.F.B.O ///


JOINT CHIEF ENVIRONMENTAL ENGINEER(CPE)

SCHEDULE - A

1. Progress on implementation of the project shall be reported to the concerned Regional Office, A.P. Pollution Control Board once in six months.
2. Separate energy meters shall be provided for Effluent Treatment Plant (ETP) and Air pollution Control equipments to record energy consumed.
3. The proponent shall obtain Consents for Operation (CFO) from APPCB, as required Under Sec.25/26 of the Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P&C of P) Act, 1981, before commencement of the activity.
4. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec.27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec 21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review any or all the conditions imposed herein and to make such alternation as deemed fit and stipulate any additional conditions by the Board.
5. The consent of the Board shall be exhibited in the factory premises at a conspicuous place for the information of the inspecting officers of different departments.
6. Compensation is to be paid for any environmental damage caused by it, as fixed by the Collector and District Magistrate as civil liability.
7. Floor washing shall be admitted into the effluent collection system only and shall not be allowed to find their way in storm drains or open areas. The industry shall maintain a good housekeeping. All pipe valves, sewers, drains shall be leak proof. Dyke walls shall be constructed around storage of chemicals.
8. Rain Water Harvesting (RWH) structure (s) shall be established on the plant site. The proponent shall ensure that effluent shall not enter the Rain Water harvesting structure.
9. The rules and regulations notified by Ministry of Law and Justice, GOI, regarding the Public Liability Insurance Act, 1991 shall be followed.
10. This order is valid for period of 5 years from the date of issue.

SCHEDULE - B

Water:

1. The source of water is VWSCO (Visakhapatnam Industrial Water Supply Co.) and the maximum permitted water consumption after expansion is 1504.18 KLD.

S. no	Purpose	Existing Quantity	Proposed Quantity	Total quantity
1	Gardening / Irrigation.	---	25 KLD	25 KLD
2	Dust Suppression	500 KLD	796.032 KLD	1296.32 KLD
3	Domestic	40 KLD	70 KLD	110 KLD
4	Ship supply	---	32.54 KLD	32.54 KLD
5	Miscellaneous	---	40.608 KLD	40.608 KLD
Total		540 KLD	964.18 KLD	1504.18 KLD

2. The maximum Waste Water Generation (KLD) shall not exceed the following after expansion:

S. no	Source	Existing Quantity	Proposed Quantity	Total quantity
1	Domestic	40 KLD	60 KLD	100 KLD

Treatment & Disposal:

Source of Effluent	Treatment	Mode of Final disposal
Domestic effluents	STP	Dust suppression / Green Belt development / Industrial use within the Port area

3. All the units of the STP shall be impervious to prevent ground water pollution. The treated waste water shall be reused or recycled to the maximum extent possible.
4. The domestic sewage shall be treated to the Onland for Irrigation standards, stipulated under Environment (Protection) Rules, 1986 notified and published by Ministry of Environment and Forests, Government of India as specified in Schedule VI vide G.S.R.422 (I), dt.19.05.1993 and its amendments thereof.
5. The industry shall provide settling pond for collecting the storm water runoff from the proposed coal berth in addition to the existing settling pond.
6. Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes mentioned below.
 - a) Domestic purposes.
 - b) Processing, whereby water gets polluted and pollutants are easily bio-degradable.
 - c) Processing, whereby water gets polluted and the pollutants are not easily bio-degradable.

Air:

7. The Air pollution Control equipment shall be installed along with the commissioning of the activity.
8. The proponent shall comply with the following for controlling fugitive emissions.
 - Fully mechanized handling equipment for loading & unloading operations for dusty cargo.
 - Closed conveyor belt with water sprinkling arrangement for suppression of dust while conveying dusty cargos like Coal, Iron ore & Alumina.
 - Vehicle movement shall be minimized / eliminated by implementing mechanical operation.

- All the vehicles involved in transportation of cargo shall be covered with tarpaulin.
 - Traffic management measures shall be adopted to avoid traffic congestion and shall provide empty dusting vehicle washings / dry cleaning system to clean all out going cargo vehicles.
 - Based on traffic density/ vehicular movements anticipated from the port, parking facilities shall be provided.
 - Automated mechanical water sprinkling shall be provided on roads and at dusty cargo storage areas, for suppression of dust.
9. The proponent shall implement the following measures in the cargo handling and stacking area:
- i) The ship unloader shall be provided with insitu water sprinkling system and unloading hoppers shall be provided with covers on three sides to control fugitive emissions.
 - ii) Mechanical stackers cum reclaimers for staking transfer and reclamation and conveyors for transfer of materials to stop manual handling and no involvement of mobile machines.
 - iii) MDSS at transfer points and stacking areas.
10. All the transfer points, loading / unloading points and conveyer systems shall be housed completely with leak proof arrangements. Adequate dust suppression and containment measures shall be implemented for effective control of fugitive emissions.
11. The proponent shall ensure compliance of the National Ambient Air quality standards notified by MoE&F, GoI vide notification No. GSR 926(E), dated. 16.11.2009 during construction and regular operational phase of the project.
12. The generator shall be installed in a closed area with a silencer and suitable noise absorption systems. The ambient noise level shall not exceed 75 dB(A) during day time and 70 dB(A) during night time.

Solid Waste:

13. The proponent shall comply with the following after implementation of expansion.

S.No	Type of solid waste	Quantity (TPM)	Mode of disposal
1	Domestic solid waste	10	Shall be Collected, segregated and disposed as per MSW Rules in consultation with GVMC Authorities.
2	Discarded material, Plastic material	10	Shall be disposed to authorized recyclers only
3	Sludge from STP	1.0	Shall be composted and used in green belt programme
4	Lead acid batteries	--	Shall be disposed to authorized recyclers.
5	Waste oil (including Bilge oil)	--	Shall be disposed to authorized recyclers

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14. Fire detection and fire fighting facilities with adequate water storage facility shall be provided in fire prone area in consultation with Directorate of Fire Firefighting.
 15. Onsite & offsite Disaster Management plan shall be prepared to meet any eventuality in case of any accident. Mock drills shall be conducted atleast twice a year and modifications required if any shall be incorporated in Disaster Management Plan.
 16. The proponent shall not allow unauthorized hazardous wastes (for recycling / reprocessing) through the port.
 17. The proponent shall not store any hazardous cargo containers within the premises.
 18. In case of any leakage container of hazardous cargo is found, permission shall be obtained from the Board for disposal after establishing type and quantity of the waste.
 19. The following rules and regulations notified by the MOEF, GOI shall be implemented.
 - a) Hazardous waste (Management, Handling and Transboundary) Rules, 2008.
 - b) Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989.
 - c) Batteries (Management & Handling) Rules, 2010.

Other Conditions:

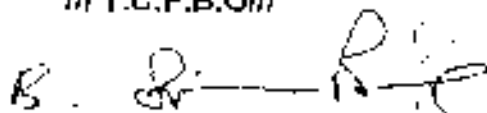
20. Thick green belt shall be developed along the boundary of the port. The proponent shall develop 100 mts wide thick green belt on road side & habitation side particularly towards north-west & west directions. The proponent shall develop green belt with three year old plants. Existing Green belt shall not be disturbed in the proposed expansion activity
21. The proponent shall not establish any other stock yards other than designated stock yards
22. The industry shall procure additional sweeping machine within three months of time as committed vide Ir.dt. 29.02.2012 and report the compliance to the E.E., R.O., Visakhapatnam.
23. The industry shall network the CAAQM data to Board website within one months as committed vide Ir.dt. 29.02.2012.
24. The proponent shall restrict its cargo handling and storage of commodities permitted. In any case, the non-permitted commodities and other dusting cargo shall not be handled and stored in the proposed activity without prior permission from the Board.
25. In any case, the cargo stacking height shall not be more than 6 m from the ground level as directed by the Board vide order dt. 18.05.2011 and as committed by the Industry during CFE Committee meeting held on 29.02.2012.

26. The solid waste arises from dredging shall be disposed in Environmental sound manner. The details of actual solid waste generation and disposal mode shall be submitted to the Board before commissioning of construction activity.
27. The proponent shall implement Mechanical Dust Suppression system (MDSS) to control fugitive emissions at all potential sources in entire activity.
28. Dry fogging / water sprinkling shall be implemented and maintained effectively at all transfer points, cargo handling area and stacking areas.
29. The industry shall not slack alumina on berth and the same should be stored in silos only.
30. The industry shall provide standby centrifugal pump so as to ensure uninterrupted operated of MDSS.
31. All types of the fertilizers shall be stored in the closed warehouses only. The proponent shall ensure that there shall not be any open storage of urea or any other fertilizer materials and all urea & fertilizer material handling warehouses shall be provided with effluent treatment plant.
32. The proponent shall comply with all the directions issued by the Board from time to time.
33. Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant pollution control Acts.
34. The Board reserves its right to modify above conditions or stipulate any additional conditions in the interest of environment protection.

Sd/-
MEMBER SECRETARY

To,
M/s. Gangavaram Port Ltd., (Expansion),
Gangavaram (V), Pedagantyada (M)
Visakhapatnam District.

/// T.C.F.B.O///



JOINT CHIEF ENVIRONMENTAL ENGINEER(CFE)



ANDHRA PRADESH POLLUTION CONTROL BOARD
D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel
Centre,
Chalamavari Street, Kasturibaipet, Vijayawada - 520 008
Phone. No.0866-2436200, Website : www.pcb.ap.gov.in

CONSENT ORDER FOR ESTABLISHMENT

Order No: APPCB/ VSP/ VSP/ 113/ CFE/ HO/ 2012

16/08/2022

Sub: **APPCB - CFE - M/s. Gangavaram Port Limited, Gangavaram (V), Pedagantyada (M), Visakhapatnam District** - Consent for Establishment (Expansion) of the Board under Sec.25 of Water (P & C of P) Act, 1974 and Under Sec.21 of Air (P & C of P) Act, 1981 - Issued - Reg.

Ref:

1. CFO order No.APPCB/VSP/VSP/113/CFO/HO/2020 dt.10.09.2020.
2. EC order dt.24.12.2021 issued by MoEF & CC, GoI for expansion project.
3. Port facility's CFE(Exp) application received through APOCMMS on 13.06.2022.
4. R.O's inspection report dt.16.06.2022.
5. CFE Committee meeting held on 28.06.2022.
6. T.O. Ir. dt.12.07.2022.
7. Port facility's Ir.dt.14.07.2022.
8. CFE Committee meeting held on 26.07.2022.
9. T.O. Ir. dt.04.08.2022.
- 10.RO: VSP mail dt.08.08.2022 reg receipt of balance fee.

M/s. Gangavaram Port Limited, vide reference 2nd cited, submitted an application to the Board seeking Consent for Establishment (CFE) for expansion project as mentioned below, with an additional investment of Rs.5055.00 Crores.

Proposed Expansion:

S. No.	Name of the cargo	Existing qty as per CFO Order dt.13.01.2016 (MMTPA)	Qty as per EC Clearance dt.24.12.2021 and as per CFE Expansion (MMTPA)	Total qty after CFE expansion (MMTPA)
1	Containers	0.25	7.75	8.00
2	Multi Cargo: Agri products, (Food grains in bags or bulk, Chickpeas, Cereals, Pulses, Sugar, Raw Sugar), Slag, Lime Stone, Bauxite, Steel Products (Steel Beams, Coils, Billets, Angles,	6.20	6.50	12.70

	Channels, Project Cargo), Bulk Alumina & Other cargos.			
3	Coal	25.00	3.25	28.25
4	Iron ore	3.00	2.50	5.50
5	Fertilizer	2.50	0	2.50
6	Industrial Raw Material (Ferro silicon, Charge Chrome, Chrome ore, Coal Tar (Bags), Aluminum Ingots, Aluminum Billets, Bentonite, Pig iron, Manganese ore, Wood items, Paper bundles, CP Coke Bauxite, gypsum, clinker, scrap)	3.50	0	3.50
7	Liquid cargo (edible oil, caustic lye)	0.50	0	0.50
	Total	40.95	20	60.95

2. As per the application, the above expansion activity is to be located in the existing premises of the Port located at **Gangavaram (V), Pedagantyada (M), Visakhapatnam District.**

3. The above site was inspected by Environmental Engineer, Regional Office, Visakhapatnam, A.P Pollution Control Board on 15.06.2022 and found that the port site is surrounded by

North : Gangavaram (V)
South : RINL (Steel Plant)
East : Bay of Bengal
West : Pedagantyada (V)

4. The Board, after careful scrutiny of the application, verification report of Regional Officer and recommendation of the CFE Committee, hereby issues **CONSENT FOR ESTABLISHMENT for EXPANSION** under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. **This order is issued to the activity as mentioned at para (1) only.**

5. This Consent Order now issued is subject to the conditions mentioned in Annexure.

6. This order is issued from pollution control point of view only. Zoning and other regulations are not considered.

7. This order is valid for a period of 7 years from the date of issue.

Encl: Annexure.

VIJAY KUMAR GSRKR
IAS, MEMBER SECY(GSRKRVK), O/o
MEMBER SECRETARY-APPCB

To
M/s. Gangavaram Port Ltd., (exp)
Gangavaram (V), Pedagantyada (M)
Visakhapatnam Dist.

Copy to: 1. The JCEE, Z.O: Visakhapatnam for information and necessary action.
2. The E.E., R.O: Visakhapatnam for information and necessary action.

ANNEXURE

1. The Port facility shall obtain Consents for Operation (CFO) from APPCB, as required Under Sec.25/26 of the Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P&C of P) Act, 1981, before commencement of the expansion activity.
2. Compensation is to be paid for any environmental damage caused by it, as fixed by the Collector and District Magistrate as civil liability.
3. The rules and regulations notified by Ministry of Law and Justice, GOI, regarding the Public Liability Insurance Act, 1991 shall be followed.

Water:

4. The source of water supply is from GVMC and the maximum permitted water consumption after proposed expansion activity is as following:

S. No	Purpose	Qty as per CFO Order dt.13.01.2016 (KLD)	Qty as per EC Order dt.24.12.2021 & proposed CFE Expansion (KLD)	Total quantity after expansion (KLD)
1.	Gardening	25.00	360.00	1754.10
2.	Dust suppression	1296.00		
3.	Ship supply	32.50		
4.	Miscellaneous	40.60		
5.	Domestic	40.00	18.00	58.00
	Total	1434.10	378.00	1812.10

Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes viz., Dust suppression, Domestic , Miscellaneous, Development of greenbelt.

5. The maximum waste water generation (KLD) shall not exceed the following:

S. No	Source	Qty as per CFO Order dt.13.01.2016 (KLD)	Qty as per EC Order dt.24.12.2021 & as per CFE Expansion (KLD)	Total qty after expansion (KLD)
1.	Domestic waste after treatment in STP	32.00	14.40	46.40
	Total	32.00	14.40	46.40

Treatment & Disposal:

S. No.	Effluent Description	Treatment	Disposal
1	Domestic effluent	STPs of capacity - 50 KLD (Existing STP - 35 KLD Proposed STP - 15 KLD)	The treated water shall be utilised for green belt development in own premises.

The effluent / sewage shall be treated to the on land for irrigation standards, as stipulated under Schedule VI of Environment (Protection) Rules, 1986, notified by Ministry of Environment and Forests, Government of India vide G.S.R.422 (E), dt.19.05.1993 and its amendments thereof. The treated waste water shall be used for development of greenery, dust suppression, re-used for various purposes within the premises.

Air:

Existing:

S. No.	Details of Stack	Stack -1 & 2
a.	Attached to:	DG Sets
b.	Capacity	3 X 320 KVA & 1 X 62.5 KVA
c.	Stack height above ground	4m & 6m
d.	Air Pollution Control Equipment:	Acoustic Enclosure

Additional DG Sets not proposed in the expansion project.

7. The port facility shall ensure compliance of the National Ambient Air quality standards notified by MoE&F, GoI vide notification No. GSR 826(E), dated. 16.11.2009 during construction and regular operational phase of the project.
8. The port facility shall comply with the following for controlling fugitive emissions
 - Vehicle movement shall be minimized / eliminated by implementing mechanical operation.
 - All the vehicles involved in transportation of cargo shall be covered with tarpaulin.
 - Vehicles shall be managed to avoid traffic congestion and shall provide empty dusting vehicle washings / dry cleaning system to clean all out going cargo vehicles.
 - Based on traffic density/ vehicular movements anticipated from the

port, parking facilities shall be provided.

10. All the transfer points, loading / unloading points and conveyer systems shall be housed completely with leak proof arrangements. Adequate dust suppression and containment measures shall be implemented for effective control of fugitive emissions.

11. Hazardous / Solid Waste details:

The Port Authority shall comply with the following w.r.t disposal of solid waste:

S. No.	Name of the solid waste	Qty as per CFO Order dt. 13.01.2016	Qty proposed for Expansion	Total qty after CFE expansion	Method of Disposal
1.	Waste Oils & Grease	12,000 LPA	---	12,000 LPA	Shall be disposed to authorized Re-processors / Recyclers / to the Cement industries to use as alternate fuel in the kiln routed through M/s APEMCL
2.	Domestic solid waste	10 TPM	3.60 TPM	13.60 TPM	Shall be collected segregated and disposed as per MSW Rules in consultation with GVMC Authorities.
3.	Discarded material, plastic material	10 TPM	0.25 TPM	10.25 TPM	Shall be disposed to authorized recyclers only
4.	Sludge from STP	1.0 TPM	0.165 TPM	1.165 TPM	Shall be composted and used for green belt development
5.	Lead acid batteries	---	---	---	Shall be disposed to authorized recyclers routed through M/s APEMCL

Other Conditions:

12. The Gangavaram port facility shall comply with the conditions stipulated in the EC order dt.24.12.2021 issued by the MoEF, CC & GoI.
13. The Gangavaram port facility shall provide the 4th Continuous Ambient Air quality (CAAQM) station with Beta Ray Attenuation technology as per the EC order condition and as committed in the CFE Committee meeting.
14. The Gangavaram port facility shall get a study carried out by Andhra University or any other reputed institute clearly establishing the Ambient Air Quality Levels with existing system and projected levels if tube conveyor system is not provided considering the proposed expansion activities within 6 months.
15. The Gangavaram port shall Conduct Health camps jointly with medical and health departments Govt. AP in the nearby villages.
16. Fire detection and fire fighting facilities with adequate water storage facility shall be provided in fire prone area in consultation with competent authorities.
17. Onsite & offsite Disaster Management plan shall be prepared to meet any eventuality in case of any accident. Mock drills shall be conducted atleast twice a year and modifications required if any shall be incorporated in Disaster Management Plan and shall submit to Board
18. The following rules and regulations notified by the MOE&F, GOI shall be implemented.
 - a. Regulation of Persistent Organic Pollutants Rules, 2018.
 - b. Hazardous waste and other wastes (Management and Transboundary Movement) Rules, 2016.
 - c. Plastic Waste Management Rules, 2016.
 - d. Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
 - e. Fly Ash Notification, 2016.
 - f. Batteries (Management & Handling) Rules, 2010.
 - g. E-Waste (Management) Rules, 2016.
 - h. Construction and Demolition waste Management Rules, 2016.
 - i. Solid Waste Management Rules, 2016.
 - j. The Public Liability Insurance Act, 1991 and its amendments thereof.
19. The Port facility shall obtain prior permission from MoEF&CC, GoI and APPCB for any changes in the cargo type / capacity.
20. DO levels in the sea water at the dredging area shall be monitored at regular interval and the dredging time shall be suitably regulated to prevent depletion of DO levels in the sea water.

21. Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of this order and attract action under the provisions of relevant pollution control Acts.
22. Notwithstanding anything contained in this conditional letter or consent, the Board hereby reserves its right and power Under Sec. 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to revoke the order, to review any or all the conditions imposed herein and to make such modifications as deemed fit and stipulate any additional conditions.
23. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules,1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of Water (Prevention and Control of Pollution)Act,1974 and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981.

VIJAY KUMAR GSRKR IAS,
MEMBER SECY(GSRKRVK), O/o MEMBER
SECRETARY-APPCB

To
M/s. Gangavaram Port Ltd., (exp)
Gangavaram (V), Pedagantyada (M)
Visakhapatnam Dist.

**ANDHRA PRADESH POLLUTION CONTROL BOARD**

Paryavaran Bhavan, APIIC Colony Road,

Gurunanak Colony,

Autonagar, Vijayawada- 520007.

Website: www.pcb.ap.gov.in

**CONSENT TO ESTABLISH ORDER****Order No.APPCB/VSP/VSP/113/CTE/HO/2012 05/06/2023**

Sub: **APPCB – CTE - M/s. Adani Gangavaram Port Limited (formerly M/s.Gangavaram Port Limited), Gangavaram (V), Pedagantyada (M), Visakhapatnam District** – Consent to Establish (CTE) of the Board under Sec.25 of Water (P & C of P) Act, 1974 and under Sec.21 of Air (P & C of P) Act, 1981 - Issued - Reg.

- Ref:
1. CTE (exp) order dt.16.08.2022 issued by the Board.
 2. CTE application for Iron ore screening and crushing, received through APOCMMS on 20.04.2023.
 3. R.O's inspection report dt.09.05.2023.
 4. Industry's mail dt.17.05.2023.
 5. CTE Committee meeting held on 18.05.2023 and 30.05.2023.
 6. T.O. Ir.dt.19.05.2023.

1. **M/s.Gangavaram Port Limited**, vide reference 2nd cited, submitted an application to the Board seeking Consent to Establish for Iron ore screening and crushing unit in the port premises to produce the following products with installed capacities as mentioned below, with an additional investment of Rs.3.80 Cr.

Under expansion:

S. No.	Name of the Products	Capacity
1.	Screened Iron ore fines	1.0 Lakh Tons/month
2.	Crushed Iron ore	1.0 Lakh Tons/month

Raw material:

S. No.	Name of the Raw material	Qty
1.	Iron Ore boulders	2.0 Lakh Tons/month (0.2MMTM)

2. As per the application, the above activity is to be located in the existing port premises at Gangavaram (V), Pedagantyada (M), Visakhapatnam District in an area of 2 acres (total Port area is 1800 acres).
3. The above site was inspected by Asst. Environmental Engineer, Regional Office, Visakhapatnam, A.P Pollution Control Board on 26.04.2023 and found that the site is surrounded by

Surroundings of the Port:

North : Gangavaram Village
South : RINL(Steel Plant) boundary
East : Bay of Bengal

West : Pedagantyada Village

Surroundings of the proposed screening & crushing unit:

North –Internal railway track

South – Internal road followed by stock yard

East – Customs fencing followed by weigh bridge - 6

West – Iron ore stock yard

4. The Board, after careful scrutiny of the application, verification report of Regional Officer and recommendation of the CTE Committee, hereby issues **CONSENT TO ESTABLISH** for Iron ore screening and crushing unit in the port premises under Section 25 of Water (Prevention & Control of Pollution) Act 1974 and Section 21 of Air (Prevention & Control of Pollution) Act, 1981 and the rules made there under. **This order is issued to the activity as mentioned at para (1) only.**
5. This Consent Order now issued is subject to the conditions mentioned in Annexure.
6. This order is issued from pollution control point of view only. Zoning and other regulations are not considered.
7. **This order is valid for a period of 7 years from the date of issue.**
8. **The order is issued subject to final orders of the Hon'ble Courts/NGT.**

Encl: Annexure.

**B SREEDHAR IAS,
MS(BS), O/o MEMBER SECRETARY-
APPCB**

To
M/s. Adani Gangavaram Port Limited
(formerly M/s.Gangavaram Port Limited),
Gangavaram (V), Pedagantyada (M),
Visakhapatnam District
Email: jyothi@gangavaram.com

- Copy to:** 1. The JCEE,Z.O:Visakhapatnam for information and necessary action.
2. The E.E., R.O: Visakhapatnam for information and necessary action.

ANNEXURE

1. The proponent shall obtain Consent to Operate (CTO) from APPCB, as required Under sec.25/26 of the Water (P&C of P) Act, 1974 and under sec. 21/22 of the Air (P&C of P) Act, 1981, before commencement of the activity.
2. Compensation is to be paid for any environmental damage caused by it, as fixed by the Collector and District Magistrate as civil liability.
3. The rules and regulations notified by Ministry of Law and Justice, GOI, regarding the Motor Vehicle Liability Insurance Act, 1991 shall be followed.

Water:

4. The source of water is GVMC and the maximum permitted water consumption after the proposed activity is as following:

S. No.	Purpose	Qty as per CTO Order dt.13.01.2016 (KLD)	Qty for screening and crushing (KLD)
1.	Gardening	25.0	5.0
2.	Dust suppression	1296.0	5.0
3.	Ship supply	32.5	---
4.	Miscellaneous	40.6	---
5.	Domestic	40.0	---
	Total	1434.10 KLD	10.0 KLD

Separate meters with necessary pipe-line shall be provided for assessing the quantity of water used for each of the purposes viz., Dust suppression, Domestic, Washing and servicing, development of greenery.

5. **Waste water generation:** The maximum waste water generation shall not exceed the following:

S. No.	Source	Qty as per CTO Order dt.13.01.2016 (KLD)	Qty for screening and crushing (KLD)
1.	Domestic waste water	32.0	--
	Total	32.0 KLD	--

Treatment and disposal:

S. No.	Effluent	Treatment	Disposal
1.	Domestic	STPs of capacity – 30 KL, 5KL.	Dust suppression / development of greenery etc.

6. The effluent / sewage shall be treated to the on land for irrigation standards, as s under Schedule VI of Environment (Protection) Rules, 1986, notified by Ministry onment and Forests, Government of India vide G.S.R.422 (E), dt.19.05.1993 and ndments thereof. The treated waste water shall be used for development of greener uppression, re-used for various purposes within the premises.

Air:

7. The Air pollution Control equipment shall be installed along with the commissioning tivity and shall comply with the following for controlling air pollution:

S. No.	Details of Stack	Stack -1
a.	Attached to:	DG Sets
b.	Capacity	1 x 320 KVA & 1 x 62.5KVA
c.	Fuel	HSD
d.	Stack height above ground	4 m & 6 m
e.	Air Pollution Control Equipment:	Acoustic Enclosures and silencers

8. **The proponent shall ensure compliance of the National Ambient Air quality s ds notified by MoE&F, GoI vide notification No. GSR 826(E), dated. 16.11.2008 g construction and regular operational phase of the project.**

9. The proponent shall comply with the following for controlling fugitive emissions
- Vehicle movement shall be minimized / eliminated by implementing mechanical operation.
 - All the vehicles involved in transportation of cargo shall be covered with tarpaulin
 - Vehicles shall be managed to avoid traffic congestion and shall provide empty di vehicle washings / dry cleaning system to clean all out going cargo vehicles.
 - Based on traffic density/ vehicular movements anticipated from the port, parking s shall be provided.

10. All the transfer points, loading / unloading points and conveyer systems shall be hc ompletely with leak proof arrangements. Adequate dust suppression and containr asures shall be implemented for effective control of fugitive emissions.

11. Hazardous / Solid Waste details:

The Port Authority shall comply with the following w.r.t disposal of solid waste:

S. No.	Name of the solid waste	Qty as per CFO Order Dt.13.01.2016	Method of Disposal
1.	Waste Oils & Grease	12,000 LPA	To authorized Re-processors / Recyclers / to the Cement industries to use as alternate fuel in the kiln through M/s. APEMCL.
2.	Domestic solid waste	10 TPM	Shall be collected segregated and disposed as per MSW Rules in consultation with GVMC Authorities
3.	Discarded material, plastic material	10 TPM	Shall be disposed to authorized recyclers only
4.	Sludge from STP	1.0 TPM	Shall be composted and used for green belt development.
5.	Lead acid batteries	---	To dealers on buy back system through M/s. APEMCL.

No additional waste generation from proposed Iron Ore screening and crushing unit.

Other Conditions:

12. The proponent shall comply with the following conditions:

- The Port shall provide cladding / cover to the screen, conveyors and crusher.
- Hood with Bag Filter shall be provided to suck emissions at transfer points of conveyor.
- The Port shall maintain ambient air quality within the Board standards.
- The Port shall co-ordinate with traffic police and GVMC for regular cleaning of road along National Highway to suppress the dust emissions.
- The Port shall strictly comply with the directions of the Hon'ble NGT issued, if any.

13. Fire detection and fire fighting facilities with adequate water storage facility shall be provided in fire prone area in consultation with competent authorities.
14. Onsite & offsite Disaster Management plan shall be prepared to meet any eventualities in case of any accident. Mock drills shall be conducted atleast twice a year and modifications to the plan shall be incorporated in Disaster Management Plan and shall submit to Board.
15. The following rules and regulations notified by the MOE&F, GOI shall be implemented:
 - a. Regulation of Persistent Organic Pollutants Rules, 2018.

- b. Hazardous waste and other wastes (Management and Transboundary Movement) Rules, 2016.
 - c. Plastic Waste Management Rules, 2016.
 - d. Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989
 - e. Fly Ash Notification, 2016.
 - f. Batteries (Management & Handling) Rules, 2010.
 - g. E-Waste (Management) Rules, 2016.
 - h. Construction and Demolition waste Management Rules, 2016.
 - i. Solid Waste Management Rules, 2016.
 - j. The Public Liability Insurance Act, 1991 and its amendments thereof.
16. The Port Authorities shall obtain prior permission from MoEF&CC, GoI and APPCB changes in the cargo type / capacity.
 17. DO levels in the sea water at the dredging area shall be monitored at regular intervals and dredging time shall be suitably regulated to prevent depletion of DO levels in the sea.
 18. Concealing the factual data or submission of false information/ fabricated data and failure to comply with any of the conditions mentioned in this order may result in withdrawal of consent and attract action under the provisions of relevant pollution control Acts.
 19. Concealing the factual data or submission of false information / fabricated data and failure to comply with any of the conditions mentioned in this order attracts action under the provisions of relevant pollution control Acts.
 20. Notwithstanding anything contained in this conditional letter or consent, the Board reserves its right and power Under Sec. 27(2) of Water (Prevention and Control of Pollution) Act, 1974 and Under Sec.21(4) of Air (Prevention and Control of Pollution) Act, 1981 to review the order, to review any or all the conditions imposed herein and to make such modifications as deemed fit and stipulate any additional conditions.
 21. Any person aggrieved by an order made by the State Board under Section 25, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules, 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of Water (Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air (Prevention and Control of Pollution) Act, 1981.

**B SREEDHAR IAS,
MS(BS), O/o MEMBER SECRETARY-
APPCB**

To

**M/s. Adani Gangavaram Port Limited
(formerly M/s.Gangavaram Port Limited),
Gangavaram (V), Pedagantyada (M),
Visakhapatnam District**



ANDHRA PRADESH POLLUTION CONTROL BOARD

Paryavaran Bhavan, A-III, Industrial Estate,
Sanathnagar, Hyderabad-500 018
Phone : 040-23887500, Website : www.appcb.ap.nic.in

RED CATEGORY CONSENT & AUTHORIZATION ORDER BY REGISTERED POST WITH ACKNOWLEDGEMENT DUE

Consent Order No:APPCB/VSP/VSP/113/CFO/HO/2015- 1056

Date:12.01.2015

(Consent Order for Existing/New or altered discharge of sewage and/or trade effluents/outlet under Section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and amendments thereof, Operation of the plant under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorization / Renewal of Authorization under Rule 5 of the Hazardous Wastes (Management & Handling) Rules 1989 & Amendment Rules).

CONSENT is hereby granted under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974, under section 21 of Air (Prevention & Control of Pollution) Act 1981 and Authorization under the provisions of HW (M & H) Rules (hereinafter referred to as 'the Acts', 'the Rules') and the rules and orders made there under to

M/s.Gangavaram Port Ltd.,(Existing&Expansion),
Gangavaram Village,
Pedagantyada (M),
Visakhapatnam District – 530 044
E-mail: vasantkumar@gangavaram.com

(Hereinafter referred to as 'the Applicant') authorizing to operate the industrial plant to discharge the effluents from the outlets and the quantity of emissions per hour from the chimneys as detailed below:

i) Out lets for discharge of effluents:

Outlet No.	Outlet Description	Max Daily Discharge KLD	Point of Disposal
1)	Domestic Effluents after treatment in STP	32	Shall be used for Dust Suppression / Green Belt development / Industrial use with in port area.

ii) HAZARDOUS WASTE AUTHORISATION (FORM – II) [See Rule 5 (4)]:

M/s. Gangavaram Port Ltd., Gangavaram (V), Pedagantyada (M), Visakhapatnam District., is hereby granted an authorization to operate a facility for collection, reception, storage, treatment, transport and disposal of Hazardous Wastes namely:

• HAZARDOUS WASTES WITH RECYCLING OPTION :

S. No	Name of Hazardous waste	Stream	Quantity	Method of disposal
1.	Waste oil including bilge oil	5.1 of Schedule - I	8000 LPA	Shall be sent To authorized reprocessors/ recyclers.

This consent order is valid for various port activities with installed capacities as mentioned below:

a) Traffic to be handled at Gangavaram Port

S. No.	Name of the cargo	Total capacity (MMTPA) after expansion
1	Liquid bulk	1.5
2	Iron ore	6.0
3	Coal	17.0
4	Agri products	1.25
5	Slag	1.0
6	Containers	1.0
7	Fertilizer	2.0
8	Lime stone	1.5
9	Steel products	1.2
10	Industrial raw material	5.5
11	Bulk Alumina	3.0
Total		40.95

b) Vessel sizes:

S. No.	Type of Vessel	Total capacities
1	Iron ore, coal, coke	2,00,000 DWT
2	Other dry bulk and general cargo	80,000 DWT

c) Berth Requirements:

S. No	Berth	No's
1	Coal berths (mechanized)	2
2	Iron ore berth (Mechanized)	1
3	Other dry bulk berth (lime stone /fertilizers etc)	1
4	General cargo berth	1
5	Multipurpose berths (General cargo / multipurpose cargo)	4
Total		9

d) Dimensions of berths:

S. No	Name of the berth	Length	Width	Draft
1	Coal berth (Mechanized)	320	25	19.5
2	Iron ore berth (Mechanized)	316	25	19.5
3	Other dry bulk berth	285	31	15.5
4	Multipurpose berth	275	31	15.5
5	General cargo berth	240	21	14
6	Dry bulk (coal) (Mechanized)	350	25	20.5
7	Multipurpose berths (General cargo / Multipurpose cargo)	285	28	15.5

i. Storage area requirement for dry bulk and other dry bulk cargo:

Cargo	Storage demand (T)	Storage area Req. (Sq.M)
Coal	53,86,000	7,35,674
Iron Ore		
Fertilizers /Agri Products		
Limestone		
Slag		

ii. Storage area requirement for Break Bulk Cargo:

Items		Quantity
Through put		2.0 MTPA
Storage Demand	Open	66,000.08 T
	covered	
Storage area required including aisle space factor	Open	2,58,600 Sq.m
	covered	51000 Sq.m

f) Storage area requirement for Container Cargo:

Sl No.	Cargo	Storage area requires (sqm)
1	Container cargo	Container parking yard – 2,00,000
		Container Freight station – 96,000

This order is subject to the provisions of 'the Acts' and the Rules' and orders made thereunder and further subject to the terms and conditions incorporated in the schedule A, B & C enclosed to this order.

This combined order of consent & Hazardous Waste Authorization shall be valid for a period ending with the 31st day of December, 2015.

Sd/-
Member Secretary

//T.C.F.B.O//

Kulag 10/1/15

JOINT CHIEF ENVIRONMENTAL ENGINEER
UNIT HEAD - IV

To
M/s. Gangavaram Port Ltd.,
Gangavaram Village,
Pedagantyada (M),
Visakhapatnam District – 530 044.
E-mail: vasantkumar@gangavaram.com

Copy to :

1. The JCEE, Zonal Office, Visakhapatnam for information and necessary action.
2. The JCEE (Cess), APPCB, Hyderabad for information.
3. The JCEE(HWM), APPCB, Hyderabad for information.
4. The SEE, Task Force, Visakhapatnam for information.
5. The Environmental Engineer, Regional Office, Visakhapatham for information and necessary action

SCHEDULE-A

1. The applicant shall make applications **through online** for renewal of Consent (under Water and Air Acts) and Authorisation under HWM Rules **at least 120 days before the date of expiry of this order**, along with prescribed fee under Water and Air Acts for obtaining Consent & HW Authorisation of the Board along with detailed compliance to the conditions stipulated in the CFO and HWA.
2. Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to such authority (hereinafter referred to as the Appellate Authority) constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.
3. All other conditions stipulated in the Schedule – A of the earlier combined CFO & HWA order No: **APPCB/VSP/VSP/113/CFO/HO/2010-2471, dated 23.12.2010** remain same. The industry shall ensure consistent compliance of each condition of Schedule-A.
4. The industry may explore the possibility of tapping the solar energy for their energy requirements.

SCHEDULE-B

1. The water consumption quantities are mentioned below:

S. No	Purpose	Quantity
1	Gardening / Irrigation	25
2	Dust suppression	1296.32
3	Domestic	110
4	Ship supply	32.54
5	Miscellaneous	40.608
	Total	1504.18

Source of water is Visakhapatnam Industrial Water Supply Co. Separate water meters shall be maintained for the above purposes.

2. The Gangavaram Port Limited (GPL) shall file the water cess returns in Form-I as required under section (5) of Water (Prevention and Control of Pollution) Cess Act, 1977 on or before the 5th of every calendar month, showing the quantity of water consumed in the previous month along with water meter readings. The industry shall remit water cess as per the assessment orders as and when issued by Board.
3. The industry shall comply with ambient air quality standards of PM_{10} (Particulate Matter size less than $10\mu m$) - $100 \mu g/m^3$; $PM_{2.5}$ (Particulate Matter size less than $2.5 \mu m$) - $60 \mu g/m^3$; SO_2 - $80 \mu g/m^3$; NO_x - $80 \mu g/m^3$; NH_3 - $400 \mu g/m^3$ outside the factory premises at the periphery of the industry.
Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009
Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A)
Night time (10 PM to 6 AM) - 70 dB (A).
4. The Gangavaram Port Limited (GPL) shall clean all port internal roads regularly.
5. The Gangavaram Port Limited (GPL) shall not increase the capacity beyond the permitted capacity mentioned in this order.
6. The total domestic waste water generation after Expansion shall not exceed 32 KLD and shall upgrade the existing STP to 35 KLD capacity in two months and report compliance to Regional Office, Visakhapatnam.
7. The Gangavaram Port Limited (GPL) shall maintain green belt in 50 meters width as stipulated in the EC order dated 07.02.2012.

8. The Gangavaram Port Limited (GPL) shall clean the road connecting the port to National Highway i.e up to Gajuwaka with road sweeping machine.
9. The Gangavaram Port Limited (GPL) shall unload iron ore through wagon tippers only and with dust control measures.
10. The Gangavaram Port Limited (GPL) shall maintain adequate Dust suppression System (MDSS) for all stock yards, dusty cargo berths and conveyor belts.
11. The industry shall minimise dusty cargo operations if the wind velocity crosses 20 KMPH and all MDSS sprinklers shall start immediately to maintain AAQ standards.
12. The industry shall maintain wind breaking wall all along the Gangavaram village side up to a height 10 mts as wind speed is high in this area
13. The Gangavaram Port Limited (GPL) shall not establish any other stock yards other than designated stock yards.
14. The Gangavaram Port Limited (GPL) shall maintain Telescopic chute at ship loading points
15. The Gangavaram Port Limited (GPL) shall provide separate energy meters for Sewage Treatment Plant (STP) and Air pollution Control equipments to record energy consumption.
16. The Gangavaram Port Limited (GPL) shall not allow any hazardous wastes through the port.
17. The Gangavaram Port Limited (GPL) shall not store/handle any hazardous cargo containers within premises.
18. In case a leaky container of hazardous cargo is found, a separate permission of the Board shall be obtained after establishing the quantity and the type of waste for disposal.
19. All types of the fertilizers shall be stored in the closed warehouses only. The Port shall ensure that there shall not be any open storage of urea or any other fertilizer materials and all urea & fertilizer material handling warehouses shall be maintained with effluent collection pits for collection and treatment and then used for green belt in the premises after meeting the standards.
20. The Gangavaram Port Limited (GPL) shall submit monthly monitoring reports to R.O, Visakhapatnam.
21. The Gangavaram Port Limited (GPL) shall store fuel oils used for construction equipment, vessels / vehicles in a well designed manner and protect them against fire hazards by maintaining the compound wall to prevent access to unauthorized elements. The surface run off from storage areas shall pass through oil water separator before discharging.
22. The Gangavaram Port Limited (GPL) shall maintain fire detection and fire fighting facilities with adequate water storage in fire prone areas.
23. The Gangavaram Port Limited (GPL) shall maintain the Malaria control programme, Health facilities, Vector control programmes. Control of all breeding ground shall be carried out by the use of larvicide's in addition to control of adult mosquitoes. The health team shall include a trained entomologist.
24. The Gangavaram Port Limited (GPL) shall maintain a task force to check the vehicle emissions on permanent basis.
25. The Gangavaram Port Limited (GPL) shall constitute an Environment Management cell with qualified and trained staff.
26. The Gangavaram Port Limited (GPL) shall maintain an onsite and offsite emergency action plan after carrying out risk analysis and hazop studies.
27. The Gangavaram Port Limited (GPL) with VUDA shall ensure that no slum development and unauthorized construction occur in the surrounding area.
28. The Gangavaram Port Limited (GPL) shall handle alumina in completely closed enclosures. It shall also furnish an action plan to install mechanized system.
29. The Gangavaram Port Limited (GPL) shall not stock the materials more than 10 mts height where MDSS system available and shall restrict to 6 mts for other stocking heights where tanker water spraying system is maintained in the stock yards.

30. The Gangavaram Port Limited (GPL) shall maintain 3 CAAQMs with online connectivity to APPCB and maintain records.
31. The Gangavaram Port Limited (GPL) shall implement the following for controlling fugitive emissions:
- Fully mechanized handling equipment for loading & unloading operations for dusty cargo shall be maintained to the maximum extent possible dusty cargo handled.
 - Closed conveyor belt with water sprinkling arrangement shall be maintained for suppression of dust while conveying dusty cargos like Coal, Iron ore & Alumina
 - Vehicle movement shall be minimized / eliminated by implementing mechanical operations.
 - All the vehicles involved in transportation of cargo shall be covered with tarpaulin.
 - Traffic management measures shall be adopted to avoid traffic congestion and shall provide empty dusting vehicle washing/dry cleaning system to clean all out going cargo vehicles.
 - Based on traffic density / vehicular movements anticipated from the port, sufficient parking facilities shall be provided.
 - Automated mechanical water sprinkling shall be provided on roads and at dusty cargo storage areas for suppression of dust.
32. The Gangavaram Port Limited (GPL) shall implement the following measures in the cargo handling and stacking area:
- The ship un-loader shall be maintained with in situ water sprinkling system and unloading hoppers shall be provided with covers on three sides to control fugitive emissions.
 - Mechanical stackers cum re-claimers for stacking, transfer and reclamation; Conveyors for transfer of materials to stop manual handling / mobile machines.
 - MDSS at transfer points and stacking areas.
33. The Gangavaram Port Limited (GPL) shall comply with the following after implementation of expansion project:

S. No.	Type of solid waste	Quantity (TPM)	Mode of disposal
1.	Domestic solid waste	10	Shall be collected, segregated and disposed as per MSW Rules in consultation with GVMC Authorities
2.	Discarded material, plastic material	10	Shall be disposed to authorized recyclers only
3.	Sludge from STP	1.0	Shall be composted and used in green belt programme
4.	Lead acid batteries	---	Shall be disposed to authorized recyclers

34. The Gangavaram Port Limited (GPL) shall not stack alumina on berth and the same should be stored in silos only.
35. The Gangavaram Port Limited (GPL) shall maintain standby centrifugal pump so as to ensure uninterrupted operation of MDSS.
36. The Gangavaram Port Limited (GPL) shall maintain compliance of all other conditions of CFE order dated. 02.03.2012.
37. The Gangavaram Port Limited (GPL) shall comply with Task Force directions dated 25.04.2014 and other directions issued by the Board from time to time.
38. The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E (P) Rules, 1986 & amendments.
39. The conditions stipulated are without prejudice to the rights and contentions of this Board in any Hon'ble court of Law.

SCHEDULE - C

[see rule 5(4)


[CONDITIONS OF AUTHORISATION FOR OCCUPIER OR OPERATOR HANDLING HAZARDOUS WASTES]

1. The Gangavaram Port Limited (GPL) shall give top priority for waste minimization and cleaner production practices.
2. The Gangavaram Port Limited (GPL) shall not store hazardous waste for more than 90 days as per the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 and amendments thereof.
3. The Gangavaram Port Limited (GPL) shall store Used / Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal.
4. The Gangavaram Port Limited (GPL) shall not dispose Waste oils to the traders and the same shall be disposed to the authorized Reprocessors/ Recyclers.
5. The Gangavaram Port Limited (GPL) shall dispose Used Lead Acid Batteries to the manufacturers / dealers on buyback basis.
6. The Gangavaram Port Limited (GPL) shall take necessary practical steps for prevention of oil spillages and carry over of oil from the premises.
7. The Gangavaram Port Limited (GPL) shall maintain 6 copy manifest system for transportation of waste generated and a copy shall be submitted to Board Office and concerned Regional Office.
8. The Gangavaram Port Limited (GPL) shall maintain good house keeping & maintain proper records for Hazardous Wastes stated in Authorisation.
9. The Gangavaram Port Limited (GPL) shall maintain proper records for Hazardous Wastes stated in Authorisation in FORM-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 22(2) of the Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and amendments thereof.
10. The Gangavaram Port Limited (GPL) shall dispose of e-waste to the authorised recyclers only.
11. The Gangavaram Port Limited (GPL) shall submit the condition wise compliance report of the conditions stipulated in Schedule A, B & C of this Order on half yearly basis to Board Office, Hyderabad and concerned Regional Office.

Sd/-

Member Secretary

//T.C.F.B.O//


JOINT CHIEF ENVIRONMENTAL ENGINEER
UNIT HEAD - IV

To

M/s. Gangavaram Port Ltd.,
Gangavaram Post,
Pedagantyada (M),
Visakhapatnam District – 530 044.
E-mail: vasantkumar@gangavaram.com



ANDHRA PRADESH POLLUTION CONTROL BOARD
D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Centre,
Chalamalavari Street, Kasturibaipet, Vijayawada - 520 010
Phone. No.0866-2463200, Website : <http://pcb.ap.gov.in>

Order No. APPCB/VSP/VSP/113/CFO/HO/2020-

10/09/2020

AUTO RENEWAL OF CONSENT AND HAZARDOUS WASTE AUTHORISATION ORDER
FOR OPERATIONS

In response to your application dated 12.08.2020 for Auto Renewal of Consent for Operation & Hazardous waste Authorisation Order, the Board is hereby extending validity period of Consent and Authorisation order issued vide Order APPCB/VSP/VSP/113/CFO/HO/2015, dt: 13.01.2016 and valid upto 31.12.2020, issued under sections 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorization under Rule 6 of the Hazardous & Other Wastes (Management & Transboundary, Movement) Rules, 2016 for a further period of 5 (five) years i.e., up to 31.12.2025.

The issue of CFO&HWA (Auto renewal) was placed in the CFO Committee meeting held on 02.09.2020 and the committee observed following: The facility was inspected on 30.07.2020 through computerized allocation of inspections and as per the report, it was mentioned that, "As per EC order dated 07.02.2012 and CFO order dt.13.01.2016, the Gangavaram Port Ltd., shall maintain greenbelt in 50 mtrs width. The GPL has developed 50 mtrs width of greenery towards habitation in north west direction. But, the GPL has to develop 50 mtrs width of green belt in all other three directions".

The representative of the industry attended the meeting through video conference and informed that they had developed 406 acres of greenbelt towards habitation with geo-tagging, the other three sides of the port is sea and a hill-lock and they are participating in green viskha project and developing green belt.

After a detailed discussion, the Committee recommended extending the validity of the CFO & HWA to the facility for a period up to 31.12.2025, with the following conditions:

1. All other conditions mentioned in Schedules A, B & C of the combined CFO&HWA order issued by the Board vide order dated 13.01.2016 will remain same.
2. The facility shall comply with the standards issued by MoEF&CC / CPCB from time to time.
3. The industry shall submit Half yearly compliance reports to all the stipulated conditions in Environmental Clearance (EC), Consent for Establishment (CFE) and Consent for Operation (CFO) through website i.e., <https://pcb.ap.gov.in> by 1st of January and 1st July of every year. The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through NABL accredited third party failing which the Consent Order issued **will be cancelled.**
4. The facility shall ensure that dedicated fund is allotted towards Environment Relief Fund (ERF) in the Public Liability Insurance policy and submit a copy of the policy at the Regional Office: Visakhapatnam every year.
5. In case of false certification, non compliance of conditions / directions and

discrepancy in furnishing the information by the industry, the Board can withdraw the auto renewed consent and take action under provisions of relevant Acts & Rules.

6. The facility shall inventorize the storage quantities of hazardous chemicals as per the hazard nature of reactivity / toxicity / flammability / explosive stored/handling in the premises as defined in the Management of Storage, Import of Hazardous Chemicals (MSIHC) Rules, 1989 and the details shall be furnished to the Factories Department and to the Regional Office, APPCB on monthly basis duly certifying the same.
7. The facility shall identify major accident hazard chemicals & list out the hazardous chemicals endangered to human health & environment and the details shall be furnished to the Factories Department and to the Regional Office, APPCB time to time duly certifying the same by the industry. Further the facility shall extend training to the working personnels while handling hazardous chemicals for prevention of accidents and necessary antidotes to ensure the safety, as per the MSIHC Rules, 1989.
8. The facility shall submit the copy of the safety audit report and On-Site / Off Site Emergency Plans as applicable after being certified by the Factories Department/concerned authority, to the APPCB, Regional Office from time to time, if the storage quantity of hazardous chemicals is equal to or, in excess of the threshold quantities specified in schedule 2 & 3 of MSIHC Rules, 1989.
9. The facility shall carryout calibration of safety equipments and leak detection systems at regular intervals and shall certify the same with the Factories Department/concerned authority. That certified copy shall be submitted to the APPCB, Regional Office. The facility shall install fluorescent Wind Vane at the highest point in the facility premises.
10. The facility shall inventorize the hazardous wastes and its quantities stored within the facility premises as per the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 (HOWM Rules, 2016) and shall furnish the details to Regional Office, APPCB on monthly basis duly certifying the same by the industry.
11. The facility shall allow import of hazardous cargoes only after the importer complies with the MSIHC Rules, 1989.

DR. B.MADHUSUDHANA RAO, JCEE(MSRB), O/o JOINT CHIEF ENVIRONMENTAL ENGINEER-4-APPCB

To

**M/s. Gangavaram Port Limited, Gangavaram (V),
Pedagantyada (M),
Visakhapatnam District**

Copy to:

1. The JCEE, Zonal Office, **Visakhapatnam** for information and necessary action.
2. The Environmental Engineer, Regional Office, **Visakhapatnam** for information and necessary action.



ANDHRA PRADESH POLLUTION CONTROL BOARD
D.No.33-26-14D/2, Near Sunrise Hospital, Pushpa Hotel Centre,
Chalamalavari Street, Kasturibaipet, Vijayawada – 520 010
Phone. No.0866-2463200, Website : <https://pcb.ap.gov.in/>

Consent amendment order No: APPCB/VSP/113/HO/CTO/2015 13/01/2023

Sub: APPCB – UH-IV - CTO - M/s. Gangavaram Port Limited, Pedagantyada (M & V),
- Visakhapatnam – Amendment of CTO order for increase of the quantities of waste/used oil & inclusion of waste/used oil generation in ships and its disposal quantities along with mode of disposal – Issued - Reg.

Ref:- 1. CTO Order dt: 13.01.2016 upto 31.12.2020 and the validity was extended through auto renewal on 10.09.2020 for a period upto 31.12.2025.
2. Industry representation dt 12.10.2022.
3. RO, Visakhapatnam report received on 19.12.2022.
4. CTO committee meeting held on 27.12.2022

- I. The Board vide order dt. 13.01.2016 issued CTO order to the facility to handle cargo of 40.95 Million MT/ Annum and the validity was extended through auto renewal on 10.09.2020 for a period upto 31.12.2025 with a hazardous waste authorization for Waste oil including bilge oil – 12000 LPA. The facility requested for amendment of CTO & HWA order for enhancement of waste/used oil quantity from 12 MTPA to 25 MTPA; inclusion of waste/used oil generation quantity from ships is 600 MTPA and the RO, Visakhapatnam on 19.12.2022 submitted the report.
- II. The issue of CTO (Amendment) to the industry was placed in the CTO committee meeting held on 27.12.2022 and the committee recommended to issue CTO (Amendment) for enhancement of waste/used oil quantity from 12 MTPA to 25 MTPA; inclusion of waste/used oil generation quantity from ships 600 MTPA.
- III. The Board after careful examination of the RO, Visakhapatnam report, industry's representation and recommendations of CTO committee hereby issue the following amendment to the CTO & HWA Order dt: 13.01.2016 issued by the Board under

section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorization under Rule 6 of the Hazardous & Other Wastes (Management & Transboundary, Movement) Rules, 2016 and the rules and orders made there under (hereinafter referred to as 'the Acts', 'the Rules') to:

Amendment:

- I. The table below the “HAZARDOUS WASTE AUTHORISATION (FORM – II) [See Rule 6 (2)]” in the CTO order dt. 13.01.2016 shall be replaced with the following table:

• **HAZARDOUS WASTES WITH RECYCLING OPTION:**

Sl. No	Name of Hazardous Waste	Stream	Quantity	Method of disposal
1.	Waste oil/ used oil	5.1 of Schedule - I	25 MTPA	Shall be routed through M/s. APEMC to authorized re-processors / recyclers.
2.	Waste/used oil / oil sludge generated in ships	5.1 of Schedule - I	600 MTPA	Shall be routed through M/s. APEMC to authorized recyclers/ re-processors directly from the ship.

II. Additional Condition:

1. The industry shall install digital display boards at publicly visible places at the main gate with validity of CTO; and exhibit the CTO order at a prominent place in the factory premises, as per Hon'ble Supreme Court order.
2. The industry shall submit Half yearly compliance reports to all the stipulated conditions in Environmental Clearance (EC), Consent to Establishment (CTE) and Consent to Operation (CTO) through website i.e., <https://pcb.ap.gov.in> by 1st of January and 1st July of every year. The first half yearly compliance reports shall be furnished by the industry and second half yearly compliance reports shall be the audited through MoEF&CC recognized and National Accreditation Board for Laboratory Testing (NABL) accredited third party.

All the remaining conditions mentioned in the CTO order dt. 13.01.2016 remains same.

PRAVIN KUMAR IAS, MS(PK), O/o MEMBER SECRETARY-APPCB

To

M/s. Gangavaram Port Limited,

Pedagantyada (M & V), Visakhapatnam

E-mail: gajapathij@gmail.com; jyothi@gangavaram.com;

Copy to:

1. The JCEE, Zonal Office, **Visakhapatnam** for information and necessary action.
2. The EE, Regional Office, **Visakhapatnam** for information and necessary action.



ANDHRA PRADESH POLLUTION CONTROL BOARD
Dr. YSR Paryavaran Bhavan, APIIC Colony Road,
Gurunanak Colony, Autonagar, Vijayawada- 520007
Phone. No.0866-2463200, Website : <https://pcb.ap.gov.in/>



Amendment to CTO & HW Authorization order

Consent amendment order No:APPCB/VSP/VSP/113/HO/CTO/2020 05/01/2024

Sub: APPCB – Air – M/s. Adani Gangavaram Port Limited (formerly M/s.Gangavaram Port Limited), Gangavaram (PO), Pedagantyada (M), Visakhapatnam District – Industry's request for enhanced quantity Waste / Used oil / Oil Sludge generated in ships from 600 MTPA to 1200 MTPA – CTO&HWA (Amendment) – Issued - Reg.,

- Ref:-**
1. CTO & HWA Order No. APPCB/VSP/VSP/113/CFO/HO/2020, dated 10.09.2020, valid up to 31.12.2025 (Auto renewal)
 2. CTO & HWA (Amendment) Order No. APPCB/VSP/113/CFO/ HO/2015, 13.01.2023.
 3. Consent Order No:APPCB/VSP/113/CTO/HO/2009- Dt. 22/08/2023.
 4. Industry's representation received on 15.11.2023.
 5. ZO, Visakhapatnam report dt. 12.12.2023.
 6. Consent Management (CTO) committee meeting held on 29.12.2023.

- The industry obtained CTO & HWA vide order dated 13.01.2016 for cargo handling of Coal, Iron ore, Agri products, Slag, Limestone, Fertilizers, and General Cargo – 40.95 Million MTPA which was valid upto 31.12.2020 which is auto renewed on 10.09.2020 valid up to 31.12.2025. The industry has obtained CTO amendment vide order dt 13.01.2023 for increase of the quantities of waste/used oil & inclusion of waste/used oil generation in ships.
- The industry has submitted representation stating that the AGPL has disposed 558.95 Tons of Waste / Used Oil/Oil Sludge generated in shops through APEMCL portal as on 31.10.2023 (From April-2023 to October-2023) and requested the following amendment to the CTO order dt. 22.08.2023 under Sl.No.iii of Hazardous waste authorization (form-II) is proposed.

S.No.	Name of the hazardous waste	Stream	Quantity as per CTO Order dated 22.08.2023	Final Quantity as per Facility's request	Disposal Option
2.	Waste/used oil / oil Sludge generated in ships	5.1 of Schedule - I	600 MTPA	1200 MTPA	Shall be routed through M/s.APEMC to authorized recyclers/ re-processors directly from the ship.

- III. The ZO, Visakhapatnam vide reference 5th cited recommended to consider the request of the industry.
- IV. The issue of CTO (Amendment) to the industry was placed in the CTO committee meeting held on 29.12.2023. **The committee recommended to issue amendment of CTO & HWA order to the industry by enhancing the quantity of Waste/used oil / oil Sludge generated in ships from 600 MTPA to 1200 MTPA**
- V. The Board after careful examination of the ZO, Visakhapatnam report, industry's representation and recommendations of Consent Management (CTO) committee hereby issues the following amendment to the CTO & HWA Order issued by the Board vide ref 1st cited in favour of M/s. Adani Gangavaram Port Limited (formerly M/s.Gangavaram Port Limited), Visakhapatnam under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21/22 of Air (Prevention & Control of Pollution) Act 1981 and amendments thereof and Authorization under Rule 6 of the Hazardous & Other Wastes (Management & Transboundary, Movement) Rules, 2016 and the rules and orders made there under (hereinafter referred to as 'the Acts', 'the Rules'):

Amendment:

In the CTO order dt. 22.08.2023 at S. No. iii "HAZARDOUS WASTE AUTHORISATION (FORM – II) [See Rule 6 (2)]: sl.no:2 of the table - Hazardous waste with recycling option," shall be read as follows:

S.No	Name of Waste	Category	Quantity	Mode of Disposal
1.	Waste / Used oil / Oil sludge generated in ships	5.1 of Schedule - I	1200 MTPA	Shall be routed through M/s. APEMC to authorized Re-processors / Recyclers directly from ship

- All other conditions stipulated in the CTO & HWA order dt: 22.08.2023 including CTO validity shall remain same.

B SREEDHAR IAS, MS(BS), O/o MEMBER SECRETARY-APPCB

To

**M/s. Adani Gangavaram Port Limited,
(formerly M/s.Gangavaram Port Limited),
Gangavaram (PO), Pedagantyada (M),
Visakhapatnam District**

E-mail : jyothi@gangavaram.com

Copy to:

1. The JCEE, Zonal Office, **Visakhapatnam** for information and necessary action.
2. The EE, Regional Office, **Visakhapatnam** for information and necessary action.

Lr. No. AGPL/ENV/APPCB/2024/024

Date: 27.06.2024

To

The Environmental Engineer,
A.P. Pollution Control Board,
Regional Office,
3rd floor, APPCB Buildings,
Main Road, Madhavadhara VUDA Colony,
Visakhapatnam

Sir,

Sub:- Adani Gangavaram Port Limited – Details of E – Waste generated & Disposed in **Form – 3** - Submitted – Reg.

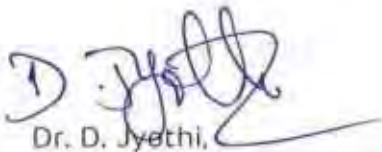
Ref:- 1. CTO & HWA Order No. APPCB/ VSP/ VSP/113/CFO/HO/2015, dated 13.01.2016 valid up to 31.12.2020
2. Consent Order No. APPCB/VSP/ VSP/113/ CFO/ HO/2020, dated 10.09.2020 valid up to 31.12.2025.
3. Amendment CTO Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated 13.01.2023
4. Name change Amendment order No: APPCB/VSP/113/HO/CTO/2023 Dt. 01.08.2023
5. CTO & HWA No: APPCB/VSP/113/CTO/HO/2009, dated 22.08.2023 valid up to 31.12.2025
6. Amendment CTO Order No: APPCB/VSP/VSP/113/HO/CTO/2020 05.01.2024

@@@

In compliance with the conditions stipulated in CTO & HWA orders vide reference cited above we are herewith submitting the Annual Returns of Generation, Storage & Disposal of E – Waste for the **year 2023 – 2024** in **Form- 3** as per the E-Waste (Management) Rules, 2016 and amendments thereof.

Kindly acknowledge receipt of the same.

Yours sincerely,


Dr. D. Jyothi,

Vice President/Environment

Encl: a/a



Adani Gangavaram Port Limited
(Formerly "Adani Gangavaram Port Private Limited")
Gangavaram Post, Pedagantyada,
Visakhapatnam, Andhra Pradesh, India - 530 044
CIN : U61100GJ2021PLC124091

Tel + 91-891-2701177, 2889999
Fax +91-891-2703377
www.adaniports.com

Registered Office : Adani Corporate House, Shanthigram, Nr. Vaishnavi Devi Circle, S.G. Highway, Khodiyar, Ahmedabad-382421, Gujarat, India.

FORM-3

[See rules 4(5), 5(5), 8(6), 9(4), 10(8), 11(9), 13 (1) (xi), 13(2)(v), 13(3)(vii) and 13(4)(v)]

FORM FOR FILING ANNUAL RETURNS

[To be submitted by producer or manufacturer or refurbisher or dismantler or recycler by 30th day of June following the financial year to which that return relates].

Quantity in Metric Tons (MT) and numbers

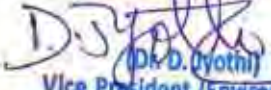
1	Name and address of the producer or manufacturer or refurbisher or dismantler or recycler		M/s. Adani Gangavaram Port Limited, Gangavaram (PO) Pedagantyada (V & M), Visakhapatnam Dist.			
2	Name of the authorized person and complete address with telephone and fax numbers and e-mail address		Dr. D. Jyothi Vice President - Environment Phone: 0891 - 2889999 Email: jyothi@gangavaram.com			
3	Total quantity of e-waste collected or channelized to recyclers or dismantlers for processing during the year for each category of electrical and electronic equipment listed in the Schedule I (Attach list) by PRODUCERS		Total Tons -24.29			
	Sl. No.	Manifest No.	Date	E - Waste Type	Quantity MT.	
	1.	07/AP/23-24	01.03.2024	E - Waste - Electrical & IT Waste	3.820	
	2.	12/AP/23-24	20.02.2024		2.650	
	3.	10/AP/23-24	09.02.2024		3.410	
	4.	09/AP/23-24	07.02.2024		3.260	
	5.	08/AP/23-24	23.01.2024		3.150	
	6.	06/AP/23-24	22.12.2023		2.950	
	7.	05/AP/23-24	18.12.2023		5.050	
				Total	24.29	
	Details of the above			TYPE	QUANTITY	No.
3(A)*	BULK CONSUMERS: Quantity of e- waste			---	---	---
3(B)*	REFURBISHERS: Quantity of e-waste:			---	---	---

3(C)*	DISMANTLERS: i. Quantity of e-waste processed (Code wise); ii. Details of materials or components recovered and sold; iii. Quantity of e-waste sent to recycler; iv. Residual quantity of e-waste sent to Treatment, Storage and Disposal Facility.	---	---	---
3(D)*	RECYCLERS: i. Quantity of e-waste processed (Code wise); ii. Details of materials recovered and sold in the market; iii. Details of residue sent to Treatment, Storage and Disposal Facility.	---	---	---
4	Name and full address of the destination with respect to 3(A)-3(D) above	M/s. Silicon Planet Recycling Pvt. Ltd., Sy. No.247 & 248, Thumkunta (V), Bommaramaram (M), Yadadri Bhuvanagiri Dist., Telengana State		
5	Type and quantity of materials segregated or recovered from e-waste of different codes as applicable to 3(A)-3(D)	Type ---	Quantity ---	

Enclose the list of recyclers to whom e-waste has been sent for recycling.

Place: Gangavaram (PO), Pedagantyada (M), Visakhapatnam Dist. Saksham Gangavaram Port Pvt. Limited

Date: 27.06.2024


(D. D. Gyothi)
Vice President (Environment)

Signature of the authorized person

Note:-

- 1 * Strike off whichever is not applicable
- 2 Provide any other information as stipulated in the conditions to the authorizer
- 3 In case filing on behalf of multiple regional offices, Bulk Consumers and Producers need to add extra rows to 1 & 3(A) with respect to each office.

Lr. No. AGPL/ENV/APPCB/2024/025

Date: 27.06.2024

To

The Environmental Engineer,
A.P. Pollution Control Board,
Regional Office,
3rd Floor, APPCB Buildings,
Main Road, Madhavadhara VUDA Colony,
Visakhapatnam

Sir,

Sub:- Adani Gangavaram Port Limited – Hazardous Waste Annual Returns – **Form - 4** – Submitted – Reg.

Ref:- 1. CTO & HWA Order No. APPCB/ VSP/ VSP/113/CFO/HO/2015, dated 13.01.2016 valid up to 31.12.2020
2. Consent Order No. APPCB/VSP/ VSP/113/ CFO/ HO/2020, dated 10.09.2020 valid up to 31.12.2025,
3. Amendment CTO Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated 13.01.2023
4. Name change Amendment order No: APPCB/VSP/113/HO/CTO/2023 Dt. 01.08.2023
5. CTO & HWA No: APPCB/VSP/113/CTO/HO/2009, dated 22.08.2023 valid up to 31.12.2025
6. Amendment CTO Order No: APPCB/VSP/VSP/113/HO/CTO/2020 05.01.2024

@@@

In compliance with the conditions stipulated in CTO & HWA orders vide reference cited above we are herewith submitting the Annual Returns of Generation, Storage & Disposal of Hazardous Waste (Waste/Used Oil) **for the year 2023 – 2024 in Form- 4** as per the Hazardous and other Waste (Management and Transboundary Movement) Rules, 2016 (HOWM Rules, 2016) and amendments thereof.

Kindly acknowledge receipt of the same.

Yours sincerely,


Dr. D. Jyothi
Vice President/Environment



Encl: a/a

Adani Gangavaram Port Limited

(Formerly "Adani Gangavaram Port Private Limited")

Gangavaram Post, Pedagantyada,

Visakhapatnam, Andhra Pradesh, India - 530 044

CIN : U61100GJ2021PLC124091

Registered Office : Adani Corporate House, Shanthigram, Mr. Vaishya Devi Circle, S.G. Highway, Khodiyar, Ahmedabad-382421, Gujarat, India.

Tel + 91-891-2701177, 2889999

Fax +91-891-2703377

www.adaniports.com

FORM 4
[See rules 6 (5), 13 (8), 16(6) and 20(2)]
FORM FOR FILING ANNUAL RETURNS

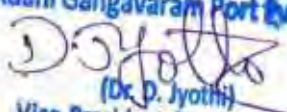
[To be submitted to state pollution control board by 30th day of June of every year for the preceding period April to March]

Sl. No	General Details	;	Information																																										
1.	Name and address of facility	:	M/s. Adani Gangavaram Port Limited, Gangavaram (V), Pedagantyada (M), Visakhapatnam																																										
2.	Authorization No. and Date of Issue	:																																											
	1. CTO & HWA Order No. APPCB/ VSP/ VSP/113/CFO/HO/2015, dated 13.01.2016 valid up to 31.12.2020 2. Consent Order No. APPCB/VSP/ VSP/113/ CFO/ HO/2020, dated 10.09.2020 valid up to 31.12.2025. 3. Amendment CTO Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated 13.01.2023 4. Name change Amendment order No: APPCB/VSP/113/HO/CTO/2023 Dt. 01.08.2023 5. CTO & HWA No: APPCB/VSP/113/CTO/HO/2009, dated 22.08.2023 valid up to 31.12.2025 6. Amendment CTO Order No: APPCB/VSP/VSP/113/HO/CTO/2020 05.01.2024																																												
3.	Name of the authorized person and full Address with telephone, fax number and e-mail	:	Dr. D. Jyothi – Vice President, Environment M/s. Gangavaram Port Limited, Gangavaram (V), Pedagantyada (M), Visakhapatnam, Phone – 0891 -2889999 jyothi@gangavaram.com																																										
4.	Production during the year	:																																											
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">S. No</th><th style="width: 40%;">Name of the Cargo</th><th style="width: 15%;">Consented quantity (MMTPA)</th><th style="width: 40%;">Commodities handled</th></tr> </thead> <tbody> <tr> <td>1</td><td>Liquid bulk</td><td>0.50</td><td rowspan="11">AGPL has handled 37,255 MMTs of Commodities viz., Iron Ore, Coal, Slag, Fertilizer, Lime Stone, Steel Products, Industrial Raw Material and Bulk Ammonia during the period from April, 2023 to March, 2024</td></tr> <tr> <td>2</td><td>Iron Ore</td><td>3.00</td></tr> <tr> <td>3</td><td>Coal</td><td>25.00</td></tr> <tr> <td>4</td><td>Agri products</td><td>0.75</td></tr> <tr> <td>5</td><td>Slag</td><td>0.75</td></tr> <tr> <td>6</td><td>Containers</td><td>0.25</td></tr> <tr> <td>7</td><td>Fertilizer</td><td>2.50</td></tr> <tr> <td>8</td><td>Lime stone</td><td>2.50</td></tr> <tr> <td>9</td><td>Steel products</td><td>0.45</td></tr> <tr> <td>10</td><td>Industrial raw material</td><td>3.50</td></tr> <tr> <td>11</td><td>Bulk Alumina</td><td>1.50</td></tr> <tr> <td></td><td>Total</td><td>40.95</td><td>37.255 MMT</td></tr> </tbody> </table>	S. No	Name of the Cargo	Consented quantity (MMTPA)	Commodities handled	1	Liquid bulk	0.50	AGPL has handled 37,255 MMTs of Commodities viz., Iron Ore, Coal, Slag, Fertilizer, Lime Stone, Steel Products, Industrial Raw Material and Bulk Ammonia during the period from April, 2023 to March, 2024	2	Iron Ore	3.00	3	Coal	25.00	4	Agri products	0.75	5	Slag	0.75	6	Containers	0.25	7	Fertilizer	2.50	8	Lime stone	2.50	9	Steel products	0.45	10	Industrial raw material	3.50	11	Bulk Alumina	1.50		Total	40.95	37.255 MMT		
S. No	Name of the Cargo	Consented quantity (MMTPA)	Commodities handled																																										
1	Liquid bulk	0.50	AGPL has handled 37,255 MMTs of Commodities viz., Iron Ore, Coal, Slag, Fertilizer, Lime Stone, Steel Products, Industrial Raw Material and Bulk Ammonia during the period from April, 2023 to March, 2024																																										
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10	Industrial raw material	3.50																																											
11	Bulk Alumina	1.50																																											
	Total	40.95	37.255 MMT																																										

Part A. To be filled by hazardous waste generators							
1.	Total quantity of waste generated Category wise			:			
	Previous Storage	Generation 2022 -23	Disposal 2022-23	Stored	Generation 2023 -24	Disposal 2023-24	Stored
	Quantity in MT						
	1.40	12.60	Nil	14.0	2.80	16.80	Nil
	AGPL obtained Amendment to CTO & HWA vide Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated 13.01.2023 & 05.01.2024 for Waste Oil quantities & inclusion of ship waste oil.						
	S. No.	Name of the Hazardous Waste	Stream	Qty, as per the CTO & HWA order dated 13.01.2023 & 05.01.2024			
	1.	Waste oil / Used Oil	5.1 of Schedule – I	25.0 MTPA			
	2.	Waste / Used Oil sludge generated in ships	5.1 of Schedule – I	1200 MTPA			
2.	Quantity dispatched			:			
	Waste Oil /Used Oil (Port equipment generated)			:	16.80 MT		
	i.	To disposal facility	:	M/s. Jyothi Lubricants, Plot No.185, IDA, Kondapalli, Krishna District – 521 228 Andhra Pradesh.			
	ii.	To recycler or co-processors or pre-processor	:	---			
	Waste / Used Oil sludge generated in ships			:	867.44 MT		
	S. No.	Name & Address of the Recycler			Quantity disposed (Tons)		
	1.	M/s.Navya Waste and Used Oil Re-refining and Recycling Industry, Visakhapatnam			489.36		
	2.	Zen Waste oil Recycling Industry, Visakhapatnam			155.69		
	3.	M/s. Sri Venkateswara Lubricants, Visakhapatnam			121.59		
	4.	M/s. Krishna Lubricants			75.78		
	5.	M/s. Royal Lubricants			25.02		
		Total			867.44		
	iii.	Others			:	N.A.	
3.	Quantity utilized in-house, if any-			:	Nil		
4.	Quantity in storage at the end of the year			:	Nil		

Part B. To be filled by Treatment, Storage and disposal facility operators		
1.	Total quantity received -	:
2.	Quantity in stock at the beginning of the year	:
3.	Quantity treated	:
4.	Quantity disposed in landfills as such and after treatment.	:
5.	Quantity incinerated (if applicable)	:
6.	Quantity processed other than specified above-	:
7.	Quantity in storage at end of the year	:
Part C. To be filled by recycler or co-processors or other users		
1.	Quantity of the waste received during the year- i) Domestic Sources ii) Imported (if applicable)	:
2.	Quantity in Stock at the beginning of year -	:
3.	Quantity recycled or co-processed or used-	:
4.	Quantity of product dispatched (wherever applicable) -	:
5.	Quantity of waste generated-	:
6.	Quantity of waste disposed-	:
7.	Quantity re-exported (wherever applicable)	:
8.	Quantity in the storage at the end of the year-	:

Date: 27.06.2024
Place: Gangavaram (P),
Pedagantyada (M)

For Adani Gangavaram Port Ltd. Limited

(Dr. P. Jyothi)
Vice President (Environment)

Signature of the Occupier or
Operator of the Disposal facility

AGPL/APPCB/ENV/Form-5/2023-24/039

Date: 23.09.2024

To

The Environmental Engineer
A.P. Pollution Control Board,
Regional Office,
3rd Floor, APPCB Buildings,
Main Road, Madhavadhara VUDA Colony
Visakhapatnam

Sir,

Sub: - Adani Gangavaram Port Limited, Gangavaram (PO) Pedagantyada (M), Visakhapatnam – Environment Statement – FORM – V – Submitted – Reg.

Ref: - 1. CTO & HWA Order No. APPCB/ VSP/ VSP/113/CFO/HO/2015, dated 13.01.2016 valid up to 31.12.2020
2. Consent Order No. APPCB/VSP/ VSP/113/ CFO/ HO/2020, dated 10.09.2020 valid up to 31.12.2025.
3. Amendment CTO Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated 13.01.2023.

@@@

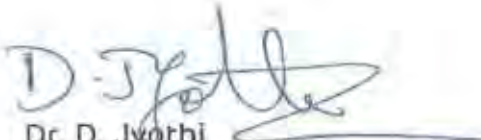
In compliance with the Consent & HW Authorization Condition No.7 stipulated in Schedule – A of CTO & HWA Order vide reference cited, and as per Rule No.14 of E(P) Rules,1986 & amendments thereof, submitting herewith the Environment Statement in Form V for the year 2023-2024.

Kindly acknowledge receipt of the same.

Thanking you.

Yours faithfully,
for Adani Gangavaram Port Limited.,




Dr. D. Jyothi
Vice President/Environment

Encl: Copy of Form – V – Environment Statement along with attachments.
Adani Gangavaram Port Limited

(Formerly "Adani Gangavaram Port Private Limited")

Gangavaram Post, Pedagantyada,
Visakhapatnam, Andhra Pradesh, India - 530 044

CIN : U61100GJ2021PLC124091

Registered Office : Adani Corporate House, Shanthigram, Nr. Vaishno Devi Circle, S.G. Highway, Khodiyar, Ahmedabad-382421, Gujarat, India.

Tel + 91-891-2701177, 2889999

Fax +91-891-2703377

www.adaniports.com

ANNEXURE

ENVIRONMENTAL STATEMENT FORM-V (See rule 14)

Environmental Statement for the financial year ending with 31st March

PART-A

- I. Name and address of the owner/
Occupier of the industry : Adani Gangavaram Port Limited,
Adani Corporate House,
Shantigram, Nr.Vaishno Devi Circle,
Corporate Office S.G. Highway, Khodiyar,
Ahmedabad – 382421,
Gujarat.
- II. *Site Office* : *Adani Gangavaram Port Limited*
Gangavaram (Post)
Peda Gantiyada (Mandal)
Visakhapatnam – 530 044
Andhra Pradesh
- III. *Operation or process* : **Port – Services**
- IV. *Industry category Primary-(STC*
Code) Secondary- (STC Code) : ----
- V. *Production category. Units. -* : **Services**
- VI. *Year of establishment* : **2009**
- VII. *Date of the last environmental*
statement submitted : **22.09.2023 for the period of 2022 -2023**

PART-B

- I. *Water and Raw Material*
Consumption : **Please refer Annexure A**

Water consumption in m³/d
Process:
Cooling:
Domestic:

Name of Products	Process water consumption per unit of products	
	During the previous financial year	During the current financial year
---	---	---

II. Raw material consumption : Please refer Annexure B

Name of raw materials*	Name of Products	Consumption of raw material per unit of output	
		During the previous financial year	During the current financial year
Being a port activity, no raw material handling involved.			

** Industry may use codes if disclosing details of raw material would violate contractual obligations, otherwise all industries have to name the raw materials used.*

PART-C

I. Pollution discharged to environment/unit : Please refer Annexure C of output – (Parameter as specified in the consent issued)

Pollutants	Quantity of Pollutants discharged (mass/day)	Concentration of Pollutants Discharged (mass/volume)	Percentage of variation from Prescribed standards with Reasons.
(a) Water	---	---	---
(b) Air	---	---	---

PART-D

I. HAZARDOUS WASTES : Please refer Annexure D (as specified under Hazardous Wastes (Management & Handling Rules, 1989).

Hazardous Wastes	Total Quantity (Kg)	
	During the previous financial year	During the current financial year
1. From Process	---	---
2. From Pollution Control Facilities		

PART - E

I. SOLID WASTES:

Solid Wastes	Total Quantity (Kg)	
	During the previous financial year	During the current financial year
a. From process	Municipal Solid waste only. In consultation with GVMC, AGPL made arrangements for daily collection & disposal of the solid waste to GVMC dump site, Pedagantyada, Visakhapatnam	<p>a. The solid waste is being collected & disposed to GVMC dump site on regular basis.</p> <p>b. GVMC segregates the material into dry and wet. The dry waste like plastic, glass, iron, aluminum, cardboard, wooden are separated with the help of dry resource collection center in MSF – VI, Gajuwaka and recycled. The wet</p>

	<p>The average quantity of solid waste generating in the port is 20.14 TPM</p>	<p>material will be treated with windrow fermentation process which converts wet waste into useful organics mixture by emitting low CO2 level. This whole process is under Solid Waste Management Rules 2020 and Amendments thereafter for environment sustainability.</p> <p>c. Some quantity of the Bio-degradable waste is being used as manure for development of greenbelt within the Port premises</p> <p>d. The dry leaves are utilizing for preparation of vermin-compost.</p>
--	--	--

Details of solid waste disposed to GVMC MSW Site during the period from April 2023 to March 2024:

Sl. No.	Month	Quantity (Tons)
1.	April 2023	17.80
2.	May 2023	19.80
3.	June 2023	19.20
4.	July 2023	18.30
5.	August 2023	19.40
6.	September 2023	20.00
7.	October 2023	21.00
8.	November 2023	20.50
9.	December 2023	20.00
10.	January 2024	21.50
11.	February 2024	22.20
12.	March 2024	22.00
	Total	241.70
	Average per month	20.14
	Average per day	0.66

b. From Pollution Control Facility	-	-
c. Quantity recycled or re-utilized within the unit.	-	-

PART- F

1. Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes. : **Not Applicable**

PART-G

1. Impact of the pollution control measures taken on conservation of natural resources and consequently on the cost of production. : **Not Applicable**

PART- H

1. Additional measures/investment proposal for environmental protection including abatement of pollution. : **Please refer Annexure E**

PART - I

MISCELLANEOUS:

1.	Any other particulars in respect of environmental protection and abatement of pollution.
----	---

1. **World Earth Day – 22nd April 2023.**

Awareness campaign on

- Environment sustainability,
- Protection measures to be adopted to save the environment
- Significance & need of plantation
- Discharging usage of single use plastic
- Water conservation & Rainwater harvesting
- Adopting Reduce, Reuse, Recycle method
- Massive Plantation programme with 500 saplings plantation



2. **World Environment Day - 2023**

On the occasion of World Environment Day, AGPL has organized and conducted weeklong awareness programmes as detailed below:

Awareness campaign on:

- Ban on usage of single use plastic
- Oil spillages by trucks
- Noise pollution,
- Air pollution due to open burning of tyres & plastic
- Importance of protecting the Environment
- Bio-waste utilization
- Soil pollution
- Collected single use plastic covers from the employees & port users Plastic waste collection drive, Cleaning and housekeeping within the Port. Plastic waste collection drive at Beach front.
- Distributed Cloth Bags of 1000 Nos. at Pedagantyada Rythubazar & 2000 Jute bags among the AGPL & Associated employees to encourage discarding of plastic carry bags.
- Conducted competitions viz., drawings, essay writing, slogans among AGPL employees to create awareness on various environmental and sustainability topics.
- Participated in the programme organized by GVMC on Eco Vizag at Ramakrishna Beach, Visakhapatnam as a part of awareness campaign on "Beat Plastic Pollution"
- Participated in the Eco Vizag Programme followed Green Rally organized by District Administration, GVMC & APPCB, Visakhapatnam on 5th June 2023 from Kali Mata temple Jn. to YMCA.



- Participated in the WED 2023 Programme Organized by APPCB, Visakhapatnam at VUDA Children's Arena.
- Participated in the WED 2023 Programme Organized by DFO, Visakhapatnam at Indira Gandhi Zoological Park.
- Organized a Green Rally within the Port in a big way to express the commitment towards environmental protection and environment sustainability.
- Plantation at various locations in the Gangavaram Port and planted 2000 no. of saplings.
- Organized massive plantation at CT area (Berth – 9) within AGPL Involving all the Hierarchy as a part of awareness campaign on "Beat Plastic Pollution"

- Organized a programme to address the significance of World Environment Day & prize distribution to the winners & participants in the competitions viz., Drawing, Essay writing, Slogans & Poems etc., on "Beat Plastic Pollution"



3. World Ocean Day 8th June

Celebrated World Ocean's Day 8th June 2023 by initiating awareness program at the Port premises and beach cleaning activity.



4. World Nature Conservation Day 28th July, 2023

Conducting the following awareness program within the Port premises to express commitment towards environment protection and environment sustainability.

- Plantation.
- Awareness campaign on:
 - Reduce waste by recycling, composting, and using reusable products.
 - Switch to energy-efficient light bulbs, reduce water usage,
 - Use public transportation or carpool to reduce carbon footprint.



5. Ozone Day – 16th September

Awareness campaign on Ozone Day:

- Reduce waste by recycling, composting, and using reusable products.
- Switch to energy-efficient light bulbs, reduce water usage,
- Use public transportation or carpool to reduce carbon footprint.

- To safeguard and preserve the environment and natural resources.
- To make a commitment to taking action to build a sustainable future and future generations.
- To promote the necessity of sustainable development is one of the day's main objectives.
- To balance between social responsibility, environmental conservation, and economic progress.
- Plantation of 600 saplings within the Port premises.



6. **Promotion of Environment sustainability**

As a part of promotion of Environment sustainability, AGPL has been continuing by distributed 2000 No. of Clay Ganesh Idols among Port employees & associates at free of cost.



7. **Global Recycling Day – 18.03.2024**

The theme of 2024 Global recycling day is “#RecyclingHeroes.”

AGPL has performed the day by campaign the significance of Global Recycling Day

- Promoted the Importance of Recycling
- Encouraged the employees to implement recycling & reuse at the house also to the extent possible.
- Discourage the utilization of single-use plastic covers or things.
- Awareness on proper/scientifically dispose of things
- Implement 3R's at Home i.e., Reduce, Reuse, Recycle



8. **International Day of Forests – 21st March 2024**

The theme for International Day of Forests 2024 is Forests and Innovation: New Solutions for a Better World. The battle against deforestation requires new technological advancements.

On this occasion, AGPL organized a massive plantation programme and planted 2000 samplings involving all the departments.



9. **World Water Day – 22nd March – 2024**

AGPL focused on the water conservation & Management, promoted awareness among the port employees including associates in a big way:

The sustainable water management generates several benefits to individuals and communities, including:

- Health,
- Food & energy security,
- Protection from natural disasters,
- Education & improved living standards and employment,
- Economic development and a variety of ecosystem services.
- It is through these benefits that water leads to prosperity, and by equitably sharing these benefits, peace is promoted.

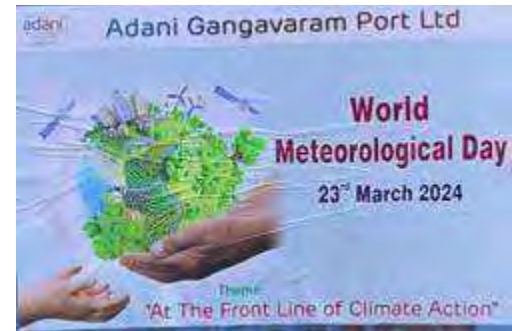
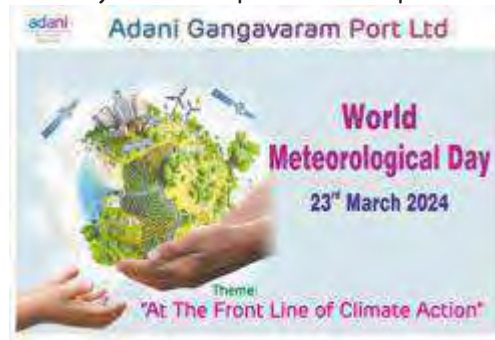
Thus, water management needs to consider the new economic and social realities, including climate change and geopolitical changes and their implications on our water

resources. Leveraging water for prosperity and peace therefore requires actions beyond the water domain.



10. World Meteorological Day – 23rd March – 2024

The theme for World Meteorological Day 2024 is "At the Frontline of Climate Action ". This theme highlights the urgent need for action against climate change and its potentially catastrophic consequences



Annexure – A

Water Source & Water Input - (April 2023 – March 2024)

Month/Year	Raw Water Source (VIWSCO)
	(KL/Month)
April - 2023	44448
May – 2023	39934
June – 2023	41067
July – 2023	38961
August – 2023	36509
September – 2023	34657

October – 2023	46524
November – 2023	44342
December – 2023	31843
January – 2024	47687
February – 2024	45979
March - 2024	50404
Total	502355
Daily average	1376.32

Fresh Water Consumption (KLD)

Month	Application as per the Consent Order				
	Green belt	Dust Suppression	Domestic	Ship Supply	Misc.
April – 2023	775.38	40164.79	1240.61	1008.00	1259.22
May – 2023	696.64	36085.78	1114.62	905.63	1131.34
June – 2023	716.40	37109.60	1146.24	931.32	1163.44
July – 2023	679.66	35206.54	1087.46	883.56	1103.77
August – 2023	636.89	32990.83	1019.02	827.96	1034.31
September – 2023	719.97	31222.74	959.96	779.97	974.36
October – 2023	966.50	41913.80	1288.66	1047.04	1307.99
November – 2023	921.17	39948.02	1228.23	997.93	1246.65
December – 2023	661.51	28687.59	882.02	716.64	895.25
January – 2024	990.66	42961.56	1320.88	1073.21	1340.69
February – 2024	955.18	41422.81	1273.57	1034.77	1292.67
March - 2024	1047.10	45409.32	1396.14	1134.36	1417.08
Total KL/Month	9767.06	453123.38	13957.41	11340.39	14166.77
Average/KLD	26.69	1238.04	38.14	30.98	38.71
Consented Qty/KLD (April to August 2023)	25.00	1296.00	40.00	32.50	40.60
Consented Qty/KLD (September 2023 to March 2024)	30.00	1301.00	40.00	32.50	40.60

Annexure – B

Cargo handled at Adani Gangavaram Port - (April 2023-March 2024)

S. No	Name of the Cargo	Consented quantity (MMTPA)	Commodities handled MMTPA
1.	Containers	0.25	AGPL has handled 37.243 MMTs of Commodities viz., Iron Ore, Coal, Slag, Fertilizer, Limestone, Steel
2.	Multi Cargo	6.20	
3.	Coal	25.00	
4.	Iron Ore	3.00	
5.	Fertilizer	2.50	

6.	Industrial raw material	3.50	Products, Industrial Raw Material and Bulk Ammonia during the period from April 2023 to March 2024
7.	Liquid Cargo	0.50	
	Total	40.95	

Annexure – C

Two numbers Sewage Treatment Plant (30 KLD and 5 KLD STPs) are provided to treat the wastewater generated in the port premises. The inlet and outlet water waters are being monitored regularly as per the statutory regulations and the treated water is well within the statutory limits. The treated water is being used for the dust suppression / green belt development only.

AGPL also utilizing the Storm water for dust suppression purposes.

STP Treated & Storm water consumption (KLM)

Month/Year	STP Treated & Storm water (KLM)		
	Treated water	Storm Water	Total
April - 2023	630	6696	7326
May – 2023	682	4236	4918
June – 2023	672	6696	7368
July – 2023	713	468	1181
August – 2023	713	2844	3557
September – 2023	690	1824	2514
October – 2023	702	4452	5154
November – 2023	700	3912	4612
December – 2023	720	7152	7872
January – 2024	716	4068	4784
February – 2024	674	4752	5426
March - 2024	742	4212	4954
Total	8354	51312	59666
Average / Day	22.89	140.58	163.47

Annexure – D

- I. E – Waste in Form – III : Submitted on 27.06.2023 for the FY 2023 - 2024
(Copy of Acknowledgement attached)
- II. Hazardous Waste in Form – IV : Submitted on 27.06.2023 for the FY 2023 - 2024

*(Copy of Acknowledgement
attached)*

*III. Used Battery Returns in Form – VIII : Submitted on 27.06.2023 for the FY
2023 - 2024*

*(Copy of Acknowledgement
attached)*



Annexure E
COST OF ENVIRONMENTAL MEASURES FOR THE FINANCIAL YEAR 2023-2024

S. No	Facility details	Description	Cost in Rs.
1.	Pump house power consumption	Kanithi & UGR pump house power consumption cost	1,516,095.00
2.	MDSS power consumption (Mechanical dust suppression system)	MDSS power consumption cost	17,354,205.00
3.	5 KLD & 30 KLD STP	30 & 5 KLD STP Power Consumption cost	367,627.00
4.	Truck Tyre Washing facility	Power consumption cost	237,897.00
5.	CAAQMS Operation & Maintenance	Annual operation & Maintenance of existing 3 nos. of CAAQM Stations & 1 No. of new Machine of Beta Ray Attenuation	5,201,050.00
6.	Water Cost (VIWSCO)	Water consumption for Dust Suppression & other port operations	15,117,862.00
7.	Dust suppression water tankers	Dust suppression water tankers cost	15,635,368.00
8.	Road sweepers	Road sweeping machines operation, diesel consumption, & maintenance & Spare's cost	13,855,200.00
9.	Water sampling & analysis	Marine, Drinking, Sewage water sampling & analysis cost	1,284,000.00
10.	Sweeping with manpower	Manual cleaning of Roads, Berths, Godowns & all operational areas	6,334,000.00
11.	5 KLD & 30 KLD STP	30 & 5 KLD STP Operation & Maintenance cost	1,660,000.00
12.	Truck Tyre Washing facility	Establishment (New), Operation & Maintenance cost	6,355,200.00
13.	Truck & Wagon Tarpaulin Covering station	Establishment, Operation & Maintenance cost	14,100,000.00
14.	Greenbelt department	Vermi compost, FYM, Plants, JCB, Transport, Diesel, Vehicle bills cost	5,826,109.00
15.	Community development & Awareness Programmes	Environment day celebrations & Clay Ganesh Idols distribution cost	865,000.00
16.	Fire tender	Fire tender diesel & maintenance cost (Engine & Tinkering works)	191,335.00
17.	Solid waste Collection & Dumping	Charges for collection of solid waste from 78 locations of AGPL & dumping at GVMC site	684,000.00
		Total Amount	106,584,948.00



Annexure F

Environmental measures in the Adani Gangavaram Port Limited

M/s Adani Gangavaram Port Limited – AGPL (formerly Gangavaram Port Limited) is located at Gangavaram (PO), Pedagantyada (M), Visakhapatnam District of Andhra Pradesh, India.

AGPL has the unique distinction of being one of the few Greenfield port projects in India which has been implemented on schedule. Construction at the site commenced in December 2005 and the Port commenced trial operations in August 2008.

AGPL has been developed as an all-weather, multipurpose port with water depth upto 20.2 meters, making it the deepest and capable of handling fully laden Cape size vessels of up to 200,000 DWT, with its deep draft berths and efficient operations AGPL has become the gateway port for a hinterland spread over 8 states across Eastern, Western, Southern and Central India. Its ability to handle larger vessels efficiently has resulted in substantial savings to trade and port users. Adani Gangavaram Port Limited provides efficient cargo handling services for a variety of bulk and break-bulk cargo groups including Coal, Iron Ore, Fertilizer, Limestone, Bauxite, Raw Sugar, Project Cargo, Alumina, Steel products etc.

The Port, its related facilities and material handling system are among the most advanced in Asia and meet the highest standards in terms of pollution prevention and safety.

AGPL is presently operating with 9 berths and with consented cargo handling capacity of 40.95 MTPA for variety of Cargos of bulk and break bulk including coal, iron ore, Multi Cargo (Agri products, Slag, Limestone, Steel products etc.), Fertilizer, Industrial Raw Materials such as Gypsum, Aluminum Ingots and their facilities includes berths, state-of-the-art cargo handling systems, mechanized storage facilities, railway sidings etc.,

The Port extended to 2800 acres, out of which Port development and operation is in 1800 acres only.

- Out of 9 berths, 3 berths (Berth No.4, 5 & 6) are fully mechanized,
- 5 berths (Berth No.1, 2, 3, 7 & 8) are semi-mechanized
- Provides cargo handling services for a variety of bulk and break bulk including coal, iron ore, multipurpose cargo (Agri products, Slag, Limestone, Steel products etc.), and Fertilizer, Industrial Raw Materials etc.
- Berth No. 9 is for container operation.





Berths Layout Image

1. Mechanized Operations:

- The State of art mechanical dust suppression system is provided at various critical points i.e., equipment (Hopper & Declaimer), hooded conveyor belts and the storage yards have been functioning well throughout the system. Ensuring these measures, the Port can mitigate all the dust that is being generated during the operations. The other berths are being used to handle other cargos such as Project cargo, fertilizer (Urea), Sugar etc.
- The Pollution Control System is implemented, as a part of project, to mitigate the dust pollution, State of Art water sprinkling system with a cost of more than Rs 21 Cr is established at various locations. AGPL is spending Rs 22 lakhs per month on an average towards water, power charges and maintenance for DSS. Around 20 people are working daily for operating the DSS.
- Mechanical Dust Suppression System (MDSS) is mounted on each of the mobile hopper. Plain water fog systems are provided at receipt points. A dry fog system is installed at the discharge point. The system consists of one water tank mounted on a hopper, two (1 working + 1 standby) pumps for each mobile hopper are provided.



2. Dust Suppression – Mechanical Dust Suppression System (MDSS)

- AGPL provided PLC based Mechanical Dust Suppression System to control the fugitive emission from the dry bulk cargo storage areas i.e., coal and iron ore stockyards and handling areas.
- The total area covered with the water sprinkler system of the facility is classified into seven sections or segments. Two types of sprinklers are provided in the water sprinkling system. Water is sprayed through 176 no. of cannons. The cannons are operated in a cycle for the period of approximately 10 to 15 minutes per shift.
- All the 8 sections shall be operated sequentially. The operation of MDSS will be 6 times per day during the dry weather conditions and twice per day in the winter season.
- There are two types of sprinklers/cannons. Type 1 sprinklers are 9.5mm/h and Type 2 sprinklers are 6mm/h respectively. The Type 1 sprinkler line will be operated for 10 minutes and the Type 2 sprinkler line will be operated for 15 minutes. The sprinklers are mounted on sprinkler posts of 6 meters height. It enables uniform water sprinkling on stockpiles height of approximately 13 meters.
- The water cannons cover a radius of approx. 50 meters & sprinkles waters up to 15 meters' height and rotate in 360⁰ directions. The distance between two sprinklers is 100mts to cover total cargo stack area

PLC based MDSS in the Yards





Dust suppression through Tankers

- Water sprinkling is being carried out on the general cargo berth and in other areas viz. Roads and yards through water tankers of 20 nos. to arrest the dust pollution causing by the vehicular movement in the port. AGPL is spending around Rs. 6.50 lakhs per month on an average towards water charges and maintenance. Around 10 persons are working for this activity.

Dust suppression through Tankers





3. Truck/Wagon Tarpaulin Covering facilities:

- AGPL established 16 No. of semi mechanized truck tarpaulin covering stations at various locations within the Port to facilitate and ensure all the outgoing cargos by Trucks are covered with tarpaulin.
- AGPL ensuring that the tarpaulin is covered in all sides of the truck and tightly tied with rope so that the tarpaulin should not be uncovered while traveling until the truck reaches the destination without any transit spillage.





- AGPL established a semi mechanized railway wagon tarpaulin covering station at Silo location within the Port to facilitate and ensure all the outgoing cargo rakes are covered with tarpaulin and tightly tied with rope so that the tarpaulin should not be uncovered while traveling until the wagon reaches the destination without any transit spillage.





4. Cargo covered with tarpaulin:

- AGPL has been maintaining the tarpaulin covering on the cargos to the extent possible to avoid fugitive emissions.





5. Deployment of Road Sweeping Machines:

- Laid BT roads internally and 5 No. of sweeping machines were deployed for the cleaning of berths, back up areas and roads.



Road Sweeping machines

Road Sweeping machines

6. Truck Tyre washing facilities:

- Provided 2 no. of automatic sensor-based truck/tyre washing facilities to ensure two stage wheels washing of all the outgoing vehicles to avoid dust passage on to outside roads.



- The 2nd automatic sensor-based truck tyre washing facility wheel washing facility is established with advanced technology which having cleaning water recycling & reusing system with oil skimmer facility.



7. Bio-toilets:

- Provided 20 Bio Toilets at Berths, CS Godowns, yards, and other operational locations to cater the needs of the contractual employees with a cost of 80.00 Lakhs



8. Specific measures towards Habitation:

Erected wind breaking walls towards Gangavaram village and HB Colony to prevent any dust transfer to habitation and a thick green belt developed supporting to the wind breaking wall, 10 layers in North-West direction to arrest the dust emissions to the villages.



Wind breaking wall towards HB Colony & Gangavaram (V)





Plantation at - GPL Site Office & all along North boundary wall side plantation supporting Wind screen towards Gangavaram village, towards Kongapalem & Venkannapalem Villages

9. Environmental Monitoring Programme in AGPL

As per the statutory guidelines AGPL appointed an authorized 3rd party agency, for continuous monitoring of the environmental parameters of the Port as well as Gangavaram village and Peda Gantyada areas.

A. Ambient Air Quality

Operating 3 No. of Continuous Ambient Air Quality Monitoring stations at the below mentioned located as suggested by SPCB within the Port premises to monitor the Ambient Air Quality viz., PM 10, PM 2.5 and the data is being uploaded to APPCB website. The Port also provided devices for measuring SO₂, NO, NO₂, & CO parameters.

- i. Administrative office towards H.B. Colony (Station 1):
- ii. Project site office building towards Venkannapalem (Station 2)
- iii. Watch tower – 4 towards Gangavaram village (Station 3)

B. Noise Monitoring

Noise monitoring is being carried out fortnightly as per the statutory regulations for the four locations and the reports are well within the statutory limits and the same are being submitted to the APPCB on monthly basis.

1. Cargo handling area (as source)
2. Gangavaram
3. Peda Gantyada/Security Gate
4. HB colony



At HB Colony



At Gangavaram (V)



**At Port
operational area**



At Port Main Gate

C. Surface & Ground water monitoring

As per the statutory regulations & requirement, Surface & Ground water quality is being monitoring by AGPL on monthly basis at Gangavaram (Village) and reports being submitted to the APPCB, and to MoEF & CC along with Half-yearly EC Compliance

1. Gangavaram (Village)
2. North Boundary Wall (NBW) open well.



Open well at Gangavaram (V)



Bore well at Gangavaram (V)

D. Marine water /sediment monitoring

The marine water and sediment quality monitoring is being carried out fortnightly basis of tidal sampling for the Four locations as



1. Harbor Basin
2. Port entrance channel
3. South break wall outside
4. North break wall outside

Physical, chemical and biological parameters were analyzed for water as well as for sediment to assess the quality and the same is being submitted to the APPCB. The reports are indicating that the waters are not having any noticeable contamination





E. Beach nourishment

Beach nourishment to safeguard the ecosystem, protecting shorefront properties, expanding, and preserving beaches & helps in building back up and protect the shoreline from diminishing beach space



10. Environment Sustainability Measures:

i. Weather & meteorological monitoring:

- CWC, Visakhapatnam installed an Automatic Weather Station (AWS) within AGPL premises as per the IMD guidelines to know the weather forecast.
- AGPL is one and only Port having the IMD Automatic Weather Station (AWS) installed by the Indian Meteorological Department, Visakhapatnam within the Port premises which is available in the domain IP address <http://aws.imd.gov.in.8091>



- Installed Automatic Weather station on the top of Signal Station, Vellametta and at Berth for weather forecasting & meteorological data generation.

ii. Water conservation measures:

Settling ponds provided at yards for collection of yards runoff and the supernatant water is being used for dust suppression.



A natural pond is available in Nursery area for collection of rain/runoff water. The water is utilizing for nursery development.



Rainwater harvesting pits around the buildings are being maintained.

Rainwater drains are being maintained periodically & pre-monsoon season to avoid stagnation & free flow of water and the water is using for dust suppression to the possible extent.



11. Sewage Treatment Plants:

AGPL operating 2 No. of Sewage Treatment Plants to cater the needs of sewage water treatment.

1. 5 KLD capacity STP at AGPL Main gate location – will receive the domestic sewerage from AOB Building & Security posts.
2. 30 KLD capacity STP at AGPL Harbour gate location – will receive the domestic sewerage from the COB, ERA, POB Location cluster buildings & Canteen

The Domestic sewage water receiving from office buildings of different locations of Port is being treated in STPs and being used for greenbelt development



5 KLD STP



30 KLD STP



The STP inlet & outlet water is being analyzed through a 3rd party agency on fortnight basis and as per the analysis reports, the values are meeting the prescribed standards of APPCB.



30 KLD STP Inlet & Outlet sampling



5 KLD STP Inlet & Outlet



12. Waste management:

- a. **Plastic waste** is being collected and disposed to SPCB authorized plastic waste recycling units.
- b. **E – Waste** is being collected and disposed to SPCB authorized E-waste recyclers and submitting the details in Form – 3 to SPCB.
- c. **Hazardous waste (Waste oil)** – as per the CFO & HWA of APPCB, AGPL is permitted to generate & dispose waste oil including bilge oil. AGPL is quantifying the waste oil and disposing to SPCB authorized Waste oil recyclers and submitting the details in Form – 4 to SPCB.
- d. **Solid waste** – In consultation with GVMC Authorities, AGPL arranged for daily collecting and disposing of the domestic solid waste to GVMC authorized dump site for further waste management process.



- e. **Organic waste**– is being collected on regular basis within the Port and being disposed to GVMC authorized dump site for landfilling and using for vermin-compost preparation.





- f. **Bio-Medical Waste** - operating an Onsite Health Centre (OHC) to provide First Aid facility to the victims and generating very less quantity of Bio-Medical Waste. AGPL made an agreement with M/s. Vasistha Environ Care an authorized Bio-medical waste Treatment Facility, Safe Collection, Transportation & disposal of properly segregated and packed BMW and/or Bio-Hazardous waste as per APPCB, CPCB norms.

13. Details of Green belt in Adani Gangavaram Port

Development of greenbelt is a continuous process in AGPL. As of now the total plantation in the Port is about 320 Acres.

- Green cover needs to reduce the pollution levels
- Improve the standard of Ambient Air Quality
- Meet the statutory requirements & compliance.
- Reduce the carbon emissions

Environment department is fixing its own targets besides statutory requirements and achieving the targets from time to time.

The land available in AGPL is mostly sand dunes and salt pans which are not supportive for plantation.

AGPL developed good plantation with the saplings suitable for the available land achieved good results.

In the process of developing greenbelt, AGPL encountered the following severe cyclones wherein the existing greenbelt was damaged badly.

- Hud Hud Cyclone 12th to 14th October 2014
- Titli Cyclone – 8th October 2018
- Gulab Cyclone – 26th & 27th September 2021

To achieve good and dense plantation, AGPL adopted Miyawaki plantation on the advice of APPCB

High Density Plantation (Miyawaki)

Miyawaki afforestation / plantation involves several different types of native plants closely just to form a Green Wall and a completely chemical free forest in an organic way that sustains itself, supports local biodiversity, and attracts birds and insects.

In 'Miyawaki' forests, the trees grow more quickly and absorb more CO₂ than plantations grown for timber.

Its benefits include lowering temperature, making soil nutritious, supporting local wildlife and sequestration of carbon.

- With the spirit of Miyawaki type plantation, AGPL continued further plantation in Miyawaki method in the other locations viz., Weigh Bridge – 3, MRSS Location, Quarry yard, 3.75 Acres location in an extent of about 5.0 Acres.

Below details show the periodical development of Greenbelt during the last 3 years:

Table T 3.11

Sl. No.	Financial Year	Target	Achieved	Survival Rate (%)
1.	2021-22	60,000	63,500	80%
2.	2022-23	50,000	51,840	95%
3.	2023-24	2,00,000	2,01,904	95%
	Total	3,10,000	3,17,244	

Nursery:

AGPL Established an exclusive nursery in an extent of 2.0 Acres within the Port premises and maintaining about 60 to 70,000 saplings of Avenue, Ornamental & Fruit bearing species viz., Badam, Conacarpus, Neem, T. Rosia, Vusiri, Casia Nadoja, Ganuga, Oil Palm, Maha Gani, Spathodia, Maredu, Piltopharm, Pycus panda, Coconut, Custard Apple, Lemon, Pedilanthus, Mandara etc.

The captive nursery played a significant role in restoration / reforestation after series of cyclones.

14. Community Plantation - Participation in plantation programmes organized by District Administration & APPCB.

- Participated in Green Visakha – Clean Visakha - Green Visakha – Clean Visakha – One million Tree Plantation Programme jointly taken-up by Visakhapatnam District Administration & A.P. Pollution Control Board on World Environment Day 5th June 2022, wherein GPL completed the targeted plantation of 50,000 by 18.08.2022 against the target of 50,000
- Participated in "Green Visakha 40 Lakhs Plantation Programme" jointly taken-up by SPCB & District Administration as per the directions of the Hon'ble Parliamentary Committee, during 2011 wherein GPL was given a target of 1.35 Lakhs plantation and achieved highest plantation of 1.43 lakh saplings with Geo-tagging & 87.24% survival rate.

- The details of year wise plantation target, achievement. Geo Tagged and survival rate details are as below:

Table T 3.12

S. No.	Year	Plantation details			
		Target	Achieved	Geo Tagged	Survival %
1	2012-13	20,000	20,000	19,000	87.24%
2	2013-14	30,000	30,000	24,955	
3	2014-15	10,000	16,600	7,650	
4	2015-16	38,000	38,500	31,306	
5	2016-17	37,000	38,500	32,030	
		135,000	143,600	114,941	

Photographs of Nursery & Greenbelt:





Greenbelt in and around the Port Boundary



Greenbelt within the Port premises covering yards & berths



Greenbelt within the Port premises all along the 4-lane road of 5 Km and at Port approach road.



15. New Initiatives for effective Environment & Sustainability:

- Converted 2 Mobile harbor cranes of 1250 KVA DG operated to Electrically operated.
- Converted 2 Mobile conveyor stacker in to electrically operated.
- Converted all new mobile harbor cranes operated electrically.
- All Marine tugs provided with shore power 100% while at jetty
- Established hooded conveyor belts to mitigate dust emissions
- TT 7/CC 1A Discharge chute skirt board length modification from 6500mm, to 3500mm resulting less pressure & emissions reduction.
- Installed fire hydrant system on all floors of Silo location. and at 25 no's Yard canons location
- Skirt board modified to control dust emission at the discharge points viz., CC – 1 to CC – 4, CC – 1A to CC 4 A along with conveyor of 2 KM distance.
- Hood conveyors replaced from Transfer Tower – 5 to Transfer Tower -8 1.8 Km area.
- New yard -01 Road: 2.8 Km cemented for reduce the dust emission
- Provided facilities for Railway Rake to ensure tarpaulin coverage to all the outgoing cargo rakes.
- Established Fuel Handling station to reduce the Land contamination
- Established new automatic sensor-based truck tyre washing facility with advanced technology of oil skimmer & water recycling units without disturbing the existing one so as to ensure two stage truck tyre washing.
- Indoor unit for Alumina Bag Loading System in CSS – 01



Adani Gangavaram Port inaugurates ₹40-cr projects to boost productivity

BB BUREAU
VISAKHAPATNAM

ADANI Gangavaram Port, one of the deepest and the most modern ports in the country, on Monday inaugurated key strategic infrastructure projects to build its export capacity and productivity.

The projects are built with an investment of ₹40 crore and are aimed at enhancing the port's productivity and business in an efficient manner. The new facilities will include a warehouse of 6,000 sq metres with capacity of 35,000 MTs, bringing the port's covered storage area to 1.4 lakh sq metres, roads and associated infrastructure of three km to connect the surface transportation more efficiently and two gantries with integrated weigh bridges and tarpaulin covering stations in addition to fuel handling station, car and truck tyre washing facilities with integrated water capture and recycling capabilities.

Adani Gangavaram Port

stated in a release that it committed to deliver best-in-class services through the best infrastructure. The port management also plans to operationalise railway infrastructure enhancement in the coming months that bolsters the port's capability to handle higher rail cargo in a day.

Speaking on the occasion, Adani Gangavaram Port Limited management said along with Adani Group's philosophy of growth with greenness, they have developed resources and infrastructure to increase the safety, sustainability and environmental conservation and contribute to nation building.

"We at Adani Gangavaram Port offer substantial economic benefits to Indian importers combined with highly efficient port operation and evacuation system with faster turnaround time on delivery. We are extremely happy to see the trade derive benefits of modern deep water infrastructure," the release stated.

Gangavaram Port inaugurates ₹40-cr infra proj

New facilities include warehouse of 6,000 sq metres with capacity of 35,000 MTs

EXPRESS NEWS SERVICE
visakhapatnam

ADANI Gangavaram Port, located to be the deepest port in the country, on Monday inaugurated key strategic infrastructure projects at the port premises to build its export capacity and productivity. The projects are built with an investment of ₹40 crore and will help the port enhance its productivity and serve the businesses in an efficient manner.

The new facilities include new warehouse of 6,000 sq metres with capacity of 35,000 MTs, which brings the port's covered storage area to 1.4 lakh sq metres, roads and associated infrastructure of three km which connects the surface transportation more efficiently, two gate complexes with integrated weigh bridges and tarpaulin covering stations, in addition to fuel handling station, car and truck tyre washing facilities with integrated water capture and re-

cycling capabilities. Adani Gangavaram Port is committed to deliver best-in-class services through the best infrastructure. The port management also plans to operationalise railway infrastructure enhancement in the coming months that bolsters the port's capability to handle higher rail cargo in a day.

Speaking on the occasion, the Adani Gangavaram Port Limited management said, "In line with Adani Group's philosophy of growth with greenness, Adani Gangavaram Port has developed resources and infrastructure to increase the safety, sustainability and environmental conservation and contribute to nation building. We offer substantial economic benefits to Indian importers combined with highly efficient port operations and evacuation system with faster turnaround time and delivery. We are extremely happy to see the trade deriving benefits of modern deep water infra."

EE
We are planning to operationalise railway infrastructure enhancement in the coming months, which bolsters the port's capability to handle higher rail cargo in a day.
Adani Gangavaram Port management

Adani Gangavaram Port inducts two new locomotives to enhance productivity in Visakhapatnam

Express News Service
visakhapatnam

visakhapatnam

Adani Gangavaram Port on Friday announced the induction of two advanced locomotives WAG-7, as part of the ongoing efforts to enhance capacity and productivity at the port.

The addition of these locomotives represents a significant step to improve the infrastructure within the port, along with productivity. The port's commitment to provide top-tier logistic services, according to a statement issued by the port.

Adani Gangavaram Port is focusing significantly on expanding and enhancing the internal rail network. These state-of-the-art locomotives will play a pivotal role in streamlining cargo handling processes and accelerating the development of a warehouse facility, complete with integrated rail capabilities, which will become operational in the coming months.

Lr. No. AGPL/ENV/APPCB/2024/024

Date: 27.06.2024

To

The Environmental Engineer,
A.P. Pollution Control Board,
Regional Office,
3rd floor, APPCB Buildings,
Main Road, Madhavadhara VUDA Colony,
Visakhapatnam

Sir,

Sub:- Adani Gangavaram Port Limited – Details of E – Waste generated & Disposed in **Form – 3** - Submitted – Reg.

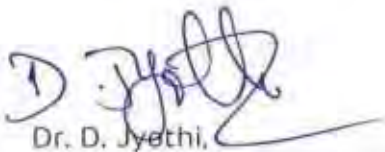
Ref:- 1. CTO & HWA Order No. APPCB/ VSP/ VSP/113/CFO/HO/2015, dated 13.01.2016 valid up to 31.12.2020
2. Consent Order No. APPCB/VSP/ VSP/113/ CFO/ HO/2020, dated 10.09.2020 valid up to 31.12.2025.
3. Amendment CTO Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated 13.01.2023
4. Name change Amendment order No: APPCB/VSP/113/HO/CTO/2023 Dt. 01.08.2023
5. CTO & HWA No: APPCB/VSP/113/CTO/HO/2009, dated 22.08.2023 valid up to 31.12.2025
6. Amendment CTO Order No: APPCB/VSP/VSP/113/HO/CTO/2020 05.01.2024

@@@

In compliance with the conditions stipulated in CTO & HWA orders vide reference cited above we are herewith submitting the Annual Returns of Generation, Storage & Disposal of E – Waste for the **year 2023 – 2024** in **Form- 3** as per the E-Waste (Management) Rules, 2016 and amendments thereof.

Kindly acknowledge receipt of the same.

Yours sincerely,


Dr. D. Jyothi,

Vice President/Environment

Encl: a/a



Adani Gangavaram Port Limited
(Formerly "Adani Gangavaram Port Private Limited")
Gangavaram Post, Pedagantyada,
Visakhapatnam, Andhra Pradesh, India - 530 044
CIN : U61100GJ2021PLC124091

Tel + 91-891-2701177, 2889999
Fax +91-891-2703377
www.adaniports.com

Registered Office : Adani Corporate House, Shanthigram - Nr. Vaishnav Devi Circle, S.G. Highway, Khodiyar, Ahmedabad-382421, Gujarat, India.

FORM-3

[See rules 4(5), 5(5), 8(6), 9(4), 10(8), 11(9), 13 (1) (xi), 13(2)(v), 13(3)(vii) and 13(4)(v)]

FORM FOR FILING ANNUAL RETURNS

[To be submitted by producer or manufacturer or refurbisher or dismantler or recycler by 30th day of June following the financial year to which that return relates].

Quantity in Metric Tons (MT) and numbers

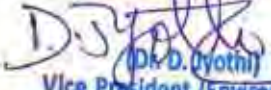
1	Name and address of the producer or manufacturer or refurbisher or dismantler or recycler		M/s. Adani Gangavaram Port Limited, Gangavaram (PO) Pedagantyada (V & M), Visakhapatnam Dist.			
2	Name of the authorized person and complete address with telephone and fax numbers and e-mail address		Dr. D. Jyothi Vice President - Environment Phone: 0891 - 2889999 Email: jyothi@gangavaram.com			
3	Total quantity of e-waste collected or channelized to recyclers or dismantlers for processing during the year for each category of electrical and electronic equipment listed in the Schedule I (Attach list) by PRODUCERS		Total Tons -24.29			
	Sl. No.	Manifest No.	Date	E - Waste Type	Quantity MT.	
	1.	07/AP/23-24	01.03.2024	E - Waste - Electrical & IT Waste	3.820	
	2.	12/AP/23-24	20.02.2024		2.650	
	3.	10/AP/23-24	09.02.2024		3.410	
	4.	09/AP/23-24	07.02.2024		3.260	
	5.	08/AP/23-24	23.01.2024		3.150	
	6.	06/AP/23-24	22.12.2023		2.950	
	7.	05/AP/23-24	18.12.2023		5.050	
				Total	24.29	
	Details of the above			TYPE	QUANTITY	No.
3(A)*	BULK CONSUMERS: Quantity of e- waste			---	---	---
3(B)*	REFURBISHERS: Quantity of e-waste:			---	---	---

3(C)*	DISMANTLERS: i. Quantity of e-waste processed (Code wise); ii. Details of materials or components recovered and sold; iii. Quantity of e-waste sent to recycler; iv. Residual quantity of e-waste sent to Treatment, Storage and Disposal Facility.	---	---	---
3(D)*	RECYCLERS: i. Quantity of e-waste processed (Code wise); ii. Details of materials recovered and sold in the market; iii. Details of residue sent to Treatment, Storage and Disposal Facility.	---	---	---
4	Name and full address of the destination with respect to 3(A)-3(D) above	M/s. Silicon Planet Recycling Pvt. Ltd., Sy. No.247 & 248, Thumkunta (V), Bommaramaram (M), Yadadri Bhuvanagiri Dist., Telengana State		
5	Type and quantity of materials segregated or recovered from e-waste of different codes as applicable to 3(A)-3(D)	Type ---	Quantity ---	

Enclose the list of recyclers to whom e-waste has been sent for recycling.

Place: Gangavaram (PO), Pedagantyada (M), Visakhapatnam Dist. Saksham Gangavaram Port Pvt. Limited

Date: 27.06.2024


(D. D. Gyothi)
Vice President (Environment)

Signature of the authorized person

Note:-

- * Strike off whichever is not applicable
- Provide any other information as stipulated in the conditions to the authorizer
- In case filing on behalf of multiple regional offices, Bulk Consumers and Producers need to add extra rows to 1 & 3(A) with respect to each office.

Lr. No. AGPL/ENV/APPCB/2024/025

Date: 27.06.2024

To

The Environmental Engineer,
A.P. Pollution Control Board,
Regional Office,
3rd Floor, APPCB Buildings,
Main Road, Madhavadhara VUDA Colony,
Visakhapatnam

Sir,

Sub:- Adani Gangavaram Port Limited – Hazardous Waste Annual Returns – **Form - 4** – Submitted – Reg.

Ref:- 1. CTO & HWA Order No. APPCB/ VSP/ VSP/113/CFO/HO/2015, dated 13.01.2016 valid up to 31.12.2020
2. Consent Order No. APPCB/VSP/ VSP/113/ CFO/ HO/2020, dated 10.09.2020 valid up to 31.12.2025,
3. Amendment CTO Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated 13.01.2023
4. Name change Amendment order No: APPCB/VSP/113/HO/CTO/2023 Dt. 01.08.2023
5. CTO & HWA No: APPCB/VSP/113/CTO/HO/2009, dated 22.08.2023 valid up to 31.12.2025
6. Amendment CTO Order No: APPCB/VSP/VSP/113/HO/CTO/2020 05.01.2024

@@@

In compliance with the conditions stipulated in CTO & HWA orders vide reference cited above we are herewith submitting the Annual Returns of Generation, Storage & Disposal of Hazardous Waste (Waste/Used Oil) **for the year 2023 – 2024 in Form- 4** as per the Hazardous and other Waste (Management and Transboundary Movement) Rules, 2016 (HOWM Rules, 2016) and amendments thereof.

Kindly acknowledge receipt of the same.

Yours sincerely,


Dr. D. Jyothi
Vice President/Environment



Encl: a/a

Adani Gangavaram Port Limited

(Formerly "Adani Gangavaram Port Private Limited")

Gangavaram Post, Pedagantyada,

Visakhapatnam, Andhra Pradesh, India - 530 044

CIN : U61100GJ2021PLC124091

Registered Office : Adani Corporate House, Shanthigram, Mr. Vaishnavi Devi Circle, S.G. Highway, Khodiyar, Ahmedabad-382421, Gujarat, India.

Tel + 91-891-2701177, 2889999

Fax +91-891-2703377

www.adaniports.com

FORM 4
[See rules 6 (5), 13 (8), 16(6) and 20(2)]
FORM FOR FILING ANNUAL RETURNS

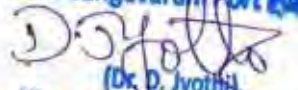
[To be submitted to state pollution control board by 30th day of June of every year for the preceding period April to March]

Sl. No	General Details	;	Information	
1.	Name and address of facility	:	M/s. Adani Gangavaram Port Limited, Gangavaram (V), Pedagantyada (M), Visakhapatnam	
2.	Authorization No. and Date of Issue	:		
	1. CTO & HWA Order No. APPCB/ VSP/ VSP/113/CFO/HO/2015, dated 13.01.2016 valid up to 31.12.2020 2. Consent Order No. APPCB/VSP/ VSP/113/ CFO/ HO/2020, dated 10.09.2020 valid up to 31.12.2025. 3. Amendment CTO Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated 13.01.2023 4. Name change Amendment order No: APPCB/VSP/113/HO/CTO/2023 Dt. 01.08.2023 5. CTO & HWA No: APPCB/VSP/113/CTO/HO/2009, dated 22.08.2023 valid up to 31.12.2025 6. Amendment CTO Order No: APPCB/VSP/VSP/113/HO/CTO/2020 05.01.2024			
3.	Name of the authorized person and full Address with telephone, fax number and e-mail	:	Dr. D. Jyothi – Vice President, Environment M/s. Gangavaram Port Limited, Gangavaram (V), Pedagantyada (M), Visakhapatnam, Phone – 0891 -2889999 jyothi@gangavaram.com	
4.	Production during the year	:		
	S. No	Name of the Cargo	Consented quantity (MMTPA)	Commodities handled
	1	Liquid bulk	0.50	AGPL has handled 37,255 MMTs of Commodities viz., Iron Ore, Coal, Slag, Fertilizer, Lime Stone, Steel Products, Industrial Raw Material and Bulk Ammonia during the period from April, 2023 to March, 2024
	2	Iron Ore	3.00	
	3	Coal	25.00	
	4	Agri products	0.75	
	5	Slag	0.75	
	6	Containers	0.25	
	7	Fertilizer	2.50	
	8	Lime stone	2.50	
	9	Steel products	0.45	
	10	Industrial raw material	3.50	
	11	Bulk Alumina	1.50	
		Total	40.95	37.255 MMT

Part A. To be filled by hazardous waste generators							
1.	Total quantity of waste generated Category wise			:			
	Previous Storage	Generation 2022 -23	Disposal 2022-23	Stored	Generation 2023 -24	Disposal 2023-24	Stored
	Quantity in MT						
	1.40	12.60	Nil	14.0	2.80	16.80	Nil
	AGPL obtained Amendment to CTO & HWA vide Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated 13.01.2023 & 05.01.2024 for Waste Oil quantities & inclusion of ship waste oil.						
	S. No.	Name of the Hazardous Waste	Stream	Qty, as per the CTO & HWA order dated 13.01.2023 & 05.01.2024			
	1.	Waste oil / Used Oil	5.1 of Schedule – I	25.0 MTPA			
	2.	Waste / Used Oil sludge generated in ships	5.1 of Schedule – I	1200 MTPA			
2.	Quantity dispatched			:			
	Waste Oil /Used Oil (Port equipment generated)			:	16.80 MT		
	i.	To disposal facility	:	M/s. Jyothi Lubricants, Plot No.185, IDA, Kondapalli, Krishna District – 521 228 Andhra Pradesh.			
	ii.	To recycler or co-processors or pre-processor	:	---			
	Waste / Used Oil sludge generated in ships			:	867.44 MT		
	S. No.	Name & Address of the Recycler			Quantity disposed (Tons)		
	1.	M/s.Navya Waste and Used Oil Re-refining and Recycling Industry, Visakhapatnam			489.36		
	2.	Zen Waste oil Recycling Industry, Visakhapatnam			155.69		
	3.	M/s. Sri Venkateswara Lubricants, Visakhapatnam			121.59		
	4.	M/s. Krishna Lubricants			75.78		
	5.	M/s. Royal Lubricants			25.02		
		Total			867.44		
	iii.	Others	:	N.A.			
3.	Quantity utilized in-house, if any-			:	Nil		
4.	Quantity in storage at the end of the year			:	Nil		

Part B. To be filled by Treatment, Storage and disposal facility operators		
1.	Total quantity received -	:
2.	Quantity in stock at the beginning of the year	:
3.	Quantity treated	:
4.	Quantity disposed in landfills as such and after treatment.	:
5.	Quantity incinerated (if applicable)	:
6.	Quantity processed other than specified above-	:
7.	Quantity in storage at end of the year	:
Part C. To be filled by recycler or co-processors or other users		
1.	Quantity of the waste received during the year- i) Domestic Sources ii) Imported (if applicable)	:
2.	Quantity in Stock at the beginning of year -	:
3.	Quantity recycled or co-processed or used-	:
4.	Quantity of product dispatched (wherever applicable) -	:
5.	Quantity of waste generated-	:
6.	Quantity of waste disposed-	:
7.	Quantity re-exported (wherever applicable)	:
8.	Quantity in the storage at the end of the year-	:

Date: 27.06.2024
Place: Gangavaram (P),
Pedagantyada (M)

For Adani Gangavaram Port Ltd. Limited

(Dr. D. Jyothi)
Vice President (Environment)

Signature of the Occupier or
Operator of the Disposal facility

Lr. No. AGPL/ENV/APPCB/2024/026

Date: 27.06.2024

To

The Environmental Engineer,
A.P. Pollution Control Board,
Regional Office,
3rd floor, APPCB Buildings,
Main Road, Madhavadhara VUDA Colony,
Visakhapatnam

Sir,

Sub:- Adani Gangavaram Port Limited – Annual Returns on Disposal of Used
batters in **Form – 8** - Submitted - Reg.

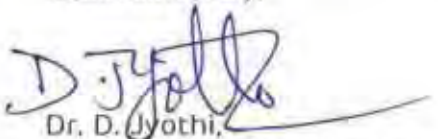
Ref:- 1. CTO & HWA Order No. APPCB/ VSP/ VSP/113/CFO/HO/2015, dated
13.01.2016 valid up to 31.12.2020
2. Consent Order No. APPCB/VSP/ VSP/113/ CFO/ HO/2020, dated
10.09.2020 valid up to 31.12.2025,
3. Amendment CTO Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated
13.01.2023
4. Name change Amendment order No: APPCB/VSP/113/HO/CTO/2023 Dt.
01.08.2023
5. CTO & HWA No: APPCB/VSP/113/CTO/HO/2009, dated 22.08.2023 valid
up to 31.12.2025
6. Amendment CTO Order No: APPCB/VSP/VSP/113/HO/CTO/2020
05.01.2024

@@@

In compliance with the conditions stipulated in CTO & HWA orders vide reference cited
above we are herewith submitting the Annual Returns of Generation, Storage &
Disposal of Used Batteries for the year 2022 – 2023 in **Form- 8** as per the Batters
(Management & Handling) Rules, 2010 and amendments thereof.

Kindly acknowledge receipt of the same.

Yours sincerely,


Dr. D. Jyothi,
Vice President/Environment

Encl: a/a



Adani Gangavaram Port Limited
(Formerly "Adani Gangavaram Port Private Limited")
Gangavaram Post, Pedagantyada,
Visakhapatnam, Andhra Pradesh, India - 530 044
CIN : U61100GJ2021PLC124091

Tel + 91-891-2701177, 2889999
Fax +91-891-2703377
www.adaniports.com

Registered Office : Adani Corporate House, Shanthigram, Nr. Vaishno Devi Circle, S.G. Highway, Khodiyar, Ahmedabad-382421, Gujarat, India.

FORM VIII

[see rule 10 (2) (ii)]


FORM FOR FILING RETURNS FOR BULK CONSUMER OF BATTERIES

[To be submitted by the bulk consumer to the State Board by 30th June (for the period October-March) and 31st December (for the period April-September) every year]

1.	Name and Address of the bulk consumer	M/s. Adani Gangavaram Port Limited, Gangavaram (PO) Pedagantyada (V & M), Visakhapatnam Dist.
2.	Name of the Authorised person and full address with telephone and fax number	Dr. D. Jyothi Vice President - Environment Phone: 0891 - 2889999 Email: jyothi@gangavaram.com
3.	Number of new batteries of different categories purchased from the manufacturer/importer/dealer or any other agency during October-March and April September Category : (i) Automotive (a) four wheelers (b) two wheelers (ii) Industrial (a) UPS (b) Motive Power (c) Stand-by (iii) Others	(i) No. of Batteries – 50 Nos. (ii) Approximate weight - 2.50 (in Metric Tonnes) Invoice No.193700000855, Date: 05.10.2023
4.	Number of used batteries of categories mentioned in Sl. No. 3 and Tonnage of scrap sent to manufacturer/ dealer/ importer/ registered recycler/ or any other agency to whom the used batteries scrap was sent*.	M/s. Amen Industries, Phase – II, Plot No.47, Autonagar, Guntur Andhra Pradesh.

- Enclose list of manufacture/dealer/importer/registered recyclers/or any other agency to whom the used batteries scrap was sent.

Place: Gangavaram (PO), Pedagantyada (M), Visakhapatnam Dist.

For Adani Gangavaram Port & A. Limited

 (Dr. D. Jyothi)
 Vice President (Environment)

Date: 27.06.2024

Signature of the authorized person

Lr. No. AGPL/ENV/APPCB/2024/026

Date: 27.06.2024

To

The Environmental Engineer,
A.P. Pollution Control Board,
Regional Office,
3rd floor, APPCB Buildings,
Main Road, Madhavadhara VUDA Colony,
Visakhapatnam

Sir,

Sub:- Adani Gangavaram Port Limited – Annual Returns on Disposal of Used
batters in **Form – 8** - Submitted – Reg.

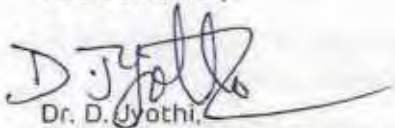
- Ref:-
1. CTO & HWA Order No. APPCB/ VSP/ VSP/113/CFO/HO/2015, dated 13.01.2016 valid up to 31.12.2020
 2. Consent Order No. APPCB/VSP/ VSP/113/ CFO/ HO/2020, dated 10.09.2020 valid up to 31.12.2025.
 3. Amendment CTO Order No. APPCB/ VSP/ VSP/ 113/HO/2015, dated 13.01.2023
 4. Name change Amendment order No: APPCB/VSP/113/HO/CTO/2023 Dt. 01.08.2023
 5. CTO & HWA No: APPCB/VSP/113/CTO/HO/2009, dated 22.08.2023 valid up to 31.12.2025
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In compliance with the conditions stipulated in CTO & HWA orders vide reference cited above we are herewith submitting the Annual Returns of Generation, Storage & Disposal of Used Batteries for the year 2023 – 2024 in **Form- 8** as per the Batters (Management & Handling) Rules, 2010 and amendments thereof.

Kindly acknowledge receipt of the same.

Yours sincerely,


Dr. D. Jyothi,
Vice President/Environment

Encl: a/a

**Adani Gangavaram Port Limited**

(Formerly "Adani Gangavaram Port Private Limited")
Gangavaram Post, Pedagantyada,
Visakhapatnam, Andhra Pradesh, India - 530 044
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FORM VIII

[see rule 10 (2) (ii)]

FORM FOR FILING RETURNS FOR BULK CONSUMER OF BATTERIES

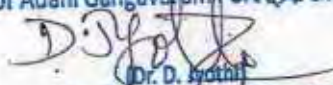
[To be submitted by the bulk consumer to the State Board by 30th June (for the period October-March) and 31st December (for the period April-September) every year]

1.	Name and Address of the bulk consumer	M/s. Adani Gangavaram Port Limited, Gangavaram (PO) Pedagantyada (V & M), Visakhapatnam Dist.
2.	Name of the Authorised person and full address with telephone and fax number	Dr. D. Jyothi Vice President - Environment Phone: 0891 - 2889999 Email: jyothi@gangavaram.com
3.	Number of new batteries of different categories purchased from the manufacturer/importer/dealer or any other agency during October-March and April September Category : (i) Automotive (a) four wheelers (b) two wheelers (ii) Industrial (a) UPS (b) Motive Power (c) Stand-by (iii) Others	(i) No. of Batteries – 50 Nos. (ii) Approximate weight - 2.50 (in Metric Tonnes) Invoice No.193700000855, Date: 05.10.2023
4.	Number of used batteries of categories mentioned in Sl. No. 3 and Tonnage of scrap sent to manufacturer/ dealer/ importer/ registered recycler/ or any other agency to whom the used batteries scrap was sent*.	M/s. Amen Industries, Phase – II, Plot No.47, Autonagar, Guntur Andhra Pradesh.

- Enclose list of manufacture/dealer/importer/registered recyclers/or any other agency to whom the used batteries scrap was sent.

Place: Gangavaram (PO), Pedagantyada (M), Visakhapatnam Dist.

For Adani Gangavaram Port Ltd. Limited


(Dr. D. Jyothi)
Vice President (Environment)

Date: 27.06.2024

Signature of the authorized person



Ports and
Logistics

AGPL/ENV/APPCB/CTO/2025/002

Date:15.01.2025

To,
The Environmental Engineer,
A.P. Pollution Control Board,
Regional Office, Madhavadhara,
VUDA Layout, Beside RTO Office,
Visakhapatnam – 530 018.

Dear Sir,

Sub: - AGPL – Submission of Compliance Status Report Issued by APPCB for
CTO & HWA Authorization for December 2024 – Reg.

Ref:- CTO & HWA Order No: APPCB/VSP/113/CTO/HO/2009 dated
22.08.2024.

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We are submitting the compliance status for the conditions stipulated in the
CTO and Hazardous Waste Authorization, as referenced above. This
submission includes the monthly CAAQM daily averages and monitoring
reports for both terrestrial and marine environments for December 2024.

Thanking you,
For, **Adani Gangavaram Port Limited**

Yours Sincerely,

Authorized Signatory

Encl: As above.

Adani Ports and Special Economic
Zone Ltd
Adani House
Shantigram, S G Highway
Ahmedabad 382 421
Gujarat, India
CIN: L63090GJ1998PLC034182

Tel +91 79 2656 5555
Fax +91 79 2555 5500
info@adani.com
www.adaniports.com

Registered Office: Adani House, Shantigram, S G Highway, Ahmedabad 382 421, Gujarat, India

Condition-wise compliance status on the conditions stipulated in the CTO & HWA Order No. APPCB/VSP/113/CTO/HO/2009, dated 22.08.2024, valid up to 31.12.2029.

S. No.	Condition	Compliance
	SCHEDULE-A	
1.	Any up-set condition in any industrial plant / activity of the facility, which result in, increased effluent / emission discharge and/ or violation of standards stipulated in this order shall be informed to this Board, under intimation to the Collector and District Magistrate and take immediate action to bring down the discharge / emission below the limits.	Noted for compliance
2.	The facility should carryout analysis of wastewater discharges or emissions through chimneys for the parameters mentioned in this order on quarterly basis and submit to the Board.	<p>Being complied.</p> <ul style="list-style-type: none"> AGPL established & operating 2 nos. of Sewage Treatment Plants of 1 X 30 KLD & 1 X 5 KLD to treat the domestic sewage generated within the Port and carrying out the analysis of the treated water through M/s. Biochem Labs a NABL/MoEF&CC accredited laboratory & submitting the reports to APPCB on monthly basis and to MoEF &CC on Half-yearly basis. As per the reports, the values are within the standards. STP analysis report for the month of December 2024) enclosed as Annexure-1 There is no process or manufacturing involved. So, no source of emission involved.
3.	Notwithstanding anything contained in this consent order, the Board hereby reserves the right and powers to review / revoke any and/or all the conditions imposed herein above and to make such variations as deemed fit for the purpose of the Acts by the Board.	Noted
4.	The facility shall ensure that there shall not be any change in the process technology, source & composition of	Noted and being complied

S. No.	Condition	Compliance
	raw materials and scope of working without prior approval from the Board.	
5.	The applicant shall submit Environment statement in Form V before 30th September every year as per Rule No.14 of E(P) Rules, 1986 & amendments thereof.	Being complied. AGPL has submitted Environment Statement – Form – V on 28.09.2024 for the FY 2023-2024 vide Letter No. AGPL/APP CB/ ENV/Form-5/2023-24/039
6.	The applicant should make applications through Online for renewal of Consent (under Water and Air Acts) and Authorization under HWM Rules at least 120 days before the date of expiry of this order, along with prescribed fee under Water and Air Acts and detailed compliance of CTO conditions for obtaining Consent & HW Authorization of the Board.	Noted and being complied
7.	The facility should immediately submit the revised application for consent to this Board in the event of any change in the raw material used, processes employed, quantity of trade effluents & quantity of emissions. Any change in the management shall be informed to the Board. The person authorized should not let out the premises / lend / sell / transfer their industrial premises without obtaining prior permission of the State Pollution Control Board.	Noted and being complied
8.	Any person aggrieved by an order made by the State Board under Section 25, Section 26, Section 27 of Water Act, 1974 or Section 21 of Air Act, 1981 may within thirty days from the date on which the order is communicated to him, prefer an appeal as per Andhra Pradesh Water Rules, 1976 and Air Rules 1982, to Appellate authority constituted under Section 28 of the Water(Prevention and Control of Pollution) Act, 1974 and Section 31 of the Air(Prevention and Control of Pollution) Act, 1981.	Noted.
9.	The facility shall be liable to pay Environmental Compensation / Other Environmental Taxes, if any environmental damage caused to the surroundings, as fixed by the Collector	Noted.

S. No.	Condition	Compliance
	& District Magistrate or any other competent authority as per the Rules in vogue.	
10.	The facility may explore the possibility of tapping the solar energy for their energy requirements.	Noted.
11.	The facility should educate the workers and nearby public of possible accidents and remedial measures.	AGPL is conducting safety TBT on regular basis to the employees, port users and Mock drills periodically.

S. No	Condition	Compliance		
.	SCHEDULE-B			
	The issue of CTO&HWA (Expansion) to the facility was placed in the Consent Management Committee meeting held on 08.08.2024. The facility shall comply with the following conditions:			
1.	The facility shall install the digital display board at Port premises.	Installed digital display board at Port premises and data displaying connectivity is in progress.		
2.	The facility shall ensure the energy conservation measures by solar power generation.	Noted.		
3.	The facility shall comply with the Task Force directions dated 27.04.2023, and conditions stipulated in CTO order dated 22.08.2023 and the control measures proposed by the facility as committed vide letter dated 05.08.2024. The details are as follows:			
S. No	Project Details	Project Term	Target Date	Status
1.	Replacement of the existing 3 No. of CAAQM Stations with Beta Ray Attenuation Technology	Short Term	November, 2024	Installation of 3 No. of CAAQM Stations with Beta Ray Attenuation Technology completed.
2.	Separate / individual digital water meters to be provided at Critical locations	Short Term	November, 2024	Flowmeters installation completed.
3.	Replacement of existing Analog meters with Digital Water Flow Meters for 2 STP Outlet and New tyre washing outlet purpose.	Short Term	November, 2024	
4.	Replacement of existing Analog meters with IOT and digital flow meters.	Short Term	November, 2024	
5.	DG set retrofitting as per the CPCB / SPCB directions to the existing DG sets	Short Term	November, 2024	Being Complied
6.	Pre & Post dredging	Short	January	Completed & complied.

S. No	Condition			Compliance	
	SCHEDULE-B				
		marine ecological study to be taken-up separately.	Term	2025.	
	7.	Extension of the wind break wall provided towards Gangavaram (V) for another 350 meters.	Medium	March-2025.	Being Complied
	8.	In addition to the closed shed for storage of waste oils & other solid wastes, additional storage shed for storage of Non-Hazardous and Hazardous waste to cater the storage needs for 3 months storage	Long term	12 Months	• Being Complied
	9.	Under Mechanization & Modernization – to upgrade the Stack yards with MDSS System in addition to the existing 176 no. of PLC based MDSS System	Long term	18 Months	• Being Complied
	10.	Further strengthening the existing drainage system along with collection pits.	Long term	18 Months	Being Complied
	11.	To control the fugitive emissions, supporting with rows of greenbelt, propose to provide windshields around the individual operational areas	Long term	12 Months	• Being Complied
	12.	All the existing Phase – I & II stack yards intermediate peripheral retaining wall for each stack pile in the yards for further protection of stockpiles.	Long term	18 Months	Being Complied
	Water Pollution:				

S. No.	Condition	Compliance																																										
	SCHEDULE-B																																											
4.	<p>The source of water is Visakhapatnam Industrial Water Supply Co. The following is the permitted water consumption:</p> <table> <tr> <th>S. No.</th><th>Purpose</th><th>Quantity (KLD)</th></tr> <tr> <td>1.</td><td>Gardening</td><td>92</td></tr> <tr> <td>2.</td><td>Dust Suppression, Truck tyre washing etc.</td><td>1373</td></tr> <tr> <td>3.</td><td>Ship supply</td><td>50</td></tr> <tr> <td>4.</td><td>Miscellaneous</td><td>10</td></tr> <tr> <td>5.</td><td>Domestic</td><td>75</td></tr> <tr> <td></td><td>Total</td><td>1600 KLD</td></tr> </table> <p>Separate meters shall be maintained for assessing the quantity of water used for each of the purposes mentioned above purpose.</p>	S. No.	Purpose	Quantity (KLD)	1.	Gardening	92	2.	Dust Suppression, Truck tyre washing etc.	1373	3.	Ship supply	50	4.	Miscellaneous	10	5.	Domestic	75		Total	1600 KLD	<p>Being complied.</p> <p>The average water consumption for December 2024 was 891.75 KLD</p> <table> <tr> <th>S. No.</th><th>Purpose</th><th>Quantity KLD</th></tr> <tr> <td>1.</td><td>Gardening</td><td>51.26</td></tr> <tr> <td>2.</td><td>Dust suppression, truck tyre washing</td><td>765.23</td></tr> <tr> <td>3.</td><td>Ship supply</td><td>27.87</td></tr> <tr> <td>4.</td><td>Miscellaneous</td><td>47.39</td></tr> <tr> <td>5.</td><td>Domestic</td><td></td></tr> <tr> <td></td><td>Total</td><td>891.75</td></tr> </table>	S. No.	Purpose	Quantity KLD	1.	Gardening	51.26	2.	Dust suppression, truck tyre washing	765.23	3.	Ship supply	27.87	4.	Miscellaneous	47.39	5.	Domestic			Total	891.75
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5.	<p>The effluent discharged shall not contain constituents more than the tolerance limits mentioned below:</p> <table> <tr> <th>Out let</th><th>Parameter</th><th>Limiting Standards (mg/l except for pH)</th></tr> <tr> <td rowspan="5">1</td><td>pH</td><td>6.50 – 8.50</td></tr> <tr> <td>Oil and Grease</td><td>10</td></tr> <tr> <td>Biochemical Oxygen Demand</td><td>30</td></tr> <tr> <td>Total Suspended Solids</td><td><100</td></tr> <tr> <td>Fecal Coliform (FC) (Most Probable Number per 100 milliliter, MPN/100ml)</td><td><1000 MPN/100 ml</td></tr> </table>	Out let	Parameter	Limiting Standards (mg/l except for pH)	1	pH	6.50 – 8.50	Oil and Grease	10	Biochemical Oxygen Demand	30	Total Suspended Solids	<100	Fecal Coliform (FC) (Most Probable Number per 100 milliliter, MPN/100ml)	<1000 MPN/100 ml	<ul style="list-style-type: none"> AGPL established & operating 2 No. of Sewage Treatment Plants of 1 X 30 KLD & 1 X 5.0 KLD to treat the domestic sewage generated within the Port and carrying out the analysis of the treated water through a NABL/MoEF&CC accredited laboratory and submitting the reports to APPCB on monthly basis and to MoEF &CC on Half-yearly basis. As per the reports, the values are within the stipulated standards. 																												
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6.	The facility shall maintain Electro Magnetic flow meters with totalizers for water consumption, effluent generation mentioned in the Order.	Installation of flowmeters completed. Dashboard application is in progress.																																										
7.	The facility shall provide & maintain separate energy meters for Sewage Treatment Plant (STP) and for Air pollution Control equipment to record energy consumption.	Being complied.																																										
8.	The effluent / sewage shall be treated to the on land for irrigation standards, as stipulated under schedule VI Environment (Protection) Rules, 1986, notified by Ministry of Environment And Forests, Government Of India vide	Being complied.																																										

S. No	Condition	Compliance
	SCHEDULE-B	
	G.S.R.422 (e), dt.19.05.1993 and its amendments thereof. The treated wastewater shall be used for development of greenery, dust suppression, re-used for various purposes within the premises.	
9.	DO levels in the sea water at the dredging area shall be monitored at regular interval and the dredging time shall be suitably regulated to prevent depletion of DO levels in the sea	AGPL carrying out the Terrestrial & Marine parameters analysis on fortnight basis through NABL & MoEF&CC accredited laboratory and submitting the analysis reports to APPCB on monthly basis and to MoEF &CC on Half-yearly basis. The test report of the analysis are enclosed as Annexure 2
	Air Pollution:	
10.	The facility shall ensure compliance of the National Ambient Air quality standards notified by MoE&F, GoI vide notification No. GSR 826(E), dated. 16.11.2009 during construction and regular operational phase of the project.	<p>AGPL installed & operating 4 No. of CAAQM stations (3 downwind & 1 upwind) to measure the parameters PM₁₀, PM_{2.5}, SO₂, NO, NO₂, CO at the following locations and data connected to APPCB website.</p> <p>Downwind directions towards habitation</p> <p>i. Administrative office towards H.B. Colony (Station 1):</p> <p>ii. Project site office building towards Venkannapalem (Station2)</p> <p>iii. Watch tower – 4 towards Gangavaram village (Station-3).</p> <p>Upwind direction towards RINL</p> <p>iv. At New Pump House (upwind directions) – Station - 4</p> <p>As per the data, the particulate matter are observed within the NAAQ standard. Gaseous values are low due to under maintenance of analyzer.</p>

S. No	Condition	Compliance																		
	SCHEDULE-B																			
11.	<p>The facility shall comply with ambient air quality standards of PM10 (Particulate Matter size less than 10mm) - 100 mg/ m³; PM2.5 (Particulate Matter size less than 2.5 mm) - 60 mg/ m³; SO₂- 80 mg/ m³; NO_x - 80 mg/m³, outside the factory premises at the periphery of the facility.</p> <p>Standards for other parameters as mentioned in the National Ambient Air Quality Standards CPCB Notification No.B-29016/20/90/PCI-I, dated 18.11.2009.</p> <p>Noise Levels: Day time (6 AM to 10 PM) - 75 dB (A) Nighttime (10 PM to 6 AM) - 70 dB (A)</p>	<p>Being complied.</p> <p>AGPL installed & operating 4 No. of CAAQM stations (3 downwind & 1 upwind) to measure the parameters PM₁₀, PM_{2.5}, SO₂, NO₂, CO at the following locations and data connected to APPCB website.</p> <p>Downwind directions towards habitation</p> <ul style="list-style-type: none"> i. Administrative office towards H.B. Colony (Station 1): ii. Project site office building towards Venkannapalem (Station2) iii. Watch tower – 4 towards Gangavaram village (Station-3). <p>Upwind direction towards RINL</p> <ul style="list-style-type: none"> iv. At New Pump House (upwind directions) – Station - 4 <p>As per the data, the particulate matter are observed within the NAAQ standard. Gaseous values are low due to under maintenance of analyzer.</p>																		
12.	<p>The facility shall comply with emission limits for DG sets of capacity upto 800 KW as per the Notification G.S.R. 804(E), dated 03.11.2022, under the Environment (Protection) Act Rules. In case of DG sets of capacity more than 800 KW shall comply with emission limits as per the Notification G.S.R.489 (E), dated 09.07.2002 at serial no.96, under the Environment (Protection) Act, 1986.</p>	<p>AGPL permitted to operate the following capacities of DG sets for emergency power backup:</p> <table border="1"> <thead> <tr> <th>S. No.</th><th>DG set capacity</th><th>Nos.</th></tr> </thead> <tbody> <tr> <td>1</td><td>200</td><td>1</td></tr> <tr> <td>2</td><td>320</td><td>3</td></tr> <tr> <td>3</td><td>380</td><td>2</td></tr> <tr> <td>4</td><td>800</td><td>1</td></tr> <tr> <td>5</td><td>1250</td><td>3</td></tr> </tbody> </table>	S. No.	DG set capacity	Nos.	1	200	1	2	320	3	3	380	2	4	800	1	5	1250	3
S. No.	DG set capacity	Nos.																		
1	200	1																		
2	320	3																		
3	380	2																		
4	800	1																		
5	1250	3																		
13.	<p>The facility shall comply with the noise limits for DG sets (upto 1000 KVA) as per G.S.R.520 (E), dated 01.07.2003 and G.S.R.448(E), dated 12.07.2004 under the Environment (Protection) Act Rules.</p>	<p>AGPL permitted to operate the following capacities of DG sets for emergency power backup:</p> <table border="1"> <thead> <tr> <th>S. No.</th><th>DG set</th><th>Nos.</th></tr> </thead> <tbody> <tr> <td>1</td><td>200</td><td>1</td></tr> <tr> <td>2</td><td>320</td><td>3</td></tr> <tr> <td>3</td><td>380</td><td>2</td></tr> <tr> <td>4</td><td>800</td><td>1</td></tr> <tr> <td>5</td><td>1250</td><td>3</td></tr> </tbody> </table>	S. No.	DG set	Nos.	1	200	1	2	320	3	3	380	2	4	800	1	5	1250	3
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4	800	1																		
5	1250	3																		
14.	<p>The facility shall maintain 4 CAAQMs with online connectivity to APPCB and maintain records.</p>	<p>Being complied.</p>																		

S. No	Condition	Compliance
	SCHEDULE-B	
15.	The project proponent shall install system to carryout Ambient Air Quality monitoring for common/criterion parameters relevant to the main pollutants released (e.g. PM10 and PM2.5 in reference to PM emission, and SO2 and NOx in reference to SO2 and NOx emissions) within and outside the project area at least at four locations, covering upwind and downwind directions.	<p>Being complied.</p> <p>AGPL installed & operating 4 No. of CAAQM stations to measure the parameters PM₁₀, PM_{2.5}, SO₂, NO, NO₂, CO at the following locations and data connected to APPCB website.</p> <p>Downwind directions towards habitation</p> <ul style="list-style-type: none"> i. Administrative office towards H.B. Colony (Station 1): ii. Project site office building towards Venkannapalem (Station2) iii. Watch tower – 4 towards Gangavaram village (Station-3). <p>Upwind direction towards RINL</p> <ul style="list-style-type: none"> iv. At New Pump House (upwind directions) – Station - 4 <p>As per the data, the particulate matter are observed within the NAAQ standard. Gaseous values are low due to under maintenance of analyzer.</p>
16.	The facility shall not stack the materials more than 12 meters height where MDSS system is available and shall maintain stack height of 10 meters at manual stack yards.	Being complied.
17.	The facility shall maintain wind breaking wall all along the Gangavaram village side up to a height 10 mts as wind speed is high in this area.	Erected wind breaking wall of height 6m on the compound wall of height 3m near Gangavaram village and HB Colony to prevent any dust nuisance towards habitation & maintaining about 50 m width of green belt along port compound wall near Gangavaram village.
18.	The facility shall not establish any other stock yards other than designated stock yards.	Being complied
19.	The facility shall maintain Telescopic chute at ship loading points	Being complied Maintaining Telescopic chute at ship loading points.
20.	The facility shall maintain dusty cargo operations if the wind velocity crosses 20 KMPH and all MDSS sprinklers shall start immediately to maintain AAQ standards.	Being complied.
21.	The facility shall maintain fully	Being complied.

S. No	Condition	Compliance
	SCHEDULE-B	
	mechanized handling equipment for loading and unloading operations for dusty cargo to the maximum extent possible.	
22.	The facility shall handle alumina in completely closed enclosures.	Being complied.
23.	<p>The facility shall maintain comply with the following for controlling fugitive emissions</p> <ul style="list-style-type: none"> i. Vehicle movement shall be minimized / eliminated by implementing mechanical operation. ii. All the vehicles involved in transportation of cargo shall be covered with tarpaulin. iii. Vehicles shall be managed to avoid traffic congestion and shall provide empty dusting vehicle washings / dry cleaning system to clean all out going cargo vehicles. iv. Based on traffic density/ vehicular movements anticipated from the port, parking facilities shall be provided. 	<p>Being complied.</p> <ul style="list-style-type: none"> a. Established mechanical conveyor system for handling coal & Iron ore to prevent the spillage of cargo and provided closed hoods for the conveyor system to curb fugitive emissions of coal/iron ore particles into the air. b. Stacker cum re-claimers is being used for loading and unloading the coal. The railway wagons are being loaded mechanically. c. Established 16 No. of semi mechanized truck tarpaulin covering stations at various locations within the Port to facilitate and ensure all the outgoing cargos by Trucks are covered with tarpaulin. d. Ensuring that the tarpaulin is covered in all sides of the truck and tightly tied with rope so that the tarpaulin should not be uncovered while traveling until the truck reaches the destination without any transit spillage. e. Provided dedicated truck/tyre washing facility to wash all the outgoing vehicles f. Provided dedicated truck parking facility.
24.	All the transfer points, loading / unloading points and conveyer systems shall be housed completely with leakproof arrangements. Adequate dust suppression and containment measures shall be implemented for effective control of fugitive emissions.	Established mechanical conveyor system for handling coal & Iron ore to prevent the spillage of cargo and provided closed hoods for the conveyor system to curb fugitive emissions of coal/iron ore particles into the air.
25.	<p>The facility shall maintain the following:</p> <ul style="list-style-type: none"> a. The facility shall provide cladding / cover to the screen, conveyors and crusher. b. Sprinklers shall be provided to suck 	<ul style="list-style-type: none"> a. Being complied. b. Being complied.

S. No	Condition	Compliance																
	SCHEDULE-B																	
	<p>emissions at transfer points of conveyors.</p> <p>c. The facility shall maintain ambient air quality within the Board standards.</p> <p>d. The facility shall co-ordinate with traffic police and GVMC for regular cleaning of roads upto National Highway to suppress the dust emissions.</p>	<p>c. Being complied.</p> <p>d. Being complied.</p>																
	General:																	
26.	The facility shall not handle any un-consented cargo and not exceed the quantities mentioned in this order, without CTE & CTO order of the Board.	Being complied.																
27.	<p>The facility shall not dispose any non-hazardous waste outside the facility premises. The facility shall dispose other non-hazardous wastes as per the disposal option specified below:</p> <table><tr><th>S. No</th><th>Name of the solid waste</th><th>Quantity</th><th>Method of Disposal</th></tr><tr><td>1.</td><td>Domestic solid waste</td><td>13.60 TPM</td><td>Shall be collected segregated and disposed as per MSW Rules in consultation with GVMC authorities</td></tr><tr><td>2.</td><td>Discarded material, plastic material</td><td>10.25 TPM</td><td>Shall be disposed to authorised recyclers only</td></tr><tr><td>3.</td><td>Sludge from STP</td><td>1.165 TPM</td><td>Shall be composted and used in green belt program</td></tr></table>	S. No	Name of the solid waste	Quantity	Method of Disposal	1.	Domestic solid waste	13.60 TPM	Shall be collected segregated and disposed as per MSW Rules in consultation with GVMC authorities	2.	Discarded material, plastic material	10.25 TPM	Shall be disposed to authorised recyclers only	3.	Sludge from STP	1.165 TPM	Shall be composted and used in green belt program	<p>Being complied.</p> <p>1. The domestic solid waste is being collected and disposed to GVMC MSW Site on regular basis.</p> <p>2. The plastic waste is being disposed through APPCB Authorized recycler.</p> <p>3. The STP Sludge is being utilized as Manure for greenbelt within the Port.</p>
S. No	Name of the solid waste	Quantity	Method of Disposal															
1.	Domestic solid waste	13.60 TPM	Shall be collected segregated and disposed as per MSW Rules in consultation with GVMC authorities															
2.	Discarded material, plastic material	10.25 TPM	Shall be disposed to authorised recyclers only															
3.	Sludge from STP	1.165 TPM	Shall be composted and used in green belt program															
28.	<p>The facility shall maintain the following records and the same shall be made available to the inspecting officers of the Board:</p> <p>a. Cargo handling details.</p> <p>b. Quantity of Effluents generated, treated, recycled/reused and disposed to CETP.</p>	<p>Being complied.</p> <p>a. Being complied & records being updated regularly</p> <p>b. Being complied & records being updated regularly</p>																

S. No	Condition	Compliance
	SCHEDULE-B	
	c. Logbooks for pollution control systems. d. Characteristics of effluents and emissions. e. Hazardous/non-hazardous solid waste generated and disposed. f. Inspection book. g. Manifest copies of effluents / hazardous waste.	c. Being complied & records being updated regularly d. Being complied & records being updated regularly e. Being complied & records being updated regularly f. Being complied & records being updated regularly g. Being complied & records being updated regularly
29.	<p>The following rules and regulations (as amended and upgraded from time to time) notified by the MoEF&CC, Govt shall be implemented.</p> a. Regulation of Persistent Organic Pollutants Rules, 2018. b. Hazardous waste and other wastes (Management and Transboundary Movement) Rules, 2016. c. Plastic Waste Management Rules, 2022. d. Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989 e. Fly Ash Notification, 2016. f. Battery Waste Management Rules, 2022. g. E-Waste (Management) Rules, 2022. h. Construction and Demolition waste Management Rules, 2016. i. Solid Waste Management Rules, 2016. j. The Public Liability Insurance Act, 1991 and its amendments thereof. k. Bio Medical Waste Management Rules, 2016.	<p>Being complied.</p> a. There is no process or manufacturing involved. So no source of POP involved. b. Being complied c. Disposing the plastic waste through plastic recycler only. d. Being complied. There is no process or manufacturing involved. So, no source of hazardous chemicals involved. e. Being port activity, no fly ash generation involved. f. Disposing of the used batteries through an authorized recycler only. g. Disposing of the E-waste through the authorized recycler only. h. Being complied. i. The solid waste generated is being disposed to MSW Site on regular basis. j. AGPL is having Public liability Insurance Policy No: 41094403, dated 23.09.2024, Valid till 13/09/2025 with Premium of Rs-5161/- & ERF of Rs.5161/- k. AGPL is operating an OHC to provide first-aid to the needy

S. No	Condition	Compliance
	SCHEDULE-B	
		and the Bio-Medical waste is being disposed to M/s Vasishta Environ Care, the authorized recycler.
30.	Spillage of fuel / engine oil and lubricants from the site are a source of organic pollution which impacts marine life, particularly benthos. This shall be prevented by suitable precautions and also by providing necessary mechanisms to trap the spillage.	AGPL is following the updated oil spillage contingency plan & conducting mock drills from time to time.
31.	Shrouding shall be carried out in the work site enclosing the dock/proposed facility area. This will act as dust curtain as well achieving zero dust discharge from the site. These curtain or shroud will be immensely effective in restricting disturbance from wind in affecting the dry dock operations, preventing waste dispersion, improving working conditions through provision of shade for the workers.	Being complied AGPL established mechanical conveyor system to prevent the spillage of cargo and provided cladding & closed hoods to curb fugitive emission into the air for handling of coal & Iron ore.
32.	The Project proponent shall ensure that no creeks or rivers are blocked due to any activities at the project site and free flow of water is maintained.	Being complied.
33.	The facility shall obtain prior permission from MoEF&CC, Gol and APPCB for any changes in the cargo type / capacity.	Being complied.
34.	The facility shall comply with the conditions stipulated in the EC order dt.24.12.2021 issued by the MoEF, CC & Gol & CTE orders dated 02.03.2012 & 16.08.2022 and CTO orders dated 13.01.2016, 22.08.2023 issued by APPCB.	Being complied.
35.	The facility shall maintain green belt as stipulated in the EC order.	Being complied AGPL developed greenbelt 320 acres within the port & detailed progress of the same is as follow: ➤ For the FY 2024-25 AGPL completed plantation of 30,458 up to 31.12.2024.

S. No	Condition	Compliance
	SCHEDULE-B	
		<ul style="list-style-type: none"> ➤ Completed ever highest plantation of 2,01,904 saplings during the financial year 2023-24. ➤ As of now AGPL developed plantation with morethan 5.5 Lakhs saplings in about 320 acres within the Port premises besides existance of Prosopis in an extent of about 150 Acres covering periphery of all yards, roads, buildings and all along conveyor belt. ➤ Maintaining 50 m width of green belt towards North and North-West direction with special emphasis towards habitation i.e., HB Colony, Peda Gantiyada, Venkannapalem, Kongapalem & Gangavaram village. ➤ Maintaining thick greenbelt at Port Approach Road, Railway track side and at Truck parking area along the wind breaking wall towards HB Colony. ➤ Maintaining exclusive nursery to maintain and improve the green belt on continuous basis.
36.	The facility shall maintain valid PLI policy which includes Environmental Relief Fund (ERF) and submit copy to RO, Visakhapatnam on yearly base.	Being complied AGPL is having valid Public liability Insurance Policy No: 41094403, dated 23.09.2024, Valid till 13/09/2025 with Premium of Rs-5161/- & ERF of Rs.5161/-
37.	The facility shall maintain digital display boards at publicly visible places at the main gate indicating the products manufactured Vs permitted quantities, treated effluent concentrations Vs discharge standards, stack emission & AAQ concentrations Vs standards, hazardous waste generation, disposed, stock Vs permitted quantities and validity of CTO; and exhibit the CTO order at a prominent place in the factory premises, as per Hon'ble Supreme Court order.	Being Complied. Display board installed in front of main gate & displayed the monitoring results of STP outlet, DG set emissions & AAQ concentrations, & disposal of hazardous waste and validity of existing of CTO obtained from APPCB as per the condition.
38.	The facility shall strictly comply with	Complied.

S. No	Condition	Compliance
	SCHEDULE-B	
	the directions of the Hon'ble NGT issued, if any, in O.A. No .571/2022.	
39.	The conditions are stipulated without prejudice to the rights and contentions of this Board in any Hon'ble Court of Law.	Noted
	Special conditions:	
40.	Fire detection and firefighting facilities with adequate water storage facility shall be provided in fire prone area in consultation with competent authorities.	Being complied.
41.	Onsite & offsite Disaster Management plan shall be prepared to meet any eventuality in case of any accident. Mock drills shall be conducted atleast twice a year and modifications required if any shall be incorporated in Disaster Management Plan and shall submit to Board.	<p>An onsite and offsite emergency action plan has been prepared and submitted to APPCB, RO, and VSP.</p> <p>Organizing periodical mock drills to draw the attention of the employees and to create awareness of safety issues.</p> <ul style="list-style-type: none"> ▪ Organizing periodical fire & safety training as a part of preparedness to face the challenges. ▪ Conducting workshops/seminars by top management involving all the employees & stakeholders to create awareness of safety issues and preventive measures. ▪ Organizing Safety awareness through mobile video van at workplace, ▪ Conducting Toolbox Talk at workplace involving employees & associates on regular basis.
42.	The facility shall prepare a safety report and carry out an independent safety audit report of the respective industrial activities including chemical storages / isolated storages by an expert not associated with such industrial activity as required under Rule 10 of MSIHC Rules, 1989 and get it approved by the Factories Dept., and submit the compliance along with copy of the safety report, safety audit report and safety certificate at concerned Regional Office, APPCB.	<p>An onsite emergency action plan has been prepared and submitted to APPCB, RO, and VSP.</p> <p>Mock drills are being conducted periodically.</p>
43.	The facility shall extend training to the	Being complied.

S. No	Condition	Compliance
	SCHEDULE-B	
	working personnel for the prevention of accidents and necessary antidotes to ensure safety, as per the MSIHC Rules, 1989.	<ul style="list-style-type: none"> Organizing periodical fire & safety training as a part of preparedness to face the challenges. Conducting workshops/seminars by top management involving all the employees & stakeholders to create the awareness of safety issues and preventive measures. Organizing Safety awareness through mobile video van at workplace, Conducting Toolbox Talk at workplace involving employees & associates on regular basis.
44.	The facility shall carryout calibration of safety equipment and leak detection systems at regular intervals and shall certify the same with the Factories Department. That certified copy shall be submitted to the APPCB, Regional Office.	Noted
45.	The facility shall submit Risk analysis and risk assessment covering worst scenario clearly describing impact within the facility premises and outside the facility premises and emergency response system.	Being complied AGPL is maintaining onsite emergency plan and updated during November 2023.
46.	The facility shall submit the copy of the safety audit report and On-Site / Off Site Emergency Plans as applicable after being certified by the Factories Department to the APPCB, Regional Office from time to time, if the storage quantity of hazardous chemicals is equal to or, in excess of the threshold quantities specified in schedule 2 & 3 of MSIHC Rules, 1989.	Being complied

SCHEDULE - C

S. No.	Condition	Compliance
1.	The authorized person shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made there under.	Being complied.
2.	The authorization or its renewal shall be produced for inspection at the request	Being complied.

S. No.	Condition	Compliance
	of an officer authorized by the State Pollution Control Board.	
3.	The person authorized shall not rent, lend, sell, transfer or otherwise transport the Hazardous and other wastes except what is permitted through this authorization.	Being complied.
4.	Any unauthorized change in personnel, equipment or working conditions as mentioned in the application by the person authorized shall constitute a breach of his authorization.	Noted for compliance
5.	The person authorized shall implement Emergency Response Procedure (ERP) for which this authorization is being granted considering all site-specific possible scenarios such as spillages, leakages, fire etc. and their possible impacts and also carry out mock drill in this regard at regular interval of time.	Noted for compliance
6.	The person authorized shall comply with the provisions outlined in the Central Pollution Control Board guidelines on "Implementing Liabilities for Environmental Damages due to Handling and Disposal of Hazardous Waste and Penalty".	Noted for compliance
7.	It is the duty of the authorized person to take prior permission of the State Pollution Control Board to close down the facility.	Noted for compliance.
8.	An application for the renewal of an authorization shall be made as laid down under these Rules.	Noted for compliance
9.	Any other conditions for compliance as per the Guidelines issued by the Ministry of Environment, Forest and Climate Change or Central Pollution Control Board from time to time.	Noted for compliance
10.	Annual return shall be filed by June 30th for the period ensuring 31st March of the year.	For the FY – 2023-24, the Annual Returns viz., Form – 3 E-Waste, Form – 4 Hazardous Waste & Form – 8 Used batteries returns were submitted on 28.06.2024 vide letter nos. a. AGPL/ENV/APPCB/2024/024, dated 27.06.2024 (Form – 3) b. AGPL/ENV/APPCB/2024/025, dated 27.06.2024 (Form – 4)

S. No.	Condition	Compliance
		c. AGPL/ENV/APPCB/2024/026, dated 27.06.2024 (Form – 8)
11.	The authorized person shall not store hazardous waste for more than 90 days as per the Hazardous & Other Wastes (Management and Transboundary Movement) Rules, 2016.	Being complied
12.	The authorized person shall store Used /Waste Oil and Used Lead Acid Batteries in a secured way in their premises till its disposal to the manufacturers / dealers on buy back basis.	Being complied
13.	The authorized person shall maintain 7 copy manifest system for transportation of waste generated and a copy shall be submitted to concerned Regional Office of APPCB. The driver who transports Hazardous Waste should be well acquainted about the procedure to be followed in case of an emergency during transit. The transporter should carry a Transport Emergency (TREM) Card.	Being complied The Used / Waste oil is being disposed through APEMCL duly following the SOP.
14.	The authorized person shall maintain proper records for Hazardous & other wastes stated in Authorization in Form-3 i.e., quantity of Incinerable waste, land disposal waste, recyclable waste etc., and file annual returns in Form- 4 as per Rule 6 (5) of the Hazardous & Other Wastes (Management & Transboundary Movement) Rules, 2016 and amendments thereof by June 30th for the period ensuring 31st March of the year.	Being complied For the FY – 2023-24, the Annual Returns viz., Form – 3 E-Waste, Form – 4 Hazardous Waste were submitted on 28.06.2024. vide letter nos. a. AGPL/ENV/APPCB/2024/024, dated 27.06.2024 (Form – 3) b. AGPL/ENV/APPCB/2024/025, dated 27.06.2024 (Form – 4) c. AGPL/ENV/APPCB/2024/026, dated 27.06.2024 (Form – 8)
15.	The authorized person shall submit the condition wise compliance report of the conditions stipulated in Schedule A, B & C of this Order on half yearly basis to Board office and concerned Regional office.	Being complied. Last submitted vide letter no
16.	The industry shall route all the hazardous waste through M/s. APEMC.	Being complied.

Adani Gangavaram Port Limited

**(An ISO 9001:2015-QMS, ISO 14001:2015-EMS,
ISO 45001-OHSMS & ISO 50001-EnMS
Certified Company)**

Environment Monitoring Report December -2024

Corporate Office:

Adani Corporate House, Shantigram,
Nr. Vaishno Devi Circle,
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Ahmedabad - 382421
Gujarat, India
Tel +91 79 2656 5555
Fax +91 79 2555 5500

Site Office:

Gangavaram (V & Post)
Pedagantyada (Mandal)
Visakhapatnam – 530 044
Phone: 0891 -2701177

Adani Gangavaram Port Limited, Gangavaram (PO), Pedagantyada (M), Visakhapatnam Dist.						
CAAQM Day Average values for December 2024						
Date & Parameters	Station - 1 - Administrative Office Building (AOB) towards HB Colony					
	PM10	PM 2.5	SO ₂	NO	NO ₂	CO
01.12.2024	48.04	41.16	36.00	0.02	0.04	0.01
02.12.2024	48.44	41.50	36.00	0.02	0.04	0.01
03.12.2024	51.97	44.49	36.00	0.02	0.04	0.01
04.12.2024	59.14	50.51	35.78	0.03	0.05	0.01
05.12.2024	55.91	47.80	36.00	0.02	0.05	0.01
06.12.2024	52.91	45.18	36.00	0.02	0.04	0.01
07.12.2024	51.88	44.30	36.00	0.02	0.04	0.01
08.12.2024	50.18	42.84	36.00	0.02	0.04	0.01
09.12.2024	53.43	45.61	25.93	0.03	0.03	0.01
10.12.2024	54.43	46.52	16.00	0.04	0.02	0.01
11.12.2024	56.62	48.46	16.00	0.04	0.02	NA
12.12.2024	60.40	51.67	15.80	0.04	0.03	0.02
13.12.2024	60.84	52.03	16.00	0.04	0.03	0.02
14.12.2024	60.35	51.57	16.00	0.04	0.03	0.02
15.12.2024	60.06	51.48	16.00	0.04	0.03	0.02
16.12.2024	60.06	51.48	16.00	0.04	0.03	0.02
17.12.2024	60.06	51.48	16.00	0.04	0.03	0.02
18.12.2024	60.06	51.48	16.00	0.04	0.03	0.02
19.12.2024	60.06	51.48	16.00	0.04	0.03	0.02
20.12.2024	58.99	50.56	15.72	0.04	0.03	0.02
21.12.2024	43.26	37.08	12.59	0.03	0.02	0.02
22.12.2024	43.26	37.08	12.59	0.03	0.02	0.02
23.12.2024	43.26	37.08	12.59	0.03	0.02	0.02
24.12.2024	48.67	41.70	14.58	0.03	0.02	0.02
25.12.2024	48.88	41.87	16.00	0.03	0.02	0.02
26.12.2024	47.74	40.87	16.00	0.03	0.02	0.02
27.12.2024	56.37	48.18	16.00	0.04	0.02	0.02
28.12.2024	57.22	48.78	16.00	0.04	0.02	0.02
29.12.2024	58.15	49.62	16.00	0.04	0.02	0.02
30.12.2024	58.62	50.05	16.00	0.04	0.03	0.02
31.12.2024	60.44	51.71	16.00	0.04	0.03	0.02
Minimum	43.26	37.08	12.59	0.02	0.02	0.01
Maximum	60.84	52.03	36.00	0.04	0.05	0.02
Average	54.51	46.63	21.08	0.03	0.03	0.02
Standard	100 ug/m ³	60 ug/m ³	80 ug/m ³	80 ug/m ³	80 ug/m ³	4 mg/m ³

Adani Gangavaram Port Limited, Gangavaram (PO), Pedagantyada (M), Visakhapatnam Dist.						
CAAQM Day Average values for December 2024						
Date & Parameters	Station - 2 - Project Site Office towards Venkannapalem					
	PM10	PM 2.5	SO ₂	NO	NO ₂	CO
01.12.2024	17.47	10.28	2.06	1.48	29.46	0.48
02.12.2024	20.70	12.18	2.12	1.51	27.24	0.67
03.12.2024	32.56	19.15	0.75	0.54	24.45	0.67
04.12.2024	53.52	31.48	0.50	0.36	24.21	0.85
05.12.2024	49.83	29.31	0.42	0.30	20.01	0.72
06.12.2024	49.22	28.95	7.80	5.59	20.67	0.75
07.12.2024	44.97	26.45	11.74	8.38	20.11	0.68
08.12.2024	37.73	22.20	12.57	8.98	15.76	0.64
09.12.2024	46.14	27.14	12.11	8.66	16.04	0.64
10.12.2024	46.16	27.15	8.89	6.32	17.79	0.69
11.12.2024	52.78	31.05	0.29	0.21	19.51	0.83
12.12.2024	62.50	36.76	0.35	0.25	22.89	0.93
13.12.2024	65.14	38.31	0.52	0.37	23.66	0.91
14.12.2024	59.21	34.83	0.35	0.25	23.81	0.86
15.12.2024	61.56	36.21	0.44	0.31	28.37	0.85
16.12.2024	58.10	34.18	0.45	0.32	32.67	0.84
17.12.2024	50.17	29.51	0.27	0.19	28.92	0.83
18.12.2024	29.96	17.62	0.56	0.40	27.37	0.78
19.12.2024	30.30	17.82	0.58	0.41	31.39	0.74
20.12.2024	9.23	5.43	1.37	0.98	28.78	0.70
21.12.2024	8.06	4.74	1.79	1.28	21.47	0.45
22.12.2024	23.38	13.75	6.29	4.50	22.48	0.46
23.12.2024	31.55	18.56	2.31	1.65	30.73	0.49
24.12.2024	26.28	15.46	0.43	0.31	26.54	0.51
25.12.2024	21.04	12.38	0.84	0.60	27.76	0.59
26.12.2024	31.81	18.71	1.12	0.80	23.66	0.52
27.12.2024	58.27	34.28	0.70	0.50	25.79	0.65
28.12.2024	63.21	37.18	2.36	1.69	30.08	0.74
29.12.2024	72.81	42.83	4.57	3.27	30.93	0.76
30.12.2024	70.27	41.34	4.93	3.51	29.42	0.82
31.12.2024	62.34	36.67	0.68	0.49	23.78	0.78
Minimum	8.06	4.74	0.27	0.19	15.76	0.45
Maximum	72.81	42.83	12.57	8.98	32.67	0.93
Average	43.43	25.55	2.91	2.08	25.02	0.70
Standard	100 ug/m ³	60 ug/m ³	80 ug/m ³	80 ug/m ³	80 ug/m ³	4 mg/m ³

Adani Gangavaram Port Limited, Gangavaram (PO), Pedagantyada (M), Visakhapatnam Dist.						
CAAQM Day Average values for December 2024						
Date & Parameters	Station - 3 - Watch Tower – 4 towards Gangavaram					
	PM10	PM 2.5	SO ₂	NO	NO ₂	CO
01.12.2024	44.61	37.73	1.65	0.05	0.07	0.02
02.12.2024	44.97	38.04	1.65	0.05	0.07	0.02
03.12.2024	48.26	40.78	1.65	0.05	0.07	0.02
04.12.2024	54.92	46.30	1.64	0.06	0.09	0.02
05.12.2024	51.91	43.82	1.65	0.06	0.08	0.02
06.12.2024	49.13	41.42	1.65	0.06	0.07	0.02
07.12.2024	48.17	40.61	1.65	0.05	0.07	0.02
08.12.2024	46.60	39.27	1.65	0.05	0.07	0.02
09.12.2024	49.61	41.81	6.11	0.05	0.06	0.02
10.12.2024	50.55	42.64	10.50	0.04	0.05	0.02
11.12.2024	52.57	44.42	10.50	0.04	0.05	0.02
12.12.2024	56.08	47.36	10.37	0.04	0.05	0.03
13.12.2024	56.49	47.69	10.50	0.04	0.05	0.03
14.12.2024	56.04	47.27	10.50	0.04	0.05	0.03
15.12.2024	55.77	47.19	10.50	0.04	0.05	0.03
16.12.2024	55.77	47.19	10.50	0.04	0.05	0.03
17.12.2024	55.77	47.19	10.50	0.04	0.05	0.03
18.12.2024	55.77	47.19	10.50	0.04	0.05	0.03
19.12.2024	55.77	47.19	10.50	0.04	0.05	0.03
20.12.2024	54.77	46.35	10.32	0.04	0.05	0.03
21.12.2024	40.17	33.99	8.26	0.03	0.04	0.02
22.12.2024	40.17	33.99	8.26	0.03	0.04	0.02
23.12.2024	40.17	33.99	8.26	0.03	0.04	0.02
24.12.2024	45.19	38.22	9.57	0.04	0.04	0.02
25.12.2024	45.39	38.38	10.50	0.03	0.04	0.02
26.12.2024	44.33	37.47	10.50	0.03	0.04	0.02
27.12.2024	52.34	44.16	10.50	0.04	0.05	0.03
28.12.2024	53.13	44.71	10.50	0.04	0.05	0.03
29.12.2024	54.00	45.48	10.50	0.04	0.05	0.03
30.12.2024	54.43	45.88	10.50	0.04	0.05	0.03
31.12.2024	56.13	47.40	10.50	0.04	0.05	0.03
Minimum	40.17	33.99	1.64	0.03	0.04	0.02
Maximum	56.49	47.69	10.50	0.06	0.09	0.03
Average	50.61	42.75	7.82	0.04	0.05	0.02
Standard	100 ug/m ³	60 ug/m ³	80 ug/m ³	80 ug/m ³	80 ug/m ³	4 mg/m ³

Adani Gangavaram Port Limited, Gangavaram (PO), Pedagantyada (M), Visakhapatnam Dist.						
CAAQM Day Average values for December 2024						
Date & Parameters	Station – 4 - UP-wind direction towards RINL (Vizag Steel Plant)					
	PM10	PM 2.5	SO ₂	NO	NO ₂	CO
01.12.2024	53.19	42.88	4.40	0.04	0.04	0.02
02.12.2024	53.63	43.22	4.40	0.04	0.04	0.02
03.12.2024	57.54	46.34	4.40	0.05	0.04	0.02
04.12.2024	65.48	52.61	4.37	0.05	0.04	0.03
05.12.2024	61.89	49.80	4.40	0.05	0.04	0.03
06.12.2024	58.57	47.07	4.40	0.05	0.04	0.03
07.12.2024	57.43	46.15	4.40	0.04	0.04	0.02
08.12.2024	55.55	44.62	4.40	0.04	0.04	0.02
09.12.2024	59.15	47.51	6.21	0.04	0.04	0.03
10.12.2024	60.26	48.46	8.00	0.04	0.03	NA
11.12.2024	62.68	50.48	8.00	0.04	0.04	NA
12.12.2024	66.87	53.82	7.90	0.04	0.04	0.01
13.12.2024	67.36	54.20	8.00	0.04	0.04	0.01
14.12.2024	66.82	53.72	8.00	0.04	0.04	0.01
15.12.2024	66.50	53.62	8.00	0.04	0.04	0.01
16.12.2024	66.50	53.62	8.00	0.04	0.04	0.01
17.12.2024	66.50	53.62	8.00	0.04	0.04	0.01
18.12.2024	66.50	53.62	8.00	0.04	0.04	0.01
19.12.2024	66.50	53.62	8.00	0.04	0.04	0.01
20.12.2024	65.31	52.66	7.86	0.04	0.04	0.01
21.12.2024	47.89	38.62	6.30	0.03	0.03	0.01
22.12.2024	47.89	38.62	6.30	0.03	0.03	0.01
23.12.2024	47.89	38.62	6.30	0.03	0.03	0.01
24.12.2024	53.88	43.43	7.29	0.04	0.03	0.01
25.12.2024	54.12	43.62	8.00	0.03	0.03	0.01
26.12.2024	52.85	42.57	8.00	0.03	0.03	0.01
27.12.2024	62.41	50.19	8.00	0.04	0.04	0.01
28.12.2024	63.35	50.81	8.00	0.04	0.04	0.01
29.12.2024	64.38	51.69	8.00	0.04	0.04	0.01
30.12.2024	64.90	52.14	8.00	0.04	0.04	0.01
31.12.2024	66.91	53.86	8.00	0.04	0.04	0.01
Minimum	47.89	38.62	4.37	0.03	0.03	0.01
Maximum	67.36	54.20	8.00	0.05	0.04	0.03
Average	60.35	48.57	6.82	0.04	0.04	0.01
Standard	100 ug/m ³	60 ug/m ³	80 ug/m ³	80 ug/m ³	80 ug/m ³	4 mg/m ³



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Environmental Monitoring Reports

(10th and 30th December 2024)

Adani Gangavaram Port Ltd,

Pedagantyada (Mandal),

Gangavaram (Post),

Visakhapatnam - 530 044.





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Environmental Monitoring Reports

(10th December 2024)

Adani Gangavaram Port Ltd,
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TEST REPORT ANALYSIS OF DRINKING WATER

BCL Ref. No.	BCL/685	Issued to: M/s. AdaniGangavaram Port Ltd, Gangavaram (Village) Peda Gantiy ada (Mandalam) Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	Drinking Water	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1	Colour	Hazen	4.6	5
2	Odour	Hazen	Unobjectionable	Unobjectionable
3	Taste	Hazen	Agreeable	Agreeable
4	Turbidity	NTU	3.4	5
5	pH	H+conc	6.38	6.5-8.5
6	Total Hardness	mg/l	256	300
7	Calcium	mg/l	48	100
8	Magnesium	mg/l	24	30
9	Chloride	mg/l	36	250
10	Total Dissolved Solids	mg/l	426	500
11	Iron	mg/l	0.018	0.3
12	Sulphate	mg/l	55	250
13	Nitrate	mg/l	0.16	50
14	Total Alkalinity	mg/l	48	200
15	Oil Grease	mg/l	Nil	0.01
16	Total Coli forms	Index	06	1-10
17	E. Coli	Cfu/ml	Absent	Should be Absent
18	Salmonella sp	Cfu/ml	Absent	Should be Absent
19	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

K. Lahari
Analyst



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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref. No.	BCL/686	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port, Ltd	
Type of Sample	Ground Water	
Location	Gangavaram Village	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS- 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1	Temperature	°C	32.6	-
2	pH	H+ concen	7.8	6.5-8.5
3	Total Hardness	mg/l	248	300
4	Calcium (as Ca)	mg/l	48	75
5	Magnesium (as Mg)	mg/l	26	30
6	Chlorides	mg/l	126	250
7	Manganese	mg/l	0.004	0.1
8	Copper	mg/l	0.016	0.05
9	Total Alkalinity	mg/l	88	200
10	Total Dissolved Solids	mg/l	346	500
11	Sulphate	mg/l	46	200
12	Dissolved Oxygen	mg/l	3.8	-
13	Nitrite (as NO ₂)	mg/l	0.02	0.02
14	Iron	mg/l	0.2	0.3
15	Fluoride	mg/l	0.4	1.0
16	Oil & Grease	mg/l	BDL	0.01
17	Chromium (as Cr ⁶⁺)	mg/l	0.03	0.05
18	Cyanide	mg/l	NIL	0.05
19	Zinc	mg/l	0.1	5.0
20	Phenolic Compound	mg/l	NIL	0.001
21	Free Residual Chlorine	mg/l	0.16	0.2
22	Total Coli forms Count	MPN Index/100ml	Absent	Absent
23	E.coli	Cfu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref. No	BCL/687	Issued to M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Ground Water	
Location	North boulder wall open well	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Temperature	°C	22.6	-
2.	pH	H+ concn.	7.48	6.5-8.5
3.	Total Hardness	mg/l	225	300
4.	Calcium (as Ca)	mg/l	36	75
5.	Magnesium (as Mg)	mg/l	28	30
6.	Chlorides	mg/l	48	250
7.	Manganese	mg/l	0.02	0.1
8.	Copper	mg/l	0.016	0.05
9.	Total Alkalinity	mg/l	48	200
10.	Total Dissolved Solids	mg/l	446	500
11.	Sulphate	mg/l	48	200
12.	Dissolved Oxygen	mg/l	3.4	-
13.	Nitrite (as NO ₂)	mg/l	0.016	0.02
14.	Iron	mg/l	0.138	0.3
15.	Fluoride	mg/l	0.8	1.0
16.	Oil & Grease	mg/l	BDL	0.01
17.	Chromium (as Cr ⁶⁺)	mg/l	0.02	0.05
18.	Cyanide	mg/l	NIL	5.0
19.	Zinc	mg/l	0.4	0.001
20.	Phenolic Compound	mg/l	NIL	0.2
21.	Free Residual Chlorine	mg/l	0.03	Absent
22.	Total Coli forms Count	MPN Index/100ml	Absent	Absent
23.	E. coli	Cfu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No.	BCL/688	Issued to:
Monitoring Date	December 10, 2024	M/s AdaniGangavaram Port
Reporting Date	December 16, 2024	Ltd Gangavaram(Village)
Type of Sample	Sewage Water	PedaGantiyada(Mandalam)
Sample Location	Culvert -11 at Gangavaram Village	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit
1	pH	H+Concen	6.18	5.0 - 9.0
2	Total Suspended Solids	mg/l	88	100
3	Total Dissolved Solids	mg/l	1436	2100
4	Oil & Grease	mg/l	3.6	10
5	COD	mg/l	238	250
6	BOD	mg/l	26	30
7	Ammonia Nitrogen	mg/l	4.3	50
8	Phenolic Compounds	mg/l	0.4	1.0
10	Nitrate	mg/l	28	50
11	Nitrite	mg/l	0.2	1.0
11	Sulphide	mg/l	0.8	1.0
12	Phosphate	mg/l	4.4	5.0
13	Cyanide	mg/l	Nil	0.2
14	Iron	mg/l	1.8	3.0
15	Aluminium	mg/l	0.2	2.0
16	Copper	mg/l	0.18	3.0
17	Chromium	mg/l	0.4	2.0
18	Zinc	mg/l	1.6	5.0
19	Lead	mg/l	0.08	0.1
20	Manganese	mg/l	0.4	2.0
21	Nickel	mg/l	0.1	3.0
22	Mercury	mg/l	<0.04	0.01
23	Cadmium	mg/l	<0.02	2.0

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref No	BCL/689	Issued to: M/s. AdaniGangavaram Port Ltd. Gangavaram(Village), PedaGan tiyada(Mandalam), Visakhapatn am.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	Sewage Water	
Sample Location	Kanithigeddanalla Near VSP	
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit
1	pH	H+Concen	5.46	5.0 - 9.0
2	Total Suspended Solids	mg/l	248	100
3	Total Dissolved Solids	mg/l	2636	2100
4	Oil & Grease	mg/l	7.8	10
5	COD	mg/l	468	250
6	BOD	mg/l	66	30
7	Ammonia Nitrogen	mg/l	18	50
8	Phenolic Compounds	mg/l	0.4	1.0
10	Nitrate	mg/l	48	50
11	Nitrite	mg/l	0.6	1.0
11	Sulphide	mg/l	0.4	1.0
12	Phosphate	mg/l	3.6	5.0
13	Cyanide	mg/l	Nil	0.2
14	Iron	mg/l	2.6	3.0
15	Aluminium	mg/l	1.8	2.0
16	Copper	mg/l	1.6	3.0
17	Chromium	mg/l	1.8	2.0
18	Zinc	mg/l	2.4	5.0
19	Lead	mg/l	0.02	0.1
20	Manganese	mg/l	1.4	2.0
21	Nickel	mg/l	1.6	3.0
22	Mercury	mg/l	0.001	0.01
23	Cadmium	mg/l	0.002	2.0

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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No.	BCL / 690	Issued to M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Monitoring Date	December 10 , 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Collected by	M/s. Biochem Labs	

S. No.	Parameter	Unit	Location	Result		CPCBLimit Industrial	
				Day time	Night time	Day time	Night time
1	Noise Level	Decibels	Cargo area	74	66	75	70
2	Noise Level	Decibels	PedaGantyada/ Security Gate	64	54	-	-
				Day time	Night time	Residential	
						Day time	Night time
3	Noise Level	Decibels	Gangavaram	58	38	55	45
4	Noise Level	Decibels	HB Colony	44	46	-	-

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/691	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1	Temperature	°C	31.4	32.8	32.6	32.8
2	pH	H+ conc	8.26	8.26	8.18	8.26
3	Salinity	PSU	34.6	35	35.6	48
4	Turbidity	NTU	38	46	16	18
5	Total Suspended Solids	mg/l	58	66	38	46
6	Transparency	Mts.	0.4	1.4	1.6	1.6
7	Electrical Conductivity	mMho	32.4	34.6	32.6	33.4

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake wall Outside		North brake wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	32.4	32.4	32.8	32.6
2.	pH	H+ conc	8.16	8.28	8.26	8.34
3.	Salinity	PSU	35.6	35.8	35.6	35.8
4.	Turbidity	NTU	18	18	24	28
5.	Total Suspended Solids	mg/l	24	28	16	26
6.	Transparency	Mts.	1.8	1.8	1.8	2.4
7.	Electrical Conductivity	mMHo	32.4	32.8	32.6	34.8

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	3.6	4.4	3.4	4.6
2	Biological Oxygen Demand	mg/l	1.4	1.6	1.6	1.6
3	Oil & Grease	mg/l	1.6	1.6	1.8	2.2
4	Sulphate	mg/l	1078	1222	1246	1266
5	Phosphate	mg/l	0.16	0.28	0.18	0.34
6	Nitrate	mg/l	4.04	4.2	4.6	4.4
7	Nitrite	mg/l	0.018	0.012	0.014	0.020
8	Chloride	mg/l	23488	34828	26466	22856
9	Chromium	ppm	0.014	0.024	0.028	0.032
10	Mercury	ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.26	0.26	0.26	0.28
12	Iron	ppm	0.028	0.028	0.0016	0.0024
13	Manganese	ppm	0.028	0.029	0.028	0.028
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	3.4	4.4	4.4	4.6
2	Biological Oxygen Demand	mg/l	1.6	1.8	1.4	1.8
3	Oil & Grease	mg/l	1	1.6	1.4	0.4
4	Sulphate	mg/l	1236	1326	1045	1062
5	Phosphate	mg/l	0.16	0.24	0.16	0.24
6	Nitrate	mg/l	4.2	4.6	2.6	2.8
7	Nitrite	mg/l	0.016	0.018	0.028	0.024
8	Chloride	mg/l	22436	26244	28036	26496
9	Chromium	ppm	0.018	0.024	0.026	0.028
10	Mercury	Ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.24	0.26	0.24	0.26
12	Iron	ppm	0.026	0.028	0.0018	0.026
13	Manganese	ppm	0.028	0.026	0.026	0.028
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.5
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	68
	<i>Amphora lineolata</i>	86
	<i>Cymbella marina</i>	24
	<i>Bacteriastrumdelicatulum</i>	15
	<i>Thalassionemantzschioides</i>	35
	<i>Chaetocerosdydymus</i>	24
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	16
B.	Zooplankton Species	
	<i>Foraminifera</i>	78
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	28
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	06

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	16000
2	Zooplankton Count	No./m ³	1600
3	Chlorophyll a	mg/m ³	3.4
4	Chlorophyll b	mg/m ³	2.6
5	Primary Productivity	gC/m ²	3.8
6	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	58
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	38
	<i>Chaetocerosdydymus</i>	06
	<i>Skeletonemacostatum</i>	16
	<i>Thalassiothrixlongissima</i>	14
	<i>Cymbella marina</i>	08
B.	Zooplankton Species	
	<i>Foraminifera</i>	36
	<i>Chaetognatha</i>	38
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	18
	<i>Eggs of fish & larvae</i>	26

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	December 16, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	1600
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.5
5.	Primary Productivity	gC/m ²	3.2
6.	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	46
	<i>Amphora lineolata</i>	35
	<i>Cymbella marina</i>	64
	<i>Bacteriastrumdelicatulum</i>	48
	<i>Thalassionemanitzschoides</i>	66
	<i>Chaetocerosdydymus</i>	88
	<i>Skeletonemacostatum</i>	12
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	26
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	26
	<i>Eggs of fish & larvae</i>	48

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Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	December 16, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	1600
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	2.8
6.	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	58
	<i>Amphora lineolata</i>	44
	<i>Cymbella marina</i>	18
	<i>Bacteriastrumdelicatulum</i>	26
	<i>Thalassionemamnitzschoides</i>	36
	<i>Chaetocerosdydymus</i>	26
	<i>Skeletonemacostatum</i>	48
	<i>Thalassiothrixlongissima</i>	25
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	28
	<i>Chaetognatha</i>	16
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	28
	Eggs of fish & larvae	16

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TEST REPORT ANALYSIS OF MARINE WATER

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Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGentryada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs.	

StationName:South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	400
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.5
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	88
	<i>Amphora lineolata</i>	34
	<i>Cymbella marina</i>	46
	<i>Bacteriastrumdelicatulum</i>	38
	<i>Thalassionemanzschoides</i>	46
	<i>Chaetocerosdydymus</i>	16
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	18
	<i>Cymbella marina</i>	26
B.	Zooplankton Species	
	<i>Foraminifera</i>	44
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	38
	<i>Cladocera</i>	26
	Eggs of fish & larvae	18

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	December 16, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	200
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	74
	<i>Amphora lineolata</i>	48
	<i>Cymbella marina</i>	16
	<i>Bacteriastrumdelicatum</i>	28
	<i>Thalassionemanitzschoides</i>	36
	<i>Chaetocerosdydymus</i>	26
	<i>Skeletonemacostatum</i>	28
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	22
B.	Zooplankton Species	
	<i>Foraminifera</i>	46
	<i>Chaetognatha</i>	38
	<i>Amphipoda</i>	26
	<i>Cladocera</i>	18
	Eggs of fish & larvae	14

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (High Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1600
3.	Chlorophyll a	mg/m ³	2.2
4.	Chlorophyll b	mg/m ³	3.4
5.	Primary Productivity	gC/m ²	3.8
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	86
	<i>Amphora lineolata</i>	48
	<i>Cymbella marina</i>	68
	<i>Bacteriastrumdelicatulum</i>	18
	<i>Thalassionemanitzschioides</i>	46
	<i>Chaetocerosdydymus</i>	15
	<i>Skeletonemacostatum</i>	18
	<i>Thalassiothrixlongissima</i>	14
	<i>Cymbella marina</i>	16
B.	Zooplankton Species	
	<i>Foraminifera</i>	46
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	38
	<i>Cladocera</i>	08
	<i>Eggs of fish & larvae</i>	19

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/691	Issued to
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	16000
2	Zooplankton Count	No./m ³	200
3	Chlorophyll a	mg/m ³	2.6
4	Chlorophyll b	mg/m ³	3.6
5	Primary Productivity	gC/m ²	2.6
6	Biomass	mg/m ²	3.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	88
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	24
	<i>Bacteriastrumdelicatulum</i>	16
	<i>Thalassionemanitzschoides</i>	18
	<i>Chaetocerosdydymus</i>	14
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	18
	<i>Cymbella marina</i>	26
B.	Zooplankton Species	
	<i>Foraminifera</i>	18
	<i>Chaetognatha</i>	46
	<i>Amphipoda</i>	32
	<i>Cladocera</i>	16
	Eggs of fish & larvae	06

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref No.	BCL/692	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Basine	Port Entrance Channel
1.	pH	H+ conc	7.84	8.06
2.	Organic matter	%	1.6	1.8
3.	Nitrate	mg/kg	2.4	2.6
4.	Phosphate	mg/kg	1.8	1.6
5.	Oil & Grease	mg/kg	0.16	0.18
6.	Iron	ppm	0.14	0.16
7.	Manganese	ppm	0.16	0.22
8.	Nickel	ppm	0.14	0.18
9.	Chromium	ppm	0.12	0.14
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.4	0.6
12.	Lead	ppm	0.05	0.08
13.	Arsenic	ppm	0.06	0.08
14.	Selenium	ppm	0.04	0.06
15.	Copper	ppm	0.16	0.18

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/692	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd	
Type of Sample	Sediment (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1	pH	H+ conc	8.18	8.26
2	Organic matter	%	1.54	1.68
3	Nitrate	mg/kg	1.6	1.8
4	Phosphate	mg/kg	0.8	1.4
5	Oil & Grease	mg/kg	0.04	0.08
6	Iron	ppm	0.16	0.18
7	Manganese	ppm	0.18	0.21
8	Nickel	ppm	0.18	0.16
9	Chromium	ppm	0.16	0.18
10	Mercury	ppm	Nil	Nil
11	Zinc	ppm	0.8	0.9
12	Lead	ppm	0.06	0.08
13	Arsenic	ppm	0.04	0.06
14	Selenium	ppm	0.06	0.08
15	Copper	ppm	0.18	0.20

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No	BCL/692	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		Harbour Basine	Port Entrance Channel
1	<i>Opheliidae sp</i>	46	34
2	<i>Glyceridae sp</i>	24	26
3	<i>Nereidae sp</i>	18	18
4	<i>Aphroditidae sp</i>	16	46
5	<i>Cirratulidae sp</i>	26	25
6	<i>Capitella sp</i>	01	34
7	<i>Amphipoda sp.</i>	05	15
8	<i>Gastropoda</i>	18	07
9	<i>Chaetognatha</i>	04	08

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/692	Issued to
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	December 16, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs.	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1	Foraminifera	06	28
2	Amphipoda	25	14
3	Mytilusedulis	48	38
4	Gastropod veliger	16	28
5	Oithona	05	26
6	Capitella	16	16
7	Copepod nauplii	36	18
9	Brachyuran zoea	24	28
8	Neanthusarenaceodentata	04	08

K. Lahari
Analyst



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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/693	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of sample	STP Water (15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.15	6.46	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	284	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	668	588	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	3.6	10
5.	COD	IS: 1 of 2488	mg/l	368	146	250
6.	BOD	IS: 44 of 3025	mg/l	48.6	26	30
7.	Chloride	IS: 32 of 3025	mg/l	136	126	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/693	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of sample	STP Water (New - 15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.15	7.48	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	284	68	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	668	548	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	2.6	10
5.	COD	IS: 1 of 2488	mg/l	368	156	250
6.	BOD	IS: 44 of 3025	mg/l	48.6	28	30
7.	Chloride	IS: 32 of 3025	mg/l	136	126	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/693	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of sample	STP Water (5- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.48	6.48	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	276	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	548	448	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	4.6	2.8	10
5.	COD	IS: 1 of 2488	mg/l	286	146	250
6.	BOD	IS: 44 of 3025	mg/l	43.4	26	30
7.	Chloride	IS: 32 of 3025	mg/l	158	134	500

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No	BCL/694	Issued to: M/s AdaniGangavaram Port Ltd.Gangavaram(Village)PedaGantiy ada(Mandalam) Visakhapatnam
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	Tug water -Ocean radiance berth -01	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.6	5
5.	pH	H+conc	6.86	6.5-8.5
6.	Total Hardness	mg/l	34.4	300
7.	Calcium	mg/l	3.8	100
8.	Magnesium	mg/l	6.8	30
9.	Chloride	mg/l	22.6	250
10.	Total Dissolved Solids	mg/l	43	500
11.	Iron	mg/l	0.016	0.3
12.	Sulphate	mg/l	56	250
13.	Nitrate	mg/l	0.14	50
14.	Total Alkalinity	mg/l	86	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No.	BCL/693	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village) Peda Gantli ada (Mandalam) Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	Tug water – ocean swan -03 berth - 01	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.6	5
5.	pH	H+conc.	8.28	6.5-8.5
6.	Total Hardness	mg/l	60.4	300
7.	Calcium	mg/l	3.6	100
8.	Magnesium	mg/l	15.6	30
9.	Chloride	mg/l	14.8	250
10.	Total Dissolved Solids	mg/l	436	500
11.	Iron	mg/l	0.018	0.3
12.	Sulphate	mg/l	58	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	126	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E. Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF UGR WATER

BCL Ref No	BCL/697	Issued to: M/s AdaniGangavaram Port Ltd.Gangavaram(Village)PedaGantiy ada(Mandalam) Visakhapatnam
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	UGR water	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.8	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	7.98	6.5-8.5
6.	Total Hardness	mg/l	66.6	300
7.	Calcium	mg/l	22.4	100
8.	Magnesium	mg/l	3.58	30
9.	Chloride	mg/l	31.6	250
10.	Total Dissolved Solids	mg/l	424	500
11.	Iron	mg/l	0.021	0.3
12.	Sulphate	mg/l	55	250
13.	Nitrate	mg/l	0.18	50
14.	Total Alkalinity	mg/l	186	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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Environmental Monitoring Reports

(30th December 2024)

Adani Gangavaram Port Ltd,
Pedagantyada (Mandal),
Gangavaram (Post),
Visakhapatnam - 530 044.





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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No.	BCL / 698	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Organization	M/s. Adani Gangavaram Port Ltd.	Gangavaram (Village),
Collected by	M/s. Biochem Labs	PedaGantiyada (Mandalam),
		Visakhapatnam.

S. No.	Parameter	Unit	Location	Result		CPCB Limit	
				Day time	Night time	Industrial	
						Day time	Night time
1	Noise Level	Decibels	Cargo area	76	66	75	70
2	Noise Level	Decibels	PedaGantiyada/ Security Gate	54	62	-	-
				Day time	Night time	Residential	
						Day time	Night time
3	Noise Level	Decibels	Gangavaram	44	38	55	45
4	Noise Level	Decibels	HB Colony	42	46	-	-

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	31.6	30.6	31.8	32.8
2.	pH	H+ conc.	8.16	8.28	8.18	8.26
3.	Salinity	PSU	28.6	34	31.6	25.8
4.	Turbidity	NTU	48	62	49	54
5.	Total Suspended Solids	mg/l	46	66	36	45
6.	Transparency	Mts.	0.6	1.4	1.6	2.8
7.	Electrical Conductivity	mMho	32.4	33.4	32.8	36.8

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	32.6	31.8	31.6	32.8
2.	pH	H+ conc	8.18	8.26	8.26	8.16
3.	Salinity	PSU	32.6	32.8	36.8	34.8
4.	Turbidity	NTU	18	22	22	18
5.	Total Suspended Solids	mg/l	26	34	24	26
6.	Transparency	Mts	1.8	2.8	1.6	2.5
7.	Electrical Conductivity	mMHo	31.4	32.6	31.8	32.8

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGanliyada (Mandalam).
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	4.5	4.8	4.4	4.8
2	Biological Oxygen Demand	mg/l	1.6	1.8	1.4	1.6
3	Oil & Grease	mg/l	1.8	1.4	0.4	0.6
4	Sulphate	mg/l	1236	1268	1258	1246
5	Phosphate	mg/l	0.28	0.32	0.26	0.28
6	Nitrate	mg/l	3.6	3.8	2.5	2.4
7	Nitrite	mg/l	0.026	0.028	0.036	0.018
8	Chloride	mg/l	2344	24526	21458	26436
9	Chromium	ppm	0.028	0.032	0.024	0.026
10	Mercury	ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.16	0.18	0.18	0.16
12	Iron	ppm	0.028	0.034	0.026	0.028
13	Manganese	ppm	0.026	0.028	0.028	0.032
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGanliyada (Mandalam).
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	2.8	4.4	4.6	4.8
2	Biological Oxygen Demand	mg/l	1.6	1.3	2.8	1.4
3	Oil & Grease	mg/l	1.8	1.2	1.2	0.2
4	Sulphate	mg/l	1224	1126	1024	1069
5	Phosphate	mg/l	0.16	0.22	0.16	0.24
6	Nitrate	mg/l	3.6	3.8	2.6	2.8
7	Nitrite	mg/l	0.026	0.028	0.024	0.028
8	Chloride	mg/l	26246	25468	22645	24648
9	Chromium	ppm	0.024	0.026	0.028	0.032
10	Mercury	ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.18	0.18	0.18	0.21
12	Iron	ppm	0.028	0.026	0.024	0.026
13	Manganese	ppm	0.026	0.028	0.026	0.022
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	800
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	3.4
5.	Primary Productivity	gC/m ³	2.8
6.	Biomass	mg/m ³	2.2

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	56
	<i>Amphora lineolata</i>	14
	<i>Cymbella marina</i>	26
	<i>Bacteriastrumdelicatulum</i>	64
	<i>Thalassionemanitzschoides</i>	48
	<i>Chaetocerosdydymus</i>	66
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	28
B.	Zooplankton Species	
	<i>Foraminifera</i>	34
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	46
	<i>Cladocera</i>	88
	<i>Eggs of fish & larvau</i>	14

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Reporting Date	January 06, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

Station Name: Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	400
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	3.5
5.	Primary Productivity	gC/m ²	2.8
6.	Biomass	mg/m ³	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrum micans</i>	58
	<i>Amphora lineolata</i>	16
	<i>Cymbella marina</i>	26
	<i>Bacteriastrum delicatulum</i>	18
	<i>Thalassionema nitzschoides</i>	16
	<i>Chaetoceros dydimus</i>	06
	<i>Skeletonema costatum</i>	18
	<i>Thalassiothrix longissima</i>	16
	<i>Cymbella marina</i>	08
B.	Zooplankton Species	
	<i>Foraminifera</i>	38
	<i>Chaetognatha</i>	18
	<i>Amphipoda</i>	26
	<i>Cladocera</i>	08
	<i>Eggs of fish & larvae</i>	19

K. Lahari
Analyst



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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No /L	16000
2	Zooplankton Count	No./m ³	200
3	Chlorophyll a	mg/m ³	2.2
4	Chlorophyll b	mg/m ³	2.8
5	Primary Productivity	gC/m ²	1.6
6	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemamitizschoides</i>	16
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	18
B.	Zooplankton Species	
	<i>Foraminifera</i>	18
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	16
	Eggs of fish & larvae	18

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/699	Issued to
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs.	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	14000
2	Zooplankton Count	No./m ³	400
3	Chlorophyll a	mg/m ³	3.4
4	Chlorophyll b	mg/m ³	2.2
5	Primary Productivity	gC/m ³	2.4
6	Biomass	mg/m ³	1.8

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	24
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	18
	<i>Bacteriastrumdelicatulum</i>	38
	<i>Thalassionemanitzschoides</i>	44
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	46
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	34
B	Zooplankton Species	
	<i>Foraminifera</i>	16
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	28
	Eggs of fish & larvae	26

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/699	Issued to
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2	Zooplankton Count	No./m ³	1600
3.	Chlorophyll a	mg/m ³	3.4
4	Chlorophyll b	mg/m ³	2.6
5	Primary Productivity	gC/m ³	3.4
6	Biomass	mg/m ³	2.8

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	68
	<i>Amphora lineolata</i>	24
	<i>Cymbella marina</i>	36
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	44
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	28
	<i>Thalassiothrixlongissima</i>	06
	<i>Cymbella marina</i>	28
B.	Zooplankton Species:	
	<i>Foraminifera</i>	46
	<i>Chaetognatha</i>	18
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	24
	<i>Eggs of fish & larva</i>	18

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	4.8
4.	Chlorophyll b	mg/m ³	3.6
5.	Primary Productivity	gC/m ³	3.4
6.	Biomass	mg/m ³	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrum micans</i>	48
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	85
	<i>Bacteriastrum delicatulum</i>	25
	<i>Thalassionema nitzschiioides</i>	11
	<i>Chaetoceros dydimus</i>	28
	<i>Skeletonema costatum</i>	45
	<i>Thalassiothrix longissima</i>	18
	<i>Cymbella marina</i>	12
B.	Zooplankton Species	
	<i>Foraminifera</i>	15
	<i>Chaetognaths</i>	56
	<i>Amphipoda</i>	24
	<i>Cladocera</i>	15
	<i>Eggs of fish & larvae</i>	26

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	400
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	2.2
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	46
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	47
	<i>Bacteriastrumdelicatum</i>	26
	<i>Thalassionemanitzschoides</i>	26
	<i>Chaetocerosdydymus</i>	18
	<i>Skeletonemacostatum</i>	38
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	26
B.	Zooplankton Species	
	<i>Foraminifera</i>	68
	<i>Chaetognatha</i>	36
	<i>Amphipoda</i>	24
	<i>Cladocera</i>	14
	Eggs of fish & larvae	36

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	600
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.4
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	28
	<i>Amphora lineolata</i>	34
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatum</i>	46
	<i>Thalassionemanitzschoides</i>	21
	<i>Chaetocerosdydymus</i>	16
	<i>Skeletonemacostatum</i>	46
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	28
B.	Zooplankton Species	
	<i>Foraminifera</i>	28
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	15
	<i>Cladocera</i>	02
	<i>Eggs of fish & larvae</i>	14

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No	BCL/700	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Basine	Port Entrance Channel
1	pH	H+ conc	8.6	8.28
2	Organic matter	%	1.4	1.4
3	Nitrate	mg/kg	1.8	1.6
4	Phosphate	mg/kg	1.6	1.8
5	Oil & Grease	mg/kg	0.18	0.2
6	Iron	ppm	0.16	0.14
7	Manganese	ppm	0.18	0.16
8	Nickel	ppm	0.16	0.14
9	Chromium	ppm	0.12	0.16
10	Mercury	ppm	Nil	Nil
11	Zinc	ppm	0.4	0.2
12	Lead	ppm	0.06	0.08
13	Arsenic	ppm	0.02	0.06
14	Selenium	ppm	0.04	0.05
15	Copper	ppm	0.18	0.21

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/700	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1.	pH	H+ conc	8.16	8.14
2.	Organic matter	%	1.5	1.6
3.	Nitrate	mg/kg	1.08	1.8
4.	Phosphate	mg/kg	0.4	0.8
5.	Oil & Grease	mg/kg	0.14	0.16
6.	Iron	ppm	0.15	0.18
7.	Manganese	ppm	0.18	0.16
8.	Nickel	ppm	0.15	0.18
9.	Chromium	ppm	0.11	0.14
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	1.8	1.9
12.	Lead	ppm	0.02	0.04
13.	Arsenic	ppm	0.04	0.06
14.	Selenium	ppm	0.06	0.08
15.	Copper	ppm	0.18	0.21

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/700	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs.	

S. No	Species/Group	% Composition	
		Harbour Basine	Port Entrance Channel
1.	<i>Eunicidae sp.</i>	26	16
2.	<i>Paraonidae sp.</i>	48	48
3.	<i>Syllidae sp.</i>	44	58
4.	<i>Sabellidae sp.</i>	26	26
5.	<i>Oithona sp.</i>	16	18
6.	<i>Capitella sp.</i>	28	36
7.	<i>Syllidae sp.</i>	26	29
9.	<i>Amphipoda sp.</i>	56	16
8.	<i>Nematoda sp.</i>	14	56

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No	BCL/700	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1	Capitella sp.	46	38
2	Syllidae sp	34	18
3	Amphipoda sp.	08	26
4	Nematoda sp.	26	34
5	Capitella sp.	28	18
6	Syllidae sp	16	38
7	Paraonidae sp.	18	14
9	Syllidae sp	26	16
8	Sabellidae sp	08	12

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/701	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 30, 2024	
Reporting Date	January 06, 2025	
Type of sample	STP Water (15- KLD Inlet – Outlet)	
Sample Collected and Submitted by	M/s.Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H ⁺ Concen	5.6	6.66	5.0 – 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	224	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	548	566	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	3.6	12
5.	COD	IS: 1 of 2488	mg/l	246	234	250
6.	BOD	IS: 44 of 3025	mg/l	42.6	23.5	30
7.	Chloride	IS: 32 of 3025	mg/l	156	146	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCU701	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 30, 2024	
Reporting Date	January 06, 2025	
Type of sample	STP Water (New - 15-KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	5.6	6.6	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	224	88	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	548	476	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	2.4	10
5.	COD	IS: 1 of 2488	mg/l	246	126	250
6.	BOD	IS: 44 of 3025	mg/l	42.6	21.8	30
7.	Chloride	IS: 32 of 3025	mg/l	156	126	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL701	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 30, 2024	
Reporting Date	January 06, 2025	
Type of sample	STP Water (5- KLD Inlet – Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.4	6.48	5.0 – 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	236	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	626	596	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	2.6	10
5.	COD	IS: 1 of 2488	mg/l	296	148	250
6.	BOD	IS: 44 of 3025	mg/l	42.8	26.8	30
7.	Chloride	IS: 32 of 3025	mg/l	134	124	500

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No.	BCL/702	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village) Peda Ganitly ada (Mandalam) Visakhapatnam.
Monitoring Date	December 30, 2024	
Reporting Date	January 06, 2024	
Type of Sample	Tug water 12 dolphin Berth-9	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.8	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	6.86	6.5-8.5
6.	Total Hardness	mg/l	34.4	300
7.	Calcium	mg/l	3.8	100
8.	Magnesium	mg/l	6.6	30
9.	Chloride	mg/l	22.8	250
10.	Total Dissolved Solids	mg/l	448	500
11.	Iron	mg/l	0.014	0.3
12.	Sulphate	mg/l	56	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	86	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	0	1-10
17.	E Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

K. Lahari
Analyst



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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No.	BCL/703	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village) Peda Gantiyada (Mandalam) Visakhapatnam
Monitoring Date	December 30, 2024	
Reporting Date	January 06, 2024	
Type of Sample	Tug water- 14 dolphin Berth-9	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.8	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	8.26	6.5-8.5
6.	Total Hardness	mg/l	60.8	300
7.	Calcium	mg/l	3.4	100
8.	Magnesium	mg/l	15.8	30
9.	Chloride	mg/l	12.4	250
10.	Total Dissolved Solids	mg/l	438	500
11.	Iron	mg/l	0.014	0.3
12.	Sulphate	mg/l	58	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	16	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	0	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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Environmental Monitoring Reports

(08th October 2024)

Adani Gangavaram Port Ltd,
Pedagantyada (Mandal),
Gangavaram (Post),
Visakhapatnam - 530 044.





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TEST REPORT ANALYSIS OF DRINKING WATER

BCL Ref No.	BCL/648	Issued to: M/s AdaniGangavaram Port Ltd, Gangavaram (Village) Peda Gantiy ada (Mandalam) Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Type of Sample	Drinking Water	
Sample Collected by	M/s Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.4	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.2	5
5.	pH	H+conc	6.36	6.5-8.5
6.	Total Hardness	mg/l	254	300
7.	Calcium	mg/l	45	100
8.	Magnesium	mg/l	26	30
9.	Chloride	mg/l	32	250
10.	Total Dissolved Solids	mg/l	428	500
11.	Iron	mg/l	0.014	0.3
12.	Sulphate	mg/l	56	250
13.	Nitrate	mg/l	0.12	50
14.	Total Alkalinity	mg/l	46	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	4	1-10
17.	E. Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref. No	BCL/649	Issued to: M/s. Adani Gangavaram Port. Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port. Ltd	
Type of Sample	Ground Water	
Location	Gangavaram Village	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1	Temperature	°C	32.4	-
2	pH	H ⁺ concn	7.4	6.5-8.5
3	Total Hardness	mg/l	246	300
4	Calcium (as Ca)	mg/l	46	75
5	Magnesium (as Mg)	mg/l	24	30
6	Chlorides	mg/l	124	250
7	Manganese	mg/l	0.002	0.1
8	Copper	mg/l	0.014	0.05
9	Total Alkalinity	mg/l	86	200
10	Total Dissolved Solids	mg/l	348	500
11	Sulphate	mg/l	48	200
12	Dissolved Oxygen	mg/l	3.6	-
13	Nitrite (as NO ₂)	mg/l	0.04	0.02
14	Iron	mg/l	0.3	0.3
15	Fluoride	mg/l	0.2	1.0
16	Oil & Grease	mg/l	BDL	0.01
17	Chromium (as Cr ^{VI})	mg/l	0.04	0.05
18	Cyanide	mg/l	NIL	0.05
19	Zinc	mg/l	0.2	5.0
20	Phenolic Compound	mg/l	NIL	0.001
21	Free Residual Chlorine	mg/l	0.14	0.2
22	Total Coli forms Count	MPN index/100ml	Absent	Absent
23	E.coli	Chu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref. No.	BCL/650	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Ground Water	
Location	North boulder wall open well	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Temperature	°C	22.4	-
2.	pH	H+ concn.	7.48	6.5-8.5
3.	Total Hardness	mg/l	224	300
4.	Calcium (as Ca)	mg/l	35	75
5.	Magnesium (as Mg)	mg/l	26	30
6.	Chlorides	mg/l	46	250
7.	Manganese	mg/l	0.01	0.1
8.	Copper	mg/l	0.018	0.05
9.	Total Alkalinity	mg/l	46	200
10.	Total Dissolved Solids	mg/l	448	500
11.	Sulphate	mg/l	48	200
12.	Dissolved Oxygen	mg/l	3.6	-
13.	Nitrite (as NO ₂)	mg/l	0.014	0.02
14.	Iron	mg/l	0.134	0.3
15.	Fluoride	mg/l	0.6	1.0
16.	Oil & Grease	mg/l	BDL	0.01
17.	Chromium (as Cr ⁶⁺)	mg/l	0.04	0.05
18.	Cyanide	mg/l	NIL	0.05
19.	Zinc	mg/l	0.2	5.0
20.	Phenolic Compound	mg/l	NIL	0.001
21.	Free Residual Chlorine	mg/l	0.02	0.2
22.	Total Coli forms Count	MPN Index/100ml	Absent	Absent
23.	E.coli	Cfu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No.	BCL/651	Issued to: M/s. AdaniGangavaram Port Ltd. Gangavaram(Village), PedaGan tiyada(Mandalam), Visakhapatn am.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Type of Sample	Sewage Water	
Sample Location	Kanithigeddanalla Near VSP	
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit
1.	pH	H+Concen	5.48	5.0 - 9.0
2.	Total Suspended Solids	mg/l	246	100
3.	Total Dissolved Solids	mg/l	2634	2100
4.	Oil & Grease	mg/l	7.6	10
5.	COD	mg/l	468	250
6.	BOD	mg/l	64	30
7.	Ammonia Nitrogen	mg/l	16	50
8.	Phenolic Compounds	mg/l	0.4	1.0
10.	Nitrate	mg/l	46	50
11.	Nitrite	mg/l	0.4	1.0
11.	Sulphide	mg/l	0.2	1.0
12.	Phosphate	mg/l	3.4	5.0
13.	Cyanide	mg/l	Nil	0.2
14.	Iron	mg/l	2.4	3.0
15.	Aluminium	mg/l	1.6	2.0
16.	Copper	mg/l	1.8	3.0
17.	Chromium	mg/l	1.6	2.0
18.	Zinc	mg/l	2.6	5.0
19.	Lead	mg/l	0.04	0.1
20.	Manganese	mg/l	1.6	2.0
21.	Nickel	mg/l	1.8	3.0
22.	Mercury	mg/l	0.002	0.01
23.	Cadmium	mg/l	0.002	2.0

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No.	BCL/652	Issued to:
Monitoring Date	October 08, 2024	M/s AdaniGangavaram Port
Reporting Date	October 14, 2024	Ltd.Gangavaram(Village)
Type of Sample	Sewage Water	PedaGantiyada(Mandalam)
Sample Location	Culvert -11 at Gangavaram Village	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit
1	pH	H+Concen	6.14	5.0 - 9.0
2	Total Suspended Solids	mg/l	88	100
3	Total Dissolved Solids	mg/l	1434	2100
4	Oil & Grease	mg/l	3.4	10
5	COD	mg/l	236	250
6	BOD	mg/l	24	30
7	Ammonia Nitrogen	mg/l	4.3	50
8	Phenolic Compounds	mg/l	0.4	1.0
10	Nitrate	mg/l	26	50
11	Nitrite	mg/l	0.4	1.0
11	Sulphide	mg/l	0.6	1.0
12	Phosphate	mg/l	4.6	5.0
13	Cyanide	mg/l	Nil	0.2
14	Iron	mg/l	1.6	3.0
15	Aluminium	mg/l	0.1	2.0
16	Copper	mg/l	0.16	3.0
17	Chromium	mg/l	0.2	2.0
18	Zinc	mg/l	1.4	5.0
19	Lead	mg/l	0.02	0.1
20	Manganese	mg/l	0.2	2.0
21	Nickel	mg/l	0.1	3.0
22	Mercury	mg/l	<0.04	0.01
23	Cadmium	mg/l	<0.02	2.0

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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No.	BCL / 653	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 08, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Collected by	M/s. Biochem Labs	

S. No.	Parameter	Unit	Location	Result		CPCBLimit	
				Day time	Night time	Industrial	
						Day time	Night time
1.	Noise Level	Decibels	Cargo area	76	64	75	70
2.	Noise Level	Decibels	PedaGantyada/ Security Gate	66	54	-	-
				Day time	Night time	Residential	
						Day time	Night time
3.	Noise Level	Decibels	Gangavaram	56	36	55	45
4.	Noise Level	Decibels	HB Colony	46	44	-	-

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/654	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 14, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	31.6	32.6	32.8	32.6
2.	pH	H+ conc	8.24	8.28	8.16	8.28
3.	Salinity	PSU	34.8	36	35.8	46
4.	Turbidity	NTU	36	48	14	16
5.	Total Suspended Solids	mg/l	56	64	35	44
6.	Transparency	Mts.	0.2	1.6	1.6	1.8
7.	Electrical Conductivity	mMHo	32.6	34.8	32.4	33.6

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/654	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd Gangavaram (Village). PedaGantiyada (Mandalam). Visakhapatnam.
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake wall Outside		North brake wall Outside	
			Low tide	High tide	Low tide	High tide
1	Temperature	°C	32.6	32.4	32.8	32.6
2	pH	H+ conc	8.18	8.28	8.26	8.34
3	Salinity	PSU	35.4	35.8	35.6	35.8
4	Turbidity	NTU	16	18	20	22
5	Total Suspended Solids	mg/l	26	28	16	24
6	Transparency	Mts	1.6	1.8	1.8	2.2
7	Electrical Conductivity	mMHo	32.6	32.8	32.6	34.6

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/654	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	3.4	4.2	3.4	4.6
2	Biological Oxygen Demand	mg/l	1.2	1.8	1.6	1.6
3	Oil & Grease	mg/l	1.4	1.6	1.8	2.2
4	Sulphate	mg/l	1076	1222	1246	1266
5	Phosphate	mg/l	0.18	0.28	0.18	0.34
6	Nitrate	mg/l	4.02	4.2	4.2	4.4
7	Nitrite	mg/l	0.016	0.012	0.014	0.020
8	Chloride	mg/l	23486	34828	26486	22958
9	Chromium	ppm	0.016	0.024	0.024	0.026
10	Mercury	ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.24	0.26	0.26	0.28
12	Iron	ppm	0.024	0.028	0.0016	0.0024
13	Manganese	ppm	0.026	0.029	0.026	0.028
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/654	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	3.4	4.4	4.4	4.6
2	Biological Oxygen Demand	mg/l	1.4	1.6	1.6	1.8
3	Oil & Grease	mg/l	1.4	1.6	1.4	0.4
4	Sulphate	mg/l	1236	1326	1045	1062
5	Phosphate	mg/l	0.16	0.24	0.16	0.24
6	Nitrate	mg/l	4.2	4.6	2.6	2.8
7	Nitrite	mg/l	0.018	0.018	0.028	0.024
8	Chloride	mg/l	22436	26244	28088	26498
9	Chromium	ppm	0.018	0.024	0.024	0.026
10	Mercury	Ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.24	0.26	0.24	0.26
12	Iron	ppm	0.026	0.028	0.0018	0.028
13	Manganese	ppm	0.028	0.026	0.026	0.026
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/654	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	October 14, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.8
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	66
	<i>Amphora lineolata</i>	84
	<i>Cymbella marina</i>	26
	<i>Bacteriastrumdelicatulum</i>	14
	<i>Thalassionemanitzschoides</i>	36
	<i>Chaetocerosdydymus</i>	22
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	18
B.	Zooplankton Species	
	<i>Foraminifera</i>	76
	<i>Chaetognatha</i>	24
	<i>Amphipoda</i>	26
	<i>Cladocera</i>	14
	<i>Eggs of fish & larvae</i>	08

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/654	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 14, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	2.4
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	46
	<i>Amphora lineolata</i>	24
	<i>Cymbella marina</i>	56
	<i>Bacteriastrumdelicatulum</i>	34
	<i>Thalassionemanitzschoides</i>	36
	<i>Chaetocerosdydymus</i>	08
	<i>Skeletonemacostatum</i>	18
	<i>Thalassiothrixlongissima</i>	12
	<i>Cymbella marina</i>	06
B.	Zooplankton Species	
	<i>Foraminifera</i>	34
	<i>Chaetognatha</i>	36
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	22

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/654	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 14, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1800
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	34
	<i>Cymbella marina</i>	62
	<i>Bacteriastrumdelicatulum</i>	46
	<i>Thalassionemanitzschoides</i>	68
	<i>Chaetocerosdydymus</i>	86
	<i>Skeletonemacostatum</i>	14
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	28
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	38
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	28

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/654	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (High Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	18000
2	Zooplankton Count	No./m ³	1600
3	Chlorophyll a	mg/m ³	3.4
4	Chlorophyll b	mg/m ³	2.6
5	Primary Productivity	gC/m ²	2.8
6	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	56
	<i>Amphora lineolata</i>	42
	<i>Cymbella marina</i>	16
	<i>Bacteriastrumdelicatulum</i>	28
	<i>Thalassionemanitzschoides</i>	38
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	46
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	26
	<i>Chaetognatha</i>	18
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	26
	Eggs of fish & larvae	18

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCU654	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	600
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.4
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	86
	<i>Amphora lineolata</i>	36
	<i>Cymbella marina</i>	48
	<i>Bacteriastrumdelicatum</i>	36
	<i>Thalassionemanitzschoides</i>	44
	<i>Chaetocerosdydymus</i>	18
	<i>Skeletonemacostatum</i>	28
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	24
B.	Zooplankton Species	
	<i>Foraminifera</i>	48
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	36
	<i>Cladocera</i>	28
	<i>Eggs of fish & larvae</i>	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCL/854	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 14, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyeda (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	18000
2	Zooplankton Count	No./m ³	400
3	Chlorophyll a	mg/m ³	3.8
4	Chlorophyll b	mg/m ³	2.6
5	Primary Productivity	gC/m ³	3.4
6	Biomass	mg/m ³	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	70
	<i>Amphora lineolata</i>	46
	<i>Cymbella manna</i>	18
	<i>Bacteriastrumdelicatum</i>	26
	<i>Thalassionemanitzschoides</i>	34
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	18
	<i>Cymbella marina</i>	21
B.	Zooplankton Species	
	<i>Foraminifera</i>	48
	<i>Chaetognatha</i>	36
	<i>Amphipoda</i>	28
	<i>Cladocera</i>	16
	Eggs of fish & larvae	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/654	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (High Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	18000
2	Zooplankton Count	No./m ³	1800
3	Chlorophyll a	mg/m ³	2.4
4	Chlorophyll b	mg/m ³	3.2
5	Primary Productivity	gC/m ²	3.6
6	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	84
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	66
	<i>Bacteriastrumdelicatulum</i>	16
	<i>Thalassionemanitzschoides</i>	44
	<i>Chaetocerosdydymus</i>	11
	<i>Skeletonemacostatum</i>	12
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	12
B.	Zooplankton Species	
	<i>Foraminifera</i>	44
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	36
	<i>Cladocera</i>	04
	Eggs of fish & larvae	18

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCL/654	Issued to
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 14, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	300
3.	Chlorophyll a	mg/m ³	2.4
4.	Chlorophyll b	mg/m ³	3.4
5.	Primary Productivity	gC/m ²	2.8
6.	Biomass	mg/m ²	3.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	86
	<i>Amphora lineolata</i>	44
	<i>Cymbella marina</i>	22
	<i>Bacteriastrumdelicatum</i>	18
	<i>Thalassionemanitzschoides</i>	16
	<i>Chaetocerosdydymus</i>	18
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	28
B.	Zooplankton Species	
	<i>Foraminifera</i>	16
	<i>Chaetognatha</i>	48
	<i>Amphipoda</i>	34
	<i>Cladocera</i>	18
	Eggs of fish & larvae	08

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/655	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Sediment (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Basine	Port Entrance Channel
1.	pH	H+ conc	7.82	8.08
2.	Organic matter	%	1.2	1.6
3.	Nitrate	mg/kg	2.6	2.8
4.	Phosphate	mg/kg	1.6	1.8
5.	Oil & Grease	mg/kg	0.18	0.16
6.	Iron	ppm	0.16	0.18
7.	Manganese	ppm	0.18	0.20
8.	Nickel	ppm	0.12	0.16
9.	Chromium	ppm	0.14	0.14
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.2	0.4
12.	Lead	ppm	0.02	0.03
13.	Arsenic	ppm	0.04	0.02
14.	Selenium	ppm	0.02	0.06
15.	Copper	ppm	0.18	0.16

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref No.	BCL/655	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Sediment (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1.	pH	H+ conc	9.16	8.28
2.	Organic matter	%	1.56	1.66
3.	Nitrate	mg/kg	1.4	1.6
4.	Phosphate	mg/kg	0.4	1.6
5.	Oil & Grease	mg/kg	0.02	0.04
6.	Iron	ppm	0.18	0.16
7.	Manganese	ppm	0.14	0.16
8.	Nickel	ppm	0.16	0.18
9.	Chromium	ppm	0.10	0.18
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.6	0.4
12.	Lead	ppm	0.04	0.02
13.	Arsenic	ppm	0.02	0.04
14.	Selenium	ppm	0.04	0.06
15.	Copper	ppm	0.16	0.16

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref No.	BCL/655	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Sediment (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		HarbourBasme	Port Entrance Channel
1	<i>Ophelidae sp</i>	48	36
2	<i>Glycendae sp</i>	26	24
3	<i>Nereidae sp</i>	16	16
4	<i>Aphroditidae sp</i>	18	48
5	<i>Cirratulidae sp</i>	28	16
6	<i>Capiteifa sp</i>	04	36
7	<i>Amphipoda sp</i>	05	18
8	<i>Gastropoda</i>	16	06
9	<i>Chaetognatha</i>	02	08

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No	BCL/655	Issued to:
Monitoring Date	October 08, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	October 14, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1.	Foraminifera	06	28
2.	Amphipoda	25	14
3.	Mytilusedulis	48	36
4.	Gastropod veliger	16	26
5.	Oithona	04	28
6.	Capitella	16	18
7.	Copepod nauplii	36	16
9.	Brachyuran zoea	26	26
8.	Neanthusarenaceodentata	04	06

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/656	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Type of sample	STP Water (15- KLD Inlet – Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.16	6.48	5.0 – 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	286	96	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	666	586	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.6	3.4	10
5.	COD	IS: 1 of 2488	mg/l	348	148	250
6.	BOD	IS: 44 of 3025	mg/l	47.6	24	30
7.	Chloride	IS: 32 of 3025	mg/l	134	128	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/656	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Type of sample	STP Water (New - 15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s.Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.16	7.42	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	286	66	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	666	546	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.6	2.4	10
5.	COD	IS: 1 of 2488	mg/l	348	158	250
6.	BOD	IS: 44 of 3025	mg/l	47.6	26	30
7.	Chloride	IS: 32 of 3025	mg/l	134	128	500

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Analyst



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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/656	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Type of sample	STP Water (5- KLD Inlet – Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.46	6.46	5.0 – 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	278	96	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	546	446	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	4.4	2.6	10
5.	COD	IS: 1 of 2488	mg/l	288	148	250
6.	BOD	IS: 44 of 3025	mg/l	43.6	24	30
7.	Chloride	IS: 32 of 3025	mg/l	156	138	500

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No	BCL/657	Issued to: M/s AdaniGangavaram Port Ltd, Gangavaram(Village)PedaGantiy ada(Mandalam) Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Type of Sample	Tug water -Dolphin no -12 berth - 09	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500: 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.8	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	6.84	6.5-8.5
6.	Total Hardness	mg/l	34.6	300
7.	Calcium	mg/l	3.6	100
8.	Magnesium	mg/l	6.6	30
9.	Chloride	mg/l	22.4	250
10.	Total Dissolved Solids	mg/l	436	500
11.	Iron	mg/l	0.014	0.3
12.	Sulphate	mg/l	58	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	84	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No.	BCL/658	Issued to: M/s AdaniGangavaram Port Ltd.Gangavaram(Village)PedaGantli ada(Mandalam) Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Type of Sample	Tug water – ocean swan -03 berth - 09	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.4	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	8.24	6.5-8.5
6.	Total Hardness	mg/l	60.6	300
7.	Calcium	mg/l	3.4	100
8.	Magnesium	mg/l	15.8	30
9.	Chloride	mg/l	14.6	250
10.	Total Dissolved Solids	mg/l	434	500
11.	Iron	mg/l	0.016	0.3
12.	Sulphate	mg/l	56	250
13.	Nitrate	mg/l	0.18	50
14.	Total Alkalinity	mg/l	124	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF UGR WATER

BCL Ref. No.	BCL/659	Issued to M/s AdaniGangavaram Port Ltd, Gangavaram(Village) Pada Gantiy ada(Mandalam) Visakhapatnam.
Monitoring Date	October 08, 2024	
Reporting Date	October 14, 2024	
Type of Sample	UGR water	
Sample Collected by	M/s Biochem Labs	
Reference Standard	IS 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.6	5
5.	pH	H+conc	7.94	6.5-8.5
6.	Total Hardness	mg/l	66.8	300
7.	Calcium	mg/l	22.6	100
8.	Magnesium	mg/l	3.56	30
9.	Chloride	mg/l	31.8	250
10.	Total Dissolved Solids	mg/l	426	500
11.	Iron	mg/l	0.018	0.3
12.	Sulphate	mg/l	56	250
13.	Nitrate	mg/l	0.18	50
14.	Total Alkalinity	mg/l	188	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp.	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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Environmental Monitoring Reports

(22nd October 2024)

Adani Gangavaram Port Ltd,
Pedagantyada (Mandal),
Gangavaram (Post),
Visakhapatnam - 530 044.





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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No	BCL / 660	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 22, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Collected by	M/s. Biochem Labs	

S. No.	Parameter	Unit	Location	Result		CPCB Limit	
				Day time	Night time	Industrial	
						Day time	Night time
1.	Noise Level	Decibels	Cargo area	78	68	75	70
2.	Noise Level	Decibels	PedaGantiyada/ Security Gate	56	64	-	-
				Day time	Night time	Residential	
						Day time	Night time
3.	Noise Level	Decibels	Gangavaram	46	36	55	45
4.	Noise Level	Decibels	HB Colony	44	48	-	-

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/661	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 22, 2024	
Reporting Date	October 28, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	31.4	30.4	31.6	32.6
2.	pH	H+ conc	8.14	8.26	8.16	8.28
3.	Salinity	PSU	28.8	36	31.4	25.6
4.	Turbidity	NTU	46	48	48	44
5.	Total Suspended Solids	mg/l	48	28	16	18
6.	Transparency	Mts	0.4	1.6	1.4	2.6
7.	Electrical Conductivity	mMHo	32.2	33.6	32.6	36.6

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/661	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	October 28, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	32.8	31.6	31.8	32.6
2.	pH	H+ conc	8.16	8.24	8.28	8.18
3.	Salinity	PSU	32.4	32.6	36.4	34.6
4.	Turbidity	NTU	16	18	21	16
5.	Total Suspended Solids	mg/l	28	32	26	28
6.	Transparency	Mts	1.6	2.6	1.8	2.1
7.	Electrical Conductivity	mMHo	31.6	32.4	31.6	32.6

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/661	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 28, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			HarbourBasine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	4.6	4.8	4.4	4.8
2.	Biological Oxygen Demand	mg/l	1.8	1.6	1.4	1.6
3.	Oil & Grease	mg/l	1.6	1.4	0.2	0.8
4.	Sulphate	mg/l	1234	1268	1273	1248
5.	Phosphate	mg/l	0.24	0.24	0.21	0.26
6.	Nitrate	mg/l	3.8	3.8	2.1	2.4
7.	Nitrite	mg/l	0.021	0.021	0.026	0.018
8.	Chloride	mg/l	23448	24526	21456	26438
9.	Chromium	ppm	0.024	0.028	0.024	0.024
10.	Mercury	ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.18	0.16	0.18	0.18
12.	Iron	ppm	0.026	0.056	0.028	0.025
13.	Manganese	ppm	0.024	0.028	0.026	0.024
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/661	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 28, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	2.6	4.6	4.8	4.8
2.	Biological Oxygen Demand	mg/l	1.4	1.3	2.8	1.4
3.	Oil & Grease	mg/l	1.4	1.2	1.2	0.2
4.	Sulphate	mg/l	1224	1126	1024	1068
5.	Phosphate	mg/l	0.18	0.22	0.16	0.26
6.	Nitrate	mg/l	3.6	3.8	2.6	2.2
7.	Nitrite	mg/l	0.026	0.028	0.024	0.014
8.	Chloride	mg/l	2624	25466	22646	24646
9.	Chromium	ppm	0.024	0.026	0.028	0.022
10.	Mercury	ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.16	0.18	0.18	0.21
12.	Iron	ppm	0.028	0.026	0.024	0.026
13.	Manganese	ppm	0.026	0.028	0.026	0.022
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/661	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 28, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1800
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	3.6
5.	Primary Productivity	gC/m ²	2.8
6.	Biomass	mg/m ²	2.2

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	56
	<i>Amphora lineolata</i>	24
	<i>Cymbella marina</i>	16
	<i>Bacteriastrumdelicatulum</i>	24
	<i>Thalassionemanitzschioides</i>	28
	<i>Chaetocerosdydymus</i>	46
	<i>Skeletonemacostatum</i>	14
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	48
B.	Zooplankton Species	
	<i>Foraminifera</i>	34
	<i>Chaetognatha</i>	16
	<i>Amphipoda</i>	26
	<i>Cladocera</i>	38
	Eggs of fish & larvae	04

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/661	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Reporting Date	October 28, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	400
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	3.5
5.	Primary Productivity	gC/m ²	2.8
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	58
	<i>Amphora lineolata</i>	16
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatulum</i>	16
	<i>Thalassionemamaritzschoides</i>	18
	<i>Chaetocerosdydymus</i>	04
	<i>Skeletonemacostatum</i>	16
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	08
B.	Zooplankton Species	
	<i>Foraminifera</i>	36
	<i>Chaetognatha</i>	16
	<i>Amphipoda</i>	28
	<i>Cladocera</i>	06
	<i>Eggs of fish & larvae</i>	19

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/551	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	October 28, 2024	Gangevaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	18000
2	Zooplankton Count	No./m ³	400
3	Chlorophyll a	mg/m ³	2.4
4	Chlorophyll b	mg/m ³	2.6
5	Primary Productivity	gC/m ²	1.4
6	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	46
	<i>Amphora lineolata</i>	24
	<i>Cymbella marina</i>	26
	<i>Bacteriastrumdelicatulum</i>	38
	<i>Thalassionemanitzschoides</i>	18
	<i>Chaetocerosdydymus</i>	24
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	18
	<i>Cymbella marina</i>	19
B.	Zooplankton Species	
	<i>Foraminifera</i>	16
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	18
	<i>Eggs of fish & larvae</i>	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/661	Issued to:
Monitoring Date	October 22, 2024	M/s Adani Gangavaram Port Ltd.
Reporting Date	October 28, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	400
3.	Chlorophyll a	mg/m ³	4.4
4.	Chlorophyll b	mg/m ³	2.2
5.	Primary Productivity	gC/m ³	2.4
6.	Biomass	mg/m ²	1.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	24
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	18
	<i>Bacterastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	42
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	44
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	36
B.	Zooplankton Species	
	<i>Foraminifera</i>	18
	<i>Cheetognatha</i>	28
	<i>Amphipoda</i>	19
	<i>Cladocera</i>	26
	Eggs of fish & larvae	28

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/661	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 28, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGentryada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	17000
2.	Zooplankton Count	No./m ³	1600
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	68
	<i>Amphora lineolata</i>	24
	<i>Cymbella marina</i>	36
	<i>Bacteriastriumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	44
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	08
	<i>Cymbella marina</i>	26
B.	Zooplankton Species	
	<i>Foraminifera</i>	48
	<i>Chaetognathia</i>	16
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	26
	Eggs of fish & larva	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/661	Issued to
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	October 28, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	18000
2	Zooplankton Count	No./m ³	200
3	Chlorophyll a	mg/m ³	4.8
4	Chlorophyll b	mg/m ³	3.6
5	Primary Productivity	gC/m ²	3.4
6	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	46
	<i>Amphora lineolata</i>	48
	<i>Cymbella marina</i>	86
	<i>Bacteriastrumdelicatulum</i>	24
	<i>Thalassionemanitzschoides</i>	16
	<i>Chaetocerosdydymus</i>	26
	<i>Skeletonemacostatum</i>	48
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	18
B.	Zooplankton Species	
	<i>Foraminifera</i>	18
	<i>Chaetognatha</i>	56
	<i>Amphipoda</i>	24
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	28

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/661	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Reporting Date	October 28, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (High Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	2.2
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	28
	<i>Cymbella marina</i>	48
	<i>Bacteriastrumdelicatulum</i>	26
	<i>Thalassionemanitzschioides</i>	28
	<i>Chaetocerosdydymus</i>	16
	<i>Skeletonemacostatum</i>	38
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	28
B.	Zooplankton Species	
	<i>Foraminifera</i>	68
	<i>Chaetognatha</i>	36
	<i>Amphipoda</i>	24
	<i>Cladocera</i>	16
	Eggs of fish & larvae	36

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/661	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	October 28, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	18000
2	Zooplankton Count	No./m ³	600
3	Chlorophyll a	mg/m ³	3.6
4	Chlorophyll b	mg/m ³	2.4
5	Primary Productivity	gC/m ²	3.6
6	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	28
	<i>Amphora lineolata</i>	36
	<i>Cymbella marina</i>	26
	<i>Bacteriastrumdelicatulum</i>	48
	<i>Thalassionemanitzschoides</i>	25
	<i>Chaetocerosdydymus</i>	16
	<i>Skeletonemacostatum</i>	46
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	26
B	Zooplankton Species	
	<i>Foraminifera</i>	28
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	02
	<i>Eggs of fish & larvae</i>	14

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/662	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	October 28, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Basins	Port Entrance Channel
1.	pH	H+ conc	8.4	8.26
2.	Organic matter	%	1.8	1.6
3.	Nitrate	mg/kg	1.6	1.8
4.	Phosphate	mg/kg	1.4	1.6
5.	Oil & Grease	mg/kg	0.16	0.22
6.	Iron	ppm	0.14	0.16
7.	Manganese	ppm	0.16	0.14
8.	Nickel	ppm	0.18	0.16
9.	Chromium	ppm	0.14	0.18
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.2	0.4
12.	Lead	ppm	0.04	0.06
13.	Arsenic	ppm	0.03	0.04
14.	Selenium	ppm	0.02	0.06
15.	Copper	ppm	0.16	0.18

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/662	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 28, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1.	pH	H+ conc	8.14	8.16
2.	Organic matter	%	1.4	1.8
3.	Nitrate	mg/kg	1.06	1.4
4.	Phosphate	mg/kg	0.2	0.6
5.	Oil & Grease	mg/kg	0.16	0.18
6.	Iron	ppm	0.14	0.16
7.	Manganese	ppm	0.16	0.18
8.	Nickel	ppm	0.18	0.16
9.	Chromium	ppm	0.16	0.18
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	1.6	1.8
12.	Lead	ppm	0.04	0.06
13.	Arsenic	ppm	0.02	0.04
14.	Selenium	ppm	0.04	0.06
15.	Copper	ppm	0.16	0.18

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/662	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 22, 2024	
Reporting Date	October 28, 2024	
Organization	M/s. Adani Gangavaram Port Ltd	
Type of Sample	Sediment (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		Harbour Basine	Port Entrance Channel
1.	<i>Eunicidae sp.</i>	46	26
2.	<i>Paraonidae sp.</i>	28	28
3.	<i>Syllidae sp.</i>	24	18
4.	<i>Sabellidae sp.</i>	16	26
5.	<i>Oithona sp.</i>	26	28
6.	<i>Capitella sp.</i>	18	26
7.	<i>Syllidae sp.</i>	16	21
9.	<i>Amphipoda sp.</i>	16	26
8.	<i>Nematoda sp.</i>	04	06

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL-Ref No.	BCL/662	Issued to:
Monitoring Date	October 22, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	October 28, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1.	<i>Capitella sp.</i>	44	36
2.	<i>Syllidae sp.</i>	36	16
3.	<i>Amphipoda sp.</i>	05	28
4.	<i>Nematoda sp.</i>	28	36
5.	<i>Capitella sp.</i>	26	16
6.	<i>Syllidae sp.</i>	14	34
7.	<i>Paraonidae sp.</i>	18	16
9.	<i>Syllidae sp.</i>	24	18
8.	<i>Sabellidae sp.</i>	06	06

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCU/663	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 22, 2024	
Reporting Date	October 28, 2024	
Type of sample	STP Water (15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	5.8	6.68	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	226	96	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	546	546	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.6	3.8	12
5.	COD	IS: 1 of 2488	mg/l	244	238	250
6.	BOD	IS: 44 of 3025	mg/l	42.8	23.6	30
7.	Chloride	IS: 32 of 3025	mg/l	154	148	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCI/Ref. No.	BCU/663	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 22, 2024	
Reporting Date	October 28, 2024	
Type of sample	STP Water (New - 15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	5.8	6.8	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	226	86	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	546	478	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.6	2.6	10
5.	COD	IS: 1 of 2488	mg/l	244	124	250
6.	BOD	IS: 44 of 3025	mg/l	42.8	21.6	30
7.	Chloride	IS: 32 of 3025	mg/l	154	128	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/663	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	October 22, 2024	
Reporting Date	October 28, 2024	
Type of sample	STP Water (5- KLD Inlet – Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H-Concen	6.18	6.46	5.0 – 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	236	96	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	628	598	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.6	2.4	10
5.	COD	IS: 1 of 2488	mg/l	298	146	250
6.	BOD	IS: 44 of 3025	mg/l	42.6	26.4	30
7.	Chloride	IS: 32 of 3025	mg/l	138	126	500

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No.	BCL/664	Issued to: M/s AdaniGangavaram Port Ltd,Gangavaram(Village)PedaGanthi ada(Mandalam) Visakhapatnam.
Monitoring Date	October 22, 2024	
Reporting Date	October 28, 2024	
Type of Sample	Tug water - ocean swan 03	
Sample Collected by	M/s Biochem Labs	
Reference Standard	IS- 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1	Colour	Hazen	4.8	5
2	Odour	Hazen	Unobjectionable	Unobjectionable
3	Taste	Hazen	Agreeable	Agreeable
4	Turbidity	NTU	3.6	5
5	pH	H+conc	6.88	6.5-8.5
6	Total Hardness	mg/l	34.6	300
7	Calcium	mg/l	3.6	100
8	Magnesium	mg/l	6.4	30
9	Chloride	mg/l	22.6	250
10	Total Dissolved Solids	mg/l	448	500
11	Iron	mg/l	0.016	0.3
12	Sulphate	mg/l	54	250
13	Nitrate	mg/l	0.14	50
14	Total Alkalinity	mg/l	88	200
15	Oil Grease	mg/l	Nil	0.01
16	Total Coli forms	Index	0	1-10
17	E.Coli	Cfu/ml	Absent	Should be Absent
18	Salmonella sp.	Cfu/ml	Absent	Should be Absent
19	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT

ANALYSIS OF TUG WATER

BCL Ref. No	BCL/665	Issued to M/s AdaniGangavaram Port Ltd.Gangavaram(Village)PedaGantli ada(Mandalam) Visakhapatnam
Monitoring Date	October 22, 2024	
Reporting Date	October 28, 2024	
Type of Sample	Tug water- 14 dolphin Berth-9	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.6	5
5.	pH	H+conc	8.24	6.5-8.5
6.	Total Hardness	mg/l	60.6	300
7.	Calcium	mg/l	3.8	100
8.	Magnesium	mg/l	15.6	30
9.	Chloride	mg/l	12.6	250
10.	Total Dissolved Solids	mg/l	436	500
11.	Iron	mg/l	0.016	0.3
12.	Sulphate	mg/l	56	250
13.	Nitrate	mg/l	0.14	50
14.	Total Alkalinity	mg/l	14	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	0	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

K. Lakshmi
Analyst



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Environmental Monitoring Reports

(19th October 2024)

Adani Gangavaram Port Ltd,
Pedagantyada (Mandal),
Gangavaram (Post),
Visakhapatnam - 530 044.





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TEST REPORT ANALYSIS OF DRINKING WATER

BCL Ref No.	BCL/667	Issued to M/s Adani Gangavaram Port Ltd, Gangavaram (Village) Peda Gantiyada (Mandalam) Visakhapatnam
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Type of Sample	Drinking Water	
Sample Collected by	M/s Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	6.26	6.5-8.5
6.	Total Hardness	mg/l	266	300
7.	Calcium	mg/l	44	100
8.	Magnesium	mg/l	28	30
9.	Chloride	mg/l	34	250
10.	Total Dissolved Solids	mg/l	426	500
11.	Iron	mg/l	0.016	0.3
12.	Sulphate	mg/l	54	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	48	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	02	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref No.	BCL/668	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Ground Water	
Location	Gangavaram Village	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Temperature	°C	32.4	-
2.	pH	H ⁺ concn.	7.2	6.5-8.5
3.	Total Hardness	mg/l	256	300
4.	Calcium (as Ca)	mg/l	46	75
5.	Magnesium (as Mg)	mg/l	24	30
6.	Chlorides	mg/l	159	250
7.	Manganese	mg/l	0.004	0.1
8.	Copper	mg/l	0.018	0.05
9.	Total Alkalinity	mg/l	88	200
10.	Total Dissolved Solids	mg/l	348	500
11.	Sulphate	mg/l	46	200
12.	Dissolved Oxygen	mg/l	3.2	-
13.	Nitrite (as NO ₂)	mg/l	0.04	0.02
14.	Iron	mg/l	0.5	0.3
15.	Fluoride	mg/l	0.1	1.0
16.	Oil & Grease	mg/l	BDL	0.01
17.	Chromium (as Cr ^{VI})	mg/l	0.02	0.05
18.	Cyanide	mg/l	NIL	0.05
19.	Zinc	mg/l	0.1	5.0
20.	Phenolic Compound	mg/l	NIL	0.001
21.	Free Residual Chlorine	mg/l	0.16	0.2
22.	Total Coli forms Count	MPN Index/100ml	Absent	Absent
23.	E.coli	Cfu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref No	BCL/669	Issued to M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Ground Water	
Location	North boulder wall open well	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1	Temperature	°C	22.8	-
2	pH	H+ concen.	7.48	6.5-8.5
3	Total Hardness	mg/l	226	300
4	Calcium (as Ca)	mg/l	38	75
5	Magnesium (as Mg)	mg/l	24	30
6	Chlorides	mg/l	486	250
7	Manganese	mg/l	0.02	0.1
8	Copper	mg/l	0.015	0.05
9	Total Alkalinity	mg/l	44	200
10	Total Dissolved Solids	mg/l	436	500
11	Sulphate	mg/l	48	200
12	Dissolved Oxygen	mg/l	3.4	-
13	Nitrite (as NO ₂)	mg/l	0.018	0.02
14	Iron	mg/l	0.135	0.3
15	Fluoride	mg/l	0.2	1.0
16	Oil & Grease	mg/l	BDL	0.01
17	Chromium (as Cr ⁶⁺)	mg/l	0.02	0.05
18	Cyanide	mg/l	NIL	0.05
19	Zinc	mg/l	0.4	5.0
20	Phenolic Compound	mg/l	NIL	0.001
21	Free Residual Chlorine	mg/l	0.04	0.2
22	Total Coli forms Count	MPN Index/100ml	Absent	Absent
23	E.coli	CFU/ml	Absent	Absent

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No.	BCL/670	Issued to
Monitoring Date	November 19, 2024	M/s AdaniGangavaram Port
Reporting Date	November 25, 2024	Ltd Gangavaram(Village)
Type of Sample	Sewage Water	PedaGantiyada(Mandalam)
Sample Location	Culvert -11 at Gangavaram Village	Visakhapatnam
Sample Collected by	M/s Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit
1	pH	H+Concen	6.24	5.0 - 9.0
2	Total Suspended Solids	mg/l	86	100
3	Total Dissolved Solids	mg/l	1458	2100
4	Oil & Grease	mg/l	3.4	10
5	COD	mg/l	246	250
6	BOD	mg/l	28	30
7	Ammonia Nitrogen	mg/l	4.8	50
8	Phenolic Compounds	mg/l	0.2	1.0
10	Nitrate	mg/l	26	50
11	Nitrite	mg/l	0.6	1.0
11	Sulphide	mg/l	0.4	1.0
12	Phosphate	mg/l	4.8	5.0
13	Cyanide	mg/l	Nil	0.2
14	Iron	mg/l	1.4	3.0
15	Aluminium	mg/l	0.2	2.0
16	Copper	mg/l	0.18	3.0
17	Chromium	mg/l	0.6	2.0
18	Zinc	mg/l	1.6	5.0
19	Lead	mg/l	0.04	0.1
20	Manganese	mg/l	0.2	2.0
21	Nickel	mg/l	0.6	3.0
22	Mercury	mg/l	<0.01	0.01
23	Cadmium	mg/l	<0.01	2.0

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref No.	BCL/671	Issued to:
Monitoring Date	November 19, 2024	M/s AdaniGangavaram Port
Reporting Date	November 25, 2024	Ltd
Type of Sample	Sewage Water	Gangavaram(Village), Peda Gan
Sample Location	Kanithigeddanalla Near VSP	liyada(Mandalam), Visakhapatn
Sample Collected by	M/s. Biochem Labs	am.

S. No.	Parameters	Unit	Result	CPCB Limit
1.	pH	H+Concen	5.46	5.0 - 9.0
2.	Total Suspended Solids	mg/l	234	100
3.	Total Dissolved Solids	mg/l	2548	2100
4.	Oil & Grease	mg/l	7.6	10
5.	COD	mg/l	465	250
6.	BOD	mg/l	64	30
7.	Ammonia Nitrogen	mg/l	16	50
8.	Phenolic Compounds	mg/l	0.4	1.0
10.	Nitrate	mg/l	48	50
11.	Nitrite	mg/l	0.6	1.0
11.	Sulphide	mg/l	0.4	1.0
12.	Phosphate	mg/l	3.6	5.0
13.	Cyanide	mg/l	Nil	0.2
14.	Iron	mg/l	2.6	3.0
15.	Aluminium	mg/l	1.8	2.0
16.	Copper	mg/l	1.6	3.0
17.	Chromium	mg/l	1.4	2.0
18.	Zinc	mg/l	2.8	5.0
19.	Lead	mg/l	0.02	0.1
20.	Manganese	mg/l	1.4	2.0
21.	Nickel	mg/l	1.2	3.0
22.	Mercury	mg/l	<0.01	0.01
23.	Cadmium	mg/l	<0.01	2.0

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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No.	BCL / 872	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	November 19, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Collected by	M/s. Biochem Labs	

S. No.	Parameter	Unit	Location	Result		CPCBLimit Industrial	
				Day time	Night time	Day time	Night time
1.	Noise Level	Decibels	Cargo area.	72	64	75	70
2.	Noise Level	Decibels	PedaGantiyada/ Security Gate	64	52	-	-
				Day time	Night time	Residential	
						Day time	Night time
3.	Noise Level	Decibels	Gangavaram	52	34	55	45
4.	Noise Level	Decibels	HB Colony	46	46	-	-

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCL/673	Issued to M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Organization	M/s. Adani Gangavaram Port Ltd	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1	Temperature	°C	31.4	32.6	32.6	32.8
2	pH	H+ conc	8.26	8.26	8.16	8.26
3	Salinity	PSU	34.8	34.8	35.6	46
4	Turbidity	NTU	38	38	18	16
5	Total Suspended Solids	mg/l	58	65	28	68
6	Transparency	Mts	0.4	1.2	1.6	1.8
7	Electrical Conductivity	mMho	32.4	34.8	32.4	33.4

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/673	Issued to
Monitoring Date	November 19, 2024	M/s Adani Gangavaram Port Ltd
Reporting Date	November 25, 2024	Gangavaram (Village),
Organization	M/s Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s Biochem Labs.	

S. No	Parameter	Unit	Result			
			South brake wall Outside		North brake wall Outside	
			Low tide	High tide	Low tide	High tide
1	Temperature	°C	32.4	32.4	32.8	32.4
2	pH	H+ conc	8.16	8.16	8.24	8.29
3	Salinity	PSU	35.6	36.4	35.6	35.6
4	Turbidity	NTU	18	16	14	14
5	Total Suspended Solids	mg/l	22	28	18	16
6	Transparency	Mts	1.6	1.6	1.4	1.6
7	Electrical Conductivity	mMho	32.6	32.8	32.6	34.8

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/673	Issued to: M/s. Adani Gangavaram Port Ltd Gangavaram (Village) PedaGantiyada (Mandalam), Visakhapatnam
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Organization	M/s. Adani Gangavaram Port Ltd	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Baseline		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	3.6	4.8	3.4	4.4
2	Biological Oxygen Demand	mg/l	1.4	1.6	1.6	1.8
3	Oil & Grease	mg/l	1.4	1.4	1.2	1.6
4	Sulphate	mg/l	1056	1234	1248	1265
5	Phosphate	mg/l	0.16	0.21	0.26	0.38
6	Nitrate	mg/l	4.1	4.2	2.4	2.8
7	Nitrite	mg/l	0.014	0.016	0.026	0.01
8	Chloride	mg/l	22456	34836	27456	24536
9	Chromium	ppm	0.018	0.026	0.026	0.024
10	Mercury	ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.26	0.24	0.24	0.26
12	Iron	ppm	0.022	0.024	0.0018	0.0024
13	Manganese	ppm	0.026	0.028	0.024	0.021
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/673	Issued to
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	November 25, 2024	Gangavaram (Village)
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	3.4	4.8	4.6	4.8
2	Biological Oxygen Demand	mg/l	1.4	1.6	1.6	1.9
3	Oil & Grease	mg/l	1.6	1.8	1.4	0.2
4	Sulphate	mg/l	1246	1288	1046	1074
5	Phosphate	mg/l	0.14	0.26	0.18	0.14
6	Nitrate	mg/l	4.4	4.6	4.1	4.4
7	Nitrite	mg/l	0.018	0.021	0.028	0.048
8	Chloride	mg/l	22434	26025	28088	26448
9	Chromium	ppm	0.016	0.026	0.026	0.022
10	Mercury	Ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.26	0.28	0.26	0.24
12	Iron	ppm	0.024	0.026	0.0024	0.026
13	Manganese	ppm	0.026	0.028	0.026	0.029
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/873	Issued to
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	November 25, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName: Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	16000
2	Zooplankton Count	No./m ³	1400
3	Chlorophyll a	mg/m ³	2.2
4	Chlorophyll b	mg/m ³	2.6
5	Primary Productivity	gC/m ³	3.6
6	Biomass	mg/m ³	2.8

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	15
	<i>Amphora lineolata</i>	28
	<i>Cymbella marina</i>	16
	<i>Bacteriastrumdelicatulum</i>	26
	<i>Thalassionemanitzschoides</i>	36
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	38
	<i>Thalassiothrixlongissima</i>	22
	<i>Cymbella marina</i>	28
B	Zooplankton Species	
	<i>Foraminifera</i>	46
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	24
	<i>Eggs of fish & larvae</i>	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCL/673	Issued to
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	November 25, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1500
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.5
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	44
	<i>Amphora lineolata</i>	28
	<i>Cymbella marina</i>	56
	<i>Bacteriastrumdelicatulum</i>	28
	<i>Thalassionemanitzschoides</i>	34
	<i>Chaetocerosdydimus</i>	26
	<i>Skeletonemacostatum</i>	18
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	28
B	Zooplankton Species	
	<i>Foraminifera</i>	16
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	34
	<i>Cladocera</i>	16
	Eggs of fish & larvae	28

K. Lahali
Analyst



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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/673	Issued to
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd
Reporting Date	November 25, 2024	Gangavaram (Village)
Organization	M/s. Adani Gangavaram Port Ltd	PedaGanfyada (Mandalam)
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName: Harbourbasin / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	18000
2	Zooplankton Count	No./m ³	1400
3	Chlorophyll a	mg/m ³	3.6
4	Chlorophyll b	mg/m ³	2.4
5	Primary Productivity	gC/m ³	3.8
6	Biomass	mg/m ³	2.5

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	58
	<i>Amphora lineolata</i>	16
	<i>Cymbella marina</i>	45
	<i>Bacteriastrumdelicatulum</i>	26
	<i>Thalassionemanitzschoides</i>	38
	<i>Chaetocerosdydymus</i>	26
	<i>Skeletonemacostatum</i>	28
	<i>Thalassiothrixlongissima</i>	04
	<i>Cymbella marina</i>	16
B	Zooplankton Species	
	<i>Foraminifera</i>	24
	<i>Chaetognatha</i>	34
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	28
	<i>Eggs of fish & larvae</i>	26

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCL/673	Issued to
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd
Reporting Date	November 25, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName: Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	16000
2	Zooplankton Count	No./m ³	1400
3	Chlorophyll a	mg/m ³	3.4
4	Chlorophyll b	mg/m ³	2.6
5	Primary Productivity	gC/m ²	2.8
6	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummigans</i>	56
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	36
	<i>Bacteriastrumdelicatulum</i>	18
	<i>Thalassionemantzschioides</i>	25
	<i>Chaetocerosdydymus</i>	12
	<i>Skeletonemacostatum</i>	28
	<i>Thalassiothrixlongissima</i>	18
	<i>Cymbella marina</i>	
B	Zooplankton Species	
	<i>Foraminifera</i>	28
	<i>Chaetognatha</i>	15
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	24
	Eggs of fish & larvae	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/673	Issued to
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	November 25, 2024	Gangavaram (Village)
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam)
Type of Sample	Marine Water (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	800
3.	Chlorophyll a	mg/m ³	1.2
4.	Chlorophyll b	mg/m ³	2.4
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.2

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrum micans</i>	58
	<i>Amphora lineolata</i>	16
	<i>Cymbella manna</i>	46
	<i>Bacteriastrum delicatulum</i>	24
	<i>Thalassionema nitidum</i>	36
	<i>Chaetoceros dydimus</i>	14
	<i>Skeletonema costatum</i>	26
	<i>Thalassiothrix longissima</i>	24
	<i>Cymbella manna</i>	26
B.	Zooplankton Species	
	<i>Foraminifera</i>	26
	<i>Chaetognaths</i>	28
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	24

K. Lahari
Analyst



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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/673	Issued to,
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	November 25, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	1000
3.	Chlorophyll a	mg/m ³	2.2
4.	Chlorophyll b	mg/m ³	1.4
5.	Primary Productivity	gC/m ²	2.8
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	68
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	18
	<i>Bacteriastrumdelicatulum</i>	24
	<i>Thalassionemanitzschoides</i>	36
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	18
B.	Zooplankton Species	
	<i>Foraminifera</i>	42
	<i>Chaetognatha</i>	16
	<i>Amphipoda</i>	28
	<i>Cladocera</i>	26
	Eggs of fish & larvae	29

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/873	Issued to
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	November 25, 2024	Gangavaram (Village)
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName: South brake Wall Outside / High Tide:

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	12000
2	Zooplankton Count	No./m ³	300
3	Chlorophyll a	mg/m ³	2.4
4	Chlorophyll b	mg/m ³	3.4
5	Primary Productivity	gC/m ²	3.2
6	Biomass	mg/m ²	2.4

S.No.	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrum micans</i>	88
	<i>Amphora lineolata</i>	48
	<i>Cymbella marina</i>	62
	<i>Bacteriastrium delicatulum</i>	21
	<i>Thalassionema nitzschioides</i>	42
	<i>Chaetoceros dydimus</i>	15
	<i>Skeletonema costatum</i>	16
	<i>Thalassiothrix longissima</i>	14
	<i>Cymbella marina</i>	16
B	Zooplankton Species	
	<i>Foraminifera</i>	46
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	34
	<i>Cladocera</i>	08
	Eggs of fish & larvae	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCL/673	Issued to
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	November 25, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGarfyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	18000
2	Zooplankton Count	No./m ³	600
3	Chlorophyll a	mg/m ³	2.2
4	Chlorophyll b	mg/m ³	2.4
5	Primary Productivity	gC/m ²	3.2
6	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	86
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	26
	<i>Bacteriastrumdelicatulum</i>	18
	<i>Thalassionemanitzschoides</i>	16
	<i>Chaetocerosdydymus</i>	18
	<i>Skeletonemacostatum</i>	16
	<i>Thalassiothrixlongissima</i>	24
	<i>Cymbella marina</i>	09
B	Zooplankton Species	
	<i>Foraminifera</i>	26
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	34
	<i>Cladocera</i>	26
	<i>Eggs of fish & larvae</i>	12

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No	BCL/674	Issued to
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	November 25, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Basine	Port Entrance Channel
1	pH	H+ conc	7.4	8.06
2	Organic matter	%	1.4	1.6
3	Nitrate	mg/kg	2.4	2.8
4	Phosphate	mg/kg	1.6	1.8
5	Oil & Grease	mg/kg	0.14	0.16
6	Iron	ppm	0.16	0.18
7	Manganese	ppm	0.18	0.21
8	Nickel	ppm	0.12	0.16
9	Chromium	ppm	0.18	0.21
10	Mercury	ppm	Nil	Nil
11	Zinc	ppm	0.1	0.2
12	Lead	ppm	0.06	0.08
13	Arsenic	ppm	0.04	0.06
14	Selenium	ppm	0.02	0.04
15	Copper	ppm	0.19	0.22

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref No	BCU674	Issued to
Monitoring Date	November 19, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	November 25, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1	pH	H+ conc	8.16	8.24
2	Organic matter	%	1.46	1.64
3	Nitrate	mg/kg	1.64	1.86
4	Phosphate	mg/kg	1.6	1.6
5	Oil & Grease	mg/kg	0.04	0.06
6	Iron	ppm	0.16	0.18
7	Manganese	ppm	0.18	0.21
8	Nickel	ppm	0.16	0.1
9	Chromium	ppm	0.24	0.26
10	Mercury	ppm	Nil	Nil
11	Zinc	ppm	0.6	0.8
12	Lead	ppm	0.04	0.06
13	Arsenic	ppm	0.02	0.08
14	Selenium	ppm	0.08	0.10
15	Copper	ppm	0.18	0.21

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref No	BCL/674	Issued to
Monitoring Date	November 19, 2024	M/s Adani Gangavaram Port Ltd,
Reporting Date	November 25, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		Harbour Basine	Port Entrance Channel
1.	<i>Ophelidae sp</i>	46	36
2.	<i>Glyceridae sp</i>	24	28
3.	<i>Nereidae sp</i>	16	18
4.	<i>Aphroditidae sp</i>	16	46
5.	<i>Cirratulidae sp</i>	24	16
6.	<i>Capitella sp</i>	08	36
7.	<i>Amphipoda sp</i>	06	16
8.	<i>Gastropoda</i>	16	04
9.	<i>Chaetognatha</i>	08	08

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No	BCL/636	Issued to:
Monitoring Date	September 11, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalem), Visakhapatnam
Reporting Date	September 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd	
Type of Sample	Sediment (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1.	Foraminifera	28	24
2.	Amphipoda	26	14
3.	Mytilusedulis	46	36
4.	Gastropod veliger	14	28
5.	Oithona	08	26
6.	Capitella	18	04
7.	Copepod nauplii	34	16
9.	Brachyuran zoea	28	26
8.	Neanthusarenaceodentata	04	08

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/675	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Type of sample	STP Water (15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.18	6.48	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	278	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	654	586	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.8	3.6	10
5.	COD	IS: 1 of 2488	mg/l	346	148	250
6.	BOD	IS: 44 of 3025	mg/l	47.5	28	30
7.	Chloride	IS: 32 of 3025	mg/l	134	126	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/675	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Type of sample	STP Water (New - 15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.18	7.26	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	278	68	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	654	536	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.8	2.4	10
5.	COD	IS: 1 of 2488	mg/l	346	168	250
6.	BOD	IS: 44 of 3025	mg/l	47.5	26	30
7.	Chloride	IS: 32 of 3025	mg/l	134	138	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/675	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Type of sample	STP Water (5- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.36	6.66	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	268	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	546	426	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	4.5	2.8	10
5.	COD	IS: 1 of 2488	mg/l	295	146	250
6.	BOD	IS: 44 of 3025	mg/l	43.6	26	30
7.	Chloride	IS: 32 of 3025	mg/l	158	128	500

K. Lakshmi
Analyst



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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No.	BCL/876	Issued to M/s AdaniGangavaram Port Ltd.Gangavaram(Village)PedaGanty ada(Mandalam) Visakhapatnam
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Type of Sample	Tug water – Ocean swan berth - 09	
Sample Collected by	M/s Biochem Labs	
Reference Standard	IS: 10500: 1991	

S. No.	Parameter	Unit	Result	Limit IS- 10500
1	Colour	Hazen	4.4	5
2	Odour	Hazen	Unobjectionable	Unobjectionable
3	Taste	Hazen	Agreeable	Agreeable
4	Turbidity	NTU	3.8	5
5	pH	H+conc	6.94	6.5-8.5
6	Total Hardness	mg/l	34.6	300
7	Calcium	mg/l	3.6	100
8	Magnesium	mg/l	8.4	30
9	Chloride	mg/l	22.8	250
10	Total Dissolved Solids	mg/l	436	500
11	Iron	mg/l	0.018	0.3
12	Sulphate	mg/l	56	250
13	Nitrate	mg/l	0.16	50
14	Total Alkalinity	mg/l	86	200
15	Oil Grease	mg/l	Nil	0.01
16	Total Coli forms	Index	00	1-10
17	E.Coli	Cfu/ml	Absent	Should be Absent
18	Salmonella sp	Cfu/ml	Absent	Should be Absent
19	Pseudomonas.aeruginosa	Cfu/ml	Absent	Should be Absent
20	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

K.Lakshmi
Analyst



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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref No	BCL/876	Issued to M/s AdaniGangavaram Port Ltd, Gangavaram(Village) PadaGantiy ada(Mandalam) Visakhapatnam
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Type of Sample	Tug water -14 dolphin berth - 09	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.2	5
5.	pH	H+conc	8.24	6.5-8.5
6.	Total Hardness	mg/l	60.2	300
7.	Calcium	mg/l	3.8	100
8.	Magnesium	mg/l	15.8	30
9.	Chloride	mg/l	14.6	250
10.	Total Dissolved Solids	mg/l	442	500
11.	Iron	mg/l	0.016	0.3
12.	Sulphate	mg/l	56	250
13.	Nitrate	mg/l	0.18	50
14.	Total Alkalinity	mg/l	126	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp.	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

K. Lahari
Analyst



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TEST REPORT ANALYSIS OF UGR WATER

BCL Ref. No	BCL/578	Issued to: M/s Adani Gangavaram Port Ltd, Gangavaram (Village) Peda Gantiyada (Mandalam) Visakhapatnam.
Monitoring Date	November 19, 2024	
Reporting Date	November 25, 2024	
Type of Sample	UGR water	
Sample Collected by	M/s Biochem Labs	
Reference Standard	IS 10500: 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1	Colour	Hazen	4.6	5
2	Odour	Hazen	Unobjectionable	Unobjectionable
3	Taste	Hazen	Agreeable	Agreeable
4	Turbidity	NTU	3.4	5
5	pH	H+conc	7.96	6.5-8.5
6	Total Hardness	mg/l	66.8	300
7	Calcium	mg/l	22.6	100
8	Magnesium	mg/l	3.54	30
9	Chloride	mg/l	31.6	250
10	Total Dissolved Solids	mg/l	426	500
11	Iron	mg/l	0.018	0.3
12	Sulphate	mg/l	56	250
13	Nitrate	mg/l	0.14	50
14	Total Alkalinity	mg/l	188	200
15	Oil Grease	mg/l	Nil	0.01
16	Total Coli forms	Index	00	1-10
17	E Coli	Cfu/ml	Absent	Should be Absent
18	Salmonella sp	Cfu/ml	Absent	Should be Absent
19	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

K. Lahari
Analyst



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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/681	Issued to
Monitoring Date	November 29, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Reporting Date	December 05, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Sediment (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1	pH	H+ conc	8.24	8.26
2	Organic matter	%	1.54	1.8
3	Nitrate	mg/kg	1.6	1.8
4	Phosphate	mg/kg	0.4	1.8
5	Oil & Grease	mg/kg	0.04	0.08
6	Iron	ppm	0.18	0.16
7	Manganese	ppm	0.16	0.24
8	Nickel	ppm	0.14	0.16
9	Chromium	ppm	0.16	0.18
10	Mercury	ppm	Nil	Nil
11	Zinc	ppm	0.4	0.6
12	Lead	ppm	0.06	0.08
13	Arsenic	ppm	0.08	0.09
14	Selenium	ppm	0.06	0.08
15	Copper	ppm	0.16	0.24

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref No	BCL/581	Issued to
Monitoring Date	November 29, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	December 05, 2024	Gangavaram (Village)
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGentiyada (Mandalam).
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		Harbour/Basine	Port Entrance Channel
1	<i>Ophelidae sp</i>	25	22
2	<i>Glyceridae sp</i>	48	15
3	<i>Nereidae sp</i>	26	25
4	<i>Aphroditidae sp</i>	28	36
5	<i>Cirratulidae sp</i>	16	26
6	<i>Caprellidae sp</i>	14	48
7	<i>Amphipoda sp</i>	36	26
8	<i>Gastropoda</i>	24	18
9	<i>Chaetognatha</i>	26	16

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No	BCL/681	Issued to:
Monitoring Date	November 29, 2024	M/s. Adani Gangavaram Port Ltd.,
Reporting Date	December 05, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGanliyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1.	Foraminifera	26	28
2.	Amphipoda	28	16
3.	Mytilusedulis	46	36
4.	Gastropod veliger	18	25
5.	Oithona	04	26
6.	Capitella	18	12
7.	Copepod nauplii	35	16
9.	Brachyuran zoea	26	28
8.	Neanthusarenaceodontaia	06	09

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/682	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	November 29, 2024	
Reporting Date	December 05, 2024	
Type of sample	STP Water (15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H-Concen	6.16	6.46	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	276	96	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	656	588	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.6	3.8	10
5.	COD	IS: 1 of 2488	mg/l	348	146	250
6.	BOD	IS: 44 of 3025	mg/l	47.6	29	30
7.	Chloride	IS: 32 of 3025	mg/l	136	124	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/682	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	November 29, 2024	
Reporting Date	December 05, 2024	
Type of sample	STP Water (New - 15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s.Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.16	7.28	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	276	66	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	656	534	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.6	2.6	10
5.	COD	IS: 1 of 2488	mg/l	348	166	250
6.	BOD	IS: 44 of 3025	mg/l	47.6	24	30
7.	Chloride	IS: 32 of 3025	mg/l	136	138	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/682	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	November 29 ,2024	
Reporting Date	December 05 ,2024	
Type of sample	STP Water (5- KLD Inlet – Outlet)	
Sample Collected and Submitted by	M/s.Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H-Concent	6.38	6.68	5.0 – 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	263	96	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	544	424	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	4.6	2.6	10
5.	COD	IS: 1 of 2488	mg/l	298	148	250
6.	BOD	IS: 44 of 3025	mg/l	43.8	24	30
7.	Chloride	IS: 32 of 3025	mg/l	156	126	500

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No.	BCL/683	Issued to: M/s AdaniGangavaram Port Ltd, Gangavaram (Village) Peda Gantry ada (Mandalam) Visakhapatnam
Monitoring Date	November 29, 2024	
Reporting Date	December 05, 2024	
Type of Sample	Tug water - dolphin 14 berth-9	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.6	5
5.	pH	H+conc	6.78	6.5-8.5
6.	Total Hardness	mg/l	34.4	300
7.	Calcium	mg/l	3.6	100
8.	Magnesium	mg/l	6.8	30
9.	Chloride	mg/l	22.6	250
10.	Total Dissolved Solids	mg/l	446	500
11.	Iron	mg/l	0.028	0.3
12.	Sulphate	mg/l	54	250
13.	Nitrate	mg/l	0.18	50
14.	Total Alkalinity	mg/l	65	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	0	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

K. Lahari
Analyst



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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No	BCL/684	Issued to M/s. Adani Gangavaram Port Ltd. Gangavaram (Village) Pada Gantiyada (Mandalam) Visakhapatnam
Monitoring Date	November 29, 2024	
Reporting Date	December 05, 2024	
Type of Sample	Tug water- Ocean Swan-3 berth no -09	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.8	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	8.28	6.5-8.5
6.	Total Hardness	mg/l	60.8	300
7.	Calcium	mg/l	3.6	100
8.	Magnesium	mg/l	15.4	30
9.	Chloride	mg/l	12.8	250
10.	Total Dissolved Solids	mg/l	436	500
11.	Iron	mg/l	0.018	0.3
12.	Sulphate	mg/l	58	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	128	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	0	1-10
17.	E. Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

K. Lakshmi
Analyst



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Environmental Monitoring Reports

(10th and 30th December 2024)

Adani Gangavaram Port Ltd,

Pedagantyada (Mandal),

Gangavaram (Post),

Visakhapatnam - 530 044.





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Environmental Monitoring Reports

(10th December 2024)

Adani Gangavaram Port Ltd,
Pedagantyada (Mandal),
Gangavaram (Post),
Visakhapatnam - 530 044.





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TEST REPORT ANALYSIS OF DRINKING WATER

BCL Ref No	BCL/685	Issued to M/s AdaniGangavaram Port Ltd, Gangavaram (Village) Peda Gantiy ada (Mandalam) Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	Drinking Water	
Sample Collected by	M/s Biochem Labs	
Reference Standard	IS 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	6.38	6.5-8.5
6.	Total Hardness	mg/l	256	300
7.	Calcium	mg/l	48	100
8.	Magnesium	mg/l	24	30
9.	Chloride	mg/l	36	250
10.	Total Dissolved Solids	mg/l	426	500
11.	Iron	mg/l	0.018	0.3
12.	Sulphate	mg/l	55	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	48	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	06	1-10
17.	E Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

K. Lakshmi
Analyst



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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref No.	BCL/886	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd	
Type of Sample	Ground Water	
Location	Gangavaram Village	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500: 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1	Temperature	°C	32.6	-
2	pH	H+ concn.	7.8	6.5-8.5
3	Total Hardness	mg/l	248	300
4	Calcium (as Ca)	mg/l	48	75
5	Magnesium (as Mg)	mg/l	26	30
6	Chlorides	mg/l	126	250
7	Manganese	mg/l	0.004	0.1
8	Copper	mg/l	0.016	0.05
9	Total Alkalinity	mg/l	88	200
10	Total Dissolved Solids	mg/l	346	500
11	Sulphate	mg/l	46	200
12	Dissolved Oxygen	mg/l	3.8	-
13	Nitrite (as NO ₂)	mg/l	0.02	0.02
14	Iron	mg/l	0.2	0.3
15	Fluoride	mg/l	0.4	1.0
16	Oil & Grease	mg/l	BDL	0.01
17	Chromium (as Cr ⁶⁺)	mg/l	0.03	0.05
18	Cyanide	mg/l	NIL	0.05
19	Zinc	mg/l	0.1	5.0
20	Phenolic Compound	mg/l	NIL	0.001
21	Free Residual Chlorine	mg/l	0.16	0.2
22	Total Coli-forms Count	MPN Index/100ml	Absent	Absent
23	E.coli	Cfu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref. No	BCL/687	Issued to M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandlam), Visakhapatnam
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Ground Water	
Location	North boulder wall open well	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1	Temperature	°C	22.6	-
2	pH	H+ concn	7.48	6.5-8.5
3	Total Hardness	mg/l	225	300
4	Calcium (as Ca)	mg/l	36	75
5	Magnesium (as Mg)	mg/l	28	30
6	Chlorides	mg/l	48	250
7	Manganese	mg/l	0.02	0.1
8	Copper	mg/l	0.016	0.05
9	Total Alkalinity	mg/l	48	200
10	Total Dissolved Solids	mg/l	446	500
11	Sulphate	mg/l	48	200
12	Dissolved Oxygen	mg/l	3.4	-
13	Nitrite (as NO ₂)	mg/l	0.016	0.02
14	Iron	mg/l	0.138	0.3
15	Fluoride	mg/l	0.8	1.0
16	Oil & Grease	mg/l	BDL	0.01
17	Chromium (as Cr ⁶⁺)	mg/l	0.02	0.05
18	Cyanide	mg/l	NIL	0.05
19	Zinc	mg/l	0.4	5.0
20	Phenolic Compound	mg/l	NIL	0.001
21	Free Residual Chlorine	mg/l	0.03	0.2
22	Total Coli forms Count	MPN Index/100ml	Absent	Absent
23	E coli	Cfu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No.	BCL/688	Issued to M/s. Adani Gangavaram Port Ltd. Gangavaram (Village) Peda Gantiyada (Mandlam) Visakhapatnam
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	Sewage Water	
Sample Location	Culvert -11 at Gangavaram Village	
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit
1.	pH	H+Concen	6.18	5.0 - 9.0
2.	Total Suspended Solids	mg/l	86	100
3.	Total Dissolved Solids	mg/l	1436	2100
4.	Oil & Grease	mg/l	3.6	10
5.	COD	mg/l	238	250
6.	BOD	mg/l	26	30
7.	Ammonia Nitrogen	mg/l	4.3	50
8.	Phenolic Compounds	mg/l	0.4	1.0
10.	Nitrate	mg/l	28	50
11.	Nitrite	mg/l	0.2	1.0
11.	Sulphide	mg/l	0.8	1.0
12.	Phosphate	mg/l	4.4	5.0
13.	Cyanide	mg/l	Nil	0.2
14.	Iron	mg/l	1.8	3.0
15.	Aluminium	mg/l	0.2	2.0
16.	Copper	mg/l	0.18	3.0
17.	Chromium	mg/l	0.4	2.0
18.	Zinc	mg/l	1.6	5.0
19.	Lead	mg/l	0.08	0.1
20.	Manganese	mg/l	0.4	2.0
21.	Nickel	mg/l	0.1	3.0
22.	Mercury	mg/l	<0.04	0.01
23.	Cadmium	mg/l	<0.02	2.0

K. Lahari
Analyst



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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref No	BCL/689	Issued to M/s AdaniGangavaram Port Ltd. Gangavaram(Village), PedaGan tiyada(Mandalam), Visakhapatn am.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	Sewage Water	
Sample Location	Kanithigeddanalla Near VSP	
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit
1.	pH	H+Concen	5.46	5.0 - 9.0
2.	Total Suspended Solids	mg/l	248	100
3.	Total Dissolved Solids	mg/l	2636	2100
4.	Oil & Grease	mg/l	7.8	10
5.	COD	mg/l	468	250
6.	BOD	mg/l	66	30
7.	Ammonia Nitrogen	mg/l	18	50
8.	Phenolic Compounds	mg/l	0.4	1.0
10.	Nitrate	mg/l	48	50
11.	Nitrite	mg/l	0.6	1.0
11.	Sulphide	mg/l	0.4	1.0
12.	Phosphate	mg/l	3.6	5.0
13.	Cyanide	mg/l	Nil	0.2
14.	Iron	mg/l	2.6	3.0
15.	Aluminium	mg/l	1.8	2.0
16.	Copper	mg/l	1.6	3.0
17.	Chromium	mg/l	1.8	2.0
18.	Zinc	mg/l	2.4	5.0
19.	Lead	mg/l	0.02	0.1
20.	Manganese	mg/l	1.4	2.0
21.	Nickel	mg/l	1.6	3.0
22.	Mercury	mg/l	0.001	0.01
23.	Cadmium	mg/l	0.002	2.0

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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No	BCL / 690	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10 , 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Collected by	M/s. Biochem Labs	

S. No.	Parameter	Unit	Location	Result		CPCBLimit Industrial	
				Day time	Night time	Day time	Night time
1.	Noise Level	Decibels	Cargo area	74	66	75	70
2.	Noise Level	Decibels	PedaGantiyada/ Security Gate	64	54	-	-
				Day time	Night time	Residential	
						Day time	Night time
3.	Noise Level	Decibels	Gangavaram	58	38	55	45
4.	Noise Level	Decibels	HB Colony	44	46	-	-

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	31.4	32.8	32.6	32.8
2.	pH	H+ conc	8.26	8.26	8.18	8.26
3.	Salinity	PSU	34.6	38	35.6	48
4.	Turbidity	NTU	38	46	16	18
5.	Total Suspended Solids	mg/l	58	66	38	46
6.	Transparency	Mts	0.4	1.4	1.6	1.6
7.	Electrical Conductivity	mMho	32.4	34.6	32.6	33.4

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake wall Outside		North brake wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	32.4	32.4	32.8	32.6
2.	pH	H+ conc	8.16	8.28	8.26	8.34
3.	Salinity	PSU	35.6	35.8	35.6	35.8
4.	Turbidity	NTU	18	18	24	28
5.	Total Suspended Solids	mg/l	24	28	16	26
6.	Transparency	Mts.	1.8	1.8	1.8	2.4
7.	Electrical Conductivity	mMHo	32.4	32.8	32.6	34.8

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Baseline		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	3.6	4.4	3.4	4.8
2.	Biological Oxygen Demand	mg/l	1.4	1.6	1.6	1.6
3.	Oil & Grease	mg/l	1.6	1.6	1.8	2.2
4.	Sulphate	mg/l	1078	1222	1246	1266
5.	Phosphate	mg/l	0.16	0.28	0.18	0.34
6.	Nitrate	mg/l	4.04	4.2	4.6	4.4
7.	Nitrite	mg/l	0.018	0.012	0.014	0.020
8.	Chloride	mg/l	23488	34828	26466	22856
9.	Chromium	ppm	0.014	0.024	0.028	0.032
10.	Mercury	ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.26	0.26	0.26	0.28
12.	Iron	ppm	0.028	0.028	0.0016	0.0024
13.	Manganese	ppm	0.028	0.029	0.028	0.028
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/691	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	3.4	4.4	4.4	4.6
2.	Biological Oxygen Demand	mg/l	1.6	1.8	1.4	1.8
3.	Oil & Grease	mg/l	1.	1.6	1.4	0.4
4.	Sulphate	mg/l	1236	1326	1045	1062
5.	Phosphate	mg/l	0.16	0.24	0.16	0.24
6.	Nitrate	mg/l	4.2	4.6	2.6	2.8
7.	Nitrite	mg/l	0.016	0.018	0.028	0.024
8.	Chloride	mg/l	22436	26244	28086	26496
9.	Chromium	ppm	0.018	0.024	0.026	0.028
10.	Mercury	Ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.24	0.26	0.24	0.26
12.	Iron	ppm	0.026	0.028	0.0016	0.026
13.	Manganese	ppm	0.028	0.026	0.026	0.028
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.5
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	68
	<i>Amphora lineolata</i>	86
	<i>Cymbella marina</i>	24
	<i>Bacteriastrumdelicatulum</i>	15
	<i>Thalassionemanitzschoides</i>	35
	<i>Chaetocerosdydymus</i>	24
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	16
B.	Zooplankton Species	
	<i>Foraminifera</i>	78
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	28
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	06

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	16000
2	Zooplankton Count	No./m ³	1600
3	Chlorophyll a	mg/m ³	3.4
4	Chlorophyll b	mg/m ³	2.6
5	Primary Productivity	gC/m ²	3.8
6	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	58
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschioides</i>	38
	<i>Chaetocerosdydymus</i>	06
	<i>Skeletonemacostatum</i>	16
	<i>Thalassiothrixlongissima</i>	14
	<i>Cymbella marina</i>	08
B.	Zooplankton Species	
	<i>Foraminifera</i>	36
	<i>Chaetognatha</i>	38
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	18
	<i>Eggs of fish & larvae</i>	26

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (High Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	1600
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.5
5.	Primary Productivity	gC/m ²	3.2
6.	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	46
	<i>Amphora lineolata</i>	35
	<i>Cymbella marina</i>	64
	<i>Bacteriastrumdelicatulum</i>	48
	<i>Thalassionemanitzschoides</i>	66
	<i>Chaetocerosdydymus</i>	88
	<i>Skeletonemacostatum</i>	12
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	26
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	26
	Eggs of fish & larvae	48

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	December 16, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	1600
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	2.8
6.	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	58
	<i>Amphora lineolata</i>	44
	<i>Cymbella marina</i>	18
	<i>Bacteriastriumdelicatulum</i>	26
	<i>Thalassionemanitzschoides</i>	36
	<i>Chaetocerosdydymus</i>	26
	<i>Skeletonemacostatum</i>	48
	<i>Thalassiothrixlongissima</i>	25
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	28
	<i>Chaetognatha</i>	16
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	28
	Eggs of fish & larvae	16

K. Lahari
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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	December 16, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
			18000
1.	Phytoplankton Count	No./L	400
2.	Zooplankton Count	No./m ³	3.6
3.	Chlorophyll a	mg/m ³	2.6
4.	Chlorophyll b	mg/m ³	3.5
5.	Primary Productivity	gC/m ²	2.8
6.	Biomass	mg/m ²	

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	88
	<i>Amphora lineolata</i>	34
	<i>Cymbella marina</i>	46
	<i>Bacteriastrumdelicatulum</i>	38
	<i>Thalassionemanitzschoides</i>	46
	<i>Chaetocerosdydymus</i>	16
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	18
	<i>Cymbella marina</i>	26
B.	Zooplankton Species	
	<i>Foraminifera</i>	44
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	38
	<i>Cladocera</i>	26
	Eggs of fish & larvae	18

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	200
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	74
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	16
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	26
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	16
	<i>Thalassiothrixlongissima</i>	22
	<i>Cymbella marina</i>	
B.	Zooplankton Species	46
	<i>Foraminifera</i>	38
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	14
	Eggs of fish & larvae	

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/691	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (High Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1600
3.	Chlorophyll a	mg/m ³	2.2
4.	Chlorophyll b	mg/m ³	3.4
5.	Primary Productivity	gC/m ²	3.8
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	86
	<i>Amphora lineolata</i>	48
	<i>Cymbella marina</i>	68
	<i>Bacterastrumdelicatulum</i>	18
	<i>Thalassionemamantzschoides</i>	46
	<i>Chaetocerosdydymus</i>	15
	<i>Skeletonemacostatum</i>	18
	<i>Thalassiothrixlongissima</i>	14
	<i>Cymbella marina</i>	16
B.	Zooplankton Species	
	<i>Foraminifera</i>	46
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	38
	<i>Cladocera</i>	08
	<i>Eggs of fish & larvae</i>	19

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCL/691	Issued to M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd	
Type of Sample	Marine Water (High Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	16000
2	Zooplankton Count	No./m ³	200
3	Chlorophyll a	mg/m ³	2.6
4	Chlorophyll b	mg/m ³	3.6
5	Primary Productivity	gC/m ²	2.6
6	Biomass	mg/m ²	3.8

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	88
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	24
	<i>Bacteriastrumdelicatulum</i>	16
	<i>Thalassionemanitzschoides</i>	18
	<i>Chaetocerosdydymus</i>	14
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	18
	<i>Cymbella marina</i>	26
B	Zooplankton Species	
	<i>Foraminifera</i>	18
	<i>Chaetognatha</i>	46
	<i>Amphipoda</i>	32
	<i>Cladocera</i>	16
	Eggs of fish & larvae	06

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No	BCL/692	Issued to
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Basine	Port Entrance Channel
1	pH	H+ conc	7.84	8.06
2	Organic matter	%	1.6	1.8
3	Nitrate	mg/kg	2.4	2.6
4	Phosphate	mg/kg	1.8	1.6
5	Oil & Grease	mg/kg	0.16	0.18
6	Iron	ppm	0.14	0.16
7	Manganese	ppm	0.16	0.22
8	Nickel	ppm	0.14	0.18
9	Chromium	ppm	0.12	0.14
10	Mercury	ppm	Nil	Nil
11	Zinc	ppm	0.4	0.6
12	Lead	ppm	0.05	0.08
13	Arsenic	ppm	0.06	0.08
14	Selenium	ppm	0.04	0.06
15	Copper	ppm	0.16	0.18

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/692	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Reporting Date	December 16, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Sediment (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1.	pH	H+ conc	8.18	8.26
2.	Organic matter	%	1.54	1.68
3.	Nitrate	mg/kg	1.6	1.8
4.	Phosphate	mg/kg	0.8	1.4
5.	Oil & Grease	mg/kg	0.04	0.08
6.	Iron	ppm	0.16	0.18
7.	Manganese	ppm	0.18	0.21
8.	Nickel	ppm	0.18	0.16
9.	Chromium	ppm	0.16	0.18
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.8	0.9
12.	Lead	ppm	0.06	0.08
13.	Arsenic	ppm	0.04	0.06
14.	Selenium	ppm	0.06	0.08
15.	Copper	ppm	0.18	0.20

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref No.	BCL/692	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	December 16, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		HarbourBasine	Port Entrance Channel
1	<i>Opheliidae sp</i>	46	34
2	<i>Glyceridae sp</i>	24	26
3	<i>Nereidae sp</i>	18	18
4	<i>Aphroditidae sp</i>	16	46
5	<i>Cirratulidae sp</i>	26	25
6	<i>Capitella sp</i>	01	34
7	<i>Amphipoda sp.</i>	05	15
8	<i>Gastropoda</i>	18	07
9	<i>Chaetognatha</i>	04	08

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/692	Issued to:
Monitoring Date	December 10, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	December 16, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1.	Foraminifera	06	28
2.	Amphipoda	25	14
3.	Mytilusedulis	48	38
4.	Gastropod veliger	16	28
5.	Oithona	05	26
6.	Capitella	16	16
7.	Copepod nauplii	36	18
9.	Brachyuran zoea	24	28
8.	Neanthusarenaceodentata	04	08

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/693	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of sample	STP Water (15- KLD Inlet – Outlet)	
Sample Collected and Submitted by	M/s.Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H ⁺ Concen	6.15	6.46	5.0 – 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	284	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	668	588	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	3.6	10
5.	COD	IS: 1 of 2488	mg/l	368	146	250
6.	BOD	IS: 44 of 3025	mg/l	48.6	26	30
7.	Chloride	IS: 32 of 3025	mg/l	136	126	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/693	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of sample	STP Water (New - 15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.15	7.48	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	284	68	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	668	548	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	2.6	10
5.	COD	IS: 1 of 2488	mg/l	368	156	250
6.	BOD	IS: 44 of 3025	mg/l	48.6	28	30
7.	Chloride	IS: 32 of 3025	mg/l	136	126	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/693	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of sample	STP Water (5- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.48	6.48	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	276	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	548	448	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	4.6	2.8	10
5.	COD	IS: 1 of 2488	mg/l	286	146	250
6.	BOD	IS: 44 of 3025	mg/l	43.4	26	30
7.	Chloride	IS: 32 of 3025	mg/l	158	134	500

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref No	BCL/694	Issued to: M/s AdaniGangavaram Port Ltd,Gangavaram(Village)PedaGantiy ada(Mandalam) Visakhapatnam
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	Tug water -Ocean radiance berth -01	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parametor	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.6	5
5.	pH	H+conc	6.86	6.5-8.5
6.	Total Hardness	mg/l	34.4	300
7.	Calcium	mg/l	3.8	100
8.	Magnesium	mg/l	6.8	30
9.	Chloride	mg/l	22.6	250
10.	Total Dissolved Solids	mg/l	43	500
11.	Iron	mg/l	0.016	0.3
12.	Sulphate	mg/l	56	250
13.	Nitrate	mg/l	0.14	50
14.	Total Alkalinity	mg/l	86	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref No.	BCL/693	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village) Peda Gantry ada (Mandalam) Visakhapatnam.
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	Tug water – ocean swan -03 berth - 01	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.6	5
5.	pH	H+conc	8.28	6.5-8.5
6.	Total Hardness	mg/l	60.4	300
7.	Calcium	mg/l	3.6	100
8.	Magnesium	mg/l	15.6	30
9.	Chloride	mg/l	14.8	250
10.	Total Dissolved Solids	mg/l	436	500
11.	Iron	mg/l	0.018	0.3
12.	Sulphate	mg/l	58	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	126	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E. Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp.	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF UGR WATER

BCL Ref. No.	BCL/697	Issued to: M/s AdaniGangavaram Port Ltd,Gangavaram(Village)PedaGanli ada(Mandalam) Visakhapatnam
Monitoring Date	December 10, 2024	
Reporting Date	December 16, 2024	
Type of Sample	UGR water	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.8	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	7.98	6.5-8.5
6.	Total Hardness	mg/l	66.6	300
7.	Calcium	mg/l	22.4	100
8.	Magnesium	mg/l	3.58	30
9.	Chloride	mg/l	31.6	250
10.	Total Dissolved Solids	mg/l	424	500
11.	Iron	mg/l	0.021	0.3
12.	Sulphate	mg/l	55	250
13.	Nitrate	mg/l	0.18	50
14.	Total Alkalinity	mg/l	186	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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Environmental Monitoring Reports

(30th December 2024)

Adani Gangavaram Port Ltd,
Pedagantyada (Mandal),
Gangavaram (Post),
Visakhapatnam - 530 044.





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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No.	BCL / 698	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 30, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Collected by	M/s. Biochem Labs	

S. No.	Parameter	Unit	Location	Result		CPCB Limit	
				Day time	Night time	Industrial	
						Day time	Night time
1.	Noise Level	Decibels	Cargo area	76	66	75	70
2.	Noise Level	Decibels	PedaGantiyada/ Security Gate	54	62	-	-
				Day time	Night time	Residential	
						Day time	Night time
3.	Noise Level	Decibels	Gangavaram	44	38	55	45
4.	Noise Level	Decibels	HB Colony	42	46	-	-

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	31.6	30.6	31.8	32.8
2.	pH	H+ conc.	8.16	8.28	8.18	8.26
3.	Salinity	PSU	28.6	34	31.6	25.8
4.	Turbidity	NTU	48	52	49	54
5.	Total Suspended Solids	mg/l	46	66	36	45
6.	Transparency	Mts.	0.6	1.4	1.6	2.8
7.	Electrical Conductivity	mMho	32.4	33.4	32.8	36.8

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	32.6	31.8	31.6	32.8
2.	pH	H+ conc	8.18	8.26	8.26	8.16
3.	Salinity	PSU	32.6	32.8	36.8	34.8
4.	Turbidity	NTU	18	22	22	18
5.	Total Suspended Solids	mg/l	26	34	24	26
6.	Transparency	Mts	1.8	2.8	1.6	2.5
7.	Electrical Conductivity	mMHo	31.4	32.6	31.8	32.8

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			HarbourBasine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	4.5	4.8	4.4	4.8
2	Biological Oxygen Demand	mg/l	1.6	1.8	1.4	1.6
3	Oil & Grease	mg/l	1.8	1.4	0.4	0.6
4	Sulphate	mg/l	1236	1268	1258	1246
5	Phosphate	mg/l	0.28	0.32	0.26	0.26
6	Nitrate	mg/l	3.6	3.8	2.5	2.4
7	Nitrite	mg/l	0.026	0.028	0.036	0.018
8	Chloride	mg/l	2344	24526	21458	26436
9	Chromium	ppm	0.028	0.032	0.024	0.026
10	Mercury	ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.16	0.18	0.18	0.16
12	Iron	ppm	0.028	0.034	0.026	0.028
13	Manganese	ppm	0.026	0.028	0.028	0.032
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	2.8	4.4	4.6	4.8
2.	Biological Oxygen Demand	mg/l	1.6	1.3	2.8	1.4
3.	Oil & Grease	mg/l	1.8	1.2	1.2	0.2
4.	Sulphate	mg/l	1224	1126	1024	1069
5.	Phosphate	mg/l	0.16	0.22	0.16	0.24
6.	Nitrate	mg/l	3.6	3.8	2.6	2.8
7.	Nitrite	mg/l	0.026	0.028	0.024	0.028
8.	Chloride	mg/l	26246	25468	22645	24648
9.	Chromium	ppm	0.024	0.026	0.028	0.032
10.	Mercury	ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.16	0.18	0.18	0.21
12.	Iron	ppm	0.028	0.026	0.024	0.026
13.	Manganese	ppm	0.026	0.028	0.026	0.022
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	800
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	3.4
5.	Primary Productivity	gC/m ³	2.8
6.	Biomass	mg/m ³	2.2

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	56
	<i>Amphora lineolata</i>	14
	<i>Cymbella marina</i>	26
	<i>Bacteriastrumdelicatum</i>	64
	<i>Thalassionemanitzschoides</i>	48
	<i>Chaetocerosdydymus</i>	66
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	28
B.	Zooplankton Species	
	<i>Foraminifera</i>	34
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	46
	<i>Cladocera</i>	88
	<i>Eggs of fish & larvae</i>	14

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Reporting Date	January 06, 2024	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

Station Name: Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	400
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	3.5
5.	Primary Productivity	gC/m ²	2.8
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrum micans</i>	58
	<i>Amphora lineolata</i>	16
	<i>Cymbella marina</i>	26
	<i>Bacteriastrum delicatulum</i>	18
	<i>Thalassionema nitzschioides</i>	16
	<i>Chaetoceros dydimus</i>	06
	<i>Skeletonema costatum</i>	18
	<i>Thalassiothrix longissima</i>	16
	<i>Cymbella marina</i>	08
B.	Zooplankton Species	
	<i>Foraminifera</i>	38
	<i>Chaetognatha</i>	18
	<i>Amphipoda</i>	26
	<i>Cladocera</i>	08
	Eggs of fish & larvae	19

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	200
3.	Chlorophyll a	mg/m ³	2.2
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	1.6
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	16
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	18
B.	Zooplankton Species	
	<i>Foraminifera</i>	18
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	18

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/699	Issued to
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	14000
2	Zooplankton Count	No./m ³	400
3	Chlorophyll a	mg/m ³	3.4
4	Chlorophyll b	mg/m ³	2.2
5	Primary Productivity	gC/m ²	2.4
6	Biomass	mg/m ²	1.8

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrummicans</i>	24
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	18
	<i>Bacteriastrumdelicatulum</i>	38
	<i>Thalassionemanitzschoides</i>	44
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	46
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	34
B.	Zooplankton Species	
	<i>Foraminifera</i>	16
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	28
	<i>Eggs of fish & larvae</i>	26

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1600
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	68
	<i>Amphora lineolata</i>	24
	<i>Cymbella marina</i>	36
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	44
	<i>Chaetocerosdydymus</i>	26
	<i>Skeletonemacostatum</i>	28
	<i>Thalassiothrixlongissima</i>	06
	<i>Cymbella marina</i>	28
B.	Zooplankton Species	
	<i>Foraminifera</i>	46
	<i>Chaetognatha</i>	18
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	24
	Eggs of fish & larva	18

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 05, 2024	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	18000
2	Zooplankton Count	No./m ³	1400
3	Chlorophyll a	mg/m ³	4.8
4	Chlorophyll b	mg/m ³	3.6
5	Primary Productivity	gC/m ²	3.4
6	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	85
	<i>Bacteriastrumdelicatulum</i>	25
	<i>Thalassionemanitzschioides</i>	11
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	45
	<i>Thalassiothrixlongissima</i>	18
	<i>Cymbella marina</i>	12
B.	Zooplankton Species	
	<i>Foraminifera</i>	15
	<i>Chaetognatha</i>	56
	<i>Amphipoda</i>	24
	<i>Cladocera</i>	15
	<i>Eggs of fish & larvae</i>	26

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/699	Issued to.
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	400
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	2.2
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	46
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	47
	<i>Bacteriastrumdelicatulum</i>	26
	<i>Thalassionemanitzschoides</i>	26
	<i>Chaetocerosdydymus</i>	18
	<i>Skeletonemacostatum</i>	38
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	26
B.	Zooplankton Species	
	<i>Foraminifera</i>	68
	<i>Chaetognatha</i>	36
	<i>Amphipoda</i>	24
	<i>Cladocera</i>	14
	<i>Eggs of fish & larvae</i>	36

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/699	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2024	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	600
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.4
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	28
	<i>Amphora lineolata</i>	34
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatulum</i>	46
	<i>Thalassionemanitzschoides</i>	21
	<i>Chaetocerosdydymus</i>	16
	<i>Skeletonemacostatum</i>	46
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	28
B.	Zooplankton Species	
	<i>Foraminifera</i>	28
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	15
	<i>Cladocera</i>	02
	<i>Eggs of fish & larvae</i>	14

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/700	Issued to
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2025	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Sediment (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Basine	Port Entrance Channel
1	pH	H+ conc	8.6	8.28
2	Organic matter	%	1.4	1.4
3	Nitrate	mg/kg	1.8	1.6
4	Phosphate	mg/kg	1.6	1.8
5	Oil & Grease	mg/kg	0.18	0.2
6	Iron	ppm	0.16	0.14
7	Manganese	ppm	0.18	0.16
8	Nickel	ppm	0.16	0.14
9	Chromium	ppm	0.12	0.16
10	Mercury	ppm	Nil	Nil
11	Zinc	ppm	0.4	0.2
12	Lead	ppm	0.06	0.08
13	Arsenic	ppm	0.02	0.06
14	Selenium	ppm	0.04	0.05
15	Copper	ppm	0.18	0.21

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/700	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Reporting Date	January 06, 2025	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Sediment (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1.	pH	H+ conc	8.16	8.14
2.	Organic matter	%	1.5	1.6
3.	Nitrate	mg/kg	1.08	1.8
4.	Phosphate	mg/kg	0.4	0.8
5.	Oil & Grease	mg/kg	0.14	0.16
6.	Iron	ppm	0.15	0.18
7.	Manganese	ppm	0.18	0.16
8.	Nickel	ppm	0.15	0.18
9.	Chromium	ppm	0.11	0.14
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	1.8	1.9
12.	Lead	ppm	0.02	0.04
13.	Arsenic	ppm	0.04	0.06
14.	Selenium	ppm	0.06	0.08
15.	Copper	ppm	0.18	0.21

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/700	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 06, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		Harbour Basine	Port Entrance Channel
1.	<i>Eunicidae sp.</i>	26	16
2.	<i>Paraonidae sp.</i>	48	48
3.	<i>Syllidae sp.</i>	44	58
4.	<i>Sabellidae sp.</i>	26	26
5.	<i>Oithona sp.</i>	16	18
6.	<i>Capitella sp.</i>	28	36
7.	<i>Syllidae sp.</i>	26	29
9.	<i>Amphipoda sp.</i>	56	16
8.	<i>Nematoda sp.</i>	14	56

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/700	Issued to:
Monitoring Date	December 30, 2024	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 06, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1.	<i>Capitella sp.</i>	46	38
2.	<i>Syllidae sp</i>	34	18
3.	<i>Amphipoda sp.</i>	08	26
4.	<i>Nematoda sp.</i>	26	34
5.	<i>Capitella sp.</i>	28	18
6.	<i>Syllidae sp</i>	16	38
7.	<i>Paraonidae sp.</i>	18	14
9.	<i>Syllidae sp</i>	26	16
8.	<i>Sabellidae sp</i>	08	12

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/701	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 30, 2024	
Reporting Date	January 06, 2025	
Type of sample	STP Water (15- KLD Inlet – Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	5.6	6.66	5.0 – 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	224	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	548	566	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	3.6	12
5.	COD	IS: 1 of 2488	mg/l	246	234	250
6.	BOD	IS: 44 of 3025	mg/l	42.6	23.5	30
7.	Chloride	IS: 32 of 3025	mg/l	156	146	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/701	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 30, 2024	
Reporting Date	January 06, 2025	
Type of sample	STP Water (New - 15-KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen.	5.6	6.6	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	224	88	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	548	476	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	2.4	10
5.	COD	IS: 1 of 2488	mg/l	246	126	250
6.	BOD	IS: 44 of 3025	mg/l	42.6	21.8	30
7.	Chloride	IS: 32 of 3025	mg/l	156	126	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/701	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	December 30, 2024	
Reporting Date	January 06, 2025	
Type of sample	STP Water (5- KLD Inlet – Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.4	6.48	5.0 – 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	236	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	626	596	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	2.6	10
5.	COD	IS: 1 of 2488	mg/l	296	148	250
6.	BOD	IS: 44 of 3025	mg/l	42.8	26.8	30
7.	Chloride	IS: 32 of 3025	mg/l	134	124	500

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No.	BCL/702	Issued to M/s. AdaniGangavaram Port Ltd, Gangavaram(Village)PedaGantiy ada(Mandalam) Visakhapatnam.
Monitoring Date	December 30, 2024	
Reporting Date	January 06, 2024	
Type of Sample	Tug water 12 dolphin Berth-9	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	6.86	6.5-8.5
6.	Total Hardness	mg/l	34.4	300
7.	Calcium	mg/l	3.8	100
8.	Magnesium	mg/l	6.6	30
9.	Chloride	mg/l	22.8	250
10.	Total Dissolved Solids	mg/l	446	500
11.	Iron	mg/l	0.014	0.3
12.	Sulphate	mg/l	56	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	86	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	0	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref. No.	BCL/703	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village) Peda Gantiyada (Mandalam) Visakhapatnam.
Monitoring Date	December 30, 2024	
Reporting Date	January 06, 2024	
Type of Sample	Tug water- 14 dolphin Berth-9	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.8	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.4	5
5.	pH	H+conc	8.26	6.5-8.5
6.	Total Hardness	mg/l	60.8	300
7.	Calcium	mg/l	3.4	100
8.	Magnesium	mg/l	15.8	30
9.	Chloride	mg/l	12.4	250
10.	Total Dissolved Solids	mg/l	438	500
11.	Iron	mg/l	0.014	0.3
12.	Sulphate	mg/l	58	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	16	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	0	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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Environmental Monitoring Reports

(07th January 2025)

Adani Gangavaram Port Ltd,
Pedagantyada (Mandal),
Gangavaram (Post),
Visakhapatnam - 530 044.





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TEST REPORT ANALYSIS OF DRINKING WATER

BCL Ref. No.	BCL/704	Issued to: M/s AdaniGangavaram Port Ltd, Gangavaram(Village) Peda Gantiy ada(Mandalam) Visakhapatnam
Monitoring Date	January 07, 2025	
Reporting Date	January 15, 2025	
Type of Sample	Drinking Water	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.4	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.6	5
5.	pH	H+conc	6.38	6.5-8.5
6.	Total Hardness	mg/l	254	300
7.	Calcium	mg/l	46	100
8.	Magnesium	mg/l	28	30
9.	Chloride	mg/l	34	250
10.	Total Dissolved Solids	mg/l	426	500
11.	Iron	mg/l	0.016	0.3
12.	Sulphate	mg/l	58	250
13.	Nitrate	mg/l	0.14	50
14.	Total Alkalinity	mg/l	48	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	6	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref No	BCL/705	Issued to M/s Adani Gangavaram Port Ltd. Gangavaram (Village), Pedagantiyada (Mandalam), Visakhapatnam
Monitoring Date	January 07, 2025	
Reporting Date	January 15, 2025	
Organization	M/s Adani Gangavaram Port Ltd	
Type of Sample	Ground Water	
Location	Gangavaram Village	
Sample Collected by	M/s Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1	Temperature	°C	32.6	-
2	pH	H+ concn.	7.8	6.5-8.5
3	Total Hardness	mg/l	248	300
4	Calcium (as Ca)	mg/l	48	75
5	Magnesium (as Mg)	mg/l	26	30
6	Chlorides	mg/l	126	250
7	Manganese	mg/l	0.004	0.1
8	Copper	mg/l	0.018	0.05
9	Total Alkalinity	mg/l	88	200
10	Total Dissolved Solids	mg/l	346	500
11	Sulphate	mg/l	46	200
12	Dissolved Oxygen	mg/l	3.5	-
13	Nitrite (as NO ₂)	mg/l	0.08	0.02
14	Iron	mg/l	0.4	0.3
15	Fluoride	mg/l	0.4	1.0
16	Oil & Grease	mg/l	BDL	0.01
17	Chromium (as Cr ⁶⁺)	mg/l	0.06	0.05
18	Cyanide	mg/l	NIL	0.05
19	Zinc	mg/l	0.4	5.0
20	Phenolic Compound	mg/l	NIL	0.001
21	Free Residual Chlorine	mg/l	0.18	0.2
22	Total Coli forms Count	MPN Index/100ml	Absent	Absent
23	E.coli	Cfu/ml	Absent	Absent

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Regd. Off. # 1-74, Musalayyapalem, Near Sagar Nagar, Visakhapatnam-530043, A.P. (INDIA)



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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref No.	BCL/706	Issued to M/s. Adani Gangavaram Port Ltd. Gangavaram (Village). Peda Ganthyada (Mandalam) Visakhapatnam
Monitoring Date	January 07, 2025	
Reporting Date	January 15, 2025	
Organization	M/s. Adani Gangavaram Port Ltd	
Type of Sample	Ground Water	
Location	North boulder wall open well	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1	Temperature	°C	22.6	-
2	pH	H+ concn.	7.48	6.5-8.5
3	Total Hardness	mg/l	226	300
4	Calcium (as Ca)	mg/l	38	75
5	Magnesium (as Mg)	mg/l	24	30
6	Chlorides	mg/l	48	250
7	Manganese	mg/l	0.02	0.1
8	Copper	mg/l	0.016	0.05
9	Total Alkalinity	mg/l	48	200
10	Total Dissolved Solids	mg/l	446	500
11	Sulphate	mg/l	44	200
12	Dissolved Oxygen	mg/l	3.8	-
13	Nitrite (as NO ₂)	mg/l	0.016	0.02
14	Iron	mg/l	0.138	0.3
15	Fluoride	mg/l	0.8	1.0
16	Oil & Grease	mg/l	BDL	0.01
17	Chromium (as Cr ⁶⁺)	mg/l	0.02	0.05
18	Cyanide	mg/l	NIL	0.05
19	Zinc	mg/l	0.4	5.0
20	Phenolic Compound	mg/l	NIL	0.001
21	Free Residual Chlorine	mg/l	0.04	0.2
22	Total Coli forms Count	MPN Index/100ml	Absent	Absent
23	E.coli	Cfu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No.	BCL/707	Issued to:
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), Peda Garitiyada (Mandalam), Visakhapatnam.
Reporting Date	January 15, 2025	
Type of Sample	Sewage Water	
Sample Location	Kanithigeddanalla Near VSP	
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit
1.	pH	H+Concen	5.46	5.0 – 9.0
2.	Total Suspended Solids	mg/l	248	100
3.	Total Dissolved Solids	mg/l	2634	2100
4.	Oil & Grease	mg/l	7.8	10
5.	COD	mg/l	466	250
6.	BOD	mg/l	65	30
7.	Ammonia Nitrogen	mg/l	18	50
8.	Phenolic Compounds	mg/l	0.6	1.0
10.	Nitrate	mg/l	48	50
11.	Nitrite	mg/l	0.6	1.0
11.	Sulphide	mg/l	0.4	1.0
12.	Phosphate	mg/l	3.6	5.0
13.	Cyanide	mg/l	Nil	0.2
14.	Iron	mg/l	2.8	3.0
15.	Aluminium	mg/l	1.4	2.0
16.	Copper	mg/l	1.6	3.0
17.	Chromium	mg/l	1.8	2.0
18.	Zinc	mg/l	2.8	5.0
19.	Lead	mg/l	0.06	0.1
20.	Manganese	mg/l	1.4	2.0
21.	Nickel	mg/l	1.6	3.0
22.	Mercury	mg/l	0.004	0.01
23.	Cadmium	mg/l	0.006	2.0

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No	BCL/708	Issued to:
Monitoring Date	January 07, 2025	M/s AdaniGangavaram Port Ltd. Gangavaram (Village) PedaGantiyada (Mandalam) Visakhapatnam.
Reporting Date	January 15, 2025	
Type of Sample	Sewage Water	
Sample Location	Culvert -11 at Gangavaram Village	
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit
1.	pH	H+Concen	6.16	5.0 – 9.0
2.	Total Suspended Solids	mg/l	86	100
3.	Total Dissolved Solids	mg/l	1436	2100
4.	Oil & Grease	mg/l	3.6	10
5.	COD	mg/l	234	250
6.	BOD	mg/l	26	30
7.	Ammonia Nitrogen	mg/l	4.4	50
8.	Phenolic Compounds	mg/l	0.8	1.0
10.	Nitrate	mg/l	24	50
11.	Nitrite	mg/l	0.6	1.0
11.	Sulphide	mg/l	0.8	1.0
12.	Phosphate	mg/l	4.8	5.0
13.	Cyanide	mg/l	Nil	0.2
14.	Iron	mg/l	1.4	3.0
15.	Aluminium	mg/l	0.2	2.0
16.	Copper	mg/l	0.4	3.0
17.	Chromium	mg/l	0.6	2.0
18.	Zinc	mg/l	1.6	5.0
19.	Lead	mg/l	0.02	0.1
20.	Manganese	mg/l	0.8	2.0
21.	Nickel	mg/l	0.4	3.0
22.	Mercury	mg/l	<0.04	0.01
23.	Cadmium	mg/l	<0.02	2.0

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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No.	BCL/709	Issued to
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd,
Organization	M/s. Adani Gangavaram Port Ltd.	Gangavaram (Village),
Collected by	M/s. Biochem Labs	PedaGantiyada (Mandalam), Visakhapatnam

S. No.	Parameter	Unit	Location	Result		CPCBLimit	
				Day time	Night time	Industrial	
						Day time	Night time
1	Noise Level	Decibels	Cargo area	74	68	75	70
2	Noise Level	Decibels	PedaGantiyada/ Security Gate	68	56	-	-
				Day time	Night time	Residential	
						Day time	Night time
3	Noise Level	Decibels	Gangavaram	56	38	55	45
4	Noise Level	Decibels	HB Colony	48	52	-	-

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/710	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village). PedaGantiyada (Mandalam). Visakhapatnam.
Monitoring Date	January 07 2025	
Reporting Date	January 15, 2025	
Organization	M/s. Adani Gangavaram Port Ltd	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1	Temperature	°C	31.8	32.8	32.6	32.8
2	pH	H+ conc	8.26	8.26	8.18	8.26
3	Salinity	PSU	34.6	38	35.6	48
4	Turbidity	NTU	38	46	39	18
5	Total Suspended Solids	mg/l	58	68	38	46
6	Transparency	Mts	0.4	1.4	1.6	1.8
7	Electrical Conductivity	mMHo	32.4	34.6	32.6	33.6

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCL/710	Issued to: M/s. Adani Gangavaram Port Ltd Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam
Monitoring Date	January 07, 2025	
Reporting Date	January 15, 2025	
Organization	M/s. Adani Gangavaram Port Ltd	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake wall Outside		North brake wall Outside	
			Low tide	High tide	Low tide	High tide
1	Temperature	°C	32.8	32.9	32.6	32.4
2	pH	H+ conc	8.16	8.26	8.24	8.36
3	Salinity	PSU	35.6	35.9	35.8	35.6
4	Turbidity	NTU	18	21	23	24
5	Total Suspended Solids	mg/l	24	26	18	28
6	Transparency	Mts.	1.8	1.9	1.6	2.4
7	Electrical Conductivity	mMho	32.8	33.4	32.4	34.8

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/710	Issued to
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), PedaGantiyada (Mandalam), Visakhapatnam.
Reporting Date	January 15, 2025	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	3.6	4.4	3.6	4.6
2	Biological Oxygen Demand	mg/l	1.2	1.6	1.6	1.6
3	Oil & Grease	mg/l	1.4	1.8	1.8	2.2
4	Sulphate	mg/l	1076	1226	1248	1266
5	Phosphate	mg/l	0.18	0.26	0.18	0.34
6	Nitrate	mg/l	4.04	4.4	4.2	4.4
7	Nitrite	mg/l	0.018	0.021	0.014	0.020
8	Chloride	mg/l	23486	34826	26488	22956
9	Chromium	ppm	0.016	0.026	0.026	0.026
10	Mercury	ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.26	0.28	0.24	0.28
12	Iron	ppm	0.028	0.028	0.0016	0.0024
13	Manganese	ppm	0.029	0.028	0.028	0.028
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/710	Issued to:
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 15, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1	Dissolved Oxygen	mg/l	3.8	4.2	4.4	4.6
2	Biological Oxygen Demand	mg/l	1.4	1.8	1.6	1.8
3	Oil & Grease	mg/l	1.4	1.6	1.4	0.4
4	Sulphate	mg/l	1238	1326	1045	1062
5	Phosphate	mg/l	0.16	0.24	0.16	0.24
6	Nitrate	mg/l	4.2	4.6	2.6	2.8
7	Nitrite	mg/l	0.016	0.018	0.028	0.024
8	Chloride	mg/l	22436	26244	28089	26496
9	Chromium	ppm	0.018	0.024	0.024	0.026
10	Mercury	Ppm	Nil	Nil	Nil	Nil
11	Zinc	ppm	0.24	0.26	0.24	0.24
12	Iron	ppm	0.026	0.026	0.0018	0.026
13	Manganese	ppm	0.028	0.028	0.028	0.028
14	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No.	BCL/710	Issued to:
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 15, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.8
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	68
	<i>Amphora lineolata</i>	86
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatulum</i>	16
	<i>Thalassionemanitzschoides</i>	34
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marna</i>	16
B.	Zooplankton Species	
	<i>Foraminifera</i>	78
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	28
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	05

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/710	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village). PedaGantiyada (Mandalam). Visakhapatnam.
Monitoring Date	January 07, 2025	
Reporting Date	January 15, 2025	
Organization	M/s. Adani Gangavaram Port Ltd.	
Type of Sample	Marine Water (Low Tide)	
Sample Collected by	M/s. Biochem Labs	

StationName: Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.8
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	54
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	38
	<i>Chaetocerosdydymus</i>	06
	<i>Skeletonemacostatum</i>	16
	<i>Thalassiothrixlongissima</i>	14
	<i>Cymbella marina</i>	04
B.	Zooplankton Species	
	<i>Foraminifera</i>	36
	<i>Chaetognatha</i>	38
	<i>Amphipoda</i>	16
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	22

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/710	Issued to
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 15, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No./L	14000
2	Zooplankton Count	No./m ³	1800
3	Chlorophyll a	mg/m ³	3.6
4	Chlorophyll b	mg/m ³	2.6
5	Primary Productivity	gC/m ²	3.6
6	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	34
	<i>Cymbella marina</i>	62
	<i>Bacteriastrumdelicatum</i>	46
	<i>Thalassionemanitzschoides</i>	68
	<i>Chaetocerosdydymus</i>	86
	<i>Skeletonemacostatum</i>	14
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	28
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	38
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	28

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/710	Issued to:
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 15, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ³	2.6
6.	Biomass	mg/m ²	2.2

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	56
	<i>Amphora lineolata</i>	42
	<i>Cymbella marina</i>	16
	<i>Bacteriastrumdelicatulum</i>	28
	<i>Thalassionemanitzschioides</i>	38
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	46
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	26
	<i>Chaetognatha</i>	18
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	26
	<i>Eggs of fish & larvae</i>	18

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TEST REPORT

ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/710	Issued to:
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 15, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName: South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	400
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.4
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A	Phytoplankton Species	
	<i>Prorocentrum micans</i>	86
	<i>Amphora lineolata</i>	36
	<i>Cymbella marina</i>	48
	<i>Bacteranstrum delicatulum</i>	36
	<i>Thalassionema nitzschioides</i>	44
	<i>Chaetoceros dydimus</i>	18
	<i>Skeletonema costatum</i>	26
	<i>Thalassiothrix longissima</i>	16
	<i>Cymbella marina</i>	24
B	Zooplankton Species	
	<i>Foraminifera</i>	48
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	36
	<i>Cladocera</i>	28
	<i>Eggs of fish & larvae</i>	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/710	Issued to
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 15, 2025	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	600
3.	Chlorophyll a	mg/m ³	3.8
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	70
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	18
	<i>Bacteriastrumdelicatulum</i>	26
	<i>Thalassionemamantzschoides</i>	34
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	18
	<i>Cymbella marina</i>	21
B.	Zooplankton Species	
	<i>Foraminifera</i>	48
	<i>Chaetognatha</i>	36
	<i>Amphipoda</i>	28
	<i>Cladocera</i>	16
	Eggs of fish & larvae	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref No	BCL/710	Issued to
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 15, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Marine Water (High Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

StationName: South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1	Phytoplankton Count	No /L	19000
2	Zooplankton Count	No./m ³	1800
3	Chlorophyll a	mg/m ³	2.4
4	Chlorophyll b	mg/m ³	3.2
5	Primary Productivity	gC/m ²	3.6
6	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	85
	<i>Amphora lineolata</i>	44
	<i>Cymbella marina</i>	68
	<i>Bacteriastrumdelicatum</i>	16
	<i>Thalassionemamitzschoides</i>	44
	<i>Chaetocerosdydymus</i>	11
	<i>Skeletonemacostatum</i>	12
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	12
B.	Zooplankton Species	
	<i>Foraminifera</i>	44
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	36
	<i>Cladocera</i>	04
	<i>Eggs of fish & larvae</i>	18

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/710	Issued to:
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd,
Reporting Date	January 15, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Marine Water (High Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	800
3.	Chlorophyll a	mg/m ³	2.4
4.	Chlorophyll b	mg/m ³	3.4
5.	Primary Productivity	gC/m ²	2.6
6.	Biomass	mg/m ²	3.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	88
	<i>Amphora lineolata</i>	44
	<i>Cymbella marina</i>	22
	<i>Bacteriastrumdelicatulum</i>	18
	<i>Thalassionemanitzschoides</i>	16
	<i>Chaetocerosdydymus</i>	18
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	28
B.	Zooplankton Species	
	<i>Foraminifera</i>	16
	<i>Chaetognatha</i>	48
	<i>Amphipoda</i>	34
	<i>Cladocera</i>	18
	Eggs of fish & larvae	08

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/711	Issued to:
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 15, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Basine	Port Entrance Channel
1	pH	H ⁺ conc	7.86	8.06
2	Organic matter	%	1.4	1.4
3	Nitrate	mg/kg	2.4	2.6
4	Phosphate	mg/kg	1.8	2.1
5	Oil & Grease	mg/kg	0.16	0.18
6	Iron	ppm	0.19	0.21
7	Manganese	ppm	0.16	0.20
8	Nickel	ppm	0.14	0.16
9	Chromium	ppm	0.16	0.18
10	Mercury	ppm	Nil	Nil
11	Zinc	ppm	0.4	0.6
12	Lead	ppm	0.04	0.06
13	Arsenic	ppm	0.06	0.08
14	Selenium	ppm	0.04	0.06
15	Copper	ppm	0.18	0.21

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/711	Issued to:
Monitoring Date	January 07 2025	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 15, 2025	Gangavaram (Village).
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam).
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1	pH	H+ conc	8.16	8.28
2	Organic matter	%	1.56	1.66
3	Nitrate	mg/kg	1.4	1.6
4	Phosphate	mg/kg	0.4	1.6
5	Oil & Grease	mg/kg	0.02	0.04
6	Iron	ppm	0.18	0.16
7	Manganese	ppm	0.14	0.16
8	Nickel	ppm	0.16	0.18
9	Chromium	ppm	0.10	0.18
10	Mercury	ppm	Nil	Nil
11	Zinc	ppm	0.6	0.4
12	Lead	ppm	0.04	0.02
13	Arsenic	ppm	0.02	0.04
14	Selenium	ppm	0.04	0.06
15	Copper	ppm	0.16	0.18

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref No	BCL/711	Issued to
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 15, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandalam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		Harbour Basine	Port Entrance Channel
1.	<i>Opheliidae sp</i>	46	34
2.	<i>Glyceridae sp</i>	24	26
3.	<i>Nereidae sp</i>	18	18
4.	<i>Aphroditidae sp</i>	16	46
5.	<i>Cirratulidae sp</i>	26	28
6.	<i>Capitella sp</i>	06	25
7.	<i>Amphipoda sp.</i>	08	16
8.	<i>Gastropoda</i>	18	28
9.	<i>Chaetognatha</i>	02	04

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/711	Issued to:
Monitoring Date	January 07, 2025	M/s. Adani Gangavaram Port Ltd.
Reporting Date	January 15, 2025	Gangavaram (Village),
Organization	M/s. Adani Gangavaram Port Ltd.	PedaGantiyada (Mandaiam),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1.	Foraminifera	08	26
2.	Amphipoda	26	16
3.	Mytilusedulis	46	38
4.	Gastropod veliger	18	24
5.	Oithona	08	26
6.	Capitella	14	16
7.	Copepod nauplii	34	24
9.	Brachyuran zoea	28	26
8.	Neanthusarenaceodentata	08	08

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/712	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	January 07, 2025	
Reporting Date	January 15, 2025	
Type of sample	STP Water (15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.18	6.46	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	288	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	668	588	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	3.6	10
5.	COD	IS: 1 of 2488	mg/l	346	146	250
6.	BOD	IS: 44 of 3025	mg/l	47.8	28	30
7.	Chloride	IS: 32 of 3025	mg/l	136	126	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref No.	BCL/712	Issued to: M/s. Adani Gangavaram Port Ltd, Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	January 07, 2025	
Reporting Date	January 15, 2025	
Type of sample	STP Water (New - 15- KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.18	7.48	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	288	64	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	668	546	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	3.4	2.5	10
5.	COD	IS: 1 of 2488	mg/l	346	156	250
6.	BOD	IS: 44 of 3025	mg/l	47.8	28	30
7.	Chloride	IS: 32 of 3025	mg/l	136	126	500

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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL712	Issued to: M/s. Adani Gangavaram Port Ltd. Gangavaram (Village), Peda Gantiyada (Mandalam), Visakhapatnam.
Monitoring Date	January 07, 2025	
Reporting Date	January 15, 2025	
Type of sample	STP Water (5-KLD Inlet - Outlet)	
Sample Collected and Submitted by	M/s. Adani Gangavaram Port Ltd.	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	Limit
1.	pH	IS: 11 of 3025	H+Concen	6.48	6.52	5.0 - 9.0
2.	Total Suspended Solids	IS: 17 of 3025	mg/l	276	98	100
3.	Total Dissolved Solids	IS: 16 of 3025	mg/l	548	444	2100
4.	Oil & Grease	IS: 39 of 3025	mg/l	4.6	2.8	10
5.	COD	IS: 1 of 2488	mg/l	286	146	250
6.	BOD	IS: 44 of 3025	mg/l	43.8	26	30
7.	Chloride	IS: 32 of 3025	mg/l	154	136	500

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref No	BCL/713	Issued to M/s AdaniGangavaram Port Ltd, Gangavaram(Village)PedaGantiy ada(Mandalam) Visakhapatnam.
Monitoring Date	January 07, 2025	
Reporting Date	January 15, 2025	
Type of Sample	Tug water -Dolphin no -12 berth - 09	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.6	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.6	5
5.	pH	H+conc	6.86	6.5-8.5
6.	Total Hardness	mg/l	34.8	300
7.	Calcium	mg/l	3.4	100
8.	Magnesium	mg/l	6.8	30
9.	Chloride	mg/l	22.6	250
10.	Total Dissolved Solids	mg/l	434	500
11.	Iron	mg/l	0.016	0.3
12.	Sulphate	mg/l	56	250
13.	Nitrate	mg/l	0.18	50
14.	Total Alkalinity	mg/l	86	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF TUG WATER

BCL Ref No.	BCL/714	Issued to: M/s AdaniGangavaram Port Ltd,Gangavaram(Village)PedaGantiy ada(Mandalam) Visakhapatnam.
Monitoring Date	January 07,2025	
Reporting Date	January 15,2025	
Type of Sample	Tug water – ocean swan -03 berth - 09	
Sample Collected by	M/s Biochem Labs	
Reference Standard	IS: 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.8	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.6	5
5.	pH	H+conc	8.26	6.5-8.5
6.	Total Hardness	mg/l	60.8	300
7.	Calcium	mg/l	3.8	100
8.	Magnesium	mg/l	15.6	30
9.	Chloride	mg/l	14.8	250
10.	Total Dissolved Solids	mg/l	436	500
11.	Iron	mg/l	0.018	0.3
12.	Sulphate	mg/l	54	250
13.	Nitrate	mg/l	0.18	50
14.	Total Alkalinity	mg/l	126	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp.	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF UGR WATER

BCL Ref. No.	BCL/715	Issued to M/s AdaniGangavaram Port Ltd, Gangavaram(Village)PedaGantiy- ada(Mandalam) Visakhapatnam.
Monitoring Date	January 07, 2025	
Reporting Date	January 15, 2025	
Type of Sample	UGR water	
Sample Collected by	M/s Biochem Labs	
Reference Standard	IS- 10500, 1991	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Colour	Hazen	4.8	5
2.	Odour	Hazen	Unobjectionable	Unobjectionable
3.	Taste	Hazen	Agreeable	Agreeable
4.	Turbidity	NTU	3.8	5
5.	pH	H+conc	7.96	6.5-8.5
6.	Total Hardness	mg/l	66.8	300
7.	Calcium	mg/l	22.4	100
8.	Magnesium	mg/l	3.58	30
9.	Chloride	mg/l	31.6	250
10.	Total Dissolved Solids	mg/l	428	500
11.	Iron	mg/l	0.016	0.3
12.	Sulphate	mg/l	58	250
13.	Nitrate	mg/l	0.16	50
14.	Total Alkalinity	mg/l	18	200
15.	Oil Grease	mg/l	Nil	0.01
16.	Total Coli forms	Index	00	1-10
17.	E.Coli	Cfu/ml	Absent	Should be Absent
18.	Salmonella sp	Cfu/ml	Absent	Should be Absent
19.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
20.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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Environmental Monitoring Reports

(11th February and 28th February 2025)

Adani Gangavaram Port Limited,

Pedagantyada (Mandal),

Gangavaram (Post),

Visakhapatnam - 530 044.





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TEST REPORT ANALYSIS OF VIWSCOWATER

BCL Ref. No.	BCL/725	Issued to: AdaniGangavaram Port Limited,Gangavaram(Village) Pedagantiyada(Mandal) Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Quantity of sample	01 Liter	
Type of container	Cans and Glass bottle	
Type of Sample	POTTED VIWSCO WATER	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 2011	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Temperature	°C	28.0	-
2.	Colour	Hazen	3.8	05-15
3.	Odour	Hazen	Unobjectionable	Unobjectionable
4.	Taste	Hazen	Agreeable	Agreeable
5.	Turbidity	NTU	3.4	1-5
6.	pH	-	6.46	6.5-8.5
7.	Total Hardness	mg/l	126	300-600
8.	Calcium	mg/l	38	75-200
9.	Magnesium	mg/l	16	30-100
10.	Chloride	mg/l	38	250-1000
11.	Total Alkalinity	mg/l	54	200-600
12.	Total Dissolved Solids	mg/l	434	500- 2000
13.	Iron	mg/l	0.014	0.3-1.0
14.	Sulphate	mg/l	46	200-400
15.	Nitrate	mg/l	0.38	45-100
16.	Oil Grease	mg/l	Nil	0-0.1
17.	Total Coli forms	Cfu/ml	8	1-10
18.	E Coli	Cfu/ml	Absent	Should be Absent
19.	Salmonella sp	Cfu/ml	Absent	Should be Absent
20.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
21.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

V. Vinod Kumar
Analyst



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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref. No.	BCL/727	Issued to: Adani Gangavaram Port Ltd. Gangavaram (Village), Pedaganliyada (Mandal), Visakhapatnam
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited.	
Quantity of sample	1 liter	
Type of container	Cans, glass bottles	
Type of Sample	Ground Water- well water	
Location	North boundary wall open well	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 2011	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Temperature	°C	24.8	15-30
2.	pH	-	7.36	6.5-8.5
3.	Total Hardness	mg/l	208	300-600
4.	Calcium (as Ca)	mg/l	42	75-200
5.	Magnesium (as Mg)	mg/l	26	30-100
6.	Chlorides	mg/l	56	250-1000
7.	Manganese	mg/l	0.02	0.1-0.5
8.	Copper	mg/l	0.014	0.05-1.5
9.	Total Alkalinity	mg/l	128	200-600
10.	Total Dissolved Solids	mg/l	342	500-2000
11.	Sulphate	mg/l	60	200-400
12.	Nitrite (as NO ₂)	mg/l	0.014	0-1.0
13.	Iron	mg/l	0.18	0.3-1.0
14.	Fluoride	mg/l	0.6	0.5-1.0
15.	Oil & Grease	mg/l	BDL	0-0.1
16.	Chromium (as Cr ^{VI})	mg/l	0.02	0.05-0.05
17.	Cyanide	mg/l	NIL	0-0.05
18.	Zinc	mg/l	0.6	0.1-5.0
19.	Phenolic Compound	mg/l	NIL	0-0.002
20.	Total Coli forms Count	Cfu/ml	Absent	Absent
21.	E coli	Cfu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref. No.	BCL726	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited.	
Quantity of sample	1 liter	
Type of container	Cans ,glass bottles	
Type of Sample	Ground Water -Bore Water	
Location	Gangavaram Village	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500,2011	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Temperature	°C	25.4	15-30
2.	pH	-	7.76	6.5-8.5
3.	Total Hardness	mg/l	260	300-600
4.	Calcium (as Ca)	mg/l	54	75-200
5.	Magnesium (as Mg)	mg/l	28	30-100
6.	Chlorides	mg/l	118	250-1000
7.	Manganese	mg/l	0.004	0.1- 0.5
8.	Copper	mg/l	0.016	0.05 -1.5
9.	Total Alkalinity	mg/l	112	200 - 600
10.	Total Dissolved Solids	mg/l	368	500-2000
11.	Sulphate	mg/l	44	200-400
12.	Nitrite (as NO ₂)	mg/l	0.08	0 -1.0
13.	Iron	mg/l	0.6	0.3 -1.0
14.	Fluoride	mg/l	0.4	0.5 - 1.0
15.	Oil & Grease	mg/l	BDL	0 - 0.1
16.	Chromium (as Cr ⁺⁶)	mg/l	0.06	0.05 - 0.05
17.	Cyanide	mg/l	NIL	0 - 0.05
18.	Zinc	mg/l	0.5	0.1 - 5.0
19.	Phenolic Compound	mg/l	NIL	0 - 0.002
20.	Total Coli forms Count	Cfu/ml	Absent	Absent
21.	E.coli	Cfu/ml	Absent	Absent

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TEST REPORT

ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No.	BCL/708	Issued to:
Monitoring Date	January 07,2025	Adani Gangavaram Port
Reporting Date	January 15,2025	Limited, Gangavaram(Village)
Quantity of sample	2liter	Pedagantiyada(Mandal)
Type of containers	Cans , BOD bottle	Visakhapatnam.
Type of Sample	Sewage Water (Entry from outside port boundary)	
Sample Location	Culvert -11 at Gangavaram Village	
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit Part -II
1.	Temperature	°C	26.8	20-30
2.	pH	-	6.26	5.0 - 9.0
3.	Total Suspended Solids	mg/l	114	10 -100
4.	Total Dissolved Solids	mg/l	1632	500 - 2000
5.	Oil & Grease	mg/l	3.8	01 - 10
6.	COD	mg/l	262	50 - 250
7.	BOD	mg/l	44	03 - 30
8.	Ammonia Nitrogen	mg/l	4.0	01-05
9.	Phenolic Compounds	mg/l	0.6	0- 0.002
10.	Nitrate	mg/l	28	10 - 20
11.	Nitrite	mg/l	0.6	0 - 1.0
12.	Sulphide	mg/l	0.8	0 - 1.0
13.	Phosphate	mg/l	3.8	0.5 - 2.0
14.	Cyanide	mg/l	Nil	0-0.05
15.	Iron	mg/l	1.0	0.3 -1.0
16.	Aluminium	mg/l	0.2	0.03 -0.2
17.	Copper	mg/l	0.6	0.05 -1.5
18.	Chromium	mg/l	0.4	0.05 - 0.05
19.	Zinc	mg/l	1.6	0.1 - 5.0
20.	Lead	mg/l	0.02	0 - 0.1
21.	Manganese	mg/l	0.8	0.1-0.5
22.	Nickel	mg/l	0.4	0.02 - 0.1
23.	Mercury	mg/l	<0.04	0 - 0.001
24.	Cadmium	mg/l	<0.02	0 - 0.05

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No.	BCL728	Issued to: AdaniGangavaram Port Limited. Gangavaram(Village),Pedagant iyada(Mandal),Visakhapatnam
Monitoring Date	February 11,2025	
Reporting Date	February 16,2025	
Quantity of sample	2liter	
Type of containers	Cans ,BOD Bottle	
Type of Sample	Sewage Water (Entry from outside port boundary)	
Sample Location	Kanithigeddanalia Near VSP	
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit Part-II
1	Temperature	°C	26.2	20-30
2	pH	-	5.94	5.0 - 9.0
3	Total Suspended Solids	mg/l	228	10 -100
4	Total Dissolved Solids	mg/l	3628	500-2000
5	Oil & Grease	mg/l	6.4	01- 10
6	COD	mg/l	456	50- 250
7	BOD	mg/l	72	03 -30
8	Ammonia Nitrogen	mg/l	02	01-05
9	Phenolic Compounds	mg/l	0.1	0- 0.002
10	Nitrate	mg/l	38	10-20
11	Nitrite	mg/l	0.6	0- 1.0
11	Sulphide	mg/l	0.8	0- 1.0
12	Phosphate	mg/l	1.4	0.5 - 2.0
13	Cyanide	mg/l	Nil	0-0.05
14	Iron	mg/l	1.0	0.3-1.0
15	Aluminium	mg/l	1.2	0.03-0.2
16	Copper	mg/l	1.4	0.05-1.5
17	Chromium	mg/l	1.2	0.05 - 0.05
18	Zinc	mg/l	2.8	0.1-5.0
19	Lead	mg/l	0.06	0- 0.1
20	Manganese	mg/l	1.0	0.1-0.5
21	Nickel	mg/l	1.6	0.02-0.1
22	Mercury	mg/l	0.001	0- 0.001
23	Cadmium	mg/l	0.006	0- 0.05

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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No.	BCL/733	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited,
Organization	Adani Gangavaram Port Limited,	Gangavaram (Village),
Collected by	M/s. Biochem Labs	Pedagantiyada (Mandal),
		Visakhapatnam.

S. No.	Parameter	Unit	Location	Result		CPCBLimit Industrial	
				LeqDay	Leq Night	LeqDay	Leq Night
1.	Noise Level	dB (A)	Cargo area	72	64	75	70
2.	Noise Level	dB (A)	Peda gantiyada/ AGPL Security Gate	68	56	-	-
				LeqDay	LeqNight	CPCBLimit Residential	
						Leq Day	Leq Night
3.	Noise Level	dB (A)	Gangavaram	46	38	55	45
4.	Noise Level	dB (A)	HB Colony	50	42	-	-

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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No.	BCL/725	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Organization	Adani Gangavaram Port Limited.	
Collected by	M/s. Biochem Labs	

S. No.	Parameter	Unit	Location	Result		CPCBLimit	
				LeqDay	LeqNight	Industrial	
						LeqDay	LeqNight
1.	Noise Level	dB (A)	Cargo area	68	60	75	70
2.	Noise Level	dB (A)	Peda gantiyada/ AGPL Security Gate	64	52	-	-
				LeqDay	LeqNight	CPCBLimit	
						Residential	
						LeqDay	LeqNight
3.	Noise Level	dB (A)	Gangavaram	48	34	55	45
4.	Noise Level	dB (A)	HB Colony	52	40	-	-

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans	
Quantity of sample	02 litre	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1	Temperature	°C	26.8	26.6	27.0	27.4
2	pH	-	8.22	8.20	8.24	8.16
3	Salinity	ppt	35	35	35.2	34.8
4	Turbidity	NTU	14	10	08	12
5	Total Suspended Solids	mg/l	86	54	38	42
6	Transparency	Mts.	0.8	1.0	1.4	1.8
7	Electrical Conductivity	mMho	38.8	37.0	37.6	38.0

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans	
Quantity of sample	02litres	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake wall Outside		North brake wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	27.8	26.6	27.0	27.4
2.	pH	-	8.20	8.18	8.24	8.22
3.	Salinity	ppt	35.6	34.9	35.0	35.2
4.	Turbidity	NTU	08	10	12	14
5.	Total Suspended Solids	mg/l	44	48	56	60
6.	Transparency	Mts.	1.6	2.0	1.6	2.0
7.	Electrical Conductivity	mMHo	39.4	40.2	38.8	39.8

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to Adani Gangavaram Port Limited Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans BOD bottles	
Quantity of sample	02 litres	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	3.8	3.4	4.0	4.2
2.	Biological Oxygen Demand	mg/l	1.4	1.6	1.8	1.8
3.	Oil & Grease	mg/l	1.0	1.2	0.8	1.4
4.	Sulphate	mg/l	1084	984	1126	1018
5.	Phosphate	mg/l	0.14	0.2	0.16	0.24
6.	Nitrate	mg/l	4.8	4.6	3.8	4.4
7.	Nitrite	mg/l	0.014	0.021	0.016	0.020
8.	Chloride	mg/l	19484	20846	22014	20862
9.	Chromium	ppm	0.016	0.024	0.026	0.028
10.	Mercury	ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.24	0.28	0.24	0.26
12.	Iron	ppm	0.022	0.026	0.002	0.0024
13.	Manganese	ppm	0.024	0.028	0.022	0.02
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to:
Monitoring Date	February 11, 2025	Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans BOD bottles	
Quantity of sample	02litres	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	4.2	4.0	3.8	4.0
2.	Biological Oxygen Demand	mg/l	1.8	1.6	1.4	1.8
3.	Oil & Grease	mg/l	1.0	1.6	1.2	0.8
4.	Sulphate	mg/l	1205	1186	1068	1104
5.	Phosphate	mg/l	0.16	0.2	0.18	0.24
6.	Nitrate	mg/l	3.8	4.6	3.6	4.0
7.	Nitrite	mg/l	0.016	0.014	0.028	0.02
8.	Chloride	mg/l	21428	20862	22024	21682
9.	Chromium	ppm	0.018	0.026	0.024	0.02
10.	Mercury	Ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.26	0.26	0.22	0.24
12.	Iron	ppm	0.024	0.02	0.0018	0.016
13.	Manganese	ppm	0.022	0.028	0.02	0.018
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml.	
Sample Collected by	M/s. Biochem Labs	

Station Name: Harbour basin / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.0
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrum micans</i>	54
	<i>Amphora lineolata</i>	60
	<i>Cymbella marina</i>	28
	<i>Bacteriastrum delicatulum</i>	24
	<i>Thalassionema nitzschioides</i>	34
	<i>Chaetoceros dydimus</i>	06
	<i>Skeletonema costatum</i>	26
	<i>Thalassiothrix longissima</i>	12
	<i>Cymbella marina</i>	20
B.	Zooplankton Species	
	<i>Foraminifera</i>	92
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	48
	<i>Cladocera</i>	16
	Eggs of fish & larvae	10

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	1000
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.2
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	64
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	38
	<i>Bacteriastrumdelicatum</i>	24
	<i>Thalassionemanitzschoides</i>	40
	<i>Chaetocerosdydymus</i>	24
	<i>Skeletonemacostatum</i>	16
	<i>Thalassiothrixlongissima</i>	08
	<i>Cymbella marina</i>	12
B.	Zooplankton Species	
	<i>Foraminifera</i>	42
	<i>Chaetognatha</i>	38
	<i>Amphipoda</i>	24
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	20

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName: Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.0

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	52
	<i>Amphora lineolata</i>	34
	<i>Cymbella marina</i>	26
	<i>Bacteriastrumdelicatulum</i>	40
	<i>Thalassionemanitzschoides</i>	34
	<i>Chaetocerosdydymus</i>	22
	<i>Skeletonemacostatum</i>	14
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	42
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	20
	<i>Cladocera</i>	16
	Eggs of fish & larvae	08

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to:
Monitoring Date	February 11, 2025	Adani Gangavaram Port Limited,
Reporting Date	February 16, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.2
5.	Primary Productivity	gC/m ²	3.0
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	54
	<i>Amphora lineolata</i>	42
	<i>Cymbella marina</i>	36
	<i>Bacteriastrumdelicatulum</i>	28
	<i>Thalassionemanitzschioides</i>	42
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	16
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	30
	<i>Chaetognatha</i>	44
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	26
	<i>Eggs of fish & larvae</i>	12

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to:
Monitoring Date	February 11, 2025	Adani Gangavaram Port Limited,
Reporting Date	February 16, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName: South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.8
4.	Chlorophyll b	mg/m ³	2.4
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	82
	<i>Amphora lineolata</i>	36
	<i>Cymbella marina</i>	42
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	24
	<i>Chaetocerosdydymus</i>	38
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	20
B.	Zooplankton Species	
	<i>Foraminifera</i>	56
	<i>Chaetognatha</i>	20
	<i>Amphipoda</i>	36
	<i>Cladocera</i>	24
	Eggs of fish & larvae	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to:
Monitoring Date	February 11, 2025	Adani Gangavaram Port Limited,
Reporting Date	February 16, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	800
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.0

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	62
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	24
	<i>Bacteriastrumdelicatulum</i>	26
	<i>Thalassionemanitzschoides</i>	30
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	42
	<i>Thalassiothrixlongissima</i>	18
	<i>Cymbella marina</i>	10
B.	Zooplankton Species	
	<i>Foraminifera</i>	36
	<i>Chaetognatha</i>	24
	<i>Amphipoda</i>	28
	<i>Cladocera</i>	10
	Eggs of fish & larvae	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1800
3.	Chlorophyll a	mg/m ³	2.8
4.	Chlorophyll b	mg/m ³	3.2
5.	Primary Productivity	gC/m ²	3.0
6.	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	86
	<i>Amphora lineolata</i>	44
	<i>Cymbella marina</i>	58
	<i>Bacteriastrumdelicatulum</i>	16
	<i>Thalassionemanitzschoides</i>	44
	<i>Chaetocerosdydymus</i>	32
	<i>Skeletonemacostatum</i>	12
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	04
B.	Zooplankton Species	
	<i>Foraminifera</i>	42
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	30
	<i>Cladocera</i>	10
	<i>Eggs of fish & larvae</i>	16

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/726	Issued to:
Monitoring Date	February 11, 2025	Adani Gangavaram Port Limited,
Reporting Date	February 16, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	800
3.	Chlorophyll a	mg/m ³	2.4
4.	Chlorophyll b	mg/m ³	3.4
5.	Primary Productivity	gC/m ²	2.6
6.	Biomass	mg/m ²	3.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	88
	<i>Amphora lineolata</i>	40
	<i>Cymbella marina</i>	22
	<i>Bacteriastrumdelicatulum</i>	32
	<i>Thalassionemamantzschoides</i>	16
	<i>Chaetocerosdydymus</i>	10
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	32
	<i>Cymbella marina</i>	28
B.	Zooplankton Species	
	<i>Foraminifera</i>	24
	<i>Chaetognatha</i>	48
	<i>Amphipoda</i>	34
	<i>Cladocera</i>	20
	Eggs of fish & larvae	08

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TEST REPORT

ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited,
Reporting Date	March 05, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam,
Type of containers	Cans	
Quantity of sample	02 litre	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	28.0	27.8	27.6	28.2
2.	pH	-	8.14	8.26	8.18	8.20
3.	Salinity	ppt	34.8	35	35.2	35
4.	Turbidity	NTU	14	12	10	08
5.	Total Suspended Solids	mg/l	56	40	38	42
6.	Transparency	Mts.	0.6	1.2	1.6	1.4
7.	Electrical Conductivity	mMHo	39.0	40.6	42.0	39.4

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 28, 2025	
Reporting Date	March 05, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans	
Quantity of sample	02 litre	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake wall Outside		North brake wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	26.2	27.0	26.8	26.4
2.	pH	-	8.22	8.24	8.20	8.18
3.	Salinity	ppt	35.6	35.0	35.2	35.6
4.	Turbidity	NTU	10	12	16	14
5.	Total Suspended Solids	mg/l	38	42	56	48
6.	Transparency	Mts	1.8	2.0	1.6	2.2
7.	Electrical Conductivity	mMHo	39.8	38.4	40.4	38.8

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 28, 2025	
Reporting Date	March 05, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, BOD bottles	
Quantity of sample	02 litres	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Baseline		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	3.8	4.0	3.6	4.0
2.	Biological Oxygen Demand	mg/l	1.4	1.6	1.2	1.8
3.	Oil & Grease	mg/l	1.6	1.0	1.2	1.0
4.	Sulphate	mg/l	1014	1108	1048	1124
5.	Phosphate	mg/l	0.18	0.22	0.14	0.16
6.	Nitrate	mg/l	4.0	3.6	3.8	4.0
7.	Nitrite	mg/l	0.014	0.022	0.018	0.020
8.	Chloride	mg/l	20642	21268	20484	19892
9.	Chromium	ppm	0.016	0.02	0.018	0.024
10.	Mercury	ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.26	0.26	0.24	0.22
12.	Iron	ppm	0.018	0.024	0.018	0.012
13.	Manganese	ppm	0.022	0.026	0.02	0.018
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 28, 2025	
Reporting Date	March 05, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, BOD bottles	
Quantity of sample	02 litres	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	3.8	3.4	4.2	3.8
2.	Biological Oxygen Demand	mg/l	1.6	1.2	1.8	1.4
3.	Oil & Grease	mg/l	0.8	1.0	1.2	0.6
4.	Sulphate	mg/l	1106	986	1044	1082
5.	Phosphate	mg/l	0.14	0.22	0.24	0.18
6.	Nitrate	mg/l	3.4	4.0	2.8	2.4
7.	Nitrite	mg/l	0.016	0.018	0.026	0.02
8.	Chloride	mg/l	19864	20462	21284	20822
9.	Chromium	ppm	0.02	0.024	0.018	0.026
10.	Mercury	Ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.22	0.26	0.28	0.24
12.	Iron	ppm	0.02	0.024	0.0018	0.022
13.	Manganese	ppm	0.024	0.028	0.02	0.026
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited,
Reporting Date	March 05, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.2
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	62
	<i>Amphora lineolata</i>	54
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatulum</i>	30
	<i>Thalassionemanitzschoides</i>	34
	<i>Chaetocerosdydymus</i>	44
	<i>Skeletonemiacostatum</i>	12
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	06
B.	Zooplankton Species	
	<i>Foraminifera</i>	52
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	20
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	10

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited,
Reporting Date	March 05, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	1000
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	2.4
5.	Primary Productivity	gC/m ³	3.0
6.	Biomass	mg/m ³	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	58
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	48
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschioides</i>	42
	<i>Chaetocerosdydymus</i>	08
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	10
	<i>Cymbella marina</i>	22
B.	Zooplankton Species	
	<i>Foraminifera</i>	34
	<i>Chaetognatha</i>	48
	<i>Amphipoda</i>	10
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	24

V. Vinod Kumar
Analyst



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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 28, 2025	
Reporting Date	March 05, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.8
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	40
	<i>Amphora lineolata</i>	34
	<i>Cymbella marina</i>	48
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	24
	<i>Chaetocerosdydymus</i>	60
	<i>Skeletonemacostatum</i>	10
	<i>Thalassiothrixlongissima</i>	24
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	36
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	20
	<i>Cladocera</i>	12
	Eggs of fish & larvae	24

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 28, 2025	
Reporting Date	March 05, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml.	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	3.4
5.	Primary Productivity	gC/m ²	2.8
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	64
	<i>Amphora lineolata</i>	42
	<i>Cymbella manna</i>	10
	<i>Bacteriastriumdelicatulum</i>	22
	<i>Thalassionemanitzschioides</i>	42
	<i>Chaetocerosdydymus</i>	30
	<i>Skeletonemacostatum</i>	36
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	38
	<i>Chaetognatha</i>	18
	<i>Amphipoda</i>	22
	<i>Cladocera</i>	26
	Eggs of fish & larvae	10

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No	BCL/734	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited.
Reporting Date	March 05, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.8
4.	Chlorophyll b	mg/m ³	2.4
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	62
	<i>Amphora lineolata</i>	36
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	40
	<i>Chaetocerosdydymus</i>	34
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	20
B.	Zooplankton Species	
	<i>Foraminifera</i>	42
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	34
	<i>Cladocera</i>	28
	Eggs of fish & larvae	10

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited,
Reporting Date	March 05, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1000
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.0
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	92
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	34
	<i>Bacteriastrumdelicatulum</i>	26
	<i>Thalassionemanitzschoides</i>	32
	<i>Chaetocerosdydymus</i>	20
	<i>Skeletonemacostatum</i>	42
	<i>Thalassiothrixlongissima</i>	14
	<i>Cymbella marina</i>	20
B.	Zooplankton Species	
	<i>Foraminifera</i>	38
	<i>Chaetognatha</i>	12
	<i>Amphipoda</i>	22
	<i>Cladocera</i>	16
	Eggs of fish & larvae	24

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Reporting Date	March 05, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	2.6
4.	Chlorophyll b	mg/m ³	3.2
5.	Primary Productivity	gC/m ²	3.2
6.	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	64
	<i>Amphora lineolata</i>	44
	<i>Cymbella marina</i>	22
	<i>Bacteriastrumdelicatum</i>	16
	<i>Thalassionemanitzschoides</i>	48
	<i>Chaetocerosdydymus</i>	06
	<i>Skeletonemacostatum</i>	30
	<i>Thalassiothrixlongissima</i>	04
	<i>Cymbella marina</i>	18
B.	Zooplankton Species	
	<i>Foraminifera</i>	38
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	20
	<i>Cladocera</i>	04
	Eggs of fish & larvae	12

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/734	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited,
Reporting Date	March 05, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide			
S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	2.4
4.	Chlorophyll b	mg/m ³	3.6
5.	Primary Productivity	gC/m ²	2.0
6.	Biomass	mg/m ²	3.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	68
	<i>Amphora lineolata</i>	44
	<i>Cymbella marina</i>	22
	<i>Bacteriastrumdelicatulum</i>	30
	<i>Thalassionemanitzschoides</i>	26
	<i>Chaetocerosdydymus</i>	06
	<i>Skeletonemacostatum</i>	32
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	22
B.	Zooplankton Species	
	<i>Foraminifera</i>	18
	<i>Chaetognatha</i>	48
	<i>Amphipoda</i>	30
	<i>Cladocera</i>	28
	Eggs of fish & larvae	06

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/727	Issued to:
Monitoring Date	February 11, 2025	Adani Gangavaram Port Limited,
Reporting Date	February 16, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited	Pedagantiyada (Mandal),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Baseline	Port Entrance Channel
1.	pH	-	7.74	7.86
2.	Organic matter	%	1.6	1.8
3.	Nitrate	mg/kg	2.4	2.6
4.	Phosphate	mg/kg	1.2	2.0
5.	Oil & Grease	mg/kg	0.16	0.14
6.	Iron	ppm	0.14	0.18
7.	Manganese	ppm	0.16	0.20
8.	Nickel	ppm	0.18	0.14
9.	Chromium	ppm	0.12	0.18
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.4	0.6
12.	Lead	ppm	0.02	0.04
13.	Arsenic	ppm	0.06	0.02
14.	Selenium	ppm	0.04	0.06
15.	Copper	ppm	0.16	0.2

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/727	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1.	pH	-	8.06	8.12
2.	Organic matter	%	1.8	1.4
3.	Nitrate	mg/kg	1.4	1.6
4.	Phosphate	mg/kg	1.6	1.8
5.	Oil & Grease	mg/kg	0.02	0.04
6.	Iron	ppm	0.16	0.18
7.	Manganese	ppm	0.14	0.1
8.	Nickel	ppm	0.12	0.18
9.	Chromium	ppm	0.10	0.12
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.8	0.4
12.	Lead	ppm	0.04	0.02
13.	Arsenic	ppm	0.02	0.04
14.	Selenium	ppm	0.04	0.06
15.	Copper	ppm	0.14	0.16

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/727	Issued to: Adani Gangavaram Port Limited, Gangevaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s Biochem Labs	

S. No	Species/Group	% Composition	
		Harbour Basine	Port Entrance Channel
1.	<i>Opheliidaesp</i>	56	64
2.	<i>Glycendaesp</i>	24	26
3.	<i>Nereidae sp</i>	20	06
4.	<i>Aphroditidaesp</i>	16	46
5.	<i>Cirratulidaesp</i>	24	20
6.	<i>Capitella sp</i>	06	25
7.	<i>Amphipoda sp.</i>	12	16
8.	<i>Gastropoda</i>	04	12
9.	<i>Chaetognatha</i>	02	04

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/727	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 11, 2025	
Reporting Date	February 16, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1	Foraminifera	34	42
2	Amphipoda	26	16
3	Mytilusedulis	20	30
4	Gastropod veliger	18	24
5	Oithona	06	08
6	Capitella	14	16
7	Copepod nauplii	34	24
9	Brachyuran zoea	12	26
8	Neanthusarenaceodentata	08	10

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/735	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Reporting Date	March 05, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Baseline	Port Entrance Channel
1.	pH	-	8.24	8.16
2.	Organic matter	%	1.8	1.8
3.	Nitrate	mg/kg	1.4	2.0
4.	Phosphate	mg/kg	1.8	1.8
5.	Oil & Grease	mg/kg	0.2	0.26
6.	Iron	ppm	0.16	0.18
7.	Manganese	ppm	0.14	0.22
8.	Nickel	ppm	0.16	0.18
9.	Chromium	ppm	0.12	0.16
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.4	0.6
12.	Lead	ppm	0.04	0.08
13.	Arsenic	ppm	0.02	0.04
14.	Selenium	ppm	0.01	0.06
15.	Copper	ppm	0.18	0.2

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCU/735	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited,
Reporting Date	March 05, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited,	Pedagantiyada (Mandal),
Type of Sample	Sediment (Low Tide)	Visakhapatnam.
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1.	pH	-	8.14	8.20
2.	Organic matter	%	1.0	1.6
3.	Nitrate	mg/kg	1.2	1.4
4.	Phosphate	mg/kg	0.6	0.6
5.	Oil & Grease	mg/kg	0.18	0.2
6.	Iron	ppm	0.14	0.18
7.	Manganese	ppm	0.18	0.12
8.	Nickel	ppm	0.14	0.18
9.	Chromium	ppm	0.12	0.2
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	1.8	1.6
12.	Lead	ppm	0.04	0.04
13.	Arsenic	ppm	0.06	0.06
14.	Selenium	ppm	0.08	0.08
15.	Copper	ppm	0.12	0.16

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/735	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	February 28, 2025	
Reporting Date	March 05, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		Harbour Basine	Port Entrance Channel
1.	<i>Eunicidae sp.</i>	42	56
2.	<i>Paraonidae sp.</i>	26	28
3.	<i>Syllidae sp</i>	34	16
4.	<i>Sabellidaesp</i>	18	08
5.	<i>Oithona sp.</i>	20	26
6.	<i>Capitella sp.</i>	16	34
7.	<i>Syllidae sp</i>	02	12
9.	<i>Amphipoda sp.</i>	16	28
8.	<i>Nematoda sp.</i>	12	04

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/735	Issued to:
Monitoring Date	February 28, 2025	Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Reporting Date	March 05, 2025	
Organization	Adani Gangavaram Port Limited,	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1.	<i>Capitella sp.</i>	60	42
2.	<i>Syllidae sp</i>	36	16
3.	<i>Amphipoda sp.</i>	24	56
4.	<i>Nematoda sp.</i>	28	36
5.	<i>Capitella sp.</i>	04	18
6.	<i>Syllidae sp</i>	20	34
7.	<i>Paraonidae sp.</i>	18	16
9.	<i>Syllidae sp</i>	06	10
8.	<i>Sabellidae sp</i>	10	04

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Environmental Monitoring Reports

(12th March and 28th March 2025)

Adani Gangavaram Port Limited,

Pedagantyada (Mandal),
Gangavaram (Post),
Visakhapatnam - 530 044.





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TEST REPORT ANALYSIS OF VIWSCOWATER

BCL Ref. No.	BCL/740	Issued to: AdaniGangavaram Port Limited,Gangavaram(Village) Pedagantiyada(Mandal) Visakhapatnam,
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Quantity of sample	01 Liter	
Type of container	Cans and Glass bottle	
Type of Sample	POTTED VIWSCO WATER	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500, 2011	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Temperature	°C	29.4	-
2.	Colour	Hazen	3.6	05-15
3.	Odour	Hazen	Unobjectionable	Unobjectionable
4.	Taste	Hazen	Agreeable	Agreeable
5.	Turbidity	NTU	3.8	1-5
6.	pH	-	6.54	6.5-8.5
7.	Total Hardness	mg/l	112	300-600
8.	Calcium	mg/l	40	75-200
9.	Magnesium	mg/l	18	30-100
10.	Chloride	mg/l	34	250-1000
11.	Total Alkalinity	mg/l	58	200-600
12.	Total Dissolved Solids	mg/l	428	500- 2000
13.	Iron	mg/l	0.016	0.3-1.0
14.	Sulphate	mg/l	40	200-400
15.	Nitrate	mg/l	0.34	45-100
16.	Oil Grease	mg/l	Nil	0-0.1
17.	Total Coli forms	Cfu/ml	8	1-10
18.	E.Coli	Cfu/ml	Absent	Should be Absent
19.	Salmonella sp	Cfu/ml	Absent	Should be Absent
20.	Pseudomonas aeruginosa	Cfu/ml	Absent	Should be Absent
21.	Staphylococcus aureus	Cfu/ml	Absent	Should be Absent

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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref. No.	BCL/741	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited.	
Quantity of sample	1 liter	
Type of container	Cans, glass bottles	
Type of Sample	Ground Water -Bore Water	
Location	Gangavaram Village	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500,2011	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Temperature	°C	28.6	15-30
2.	pH	-	7.82	6.5-8.5
3.	Total Hardness	mg/l	268	300-600
4.	Calcium (as Ca)	mg/l	56	75-200
5.	Magnesium (as Mg)	mg/l	28	30-100
6.	Chlorides	mg/l	124	250-1000
7.	Manganese	mg/l	0.004	0.1-0.5
8.	Copper	mg/l	0.015	0.05-1.5
9.	Total Alkalinity	mg/l	118	200-600
10.	Total Dissolved Solids	mg/l	416	500-2000
11.	Sulphate	mg/l	46	200-400
12.	Nitrite (as NO ₂)	mg/l	0.08	0-1.0
13.	Iron	mg/l	0.14	0.3-1.0
14.	Fluoride	mg/l	0.5	0.5-1.0
15.	Oil & Grease	mg/l	BDL	0-0.1
16.	Chromium (as Cr ^{VI})	mg/l	0.06	0.05-0.05
17.	Cyanide	mg/l	NIL	0-0.05
18.	Zinc	mg/l	0.6	0.1-5.0
19.	Phenolic Compound	mg/l	NIL	0-0.002
20.	Total Coli forms Count	Cfu/ml	Absent	Absent
21.	E.coli	Cfu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF GROUND WATER SAMPLE

BCL Ref. No.	BCL/742	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited.	
Quantity of sample	1 liter	
Type of container	Cans, glass bottles	
Type of Sample	Ground Water- well water	
Location	North boundary wall open well	
Sample Collected by	M/s. Biochem Labs	
Reference Standard	IS: 10500,2011	

S. No.	Parameter	Unit	Result	Limit IS: 10500
1.	Temperature	°C	29.0	15-30
2.	pH	-	7.48	6.5-8.5
3.	Total Hardness	mg/l	214	300-600
4.	Calcium (as Ca)	mg/l	46	75-200
5.	Magnesium (as Mg)	mg/l	24	30-100
6.	Chlorides	mg/l	52	250-1000
7.	Manganese	mg/l	0.02	0.1-0.5
8.	Copper	mg/l	0.014	0.05-1.5
9.	Total Alkalinity	mg/l	136	200-600
10.	Total Dissolved Solids	mg/l	386	500-2000
11.	Sulphate	mg/l	54	200-400
12.	Nitrite (as NO ₂)	mg/l	0.016	0-1.0
13.	Iron	mg/l	0.18	0.3-1.0
14.	Fluoride	mg/l	0.6	0.5-1.0
15.	Oil & Grease	mg/l	BDL	0-0.1
16.	Chromium (as Cr ⁺⁺⁺)	mg/l	0.02	0.05-0.05
17.	Cyanide	mg/l	NIL	0-0.05
18.	Zinc	mg/l	0.8	0.1-5.0
19.	Phenolic Compound	mg/l	NIL	0-0.002
20.	Total Coli forms Count	Cfu/ml	Absent	Absent
21.	E.coli	Cfu/ml	Absent	Absent

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No.	BCL/743	Issued to: AdaniGangavaram Port Limited, Gangavaram(Village),Pedagantiy ada(Mandal), Visakhapatnam
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Quantity of sample	2liter	
Type of containers	Cans ,BOD Bottle	
Type of Sample	Sewage Water (Entry from outside port boundary)	
Sample Location	Kanithigeddanalla Near VSP	
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit Part -II
1.	Temperature	°C	28.2	20-30
2.	pH	-	6.04	5.0 – 9.0
3.	Total Suspended Solids	mg/l	236	10 -100
4.	Total Dissolved Solids	mg/l	3420	500-2000
5.	Oil & Grease	mg/l	6.8	01- 10
6.	COD	mg/l	406	50- 250
7.	BOD	mg/l	68	03 -30
8.	Ammonia Nitrogen	mg/l	0.3	01-05
9.	Phenolic Compounds	mg/l	0.1	0- 0.002
10.	Nitrate	mg/l	30	10-20
11.	Nitrite	mg/l	0.4	0- 1.0
11.	Sulphide	mg/l	0.8	0- 1.0
12.	Phosphate	mg/	1.6	0.5 - 2.0
13.	Cyanide	mg/	Nil	0-0.05
14.	Iron	mg/	1.0	0.3-1.0
15.	Aluminium	mg/	1.0	0.03-0.2
16.	Copper	mg/	1.2	0.05-1.5
17.	Chromium	mg/	1.0	0.05 - 0.05
18.	Zinc	mg/	2.6	0.1-5.0
19.	Lead	mg/	0.06	0- 0.1
20.	Manganese	mg/	1.0	0.1-0.5
21.	Nickel	mg/	1.4	0.02-0.1
22.	Mercury	mg/	0.001	0- 0.001
23.	Cadmium	mg/	0.006	0- 0.05

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TEST REPORT ANALYSIS OF SEWAGE WATER SAMPLE

BCL Ref. No.	BCL/7444	Issued to: AdaniGangavaram Port Limited. Gangavaram(Village),Pedagantiya da(Mandal),Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Quantity of sample	2liter	
Type of containers	Cans , BOD bottle	
Type of Sample	Sewage Water (Entry from outside port boundary)	
Sample Location	Culvert -11 at Gangavaram Village	
Sample Collected by	M/s. Biochem Labs	

S. No.	Parameters	Unit	Result	CPCB Limit Part -II
1.	Temperature	^o C	29.2	20-30
2.	pH	-	6.46	5.0 – 9.0
3.	Total Suspended Solids	mg/l	118	10 -100
4.	Total Dissolved Solids	mg/l	1436	500 - 2000
5.	Oil & Grease	mg/l	3.6	01 - 10
6.	COD	mg/l	248	50 - 250
7.	BOD	mg/l	41.6	03 - 30
8.	Ammonia Nitrogen	mg/l	3.6	01-05
9.	Phenolic Compounds	mg/l	0.8	0- 0.002
10.	Nitrate	mg/l	28	10 - 20
11.	Nitrite	mg/l	0.4	0 - 1.0
12.	Sulphide	mg/l	0.8	0 - 1.0
13.	Phosphate	mg/	3.6	0.5 - 2.0
14.	Cyanide	mg/	Nil	0-0.05
15.	Iron	mg/	1.0	0.3 -1.0
16.	Aluminium	mg/	0.2	0.03 -0.2
17.	Copper	mg/	0.8	0.05 -1.5
18.	Chromium	mg/	0.4	0.05 - 0.05
19.	Zinc	mg/	1.2	0.1 - 5.0
20.	Lead	mg/	0.02	0 - 0.1
21.	Manganese	mg/	0.6	0.1-0.5
22.	Nickel	mg/	0.4	0.02 - 0.1
23.	Mercury	mg/	<0.04	0 - 0.001
24.	Cadmium	mg/	<0.02	0 - 0.05

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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No.	BCL/745	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Organization	Adani Gangavaram Port Limited.	
Collected by	M/s. Biochem Labs	

S. No.	Parameter	Unit	Location	Result		CPCBLimit	
				LeqDay	LeqNight	Industrial	
						LeqDay	LeqNight
1.	Noise Level	dB (A)	Cargo area	70	64	75	70
2.	Noise Level	dB (A)	Peda gantiyada/ AGPL Security Gate	68	56	-	-
				LeqDay	LeqNight	CPCBLimit	
						Residential	
						LeqDay	LeqNight
3.	Noise Level	dB (A)	Gangavaram	46	32	55	45
4.	Noise Level	dB (A)	HB Colony	54	40	-	-

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12 ,2025	
Reporting Date	March 17 ,2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans	
Quantity of sample	02 litre	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	28.9	29.0	28.6	28.8
2.	pH	-	8.20	8.18	8.24	8.16
3.	Salinity	ppt	33	33	32	33
4.	Turbidity	NTU	16	14	10	12
5.	Total Suspended Solids	mg/l	40	48	54	36
6.	Transparency	Mts.	1.0	1.2	1.4	1.4
7.	Electrical Conductivity	mMHo	38.6	37.0	37.8	38.0

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans	
Quantity of sample	02litres	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake wall Outside		North brake wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	28.6	29.2	28.8	27.8
2.	pH	-	8.14	8.18	8.20	8.16
3.	Salinity	ppt	34	33	34	33
4.	Turbidity	NTU	12	10	16	12
5.	Total Suspended Solids	mg/l	56	42	38	44
6.	Transparency	Mts.	1.4	1.2	1.6	1.4
7.	Electrical Conductivity	mMHo	37.6	37.0	36.8	37.2

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to: Adani Gangavaram Port Limited Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans BOD bottles	
Quantity of sample	02 litres	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basins		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	4.2	3.8	4.0	4.0
2.	Biological Oxygen Demand	mg/l	1.8	1.6	1.4	1.8
3.	Oil & Grease	mg/l	1.4	1.2	1.0	1.2
4.	Sulphate	mg/l	1124	1068	994	1036
5.	Phosphate	mg/l	0.16	0.18	0.2	0.24
6.	Nitrate	mg/l	4.0	3.6	3.8	4.2
7.	Nitrite	mg/l	0.016	0.022	0.018	0.020
8.	Chloride	mg/l	20416	21068	20814	21264
9.	Chromium	ppm	0.024	0.02	0.026	0.022
10.	Mercury	ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.22	0.28	0.2	0.26
12.	Iron	ppm	0.024	0.026	0.014	0.024
13.	Manganese	ppm	0.028	0.024	0.022	0.02
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12 ,2025	
Reporting Date	March 17 ,2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans BOD bottles	
Quantity of sample	02litres	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	4.0	4.0	4.4	4.0
2.	Biological Oxygen Demand	mg/l	1.8	1.6	2.0	1.8
3.	Oil & Grease	mg/l	0.8	1.0	1.2	1.4
4.	Sulphate	mg/l	1168	1086	1124	1082
5.	Phosphate	mg/l	0.16	0.26	0.16	0.24
6.	Nitrate	mg/l	4.8	4.0	3.8	4.0
7.	Nitrite	mg/l	0.012	0.014	0.026	0.02
8.	Chloride	mg/l	21046	21636	22048	21860
9.	Chromium	ppm	0.016	0.022	0.024	0.02
10.	Mercury	Ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.24	0.26	0.2	0.24
12.	Iron	ppm	0.026	0.02	0.018	0.022
13.	Manganese	ppm	0.024	0.028	0.02	0.016
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	18000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ³	3.4
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	60
	<i>Cymbella marina</i>	36
	<i>Bacteriastrumdelicatum</i>	24
	<i>Thalassionemanitzschoides</i>	52
	<i>Chaetocerosdydymus</i>	10
	<i>Skeletonemacostatum</i>	34
	<i>Thalassiothrixlongissima</i>	12
	<i>Cymbella marina</i>	26
B.	Zooplankton Species	
	<i>Foraminifera</i>	64
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	30
	<i>Cladocera</i>	16
	Eggs of fish & larvae	28

V. Vinod Kumar
Analyst



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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	1000
3.	Chlorophyll a	mg/m ³	3.8
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.0
6.	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	80
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	20
	<i>Bacteriastrumdelicatulum</i>	24
	<i>Thalassionemanitzschioides</i>	36
	<i>Chaetocerosdydymus</i>	18
	<i>Skeletonemacostatum</i>	16
	<i>Thalassiothrixlongissima</i>	22
	<i>Cymbella marina</i>	12
B.	Zooplankton Species	
	<i>Foraminifera</i>	56
	<i>Chaetognatha</i>	38
	<i>Amphipoda</i>	30
	<i>Cladocera</i>	16
	Eggs of fish & larvae	08

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to:
Monitoring Date	March 12, 2025	Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.6
6.	Biomass	mg/m ²	2.0

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	66
	<i>Amphora lineolata</i>	34
	<i>Cymbella marina</i>	22
	<i>Bacteriastrumdelicatulum</i>	38
	<i>Thalassionemanitzschioides</i>	34
	<i>Chaetocerosdydymus</i>	22
	<i>Skeletonemacostatum</i>	10
	<i>Thalassiothrixlongissima</i>	04
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	32
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	28
	<i>Cladocera</i>	16
	Eggs of fish & larvae	14

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.8
4.	Chlorophyll b	mg/m ³	2.2
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	82
	<i>Amphora lineolata</i>	42
	<i>Cymbella marina</i>	20
	<i>Bacteriastrumdelicatulum</i>	28
	<i>Thalassionemanitzschioides</i>	36
	<i>Chaetocerosdydymus</i>	12
	<i>Skeletonemacostatum</i>	16
	<i>Thalassiothrixlongissima</i>	08
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	36
	<i>Chaetognatha</i>	24
	<i>Amphipoda</i>	18
	<i>Cladocera</i>	20
	Eggs of fish & larvae	12

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to:
Monitoring Date	March 12, 2025	Adani Gangavaram Port Limited,
Reporting Date	March 17, 2025	Gangavaram (Village),
Organization	Adani Gangavaram Port Limited.	Pedagantiyada (Mandal),
Type of Sample	Marine Water (Low Tide / High Tide)	Visakhapatnam.
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1000
3.	Chlorophyll a	mg/m ³	3.0
4.	Chlorophyll b	mg/m ³	2.4
5.	Primary Productivity	gC/m ²	3.2
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	64
	<i>Amphora lineolata</i>	36
	<i>Cymbella marina</i>	20
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschoides</i>	18
	<i>Chaetocerosdydymus</i>	26
	<i>Skeletonemacostatum</i>	26
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	08
B.	Zooplankton Species	
	<i>Foraminifera</i>	58
	<i>Chaetognatha</i>	20
	<i>Amphipoda</i>	32
	<i>Cladocera</i>	24
	Eggs of fish & larvae	10

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Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1000
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ³	3.4
6.	Biomass	mg/m ²	2.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	80
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	30
	<i>Bacteriastrumdelicatulum</i>	26
	<i>Thalassionemanitzschoides</i>	14
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	06
	<i>Thalassiothrixlongissima</i>	22
	<i>Cymbella marina</i>	10
B.	Zooplankton Species	
	<i>Foraminifera</i>	32
	<i>Chaetognatha</i>	24
	<i>Amphipoda</i>	20
	<i>Cladocera</i>	10
	<i>Eggs of fish & larvae</i>	18

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to:
Monitoring Date	March 12, 2025	Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	2.6
4.	Chlorophyll b	mg/m ³	3.2
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	58
	<i>Amphora lineolata</i>	44
	<i>Cymbella marina</i>	26
	<i>Bacteriastrumdelicatulum</i>	30
	<i>Thalassionemanitzschioides</i>	22
	<i>Chaetocerosdydymus</i>	14
	<i>Skeletonemacostatum</i>	12
	<i>Thalassiothrixlongissima</i>	26
	<i>Cymbella marina</i>	18
B.	Zooplankton Species	
	<i>Foraminifera</i>	62
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	34
	<i>Cladocera</i>	10
	<i>Eggs of fish & larvae</i>	04

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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/746	Issued to:
Monitoring Date	March 12 ,2025	Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam
Reporting Date	March 17 ,2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1000
3.	Chlorophyll a	mg/m ³	3.2
4.	Chlorophyll b	mg/m ³	3.0
5.	Primary Productivity	gC/m ²	2.6
6.	Biomass	mg/m ²	3.4

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	94
	<i>Amphora lineolata</i>	24
	<i>Cymbella marina</i>	30
	<i>Bacteriastrumdelicatulum</i>	32
	<i>Thalassionemanitzschoides</i>	16
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	38
	<i>Cymbella marina</i>	20
B.	Zooplankton Species	
	<i>Foraminifera</i>	26
	<i>Chaetognatha</i>	48
	<i>Amphipoda</i>	30
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	10

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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/747	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Baseline	Port Entrance Channel
1.	pH	-	7.80	7.82
2.	Organic matter	%	1.4	1.6
3.	Nitrate	mg/kg	2.6	2.0
4.	Phosphate	mg/kg	1.2	2.0
5.	Oil & Grease	mg/kg	0.18	0.14
6.	Iron	ppm	0.14	0.16
7.	Manganese	ppm	0.12	0.18
8.	Nickel	ppm	0.18	0.14
9.	Chromium	ppm	0.14	0.16
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.8	0.4
12.	Lead	ppm	0.02	0.02
13.	Arsenic	ppm	0.01	0.01
14.	Selenium	ppm	0.02	0.04
15.	Copper	ppm	0.12	0.2

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Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited,	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1.	pH	-	7.94	8.14
2.	Organic matter	%	1.2	1.2
3.	Nitrate	mg/kg	1.4	1.8
4.	Phosphate	mg/kg	1.0	1.4
5.	Oil & Grease	mg/kg	0.06	0.04
6.	Iron	ppm	0.14	0.18
7.	Manganese	ppm	0.12	0.1
8.	Nickel	ppm	0.1	0.16
9.	Chromium	ppm	0.14	0.12
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.6	0.4
12.	Lead	ppm	0.04	0.02
13.	Arsenic	ppm	0.01	0.01
14.	Selenium	ppm	0.01	0.01
15.	Copper	ppm	0.14	0.16

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL747	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		Harbour Basine	Port Entrance Channel
1.	<i>Opheliidaesp</i>	68	26
2.	<i>Glyceridaesp</i>	24	26
3.	<i>Nereidae sp</i>	32	42
4.	<i>Aphroditidaesp</i>	16	18
5.	<i>Cirratulidaesp</i>	20	20
6.	<i>Capitella sp</i>	14	36
7.	<i>Amphipoda sp.</i>	08	16
8.	<i>Gastropoda</i>	10	12
9.	<i>Chaetognatha</i>	14	28

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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/747	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1.	Foraminifera	28	34
2.	Amphipoda	26	16
3.	Mytilusedulis	48	24
4.	Gastropod veliger	18	36
5.	Oithona	36	20
6.	Capitella	14	42
7.	Copepod nauplii	52	38
9.	Brachyuran zoea	12	26
8.	Neanthusarenaceodentata	28	16

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TEST REPORT NOISE LEVEL MONITORING

BCL Ref. No.	BCL/753	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 28, 2025	
Organization	Adani Gangavaram Port Limited.	
Collected by	M/s. Biochem Labs	

S. No.	Parameter	Unit	Location	Result		CPCBLimit	
				LeqDay	Leq Night	Industrial	
						LeqDay	Leq Night
1.	Noise Level	dB (A)	Cargo area	68	60	75	70
2.	Noise Level	dB (A)	Peda gantiyada/ AGPL Security Gate	64	52	-	-
				LeqDay	LeqNight	CPCBLimit	
						Residential	
						Leq Day	Leq Night
3.	Noise Level	dB (A)	Gangavaram	42	38	55	45
4.	Noise Level	dB (A)	HB Colony	46	40	-	-

V. Vinod Kumar
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TEST REPORT ANALYSIS OF MARINE WATER

BCL Ref. No.	BCL/754	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans	
Quantity of sample	02 litre	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Baseline		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Temperature	°C	28.0	27.6	28.2	28.1
2.	pH	-	8.22	8.18	8.14	8.16
3.	Salinity	ppt	34	34	34	34
4.	Turbidity	NTU	12	08	14	12
5.	Total Suspended Solids	mg/l	56	42	38	46
6.	Transparency	Mts.	1.0	1.2	1.4	1.6
7.	Electrical Conductivity	mMho	38.4	38.0	37.8	37.6

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Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans	
Quantity of sample	02 litre	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake wall Outside		North brake wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Temperature	^o C	28.4	28.6	27.8	28.0
2.	pH	-	8.18	8.22	8.24	8.16
3.	Salinity	ppt	34	34	34	34
4.	Turbidity	NTU	18	12	14	10
5.	Total Suspended Solids	mg/l	44	36	40	32
6.	Transparency	Mts.	1.4	1.2	1.4	1.2
7.	Electrical Conductivity	mMHo	38.6	38.0	38.4	37.8

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Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, BOD bottles	
Quantity of sample	02 litres	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			Harbour Basine		Port Entrance Channel	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	4.0	4.2	3.8	4.0
2.	Biological Oxygen Demand	mg/l	1.4	1.8	1.6	1.8
3.	Oil & Grease	mg/l	1.2	1.4	1.2	1.0
4.	Sulphate	mg/l	1126	1042	1060	1106
5.	Phosphate	mg/l	0.16	0.2	0.18	0.22
6.	Nitrate	mg/l	4.8	3.6	3.6	4.0
7.	Nitrite	mg/l	0.016	0.02	0.018	0.024
8.	Chloride	mg/l	19640	20268	20446	19486
9.	Chromium	ppm	0.014	0.02	0.012	0.024
10.	Mercury	ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.24	0.28	0.26	0.22
12.	Iron	ppm	0.012	0.02	0.018	0.012
13.	Manganese	ppm	0.024	0.026	0.016	0.018
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, BOD bottles	
Quantity of sample	02 litres	
Sample Collected by	M/s. Biochem Labs	

S. No	Parameter	Unit	Result			
			South brake Wall Outside		North brake Wall Outside	
			Low tide	High tide	Low tide	High tide
1.	Dissolved Oxygen	mg/l	4.2	4.4	4.0	3.8
2.	Biological Oxygen Demand	mg/l	1.8	2.0	1.6	1.4
3.	Oil & Grease	mg/l	1.0	1.0	0.8	0.6
4.	Sulphate	mg/l	1068	1104	1086	1048
5.	Phosphate	mg/l	0.16	0.22	0.2	0.18
6.	Nitrate	mg/l	3.8	4.0	2.6	3.4
7.	Nitrite	mg/l	0.014	0.018	0.02	0.02
8.	Chloride	mg/l	18642	20468	21046	20820
9.	Chromium	ppm	0.026	0.016	0.018	0.02
10.	Mercury	ppm	Nil	Nil	Nil	Nil
11.	Zinc	ppm	0.22	0.18	0.28	0.44
12.	Iron	ppm	0.02	0.024	0.0018	0.022
13.	Manganese	ppm	0.024	0.028	0.02	0.026
14.	Cadmium	ppm	Nil	Nil	Nil	Nil

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Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.0
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	84
	<i>Amphora lineolata</i>	30
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatulum</i>	30
	<i>Thalassionemanitzschoides</i>	56
	<i>Chaetocerosdydymus</i>	44
	<i>Skeletonemacostatum</i>	12
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	18
B.	Zooplankton Species	
	<i>Foraminifera</i>	62
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	30
	<i>Cladocera</i>	16
	Eggs of fish & larvae	08

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Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	1000
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.0
6.	Biomass	mg/m ²	2.2

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	54
	<i>Amphora lineolata</i>	26
	<i>Cymbella marina</i>	40
	<i>Bacteriastrumdelicatulum</i>	36
	<i>Thalassionemanitzschioides</i>	24
	<i>Chaetocerosdydymus</i>	16
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	04
	<i>Cymbella marina</i>	22
B.	Zooplankton Species	
	<i>Foraminifera</i>	20
	<i>Chaetognatha</i>	48
	<i>Amphipoda</i>	12
	<i>Cladocera</i>	16
	Eggs of fish & larvae	20

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Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Harbourbasine / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.0
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	56
	<i>Amphora lineolata</i>	34
	<i>Cymbella marina</i>	48
	<i>Bacteriastrumdelicatulum</i>	30
	<i>Thalassionemanitzschioides</i>	24
	<i>Chaetocerosdydymus</i>	36
	<i>Skeletonemacostatum</i>	10
	<i>Thalassiothrixlongissima</i>	28
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	32
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	24
	<i>Cladocera</i>	12
	<i>Eggs of fish & larvae</i>	06

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Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:Port Entrance Channel / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.6
4.	Chlorophyll b	mg/m ³	3.4
5.	Primary Productivity	gC/m ²	2.6
6.	Biomass	mg/m ²	2.8

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	24
	<i>Cymbella marina</i>	36
	<i>Bacteriastrumdelicatulum</i>	22
	<i>Thalassionemanitzschioides</i>	20
	<i>Chaetocerosdydymus</i>	32
	<i>Skeletonemacostatum</i>	18
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	
B.	Zooplankton Species	
	<i>Foraminifera</i>	40
	<i>Chaetognatha</i>	18
	<i>Amphipoda</i>	20
	<i>Cladocera</i>	26
	<i>Eggs of fish & larvae</i>	12

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Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	12000
2.	Zooplankton Count	No./m ³	1400
3.	Chlorophyll a	mg/m ³	3.4
4.	Chlorophyll b	mg/m ³	2.8
5.	Primary Productivity	gC/m ²	3.4
6.	Biomass	mg/m ²	2.0

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	60
	<i>Amphora lineolata</i>	36
	<i>Cymbella marina</i>	28
	<i>Bacteriastrumdelicatulum</i>	32
	<i>Thalassionemanitzschioides</i>	26
	<i>Chaetocerosdydymus</i>	30
	<i>Skeletonemacostatum</i>	24
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	28
B.	Zooplankton Species	
	<i>Foraminifera</i>	48
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	30
	<i>Cladocera</i>	28
	Eggs of fish & larvae	12

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Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / Low Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	16000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	3.8
4.	Chlorophyll b	mg/m ³	2.6
5.	Primary Productivity	gC/m ²	3.0
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	84
	<i>Amphora lineolata</i>	46
	<i>Cymbella marina</i>	30
	<i>Bacteriastrumdelicatulum</i>	26
	<i>Thalassionemanitzschoides</i>	12
	<i>Chaetocerosdydymus</i>	20
	<i>Skeletonemacostatum</i>	36
	<i>Thalassiothrixlongissima</i>	14
	<i>Cymbella marina</i>	22
B.	Zooplankton Species	
	<i>Foraminifera</i>	42
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	22
	<i>Cladocera</i>	16
	<i>Eggs of fish & larvae</i>	08

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Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:South brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	2.8
4.	Chlorophyll b	mg/m ³	3.0
5.	Primary Productivity	gC/m ²	3.2
6.	Biomass	mg/m ²	2.6

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	48
	<i>Amphora lineolata</i>	20
	<i>Cymbella marina</i>	22
	<i>Bacteriastrumdelicatulum</i>	56
	<i>Thalasslonemanitzschoides</i>	14
	<i>Chaetocerosdydymus</i>	28
	<i>Skeletonemacostatum</i>	10
	<i>Thalassiothrixlongissima</i>	24
	<i>Cymbella marina</i>	18
B.	Zooplankton Species	
	<i>Foraminifera</i>	36
	<i>Chaetognatha</i>	28
	<i>Amphipoda</i>	22
	<i>Cladocera</i>	06
	<i>Eggs of fish & larvae</i>	18

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Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Marine Water (Low Tide / High Tide)	
Type of containers	Cans, Tins	
Quantity of sample	01 litres, Tins -500ml,	
Sample Collected by	M/s. Biochem Labs	

StationName:North brake Wall Outside / High Tide

S. No	PARAMETERS	UNIT	RESULT
1.	Phytoplankton Count	No./L	14000
2.	Zooplankton Count	No./m ³	1200
3.	Chlorophyll a	mg/m ³	2.8
4.	Chlorophyll b	mg/m ³	3.4
5.	Primary Productivity	gC/m ²	2.0
6.	Biomass	mg/m ²	3.2

S.No	Species	Total Species count in 1L
A.	Phytoplankton Species	
	<i>Prorocentrummicans</i>	60
	<i>Amphora lineolata</i>	44
	<i>Cymbella marina</i>	36
	<i>Bacteriastrumdelicatulum</i>	30
	<i>Thalassionemanitzschioides</i>	26
	<i>Chaetocerosdydymus</i>	30
	<i>Skeletonemacostatum</i>	32
	<i>Thalassiothrixlongissima</i>	16
	<i>Cymbella marina</i>	24
B.	Zooplankton Species	
	<i>Foraminifera</i>	14
	<i>Chaetognatha</i>	26
	<i>Amphipoda</i>	30
	<i>Cladocera</i>	28
	Eggs of fish & larvae	16

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1-50-4/1/1/1, Flat No. 64, Blue Dart Opp. Lane, Sector -1, MVP Colony, Visakhapatnam 530017 - Ph: 0891 4427623, 73969 08000, 81422 22277 | E-mail: biochemlabs@biochemlabs.in | biochemlabs888@gmail.com | www.biochemlabs.in

TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/755	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			Harbour Baseline	Port Entrance Channel
1.	pH	-	8.16	8.12
2.	Organic matter	%	1.0	1.4
3.	Nitrate	mg/kg	1.2	1.0
4.	Phosphate	mg/kg	1.6	1.2
5.	Oil & Grease	mg/kg	0.2	0.14
6.	Iron	ppm	0.18	0.16
7.	Manganese	ppm	0.14	0.18
8.	Nickel	ppm	0.1	0.12
9.	Chromium	ppm	0.12	0.14
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	0.6	0.8
12.	Lead	ppm	0.02	0.01
13.	Arsenic	ppm	0.01	0.01
14.	Selenium	ppm	0.01	0.01
15.	Copper	ppm	0.12	0.2

V. V. V. V.
Analyst



Authorized Signatory



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TEST REPORT ANALYSIS OF SEDIMENT SAMPLE

BCL Ref. No.	BCL/755	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantyada (Mandal), Visakhapatnam.
Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S.No	Parameters	Unit	Result	
			South brake Wall Outside	North brake Wall Outside
1.	pH	-	8.24	8.18
2.	Organic matter	%	1.0	1.4
3.	Nitrate	mg/kg	2.2	1.8
4.	Phosphate	mg/kg	1.0	0.6
5.	Oil & Grease	mg/kg	0.16	0.2
6.	Iron	ppm	0.14	0.16
7.	Manganese	ppm	0.12	0.12
8.	Nickel	ppm	0.14	0.18
9.	Chromium	ppm	0.12	0.16
10.	Mercury	ppm	Nil	Nil
11.	Zinc	ppm	1.0	0.8
12.	Lead	ppm	0.01	0.02
13.	Arsenic	ppm	0.01	0.01
14.	Selenium	ppm	0.01	0.01
15.	Copper	ppm	0.18	0.16

V. Vaidik
Analyst



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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/755	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs.	

S. No	Species/Group	% Composition	
		Harbour Basine	Port Entrance Channel
1.	<i>Eunicidae sp.</i>	28	18
2.	<i>Paraonidae sp.</i>	26	48
3.	<i>Syllidae sp</i>	56	24
4.	<i>Sabellidaesp</i>	30	0
5.	<i>Oithona sp.</i>	04	26
6.	<i>Capitella sp.</i>	0	08
7.	<i>Syllidae sp</i>	02	12
9.	<i>Amphipoda sp.</i>	10	10
8.	<i>Nematoda sp.</i>	28	04

V. Vinod Kumar
Analyst



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TEST REPORT BENTHIC FAUNAL DIVERSITY

BCL Ref. No.	BCL/755	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Organization	Adani Gangavaram Port Limited.	
Type of Sample	Sediment (Low Tide)	
Type of containers	ZIP COVERS	
Quantity of sample	2kg	
Sample Collected by	M/s. Biochem Labs	

S. No	Species/Group	% Composition	
		South brake Wall Outside	North brake Wall Outside
1.	<i>Capitella sp.</i>	22	32
2.	<i>Syllidae sp</i>	36	20
3.	<i>Amphipoda sp.</i>	40	08
4.	<i>Nematoda sp.</i>	02	32
5.	<i>Capitella sp.</i>	26	18
6.	<i>Syllidae sp</i>	20	26
7.	<i>Paraonidae sp.</i>	0	16
9.	<i>Syllidae sp</i>	06	10
8.	<i>Sabellidae sp</i>	14	0

V. Vinod Kumar
Analyst



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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/748	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Type of sample	STP Water (15- KLD Inlet – Outlet)	
Type of containers	Cans , BOD Bottle	
Quantity of sample	2 liter	
Sample Collected and Submitted by	Adani Gangavaram Port Limited	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	CPCB-Limit
1.	Temperature	IS: 09 of 3025	°C	28.6	28.2	20-30
2.	pH	IS: 11 of 3025	-	6.08	6.82	6.5 – 9.0
3.	Total Suspended Solids	IS: 17 of 3025	mg/l	156	28	30-50
4.	Total Dissolved Solids	IS: 16 of 3025	mg/l	612	84	500-2000
5.	Oil & Grease	IS: 39 of 3025	mg/l	3.6	2.8	10-20
6.	COD	IS: 1 of 2488	mg/l	364	46	250-500
7.	BOD	IS: 44 of 3025	mg/l	60.6	18	20 - 30
8.	Chloride	IS: 32 of 3025	mg/l	134	86	250-1000
9.	Feecal coliform	Apha 23 RD edition 9221D	CFU/ml	840	94	Less than 1000 CFU/ml

V. Vinod Kumar
Analyst



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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/748	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Type of sample	STP Water (New 15- KLD Inlet – Outlet)	
Type of containers	Cans , BOD Bottle	
Quantity of sample	2 liter	
Sample Collected and Submitted by	Adani Gangavaram Port Limited	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	CPCB-Limit
1.	Temperature	IS: 09 of 3025	°C	28.6	28.2	20-30
2.	pH	IS: 11 of 3025	-	6.08	6.78	6.5 – 9.0
3.	Total Suspended Solids	IS: 17 of 3025	mg/l	156	26	30-50
4.	Total Dissolved Solids	IS: 16 of 3025	mg/l	612	80	500-2000
5.	Oil & Grease	IS: 39 of 3025	mg/l	3.6	2.6	10-20
6.	COD	IS: 1 of 2488	mg/l	364	42	250-500
7.	BOD	IS: 44 of 3025	mg/l	60.6	16	20 - 30
8.	Chloride	IS: 32 of 3025	mg/l	134	84	250-1000
9.	Faecal coliform	Apha 23 RD edition 9221D	CFU/ml	840	92	Less than 1000 CFU/ml

V. Vinod Kumar
Analyst



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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/748	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 12, 2025	
Reporting Date	March 17, 2025	
Type of sample	STP Water (5- KLD Inlet – Outlet)	
Type of containers	Cans , BOD Bottle	
Quantity of sample	2 liter	
Sample Collected and Submitted by	Adani Gangavaram Port Limited	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	CPCB-Limit
1.	Temperature	IS: 09 of 3025	^o C	28.6	28.4	20-30
2.	pH	IS: 11 of 3025	-	6.48	6.68	6.5 – 9.0
3.	Total Suspended Solids	IS: 17 of 3025	mg/l	224	24	30-50
4.	Total Dissolved Solids	IS: 16 of 3025	mg/l	592	90	500-2000
5.	Oil & Grease	IS: 39 of 3025	mg/l	4.2	2.8	10-20
6.	COD	IS: 1 of 2488	mg/l	286	42	250-500
7.	BOD	IS: 44 of 3025	mg/l	47.6	24	20 - 30
8.	Chloride	IS: 32 of 3025	mg/l	168	80	250-1000
9.	Feacal coliform	Apha 23 RD edition 9221D	CFU/ml	920	88	Less than 1000 CFU/ml

V. Vinod Kumar
Analyst



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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/756	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Type of sample	STP Water (15- KLD Inlet – Outlet)	
Type of containers	Cans , BOD Bottle	
Quantity of sample	2 liter	
Sample Collected and Submitted by	Adani Gangavaram Port Limited	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	CPCB-Limit
1.	Temperature	IS: 09 of 3025	°C	27	26.8	20-30
2.	pH	IS: 11 of 3025	-	6.14	6.68	6.5 – 9.0
3.	Total Suspended Solids	IS: 17 of 3025	mg/l	164	24	30-50
4.	Total Dissolved Solids	IS: 16 of 3025	mg/l	586	86	500-2000
5.	Oil & Grease	IS: 39 of 3025	mg/l	3.8	2.6	10-20
6.	COD	IS: 1 of 2488	mg/l	356	48	250-500
7.	BOD	IS: 44 of 3025	mg/l	59.3	16	20- 30
8.	Chloride	IS: 32 of 3025	mg/l	128	84	250-1000
9.	Feecal coliform	Apha 23 RD edition 9221D	CFU/ml	920	92	Less than 1000 CFU/ml

V. V. V. V.
Analyst



[Signature]
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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/756	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Type of sample	STP Water (New 15- KLD Inlet – Outlet)	
Type of containers	Cans , BOD Bottle	
Quantity of sample	2 liter	
Sample Collected and Submitted by	Adani Gangavaram Port Limited	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	CPCB-Limit
1.	Temperature	IS: 09 of 3025	^o C	27	27.2	20-30
2.	pH	IS: 11 of 3025	-	6.14	6.64	6.5 – 9.0
3.	Total Suspended Solids	IS: 17 of 3025	mg/l	164	22	30-50
4.	Total Dissolved Solids	IS: 16 of 3025	mg/l	586	80	500-2000
5.	Oil & Grease	IS: 39 of 3025	mg/l	3.8	2.0	10-20
6.	COD	IS: 1 of 2488	mg/l	356	42	250-500
7.	BOD	IS: 44 of 3025	mg/l	59.3	14	20- 30
8.	Chloride	IS: 32 of 3025	mg/l	128	78	250-1000
9.	Feacal coliform	Apha 23 RD edition 9221D	CFU/ml	920	94	Less than 1000 CFU/ml

V. Vinod Kumar
Analyst



Authorized Signatory

Regd. Off. # 1-74, Musalayyapalem, Near Sagar Nagar, Visakhapatnam-530043, A.P. (INDIA)



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TEST REPORT ANALYSIS OF STP WATER SAMPLE

BCL/Ref. No.	BCL/756	Issued to: Adani Gangavaram Port Limited, Gangavaram (Village), Pedagantiyada (Mandal), Visakhapatnam.
Monitoring Date	March 28, 2025	
Reporting Date	April 02, 2025	
Type of sample	STP Water (5- KLD Inlet – Outlet)	
Type of containers	Cans , BOD Bottle	
Quantity of sample	2 liter	
Sample Collected and Submitted by	Adani Gangavaram Port Limited	

S. No.	Parameters	Method	Unit	Result		
				Inlet	Outlet	CPCB-Limit
1.	Temperature	IS: 09 of 3025	°C	28.0	28.2	20-30
2.	pH	IS: 11 of 3025	-	6.32	6.62	6.5 – 9.0
3.	Total Suspended Solids	IS: 17 of 3025	mg/l	218	20	30-50
4.	Total Dissolved Solids	IS: 16 of 3025	mg/l	586	94	500-2000
5.	Oil & Grease	IS: 39 of 3025	mg/l	4.0	2.6	10-20
6.	COD	IS: 1 of 2488	mg/l	292	46	250-500
7.	BOD	IS: 44 of 3025	mg/l	48.6	22	20- 30
8.	Chloride	IS: 32 of 3025	mg/l	160	86	250-1000
9.	Feecal coliform	Apha 23 RD edition 9221D	CFU/ml	936	94	Less than 1000 CFU/ml

V. Vinod Kumar
Analyst



Authorized Signatory



**ANDHRA PRADESH POLLUTION CONTROL BOARD
REGIONAL OFFICE: VISAKHAPATNAM**

D.No. 39-33-20/4/1, Madhavacharya Vaid Colony,
Visakhapatnam - 530018
Phone No. 0891 - 2755356, Email Id : govapapcb@vsnl.com

Annexure - XII

BIO -MEDICAL WASTE AUTHORISATION

(Issued under Rule 10 of the Bio-Medical Waste Management Rules, 2016)

(Authorisation for operating a facility for generation, collection, reception, treatment, storage, transport and disposal of biomedical wastes)

Order PCB/ROVSP/BMW/HCE- /2022 - 794

Date: 20.10.2022

Occupational Health Centre an occupier or operator of the facility located at M/s **Gangavaram Port Limited, Pedagantyada (V & M), Visakhapatnam District** is hereby granted an authorization for:

Activity	Please tick
Generation, segregation	[<input checked="" type="checkbox"/>]
Collection,	[<input checked="" type="checkbox"/>]
Storage	[<input checked="" type="checkbox"/>]
Packaging	[<input checked="" type="checkbox"/>]
Reception	[<input type="checkbox"/>]
Transportation	[<input type="checkbox"/>]
Treatment or processing or conversion	[<input type="checkbox"/>]
Recycling	[<input type="checkbox"/>]
Disposal or destruction	[<input type="checkbox"/>]
Use	[<input type="checkbox"/>]
Offering for sale, transfer	[<input type="checkbox"/>]
Any other form of handling	[<input type="checkbox"/>]

2. Occupational Health Centre is hereby authorized for handling of biomedical waste as per the capacity given below:


- (i) Number of beds of HCF: OHC (Without Beds)
- (ii) Quantity of Biomedical waste handled treated or disposed:

Type of Waste Category	Quantity permitted for Handling
Yellow	15.0 Kgs/Month
Red	10.0 Kgs/Month
White (Translucent)	2.0 Kgs/Month
Blue	0.2 Kgs/Month

3. This is an One Time Authorization.

4. This authorisation is subject to the conditions stated below and to such other conditions as may be specified in the rules for the time being in force under the Environment (Protection) Act, 1986.

Date: 20.10.2022
Place: Visakhapatnam


ENVIRONMENTAL ENGINEER (FAC)
 19.10.22
Environmental Engineer
A.P. Pollution Control Board
Regional Office, Visakhapatnam

GREATER VISAKHAPATNAM MUNICIPAL CORPORATION
VISAKHAPATNAM

From,
Zonal Commissioner
Zone-VI, GVMC

To,
Chairman Managing Director
Gangavaram Port Limited
Visakhapatnam

Re. No. 09//2022/F1/PH/Gwk/Zone-VI, Dt 09-03-20

Sir,

Sub: GVMC - ZONE-VI - PH section-Dumping wet & Dry at the transfer station, Gajuwaka, from Gangavaram Port - Procedure of Wet & Dry handling by GVMC - Reg.

Ref: Letter from Gangavaram port Limited, Dated 08 January 2022.

&&&&

In the above reference cited, Gangavaram port Limited requested GVMC, Zone-VI to know the procedure of handling being followed by GVMC dry & wet waste that the GVMC followed.

In this regard, it is informed that GVMC segregated the materials in to dry and wet. The dry waste like plastic, glass, iron, aluminum, cardboard, wooden are separate with the help of dry resource collection center in MSF-VI, Gajuwaka and recycled. Some dry & wet material are being transported to Kapuluppada for processing. Some wet material which is pungent odour will be treated with windrow fermentation process with a specific culture, which converts wet waste into useful organic mixture by emitting low CO2 level. Adding microbial inoculants will eradicate bad odour, declines fly and pathogens speeds fermentation and reduce air pollution. This whole process is under SOLID WASTE MANAGEMENT RULES 2020 (AMENDMENT) for environment sustainability.

This is for kind information


Zonal Commissioner
Zone-VI, GVMC


11/26/24, 6:50 PM

Uploaded Compliance

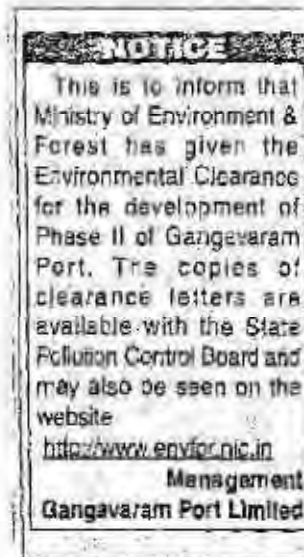


सर्वोच्च वातावरण विभाग
Ministry of Environment, Forest and Climate Change

List of **Uploaded** EC Compliance Reports

Sr.No.	Proposal No. / Name of Project	Compliance No./ EC Letter Number	State and District	Year of Compliance	Period of Compliance	Remarks	Uploaded Date
1	EC21A033AP141550 Adani Gangavaram Port Limited, Gangavaram (P), Pedagantyada (M), Visakhapatnam Dist. 530044, Andhra Pradesh	EC/M/COMPLIANCE/112484875/2024 10/51/2021-IA.III	ANDHRA PRADESH VISAKHAPATANAM	2024	01 Dec(01 Apr -30 Sep)	Half-Yearly Compliance status on the conditions stipulated in EC and CRZ Clearance, CTE and CTO Orders (including Amendment(s) accorded by MOEF and SPCB for the period from April 2024 to September 2024 submitted.	26-11- 2024

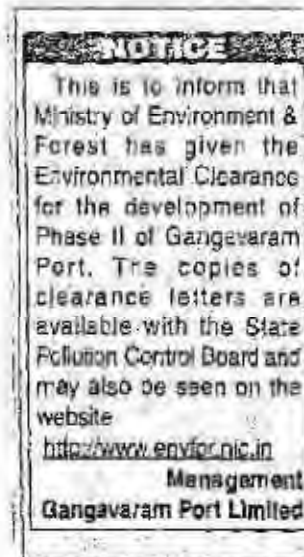
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THE NEW INDIAN EXPRESS, HYDERABAD, 27th FEBRUARY 2012



VAARTHA, 27th FEBRUARY 2012



Published in
THE NEW INDIAN EXPRESS, HYDERABAD, 27th FEBRUARY 2012



VAARTHA, 27th FEBRUARY 2012



Date: 12.01.2022

To

The Zonal Commissioner,
Zone – 6, Gajuwaka
Greater Visakhapatnam Municipal Corporation
Visakhapatnam

Sir

Sub:- Gangavaram Port Limited – Grant of Environmental Clearance (EC) for cargo enhancement from existing 40.95 to 60.95 MMTPA under clause 7 (ii) of EIA Notification, 2006 – Copy furnished for displaying in the Notice Board – Reg.

Ref:- EC No.10/51/2021-IA.III, dated 24.12.2021 of MoEF&CC, New Delhi.

We wish to inform you that MoEF&CC, New Delhi has granted Environmental Clearance (EC) to Gangavaram Port Limited for cargo enhancement from existing 40.95 to 60.95 MMTPA under clause 7 (ii) of EIA Notification, 2006.

In this regard, in compliance with the EC Miscellaneous Condition 2 of //, the copy of the EC is herewith furnished for your good office and request to display the same in the Notice Board.

Thanking you.

Yours sincerely,
For Gangavaram Port Limited



Dr. D. Jyothi

Vice President – Environment

Encl: a/a



Regd. Office

CIN : U45209TG2001PLC037651

: Podapantylade Mandal, Gangavaram (Post), Visakhapatnam - 530 044, Andhra Pradesh, INDIA.
Tel. : +91 891 270 1177, 2277, 278 1377, 2899999, Fax : +91 891 270 3377
: "Hansa Plaza", Plot No. 798, Road No.36, Jubilee Hills, Hyderabad - 500 033.
Tel : 040 2351 9999, Fax No. : 040 2351 9990.
E-mail : port@gangavaram.com Web : www.gangavaram.com

Date: 12.01.2022

To

The Tahasildar
Pedagantyada (M),
Visakhapatnam
Visakhapatnam Dist

Sir

Sub:- Gangavaram Port Limited – Grant of Environmental Clearance (EC) for cargo enhancement from existing 40.95 to 60.95 MMTPA under clause 7 (ii) of EIA Notification, 2006 – Copy furnished for displaying in the Notice Board – Reg.

Ref:- EC No.10/51/2021-IA.III, dated 24.12.2021 of MoEF&CC, New Delhi.

We wish to inform you that MoEF&CC, New Delhi has granted Environmental Clearance (EC) to Gangavaram Port Limited for cargo enhancement from existing 40.95 to 60.95 MMTPA under clause 7 (ii) of EIA Notification, 2006.

In this regard, in compliance with the EC Miscellaneous Condition 2 of 9, the copy of the EC is herewith furnished for your good office and request to display the same in the Notice Board.

Thanking you,

Yours sincerely,
For Gangavaram Port Limited



Dr. D. Jyothi
Vice President – Environment

Encl: a/a



CIN : U45209TG2001PLC037861

உயிர்தர்ப்பு

[illegible]

(b) Ենթադրելով, որ \mathbf{A} մատրիցն ունի n զրոյից տարբեր բնական թվերով բաղկացած սեփական արժեքներ, ապա \mathbf{A} -ն կոչվում է **դիագնոստիկ** մատրից:

[illegible]

- [illegible]

[illegible]

- [illegible]

10. **අනුමැතිය** ලබා ගැනීම සඳහා අවශ්‍ය වන ප්‍රධාන ක්‍රියාමාර්ගයන් සහ අවධානය යොමු කළ යුතු කරුණු පිළිබඳව ප්‍රධාන අංශවලින් සමන්විත වූ කමිටුවක් පත් කළ යුතුය. කමිටුවේ සාමාජිකයන් සියලුම අය ස්වයංපෝෂිත විය යුතුය. කමිටුවේ සාමාජිකයන් සියලුම අය ස්වයංපෝෂිත විය යුතුය. කමිටුවේ සාමාජිකයන් සියලුම අය ස්වයංපෝෂිත විය යුතුය.

- [illegible]

[illegible]

- [illegible]

1999

- ද්විත්ව හෝ ත්‍රිත්ව ප්‍රකාරයෙන් පැහැදිලි කරන්න.
- සෑම සංකල්පයක්ම සරල භාෂාවෙන් පැහැදිලි කරන්න.
- සෑම ප්‍රශ්නයක්ම සරල භාෂාවෙන් පැහැදිලි කරන්න.
- සෑම ප්‍රශ්නයක්ම පිළිගන්න.
- සෑම ප්‍රශ්නයක්ම පිළිගන්න.
- සෑම ප්‍රශ්නයක්ම පිළිගන්න.
- සෑම ප්‍රශ්නයක්ම පිළිගන්න.
- සෑම ප්‍රශ්නයක්ම පිළිගන්න.

M/S. GANGAVARAM PORT LIMITED

Government of India, Ministry of Environment, Forest and Climate Change (Impact Assessment Division)

PUBLIC NOTICE

The Vice President & Treasurer
Mr. Christopher M. Hill, 400 E. 12th St.
Mr. Christopher Hill, United Negro College Fund, Inc., 1000
C Street, Washington, D.C. 20001-1000
Subject: Grant of International Clearance (IC) to the proposed foreign library under the provision of 28
U.S.C. 1702(c)(1)(B)
Mr. Hill

This is in reference to your application for development clearance (DC) in respect of glass and stone in the memory cell product number 10070001237016/021 dated 10 Nov 2021. The parameters of the development clearance would be the weight of the stone.

- | | |
|---------------------------------------|--------------------------|
| 1. Company Name/Type of Association | 20180000000000000000 |
| 2. (a) Identification No. | 12345678901234567890 |
| 3. Title | President / Chairman |
| 4. Project Title | Project A / Initiative X |
| 5. Country | United States of America |
| 6. Name of the Association/Committee | Project A Committee |
| 7. Name of the Project | Project A / Initiative X |
| 8. Name of the Association/Committee | Project A Committee |
| 9. (a) Identification No. | 12345678901234567890 |
| 10. Title | President / Chairman |
| 11. Project Title | Project A / Initiative X |
| 12. Country | United States of America |
| 13. Name of the Association/Committee | Project A Committee |
| 14. Name of the Project | Project A / Initiative X |
| 15. Name of the Association/Committee | Project A Committee |
| 16. (a) Identification No. | 12345678901234567890 |
| 17. Title | President / Chairman |
| 18. Project Title | Project A / Initiative X |
| 19. Country | United States of America |
| 20. Name of the Association/Committee | Project A Committee |
| 21. Name of the Project | Project A / Initiative X |
| 22. Name of the Association/Committee | Project A Committee |
| 23. (a) Identification No. | 12345678901234567890 |
| 24. Title | President / Chairman |
| 25. Project Title | Project A / Initiative X |
| 26. Country | United States of America |
| 27. Name of the Association/Committee | Project A Committee |
| 28. Name of the Project | Project A / Initiative X |
| 29. Name of the Association/Committee | Project A Committee |
| 30. (a) Identification No. | 12345678901234567890 |
| 31. Title | President / Chairman |
| 32. Project Title | Project A / Initiative X |
| 33. Country | United States of America |
| 34. Name of the Association/Committee | Project A Committee |
| 35. Name of the Project | Project A / Initiative X |
| 36. Name of the Association/Committee | Project A Committee |
| 37. (a) Identification No. | 12345678901234567890 |
| 38. Title | President / Chairman |
| 39. Project Title | Project A / Initiative X |
| 40. Country | United States of America |
| 41. Name of the Association/Committee | Project A Committee |
| 42. Name of the Project | Project A / Initiative X |
| 43. Name of the Association/Committee | Project A Committee |
| 44. (a) Identification No. | 12345678901234567890 |
| 45. Title | President / Chairman |
| 46. Project Title | Project A / Initiative X |
| 47. Country | United States of America |
| 48. Name of the Association/Committee | Project A Committee |
| 49. Name of the Project | Project A / Initiative X |
| 50. Name of the Association/Committee | Project A Committee |

Date: 24/2/2024

(e-signed)
Kumardeep Kalia
15. 04.2014

and a card containing evidence that he was the FBI informant under A-549 provided him with \$500. The source provided no further information.

- [illegible]

S. No.	Name of the cargo	Existing Cargo (MT/PA) (Consolidated Quantities)	Additional Cargo (MT/PA)	Total Cargo (MT/PA)
1	Chemicals	0.20	7.24	7.44
2	Multi Cargo: Agri. Products, Food stuffs in Bulk or Pkts. (Cereals, Grains, Pulses, Spices, New Seeds), Sausages, Eggs, Fish, Sea-foam, New Textiles, Street Furniture, Cattle Fodder, Highways, Chemicals, Plastics, Garages, Glass, Furniture, Cattle Cattle, etc.	0.80	9.60	10.40
3	Coal	28.00	1.20	29.20
4	Iron Ore	1.00	2.50	3.50
5	Minerals	0.00	0	0.00
6	Multi Cargo: Non-Metals (Iron, Silicon, Copper, Zinc, etc.), Chemicals, Coal for Metall. Industries, Grains, Sausages, Eggs, Seafood, Fish, New Textiles, etc. (New Seeds, Agri. Products, Cattle Fodder, Highways, Chemicals, Plastics, Garages, Glass, Furniture, Cattle Cattle, etc.)	3.50	0	3.50
7	Multi Cargo (Multi-Use Cargo)	18.00	0	0.00

8. The estimated present (left) and total Category A, B and C cargo is as per the information given, the proposed increase in the estimated present (left) and total Category A, B and C cargo is as per the information given.

One coeditor of the Special Issue is following:

Eugenio Cristoforo Sisto	Tel. +390768642314
Federico Tassi	Tel. +390768642315

Sr. No.	Location	Area (Hect)	Percentage (%)
1	U. V. S. P. Plot	114.55	47.3
2	Vijayalakshmi Plot Area	196.95	49.21
3	Box Plot Area	40.08	5.50
4	Open Space Land	75.62	18.2
5	Water Reservoir	3.99	2.27
6	Total	230.19	100

- 1) The project is expected to be a significant milestone in the history of the smart grid and smart meters. Over 250,000 smart meters will be installed in the city of Los Angeles, and the project is expected to be a significant milestone in the history of the smart grid and smart meters.
- 2) Water quality is a critical issue for the city of Los Angeles. The project is expected to be a significant milestone in the history of the smart grid and smart meters.
- 3) Water quality is a critical issue for the city of Los Angeles. The project is expected to be a significant milestone in the history of the smart grid and smart meters.
- 4) Water quality is a critical issue for the city of Los Angeles. The project is expected to be a significant milestone in the history of the smart grid and smart meters.
- 5) Water quality is a critical issue for the city of Los Angeles. The project is expected to be a significant milestone in the history of the smart grid and smart meters.
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- 8) Water quality is a critical issue for the city of Los Angeles. The project is expected to be a significant milestone in the history of the smart grid and smart meters.
- 9) Water quality is a critical issue for the city of Los Angeles. The project is expected to be a significant milestone in the history of the smart grid and smart meters.
- 10) Water quality is a critical issue for the city of Los Angeles. The project is expected to be a significant milestone in the history of the smart grid and smart meters.

- [illegible]

IMPERFECT CONVERSION

- [illegible]

STANDARD CONDITIONS)

- 1. Regulatory compliance**
- (a) Compliance with regulatory and policy requirements, including the Environmental Protection Act (EPA) and the State Pollution Control Commission. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (b) Adherence to industry standards and best practices, including the ISO 14001 standard for environmental management systems. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (c) Adherence to local, state, and federal regulations, including the Clean Air Act, the Clean Water Act, and the Resource Conservation and Recovery Act. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (d) Adherence to international agreements, including the Paris Agreement on climate change. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- 2. Air quality monitoring and assessment**
- (a) The implementation of air quality monitoring systems, including the use of sensors and data loggers, to monitor air quality in real-time. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (b) The implementation of air quality assessment systems, including the use of models and data analysis, to assess the impact of emissions on air quality. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (c) The implementation of air quality management systems, including the use of data and analysis, to manage air quality and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (d) The implementation of air quality improvement systems, including the use of data and analysis, to improve air quality and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- 3. Environmental impact assessment and management**
- (a) The implementation of environmental impact assessment systems, including the use of data and analysis, to assess the impact of emissions on the environment. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (b) The implementation of environmental management systems, including the use of data and analysis, to manage the environment and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (c) The implementation of environmental improvement systems, including the use of data and analysis, to improve the environment and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (d) The implementation of environmental protection systems, including the use of data and analysis, to protect the environment and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- 4. Stakeholder engagement and communication**
- (a) The implementation of stakeholder engagement systems, including the use of data and analysis, to engage stakeholders and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (b) The implementation of communication systems, including the use of data and analysis, to communicate with stakeholders and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (c) The implementation of stakeholder management systems, including the use of data and analysis, to manage stakeholders and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (d) The implementation of stakeholder protection systems, including the use of data and analysis, to protect stakeholders and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- 5. Reporting and transparency**
- (a) The implementation of reporting systems, including the use of data and analysis, to report on emissions and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (b) The implementation of transparency systems, including the use of data and analysis, to ensure transparency and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (c) The implementation of stakeholder reporting systems, including the use of data and analysis, to report on stakeholders and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.
- (d) The implementation of stakeholder transparency systems, including the use of data and analysis, to ensure transparency and reduce emissions. This includes ensuring that all emissions meet the standards set by the EPA and the State Pollution Control Commission.

14. Water quality near the top and presso holes

- [illegible]

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

M/S. GANGAVARAM PORT LIMITED PUBLIC NOTICE

(From front cover page)

- (v) Any wastes from construction and demolition activities related charges shall be managed so as to strictly conform to the Construction and Demolition Waste Management Rules, 2016.
 - (vi) A yearbook from the competent authority having multiple units, wastes should be obtained, indicating the existing and projected quantities of handling and their adequacy in relation to the MSW generated from project.
 - (vii) Used OPLs and TFLs should be properly collected and disposed off safely for recycling as per the prevailing guidelines/ rules of the regulatory authority to avoid further contamination.
 - (viii) Oil spill contingency plan shall be prepared and part of EMP in case of emergencies. The equipment and recovery of oil from a spill would be as per the guidelines given in MARPOL and Shipping Act for oil spill management would be followed. Mechanism for mitigation of oil spills in contingency plan with one year oil spill contingency plan under the supervision of Coast Guard should be created.
- VII. Green Belt:**
- (i) Green belt shall be developed in area as provided in project, details with a timeline yet agency in accordance with CPCB guidelines.
 - (ii) Top soil used to be separately stored and used in the development of green belt.
- VIII. Marine Ecology:**
- (i) Drilling shall not be carried out during the fish breeding and spawning seasons.
 - (ii) Drilling, etc. shall be stopped in the confirmed manner to reduce the impact on marine environment.
 - (iii) The dredging schedule shall be so planned that the dredging is completed as soon as possible, as possible, any species in the fish population.
 - (iv) While carrying out dredging, an independent monitoring shall be carried out through a Government Agency/ Institution where the impact and necessary measures shall be taken on priority basis if any adverse impact is observed.
 - (v) A detailed marine biodiversity management plan shall be prepared through the NIC or any other Institute of repute on marine biodiversity management, fish, water, biology and biodiversity and submitted for joint implementation in the selection of the State Fisheries Board and the CRZ authority. The report shall be based on a study of the impact of the project activities on the (i) marine biota, (ii) coastal vegetation, (iii) mangroves and other marine biodiversity components including micro-organisms and macro-organisms and faunal components of marine biodiversity.
 - (vi) The project proponent shall ensure that water (effluent) does not impact the aquatic wildlife sanctuaries that fall along the construction line.
- IX. Public Hearing and Human Health Issues:**
- (i) The workplace shall be maintained as per international standards for occupational health and safety with provision of fresh air, respirators, blowers, and fans to prevent any accumulation and inhalation of unreasonable levels of pollutants including VOCs.
 - (ii) Workers shall be strictly enforced to wear personal protective equipments like dust mask, ear muffs or ear plugs, windproof and whenever necessary raincoat. Special disposable gloves will be used by labour exposed to hazardous from vibration.
 - (iii) In case of repair of any old vessels, maintenance shall be taken while handling Anhydrous & Freon gas. Besides fully enclosed covering should be provided for the temporary storage of hazardous materials at sensitive disposal to CTSO.
 - (iv) Safety training shall be given to all workers specific to their work and every worker and employee will be engaged in the hazard awareness training and mock drills which will be conducted regularly. All standard safety and occupational health measures shall be implemented and monitored by the concerned officials to prevent the occurrence of untoward incidents/ accidents.
 - (v) Emergency preparedness plan based on the Hazard Identification and Risk Assessment (HIRA) and Disaster Management Plan shall be implemented.
 - (vi) Provision shall be made for the supply of construction materials in the site with all necessary infrastructure and facilities such as fuel for (working, mobile vehicles, vehicle, STP safe drinking water, medical health care, creche etc. The fueling may be in the form of temporary structure to be located after the consultation of the project.
 - (vii) Occupational health surveillance of the workers shall be done on regular basis.
- X. Environmental Responsibility:**
- (i) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy shall prescribe for optimum operating procedures to have proper checks and balances and to bring into focus any infrastructural development of the environmental / focus areas for normal conditions. The company shall have defined system of reporting infrastructural / violation of the environmental / forest / wildlife norms / conditions and / or thresholds / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEFCC as a part of its transparency report.
 - (ii) A separate Environmental Cell shall be set up at the project and company head quarter level, with qualified personnel shall be set up under the competent authority, who will directly report to the head of the organization.
 - (iii) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company

shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly/Quarterly Report.

- (iv) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.
- XI. Miscellaneous:**
- (i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising in at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website prominently.
 - (ii) The copies of the environmental clearance shall be furnished by the project proponent to the heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government, who in turn has to display the same for 30 days from the date of receipt.
 - (iii) The project proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including details of monitored data on their website and update the same on half yearly basis.
 - (iv) The project proponent shall submit a summary report on the status of the compliance of the stipulated environmental conditions on the website of the Ministry of Environment, Forest and Climate Change at environment clearance portal.
 - (v) The project proponent shall submit the environmental statement for each financial year in Form V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986 as amended subsequently uploaded on the website of the company.
 - (vi) The criteria pollutant levels namely PM2.5, PM10, SO2, NOx (ambient levels) or critical selected parameters indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.
 - (vii) The project proponent shall inform the Regional Office as well as the Ministry the data of hydro-meteorological and final approval of the project by the concerned authorities, commencing the laid development work and start of production operation by the project.
 - (viii) The project authorities shall strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
 - (ix) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that arising from presentation to the State/Agribusiness Committee.
 - (x) No further expansion or modifications in the project shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEFCC).
 - (xi) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and strict action under the provisions of Environment (Protection) Act, 1986.
 - (xii) The Ministry may revoke or suspend the clearance if implementation of any of the above conditions is not satisfactory under the provisions of the Environment (Protection) Act, 1986, to ensure effective implementation of the stipulated safeguards measures in a time bound and satisfactory manner.
 - (xiii) The Ministry reserves the right to supersede additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
 - (xiv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
 - (xv) The above conditions shall be enforced, inter-alia under the provision of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1986, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
 - (xvi) Any appeal against this EC shall be with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

22. This notice with the approval of the Competent Authority.

(Amardeep Raju)
Scientist-E

Copy to:

1. The Principal Secretary, Department of Environment, Forest, Science & Technology, Government of Andhra Pradesh, Hyderabad-500 010.
2. The Member Secretary, AP Pollution Control Board, Chandra Prasad Street, East Vinod Nagar, Vijayawada-520 010.
3. The Chairman, Central Pollution Control Board, Panchsheel Bhawan, CPO cum Office Complex, East Vinod Nagar, Delhi-110 002.
4. The Additional Principal Chief Conservator of Forests (C), Aranya Bhawan, K.M. Narayana Road, Nagarajapuram, Guntur-522 004, Andhra Pradesh.
5. Monitoring Cell, MoEFCC, Indira Paryayashram Bhawan, New Delhi.
6. Guard File/Record File.
7. Notice Board.

(Amardeep Raju)
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