M/s AdPlus Chemicals and Polymers Pvt. Ltd.

EXECUTIVE SUMMARY

for

Proposed expansion of existing plant by increasing the production capacity of Phenol from 240 KTA to 400 KTA and Acetone from 147 KTA to 248 KTA

At

Tehsil Sutahata-I, Haldia,
District: East Medinipur, West Bengal

[Terms of Reference (File No. J-11011/194/2016-IA-II(I)) Dated 20th June, 2025]

Environmental Consultant

Envirotech East Pvt. Limited

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Company
Inhouse Laboratory Recognised by Ministry of Environment, Forest & Climate Change, Govt. of India
Accreditated by NABET, Quality Council of India as an EIA Consultant
NABET Certificate No.: NABET/EIA/2225/RA 0279
Baseline Monitoring Period: 1st March, 2025 - 31st May, 2025
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EXECUTIVE SUMMARY

1.0 INTRODUCTION

M/s AdPlus Chemicals and Polymers Privates Limited (AdPlus), a step-down subsidiary of M/s Haldia Petrochemicals Limited (HPL) is proposing an expansion of a project under construction for manufacturing of Phenol from 240 KTA to 400 KTA and Acetone from 147 KTA to 248 KTA capacity .

The company has its registered office at EM-3, Bengal Eco Intelligent Park, Saltlake, Kolkata, West Bengal-700091.

The manufacturing facility is located at Haldia, Tehsil- Sutahata-I, Haldia, District: East Medinipur, West Bengal.

The overall project scenario after expansion are presented in **Table-1.1**.

TABLE-1.1
OVERALL PROJECT SCENARIO

Sl. No.	Unit	Capacity as per EC dated 25.03.2025 (Under Implementation)	Prposed Additional Capacity	Total Capacity After Expansion	Remarks
1	Olefin Conversion Unit (OCU)	117 KTA	-	117 KTA	No Change
2	Cumene-Phenol Unit	240 KTA	160 KTA	400 KTA	Capacity Increase

Details of Products manufactured from the Proposed Project

SL. NO.	UNIT	CAPACITY AS PER EC DT. 25.03.2025 (UNDER IMPLE MENTATION)	PRPOSED ADDITIONAL CAPACITY	TOTAL CAPACITY AFTER EXPANSION
Final Products:				
1	Phenol	240 KTA	160 KTA	400 KTA
2	Acetone	147 KTA	101 KTA	248 KTA
Intermediate Products for conversion to Final Product:				
1	Cumene	319 KTA	213 KTA	532 KTA
2	Propylene	75 KTA	42 KTA	117 KTA

M/s Envirotech East Pvt. Ltd. have conducted an Environmental Impact Assessment (EIA) for the proposed expansion project and formulated an appropriate Environmental Management Plan (EMP) for such project.

2.0 SITE LOCATION

The proposed project site is located at Tehsil Sutahata-I, Haldia, District: East Medinipur, West Bengal. The Geographical Co-ordinates of the Project Site are ranged from Latitude 22°04'16.06"N to 22°04'32.47"N and Longitude 88°07'2.41"E to 88°07'26.59"E with elevation is about 15 m Above Mean Sea Level (AMSL).

The proposed site area is well developed. All necessary infrastructure facilities such as motorable road, nearness to rail head, telephone facilities and electric-power with electric sub-station are available in the area. The connectivity of the site to the key logistic/raw material/utility centres has been tabulated below:

Particulars	Description
District Head Quarter	Tamluk (District HQ) is about 31 km in north-west direction w.r.t. the project site.
Nearest Town	Haldia Town is around 4 km in west direction w.r.t. the project site
Nearest City	Kolkata City is around 60 km in north-east direction w.r.t the project site.
Nearest National / State Highways	NH-116 is passing around 4 km in west direction w.r.t the project site.
Nearest Airport	Netaji Subhas Chandra Bose International (NSCBI) Airport, Kolkata is located around 72 km in north-east direction w.r.t the project site.
Nearest Railway Station	South Eastern Railway line with Silpaprabesh (Local) Railway station is at a distance of 2 Km in south-west direction w.r.t the project site.
Nearest Port	Kolkata Port is around 55 km away and Haldia Port is 5.0 km away from the Project Site.
Nearest River	➢ Hooghly River is passing about 2.0 km distance in south direction from the project site. ➢ Haldi River is passing about 9.0 km distance in west direction from the project site.
Hills	No hills land in the Project area;
Forest Land	No forest land in the Project area;
Ecologically sensitive zones within 10 km distance	No notified eco-sensitive areas are present within 10 Km radius from the project site.
Historical / Archaeological places	No historical/ archaeological places within 10 km radius from the project site.
National Parks / Wild Life Sanctuary	No national parks/ wild life sanctuary is present within 10 Km radius from the Project site.
Defense Installation	No defense facility exists within 10 Km from area / distance from the site.

There is no eco-sensitive area like National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals etc. within 10 km radius study area around the Project site.

3.0 PROJECT HIGHLIGHTS

The principal features or highlights of the proposed expansion project of **M/s Adplus,** under study are as follows :

Location	The project site is located at Haldia, Tehsil- Sutahata-I, Haldia, District: East Medinipur, West Bengal. The Geographical Co-ordinates of the Project Site are ranged from Latitude 22° 4'16.06"N to 22° 4'32.47"N and Longitude 88° 7'2.41"E to 88° 7'26.59"E with elevation is about 15 m Above Mean Sea Level (AMSL).
Land requirement	The proposed expansion project will be set up on the available land within the existing plant area comprising of total 18 Hectares (44.4 Acres) land.
Raw water requirement & source	Total Daily make up Water requirement after expansion - 2.97 MGD (Existing: 1.95 MGD and Proposed: 1.02 MGD). Source: HPL Water supply system.
Power requirement	Total Daily power requirement after expansion - 24.1 MW (Existing: 14.425 MW and Proposed: 9.675 MW). Source: Existing Captive Power Plant of HPL.
Effluent generation & disposal	Total daily waste water generation after expansion - 2467 KLD (Existing: 1801 KLD and Proposed: 666 KLD). Effluent would be treated in ETP and treated effluent would be discharged to Greenbelt Canal as per stipulation. As per commitments made to MoEF&CC, HPL and AdPlus together would ensure 50% of Recycling and Reuse by the year 2026 and 100% Recycling/Reuse by the year 2030.
Air pollution control	Low NO_X burners will be installed with the Heaters and RTO unit to control NOx emission. VOC shall be controlled from strage tank by installing vent condenser. All volatile liquid feed stock and products shall be handled through close loop pipeline to minimize fugitive emission. Besides, stacks of adequate height will be installed for wide dispersal of air pollutants to meet the prescribed standards.
Solid Waste Management	• All Non-hazardous waste shall be segregated at source and sold to local waste recyclers.

	• All "other" wastes under H&OWM Rules 2016 covered under the EPR guidelines for "bulk consumer" shall be disposed to recyclers registered with CPCB or as appropriately stipulated in specific notifications/OMs. Ex: Batteries, Tyres, Non-ferrous metals, etc,. • All spent catalyst shall be segregated and disposed off through Authorised re-processor. • Adsorbents / spent resins etc. would be disposed off following H&OWM Rules 2016 with 3rd party TSDF. • All energy containing hazardous wastes would be preferably disposed to Pre-processing for Co-processing/ Co-incineration in cement plants or to 3rd party incinerators. • Solid waste of domestic/ commercial origin generated in the plant will be disposed of suitably in consultation with the concerned Civic body.
Manpower after expansion	175 (Direct: 135 and Contractual: 40) Direct: Existing: 95, Additional : 40, Total: 135 Contractual: Existing: 35, Additional : 5, Total: 40
Project cost	INR 800 Crores

4.0 BASELINE ENVIRONMNETAL SCENARIO

The area falling within the radius of 10 km around the project site at Tehsil Sutahata-I, Haldia, District: East Medinipur in West Bengal has been considered as study area. On-site environmental quality monitoring was carried out from **1st March, 2025 to 31st May, 2025**.

4.1 Meteorology

The monthly maximum and minimum temperatures recorded on-site during the monitoring period varied between (35.0 – 39.5)°C and (17.0 – 19.5)°C respectively with overall maximum and minimum temperatures being 39.5°C and 17.0°C respectively.

The monthly minimum and maximum relative humidity recorded on-site during the said monitoring period varied between (55.0 - 56.0)% and (69.0 - 76.0)% respectively, the overall maximum and minimum being 73.0% and 50.0% respectively.

The overall mean wind speed during the monitoring period was 4.0 km/hr). The predominant wind direction is South.

4.2 Ambient Air Quality

Ambient air quality was monitored at eight (8) locations in and around the project site.

The overall mean values of PM_{10}, $PM_{2.5}$, SO_2, NO_2, O_3, Pb, CO, NH_3, Benzene (C_6H_6), BaP, As, Ni, Methane (CH4), Methane Hydrocarbon (M-HC) in the area (mean of all the 8 locations) were 67.1 $\mu g/m^3$, 30.16 $\mu g/m^3$, 9.28 $\mu g/m^3$, 28.07 $\mu g/m^3$, 25.28 $\mu g/m^3$, 0.06 $\mu g/m^3$, 0.67 mg/m^3, 20.08 $\mu g/m^3$, 0.63 $\mu g/m^3$, 0.32 ng/m^3, 0.35 ng/m^3, BDL, 1.47 ppm and 0.68 ppm respectively.

4.3 Water Quality

Water samples were collected and analyzed at ten (10) locations to assess the surface water quality in the study area. Water samples were collected from eight (8) locations to assess the baseline status of the ground water quality of the study area.

The pH values of the collected two water samples from river Hooghly were found 7.34 and 7.12. Values of Dissolved Oxygen were observed (7.3 & 7.4) mg/lit. Total Dissolved Solids were found (1025 & 1012) mg/lit while values of Total Hardness were found (479 & 471) mg/lit. Calcium & Magnesium were found (91 & 85) mg/lit and (61 & 63) mg/lit respectively. Oil and grease was below detection limit (<1.4 mg/lit) in these two samples. Sulphate, Nitrate and Chloride were observed (66 & 63) mg/lit, (8.1 & 8.6) mg/lit and (322 & 327) mg/lit respectively. Iron contents were observed (0.16 & 0.13) mg/lit respectively and Zinc contents were found to be <0.05 mg/lit in both samples.

The pH values of the collected pond water samples were found in the range of (6.73 - 7.12). Dissolved Oxygen was observed in the ranges of (6.1 - 6.6) mg/lit. Total Dissolved Solids were found in the ranges of (273 - 421) mg/lit while Total Hardness was found in the ranges of (147 - 265) mg/lit. Calcium & Magnesium were found varying in the ranges of (39 - 78) mg/lit and (9 - 20) mg/lit respectively. Oil and grease was below detection limit (<1.4 mg/lit) in these samples. Sulphate, Nitrate and Chloride were observed varying in the ranges of (9 - 59) mg/lit, (2.8 – 8.5) mg/lit and (52 - 95) mg/lit respectively. Values of Iron and Zinc contents were found in the ranges of (0.17 - 0.48) and <0.05 mg/lit respectively.

Conclusion can be drawn in the light of the overall analysis made so far that the surface water in the study area is free of any kind of industrial and urban pollution and has been found to be generally fit for human consumption.

4.4 Noise

A total of 10 locations around the proposed project were selected for the measurement of ambient noise levels.

During the day time, the equivalent noise levels were found to vary in the range of (53.1 - 69.6) dB(A) while in the night time, the equivalent noise levels were observed to vary in the range of (43.4 – 59.5) dB(A).

4.5 Ecology

The study area is found to have a good vegetation cover due to helpful climatic conditions and good soil quality in the area. There are good number of plantation patches in the study area and dense vegetation cover around settlement areas.

The overall floral composition in the whole study area is quite rich.

4.6 Demography and Socio-economy

The study area is rural-urban mixed in nature and moderately populated with the total population of 3,64,129 (as per 2011 Census). Scheduled Caste (SC) and Scheduled Tribe (ST) population in the study area is about 17.88% and 0.51% w.r.t. the total population respectively. The sex ratio in the study area is about 931 females per 1000 males. The overall literacy rate is about 77.2% of the total population. The principal language is Bengali and the principal staple food is rice.

5.0 ENVIRONMENTAL IMPACTS OF PROPOSED PROJECTS

5.1 Impacts on Air Quality

The Stack emissions from the proposed project will be mostly Sulpher dioxide (SO_2), Nitrogen Oxides (NOx), Particulate matters (PM) & Carbon Monoxide (CO). The major source of emission from the proposed project will be from the proposed 3 stacks.

As recommended by CPCB, GLCs at various receptor locations within 10 km radius have been computed for the three months' period **(1st March, 2025 to 31st May, 2025)** representing the summer season,

based on the hourly meteorological data of this period. The computation has been made applying Industrial Source Complex (ISC3) model, developed by United States Environmental Protection Agency (USEPA), which is most widely used and also recommended by CPCB (PROBES/70/1997-98).

The maximum incremental value of SO_2, NOx, PM & CO would be about 0.542 µg/m^3, 2.714 µg/m^{3,} 0.058 µg/m^3 & 0.001 mg/m^3 respectively, which will occur at a distance of 1.0 km in "NE" direction.

The predicted maximum GLCs of SO_2, NOx, PM & CO due to the operation of the proposed expansion project is well within the prescribed limits. Therefore, there will be insignificant impact on the Air Quality of the area due to the operation of the project.

5.2 Impacts on Water Quality

Company will follow "the zero wastewater discharge concept" and the entire wastewater will be recycled to the plant for various uses. As no wastewater will be discharged into any outside water body, there will be no impact on the water quality of any surface water bodies of the area.

5.3 Impacts on Soil

There will be solid waste generation, but will be managed in the proper manner. This will ensure that there will not be any impact on soil quality due to the disposal or deposition of solid waste.

5.4 Impacts on Land Use

The proposed development will be confined within the boundary of the allocated land only, earmarked for the industrial purpose, so there will not be any significant impact on the land use pattern of the area.

5.5 Impacts on Biological Environment

The surrounding area has substantial vegetation in the form of village orchards, roadside trees and agriculture. If the gaseous emission is controlled properly, there will not be significant impact. There will be sufficient plantation of trees at the plant site. All these measures, if implemented properly will ensure insignificant impact on the local vegetation from the proposed project and may improve the vegetation scenario of the area.

No wastewater will be discharged outside the plant premises. There is, therefore, no impact on the aquatic ecology of the water bodies.

5.6 Impacts on Socio-Economic Environment

The project will offer substantial employment potential during construction phase and operation phase, which will have beneficial impact.

6.0 ENVIRONMENTAL MANAGEMENT PLAN

M/s AdPlus Chemicals and Polymers Privates Limited, will develop various management activities for the Environmental Management Programme which will meet all statutory requirements and help to improve environmental quality.

In order to improve the aesthetic look of the area and enhance the land use as well as to compensate for any loss in ecology during construction, adequate plantation programmes around the project site have been planned and will be adopted.

Development of green belt will include plantation of trees along boundary of the plant, roads and other available spaces. A greenbelt of 26.7% (4.85 Hectares (11.9 Acres) has been provided surrounding the AdPlus complex within existing manufacturing complex besides providing a greenbelt of 11% on 1.98 hectares at a distance of around 18 km from the project site boundary, making overall greenbelt coverage as 37.7% of total AdPlus Complex area.

A detailed monitoring for different environmental parameters will be carried out as per direction of State Pollution Control Board. An environmental management group will be established to implement the management plan.