**ENVIRONMENTAL STATEMENT** 

OF

## M/s SHRI GANG INDUSTRIES & ALLIED PRODUCTS LIMITED Plot no. B- 2/6 & B- 2/7, UPSIDC Industrial area, Sandila Phase IV, Lucknow Hardoi Road, Tehsil Sandila, District Hardoi (Uttar Pradesh).

Financial Year 31st March 2025

Submitted by M/s Shri Gang Industries & Allied Products Limited Plot no. B- 2/6 & B- 2/7, UPSIDC Industrial area, Sandila Phase IV, Lucknow Hardoi Road, Tehsil Sandila, District Hardoi (Uttar Pradesh - 241204

## **CERTIFICATE**

The Environmental statement for year 2024 - 2025 of the Shri Gang Industries and Allied Products Limited, at Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area, Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi, (U.P.) - 241204, has been prepared by us at the request of the factory management. The data on which this report is based was provided to us by the factory administration. The testing and analysis of the Ambient Air Quality, Ambient Noise level and Stack Emission was carried out by us.

Dr. Manoj Garg



ENVIRONMENTAL AUTOR Environmental & Technical Research Center, Lucknow (U.P.) India (An ISO 9001:2015, ISO 14001:2015, ISO 45001: 2018 (OH & S) Certified, NABL & MoEF Accredited Lab)

#### ENVIRONMENTAL STATEMENT

#### THE ISSUES, FOCUS & METHODOLOGY

#### **INTRODUCTION**

In Today's world of keen demand on financial and economic competitiveness through industrialization and simultaneous strong growing social awareness towards risks and environmental degradation associated with industrialization, the industry is under serious stress as to how to tackle it. Therefore, it is in the interest of every industry to have some formalized procedure, to provide the management, the vital knowledge of its compliance with environmental laws and procedures towards the environmental protection and their social acceptability. The formalized procedure to achieve the aforementioned objective is now popularly known as "Environmental Audit".

The concept of environmental audit is not some thing unheard of, rather it came into operation during the early 1970's in USA and industrialized European countries. However, it had a number of different approaches and names, like environmental reviews, environmental quality controls etc.

In view of the experience of developed nations where such procedure have benefited the industries and helped in reducing the environmental degradation there, the developing countries have also started taking initiatives in adopting such methodologies.

#### **DEFINING ENVIRONMENTAL AUDIT**

There is no single universally accepted definition of environmental audit, perhaps, because of absence of standard procedure and methodology to conduct this kind of study. However, the definition accepted by Internal Chamber of Commerce (ICC) is comprehensive and is as follows:

<u>"Environmental Audit"</u> is a management tool comprising a systematic documented, periodic and objectives evaluation of how well organizations, management systems and equipment are performing with the aim of:-

[1]Facilitating management control on environmental practices.[2] Assessing compliance with company policies, including meeting regulatory requirements.

Environmental audit, therefore, has two basic components :

(a) Management Audit on Environmental philosophy of the organization.

(b) Technical Audit of the plant, equipment, facilities & operating practices compliance.

Environmental Audit differs from Environmental Impact Assessment (EIA), in that, the latter is predicative concept, carried out during the planning phase before an operation starts, while the audit is systematic examination of performance during the operational phase of industrial activity, including verification of adequacy of the suggested Environmental Management Plan ((EMP) generated during EIA phase.

#### WHY AUDIT

As the definition of environmental audit suggests, it is required to be carried out by the desire of the company's management either on regulatory pressure or by its own consciousness/anxiety to have an assurance that the company's environmental management phase is adequately and satisfactorily operating. Thus prima facie the audit programme provides assurance to the company's managements the conformance to the enforced regulatory requirements, the consistency and adequacy of its environmental protection and pollution control systems and effectiveness of information reporting procedures.

#### **BENEFITS OF AUDIT**

The benefits of environmental audit to the pursuing industry are as broad as the audit objectives. As an example, a typical audit program objective could be related to verification for the compliance status of individual facilities only or could be more comprehensive and define the changes necessary to reduce the wastage in production process itself.

The benefit of this study however would not end with just the identification and documentation of compliance status but will result in increased

environmental effectiveness through improved compliance record, reduced occupational hazards, fewer legal actions, timely corrective actions for correction of faulty operating equipment/ instruments/ systems. The benefits influenced by audit are generally quantifiable, tangible and real. The reduced legal actions brought against company and/ or individuals, reduced fines/ penalties, reduced accidents, reduced incidences of environmental hazards, improved workers health, increase in worker productivity, reduced insurance rate etc., to list only a few . The intangible benefits would include better reputation, favorable publicity, improved relations with regulatory authorities, increased job satisfaction for workers, increased involvement in day to day environmental related activities and greater commitments etc. thus industries have to realize that a strong environmental performance can help both within the company and outside the company.

#### AUDIT AS A PART OF ENVIRONMENTAL MANAGEMENT PLAN (EMP)

From the benefits an environmental audit brings to the industry, it is amply clear that audit should not be perceived as just a regulatory requirement, rather it is to the company's own advantage to include auditing in its Environmental Management Plan (EMP). Environmental Management Plan is an overall framework, involving well defined group of personnel assignment with specific responsibilities to develop, installed and monitor environment related plans for the company.

As any other management system, EMP also involves planning, organizing, guiding, directing, communicating and finally controlling and reviewing to achieve the goals for which this management system is devised. The audit evidently falls in the controlling and reviewing function of EMP, because this function involves measuring results, comparing performances, diagnosing problems, taking corrective action based on the feedback and finally improving the system.

Although auditing may appear small part of EMP yet it is perhaps the most significant part of EMP. It has direct influence on the other functions of EMP and all other functions have to be reviewed/ redesigned based on audit recommendations.

#### Form V for Environmental Audit Report

It has been stated in the beginning that Environmental audit has a number of benefits. This, besides improving the Environmental Management of an organization, also increases the organistions's profitability in tangible as well as intangible terms. India is one of the developing countries, working towards a high economic growth rate by taking certain steps. Most important of these steps would call for further rapid industrialization.

The Government of India has notified the requirement for carrying out Environmental Audit for all the operating industries vide their Gazette Notification No.120 dated March 13, 1992. This is an amendment under the Environment Protection Act 1986. To help the industry in formulating the requisite information regarding its raw material usage, product profile, production process, waste discharge, pollution control system etc. a prescribed Performa is enclosed with the notification. The Performa has been prepared primarily to cover only the regulatory compliance requirements on the basis on data reported and presented by the industry.

The environmental statement is to be submitted in Form V, which has nine parts, namely Part A, B, C, D, E, F, G, H & I.

Part A contains the name and address of the owner and the date of the last environmental audit report submitted.

Part B pertains to the consumption of waste and raw materials. water consumption is to be given separately for process, cooling, and domestic uses, in m3/day and also in terms of water consumption/unit of product, for the various products. Similarly information's on raw materials consumption, product-wise per unit of output is to be provided.

Part C relates to the quantities of hazardous wastes generated, separately from the process and from pollution control facilities.

Part D deals with the quantities of solid wastes generated from the process as well as pollution control facilities,.

Part E deals which the quantities of solid wastes generated from the process as well as pollution control facilities, and seeks to know also about the quantities recycled or reutilized.

All the Parts from B to E require comparisons of the current year performance with that of the pervious year.

Part F seeks information regarding characteristics (in terms of concentration and quantum) of Hazardous and solid wastes and about the practice adopted for the disposal of both these categories of wastes.

Part G calls for information on the impact of pollution measures on the conservation of natural resources and consequently on the cost of production.

The industry is required to indicate, in Part H, its future proposals for investment in environmental protection, including abatement of pollution.

In the last Part, I, any other particulars, in respect of environmental protection and abatement of pollution may be given.

#### CONCLUSIONS

Taking advantage of the requirements of regulatory bodies the industry can take concrete steps now, to derive full benefits of Environmental Audit to become Environmental Friendly and yet more competitive. Environmental Audit, therefore, is not a restrictive requirement, but indeed a very useful and potent tool for building up the competitiveness in our industry .

#### **LEGAL PROVISIONS**

Ministry of Environment and Forests, Noti. No. G.S.R.945 (E), dated February 12, 1992, published in the Gazette of India Extra. Part II, Section 3(i),dated 12 February, 1992, p.2(No. Q - 14011(1)/90—CPA.) :-

In exercise of the powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1986(29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely :—

- [1] (i) These rules may be called the Environment (Protection) Rules, 1992.
  - (ii) They shall come into force on the date of their publication in the Official Gazette.

## [2] In Rule 3 of the environment (protection)Rules, 1986, after sub rule the following sub rules will be added, namely :—

[(6) Notwithstanding any thing contained in sub rule (3), an industry operation process which commenced production on or before 16th May, 1981 and has shown adequate proof of a least commencement of physical work for establishment of facilities of meeting the specified standards with in a time—bound programe, to the satisfaction of the concerned state pollution control board, shall comply with such standards latest by the 31st day December, 1993.]

[(7) Notwithstanding anything contained in sub—rule(3) or sub rule (6) industry, operation of process which has commenced production after the 16th day of may, 1991 but before the 31st day of December, 1991 and has shown adequate proof of a least commencement of physical work of establishment of facilities to meet the specified standards with in a time—bound programe, to the satisfaction of the concerned state pollution control Board, shall comply with such standards latest by the 31<sup>st</sup> day of December, 1992.]

Ministry of Environment and

Forests, Noti. No. G.S.R. 329(e) dated March 13, 1992, published in the Gazette of India , Extra. , Part II , Section 3(i), deed 13<sup>th</sup> March 1992, Sl . No. 120, pp.3-4(F. No.q.15015/1/90—CPA).

In exercise of the powers conferred by Sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the Environment (Protection) Rules, 1986, namely:-

- [1] 1. These rules may be called the Environment (Protection) (Second Amendment) Rules, 1992.
  - 2. They shall come into force on the date of their publication in the Official Gazette.
- [2] In the environment (protection) Rules, 1986 after rule 13, the following rule shall be inserted,

#### "14, Submission of Environmental Audit Report:-

Every person carrying on an industry, operation or process requiring consent under section 25 of the water (Prevention and Control of Pollution)Act, 1974 (6 of 1974) or under Section 21 of the Air (Prevention and Control of Pollution) act, 1981, (14 of 1981) or both authorization under the Hazardous wastes (Management and Handling) Rules, 1989, issued under the Environment (Protection) Act, 1986 (29 of 1986) shall submit an environmental audit report for the financial year ending the 31st March in form V to the concerned state pollution control board on or before the 1<sup>5th</sup> day of May every year, beginning , 1993.

#### Ministry of Environment and Forest

New Delhi : the 28th April, 1994 G.S.R. 329 (E), In exercise of the powers conferred by Sections 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules further to amend the environment (Protection) Rule1986, namely :—

- [1] 1. These rules may be called the Environment (Protection) Amendment Rules, 1993.
  - 2. They shall come into force on the date of their publication in the Official Gazette.

[2] In the Environment (Protection) Rules, 1986, (a) In rule 14,

For the word audit report whenever they occur the word "statement" shall substituted.

(ii) For the figure letters and word "15<sup>th</sup> day of May" the word the "30<sup>th</sup> day of September" shall be submitted.

## (FORM - V) (See Rule 14)

Environmental statement report for the financial year ending the 31<sup>st</sup> March 2025

## PART - A

i	Name and Address of the Owner / Occupier of Industry operation or Process	Shri Gang Industries And Allied Products Limited at Plot No.: B-2/6 & B-2/7 UPSIDC Industries Area, Sandila Phase IV, Lucknow Hardoi Road, Sandila District: Hardoi, Uttar Pradesh - 241204
ii	Production Capacity of the plant	55 KLD ((RS/ ENA) ) & Co gen Power: 2.0 MW
iii	Year of establishment	2021
iv	Date of last Environmental statement submitted.	September, 2024
V	Industry Category Primary : (STC code) Secondary : (STC Code)	Secondary

## RAW MATERIAL CONSUMED AND PRODUCT MADE AT A GLANCE

PARTICULARS	2024 - 2025	2023 - 2024
Grain Consumed (Qtl)	387632.0	378191.0
Product Made (BL)	18691532.0	17520487.0
Product Made (KL)	18691.532	17520.487

## (PART - B) I. Water and Raw Material Consumption

i	Water Consumption	313.5 m <sup>3</sup> /day at 100 % Utilization (5.87 m <sup>3</sup> /KL of product )		
ii	Process	1		
iii	Cooling	$\int 313.5 \text{ m}^{3}/\text{day}$		
iv	Domestic	6.0 m <sup>3</sup> /day		
Water		er Consumption per Unit Pro	ducts	
Name of Product		Water consumption per KL of product made		
2		2024 - 2025	2023 - 2024	
Rectified Spirit / ENA / Absolute Alcohol5		5.87 KL/KL of R.S./ENA	6.26 KL/KL of R.S./ENA	

## II. Raw Material Consumption

Sr. No.	Name of Raw Material	Name of Products	Consumption of Raw Material per unit of Product		
During the Financial Year					
2024 - 2025				2023 - 2024	
1	Grain	Rectified Spirit/ ENA	0.021 Qtl /BL of RS/ENA	0.022 Qtl /BL of RS/ENA	

#### (PART - C)

## Pollution Discharged to Environment/Unit of Output in the financial year 2024 - 2025

|--|

Waste water (Average of 10 Samples in the year ) 2024 - 2025 a)

----- ZERO EFFLUENT DISCHARG ------

(69.93 % below the limit)

(Stack)

Our Treatment strategy is first concentration in Multi effect evaporator then concentrate from MEE will be used as fuel in incineration boiler of capacity 18 TPH.

b) Stack Air (Average of 06 Samples in the year) 2024 - 2025			year) 2024 - 2025
PM*	J)	$45.10 \text{ mg/Nm}^3$	Within the max limit of 150 mg/Nm <sup>3</sup> (60.02.0), helpsy the limit.

\* PM for Particulate Matter

Pollutant	Quantity of Pollutants discharged (Mass/Day)	Concentration pollutant in Discharge (Mass/volume)	Percentage of Variation from prescribed standard with reasons	
c) Noise Leve	el (Average of 06	Samples in the yea	r ) 2024 - 2025	
Average of 24	61.75 dB(A) Day time (6:00 AM- 10:00 PM)		Within the limit of 75 db (17.67 % below the limit)	
hourly Sampling	49.81 dB (A) Night time (10:00 PM- 6:00 AM)		Within the limit of 70 db (28.84 % below the limit)	
d) Ambient A at 02 samp	ir Quality Monit ling Point) 2024	toring (Average of - 2025	6 Samples in the year	
PM <sub>10</sub>	80.79 μg/m <sup>3</sup>	100 μg/m <sup>3</sup> (Max Limit)	19.21 % below the limit	
PM <sub>2.5</sub>	49.52 μg/m <sup>3</sup>	60 μg/m <sup>3</sup> (Max Limit)	17.47 % below the limit	
SO <sub>2</sub>	13.72 μg/m <sup>3</sup>	80 μg/m <sup>3</sup> (Max Limit)	82.85 % below the limit	
NO <sub>X</sub>	19.31 μg/m <sup>3</sup>	80 μg/m <sup>3</sup> (Max Limit)	75.86 % below the limit	

> All the parameters were found within the standards stipulated by U.P.P.C.B, it shows that our Waste water treatment scheme and Air pollution control system is working perfectly & efficiently.

#### Zero Liquid Discharge Scheme :

**Spent wash** generated From the process is being first concentrated in the Multi Effect evaporator and then concentrate from MEE is being used as fuel in 18.0 TPH slop fired boiler along with bagasse.

**Other Effluent:** Like Spent Lees, MEE Condensate, blow downs is being treated in CPU & RO, after treatment 100.0 % recycling is being done.

## (PART - D) HAZARDOUS WASTES

(as per under Hazardous wastes/ Management & Handling rules, 1989)

Hazardous Wastes		Total Quantity (Kg)		
During the fina		ncial year		
		2024 - 2025	2023 - 2024	
a)	From Process	NIL	NIL	
b)	From Pollution control facilities (i.e. ETP) in the Form of Oil & Grease emulsion	NIL	NIL	

## PART - E SOLID WASTES

Solid Wastes		Total Quantity			
		During current financial year	During previous financial year		
		2024 - 2025	2023 - 2024		
(a) From Process (Fermenter Sludge)		NIL	NIL		
(b) From Pollution Control facilities					
i	Ash from APCS	17.0 MT/Day 15.0 MT/Day			
(c) L	(c) Uses of Solid Wastes				
i	Fly Ash	100% Fly ash is being sold to fertilizer manufacturing companies			
ii	Sludge from ETP	100% sludge are being used as Manure.			

#### PART - F

## Hazardous as well as solid waste and Indicate Disposal Practice adopted for both these Categories

The non-hazardous solid waste, which are generated from Fermenter sludge, Boiler ash are being 100 % consumed as manure by local farmer.

#### PART - G

# Impact of pollution control measures on conservation of natural resources and consequently on the cost of production.

We have taken the following steps :

- Segregation and separation of unpolluted water thus bringing down considerable quantity of effluent flowing into the treatment system.
- We have installed CPU along with RO for the treatment of other effluent, therefore currently we are recycling 100% treated water from CPU
- 3. By adopting the concentration and incineration scheme for Spent wash treatment, we have reduced the risk of water pollution through leaching and now a day we are running industry for 350 days in year.
- Through following change in treatment scheme for spent wash and other effluent, we have reduced fresh water requirement from 8 KL/KL of product to 5.87 KL/KL of product.

#### PART - H

## Additional investment Proposal for Environmental Protection including statement of Pollution

Factory has invested huge amount in our concentration and incineration system to achieve zero liquid discharge. Concentrate from MEE is being utilized in bio composting. The first step to achieving a zero discharge is through recycling of different streams and the following

streams are recycled into the process to economize on the usage of freshwater as also achieve a zero discharge in the process: -

- Thin slops emerging from the decanters are recycled to the process in varying quantities depending on what the process can take from 10-25%.
- The balance thin slops are passed on to the evaporator and then to the Mixer for making of DWGS and then to the Dryer to make DDGS thereby making the entire effluent zero and getting a valuable by product cattle feed.
- Spent less which is the waste zero alcohol liquid coming from different distillation columns is also recycled to the process.
- Steam and process condensate is also reused with primary condensate going back to the boiler and the process condensate being used as a makeup at different points including the Cooling Tower and so on.
- All washings etc. which cannot be reused are passed through a small treatment plant and the clear liquid obtained sent back to the process.
- > The reject of the treatment plant is generally used for ash quenching or for gardening.
- We are thus able to achieve zero discharge which is the objective of this treatment process

Besides this the industry has full fledged Secondary waste water treatment system for the treatment of other effluent like Spent lees, MEE condensate, blow downs. CPU unit comprises of Equalization tank, Anaerobic digester, Primary clarifier, diffused aeration tank, secondary clarifier, sand media filter and activated carbon filter, ultrafiltration and followed by reverse osmosis plant.

The induction of Concentration and incineration process has helped in not only containing effluent discharge and surplus steam from boiler is being used for co gen power. 100 % electricity requirement is full filled inhouse and surplus electricity is being sold to UPPCL.

The impact has resulted in converting the total pollution load to effluent into useful electricity and use full manure and thereby has completely done away with conventional effluent discharge process.

Hence this method of treatment is a close loop system has finally ensured.

"ZERO POLLUTION AND ZERO DISCHARGE EFFLUENT"

#### PART - I

## Any other Particulars in respect of Environmental protection and abatement of Pollution

- (1) We are complying all the suggestions given by the UPPCB and Getting regular Water and Air consent from UPPCB.
- (2) Plantation are being done regularly.
- (3) Regular Monitoring of Noise, Waste water and stack gases are being done as per the table given below.

Sr. No.	Process /Unit	Sampling Po	oint	Parameter Analyzed	Frequency of Sampling
	Wa	aste water treatm	ent p	lant	
1.	CPU	Outlet & inlet		Chemical testing	Monthly
2.	MEE	Outlet and Inlet		Chemical testing	Monthly
3.	MGF & ACF	Outlet	BC	DD,COD,TSS,TDS, pH	Weekly
4.	Sludge & Fly ash	Division	Chemical Quality		Weekly
	Air	r Pollution Contro	ol De	vice	
5.	ESP	Stack	Stack P.M.		Continuously
	]	Noise Level Moni	torin	g	
6.	At the different points of th sources and Nearby areas	Noise Level			Weekly
Ground water quality					
7.	Testing of ground water nea the site	Required Par	Required Parameters		