

ENVIRONMENTAL STATEMENT

OF

AARTI DISTILLERIES PRIVATE LIMITED

VILL. CHIRAURA, POST – RAIPUR (KUKHAT),

TEHSIL-AKBARPUR, KANPUR DEHAT – 209304

Financial Year 31st March 2023

Submitted by :

M/s Aarti Distilleries Private Limited

Vill. Chiraura, Post – Raipur (Kukhat),

Tehsil-Akbarpur, Kanpur Dehat – 209 304

Date:.....

CERTIFICATE

The Environmental statement for year **2022-2023** of the **Aarti Distilleries Private Limited** , vill. **Chiraura**, Post – **Raipur (Kukhat)**, Tehsil-**Akbarpur, Kanpur Dehat – 209304**, 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 AUDITOR

Environmental & Technical Research Center, Lucknow (U.P.) India

(An ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 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:

"Environmental Audit" 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 organisations'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 previous 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 31st 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 13th 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^{5th} 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) Rule 1986, 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 "15th day of May" the word the "30th day of September" shall be submitted.

(FORM – V)
(See Rule 14)

Environmental statement report for the financial year ending
the 31st March 2023

PART – A

i	Name and Address of the Owner / Occupier of Industry operation or Process	M/s Aarti Distilleries Private Limited Vill. Chiraura, Post – Raipur (Kukhat), Tehsil-Akbarpur, Kanpur Dehat – 209 304
ii	Production Capacity of the plant	150 KLD (GNS/ENA) Co gen Power : 4.5 MW
iii	Year of establishment	2022
iv	Date of last Environmental statement submitted.	-
v	Industry Category Primary : (STC code) Secondary : (STC Code)	Secondary

**RAW MATERIAL CONSUMED
AND
PRODUCT MADE AT A GLANCE**

PARTICULARS	2021 - 2022	2022 - 2023
Grain Consumed (Qtl)	NA	6,11,990
Product Made (BL)	NA	2,88,87,555
Product Made (KL)	NA	28887.555

(PART – B)

I. Water and Raw Material Consumption

i	Water Consumption	1354 m3/day at 100 % Utilization (7.32 m3/KL of product)		
ii	Process	} 930 m³/day		
iii	Cooling			
iv	Domestic	24 m³/day		
Water Consumption per Unit Products				
Name of Product		Water consumption per KL of product made		
		2021 - 2022	2022 - 2023	
Rectified Spirit / ENA		NA	7.32 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				
			2021 - 2022	2022 - 2023
1	Grains (Broken Rice / Maize)	Rectified Spirit/ ENA	NA	0.021 Qtl /BL of RS/ENA

(PART – C)

**Pollution Discharged to Environment/Unit of Output in the financial
year 2022 - 2023**

Pollutant	Quantity of Pollutants discharged (Mass/Day)	Concentration pollutant in Discharge (mass/volume)	Percentage of Variation from prescribed standard with reasons
a) Waste water (Average of 10 Samples in the year) 2022 - 2023			
<p style="text-align: center;">----- ZERO EFFLUENT DISCHARGE -----</p> <p>The distillery will be based on “ZERO EFFLUENT DISCHARGE”</p> <p>Spent wash will be fed into the decanter then supernatant concentrated in multi effect evaporator and then mixed with wet cake of decanter, further sent to DDGS dryer for drying to finally convert into a powdered substance used as cattle feed. The process condensate will be treated in condensate treatment plant. The treated water will be recycled back in cooling tower makeup.</p>			
b) Stack Air (Average of 06 Samples in the year) 2022 - 2023			
PM* (Stack)	45.2 mg/Nm ³	Within the max limit of 150 mg/Nm ³ (69.86 % below 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 Level (Average of 06 Samples in the year) 2022 - 2023			
Average of 24 hourly Sampling	57.36 db		Within the limit of 75 db (23.52 % below the limit)
d) Ambient Air Quality Monitoring (Average of 6 Samples in the year at 02 sampling Point) 2022 - 2023			
PM ₁₀	87.85 µg/m ³	100 µg/m ³ (Max Limit)	12.15 % below the limit
PM _{2.5}	49.23 µg/m ³	60 µg/m ³ (Max Limit)	17.95 % below the limit
SO ₂	14.77 µg/m ³	80 µg/m ³ (Max Limit)	81.54 % below the limit
NO _x	22.99 µg/m ³	80 µg/m ³ (Max Limit)	71.26 % below the limit

➤ All the parameters were found within the standards stipulated by U.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 will be concentrated in multi effect evaporator and sent to DDGS dryer for drying to finally convert into a powdered substance used as cattle feed. The process condensate will be treated in condensate treatment plant. The treated water will be recycled back in cooling tower makeup.

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 financial year			
		2021 - 2022	2022 - 2023
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 previous financial year	During current financial year
		2021 - 2022	2022 - 2023
(a) From Process (DDGS)		NA	73.0 MT/Day
(b) From Pollution Control facilities			
i	Fly Ash	NA	80.0 MT/Day
(c) Uses of Solid Wastes			
i	Fly Ash	100% Fly ash from the boiler will be given to brick manufacturers	
ii	DDGS	100% DDGS used as cattle feed.	

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 :

1. Segregation and separation of unpolluted water thus bringing down considerable quantity of effluent flowing into the treatment system .
2. We have installed CPU along with RO for the treatment of other effluent, therefore currently we are recycling 100% treated water from CPU
3. Spent wash will be fed into the decanter then supernatant concentrated in multi effect evaporator and then mixed with wet cake of decanter, further sent to DDGS dryer for drying to finally convert into a powdered substance used as cattle feed. The process condensate will be treated in condensate treatment plant. The treated water will be recycled back in cooling tower makeup.
4. Through following change in treatment scheme for spent wash and other effluent, we have reduced fresh water requirement from 15 KL/KL of product to 10.0 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. Spent wash will be fed into the decanter then supernatant concentrated in multi effect evaporator and then mixed with wet cake of decanter, further sent to DDGS dryer for drying to finally convert into a powdered substance used as cattle feed. The process condensate will be treated in condensate treatment plant. The treated water will be recycled back in cooling tower makeup.

Surplus steam from the boiler is being utilized for co gen power.

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 Decantation, MEE followed by DDGS dryer 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 Point	Parameter Analyzed	Frequency of Sampling
Waste water treatment plant				
1.	CPU	Outlet & inlet	Chemical testing	Monthly
2.	MEE	Outlet and Inlet	Chemical testing	Monthly
3.	Sludge & Fly ash	Division	Chemical Quality	Weekly
Air Pollution Control Device				
4.	ESP	Stack	P.M.	Continuously
Noise Level Monitoring				
5.	At the different points of the sources and Nearby areas	Noise Level		Weekly
Ground water quality				
6.	Testing of ground water near the site	Required Parameters		Weekly