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DCM SHRIRAM
SUGAR

Ref: DCM/Sugar/EHS/24-25/137

Date 07.09.2024

To
The Chief Environmental Officer (Circle-5)
Uttar Pradesh Pollution Control Board,
TC-12, Vibhuti Khand, Gomti Nagar
Lucknow, 226010

Sub: Submission of Environmental Statement in Form-V for M/s DCM Shriram Ltd., Sugar Unit, Ajbapur, Lakhimpur Kheri, UP

Dear Sir,

Reference to the Consolidated Consent to Operate and Authorization referred to as the CCA (Consolidated Consent to Operate) for Air & Water **Ref No**: 194629/ UPPCB/ Lucknow (UPPCBRO)/ CTO/both/ LAKHIMPUR KHIRI/ 2023 Dated: 20/12/2023 for the Consolidated Consent to Operate and Authorisation hereinafter referred to as the CCA (Consolidated Consent & authorization) (Fresh) under Section-25 of the Water (Prevention & Control of Pollution) Act, 1974 and under Section-21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule-6(2) of the Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 notified under Environment (Protection) Act, 1986 as applicable (to be referred hereinafter as Water Act, Air Act and HW Rules respectively).

Please find attached here with the Environmental statement in Form-V for the FY 2023-24 as per Environment (protection) Rules 1986.

Hope you will find the same in order.

Thanking you,

For DCM Shriram Ltd, Sugar Unit, Ajbapur

(Kuldip Singh)
Sr. Vice President & Unit Head

Encl: - Environmental Statement

डाक प्राप्ति रसीद
प्राप्ति दिनांक 13/9/24
प्राप्तकर्ता के हस्ताक्षर
उ0प्र0 प्रदूषण नियंत्रण बोर्ड, लखनऊ

CC:-
The Regional Officer U.P. Pollution Control Board PICUP Bhawan, 4th floor, B Bolck, Vibhuti Khand, Gomti Nagar, Lucknow 226010

13-9-24

ENVIRONMENTAL STATEMENT

FOR

THE FINANCIAL YEAR – 2023 - 24

FOR

DCM SHRIRAM
SUGAR

DCM SHRIRAM LTD.
SUGAR UNIT-AJBAPUR

VILL.-AJBAPUR, PO.-MULLAPUR
DISTT. – LAKHIMPUR KHERI, UP

ENVIRONMENT AUDIT TEAM

Mr. O.S. Shukla

Mr. A. K. Arya

Mr. Arumugam Samy

Mr. P.K Singh

Ms. Shristi Kalkar

CONTENT

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT AND FOREST

Notification No G.S.R. 95 (E) dated February 12, 1992 published in the Gazette of India, Extra – ordinary part II Section 3 (i) dated 12th February 1992, page 2 (No. Q-14011 (i) 90-CPA)

In exercise of the powers conferred by Section 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) (Amendment) Rules, 1992

   (ii) They shall come into force on the date of their publication in the Official Gazette

2. In rules 3 of the ENVIRONMENT (PROTECTION) Rules, 1986 after sub-rule (5), the following sub-rule shall be added, namely: -

   (6) Notwithstanding anything contained in sub rule (3), an industry, operation process which has commenced production on or before 16th May, 1981 and has shown adequate proof of at least commencement of physical work for establishment of facilities to meet the specified standards within a time bound program, to the satisfaction of the concerned State Pollution Control Board, shall comply with such standards latest by the 30th day of September 1993.

   a. Not with standing anything contained in sub rule (3) or sub-rule (6), an Industry, Operation or 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 facilities to meet the specified standard within a time bound program, to the satisfaction of the concerned State Pollution Control Board, shall comply with such standard latest by 31st day of December 1992.

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT AND FOREST

NOTIFICATION

No. G.S.R 329 (E), dated March 13, 1992, published in the Gazette of India, Extra-ordinary part II, Section 3 (i), dated 13th March 1992, Sl. No. 120, Page 3 & 4 (F. No. Q-415015/1/90-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) (Second Amendment) Rules , 1992 .

   (ii) They shall come into force on the date of their publication in the Official Gazette.

2. In the Environment (Protection) Rules, 1986, after 13 the following rules shall be inserted namely: -

14. SUBMISSION OF ENVIRONMENT 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 or 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 [thirtieth day of September] every year, beginning 1993.]

PART II SECTION 3, SUBSECTION (I)

GOVERNMENT OF INDIA

MINISTRY OF ENVIRONMENT AND FOREST

NOTIFICATION

(No C.S.R.329 (E)

In exercise of the powers conferred by section 6 and 25 of the ENVIRONMENT (PROTECTION) ACT 1986 (29 of 1986) The Central Government hereby makes the following rules further to amend the INVIRONMENT (PROTECTION) Rules, 1986, namely: -

1. (i) These rules may be called the Environment (Protection) (Amendment) Rules, 1993

   (ii) They shall come into force on the date of their publication in the Official Gazette

2. In the ENVIRONMENT (PROTECTION) Rules, 1986,

   a) In Rules 14

      (i) For the word Audit Report whenever they occur the word Statement shall be substituted.

      (ii) For the figure letters and word "15th Day of May" the word "THIRTIETH day of SEPTEMBER" shall be substituted.

   b) In appendix "A" for From –V, the following from shall be substituted, namely: -

FORM V

(SEE RULE – 14)

ENVIRONMENTAL STATEMENT

FOR FY – 2023-24

For the period 01.04.2023 to 31.03.2024

DCM SHRIRAM LTD.
SUGAR UNIT-AJBAPUR

VILL.-AJBAPUR, PO.-MULLAPUR
DISTT.- LAKHIMPUR KHERI, UP

PART- A

I) NAME AND ADDRESS OF OWNER / OCCUPIER OF INDUSTRY OPERATION OR PROCESS	Sh. Kuldip Singh Sr.Vice President & Unit Head DCM SHRIRAM LTD. SUGAR UNIT - AJBAPUR VILL. - AJABAPUR, P.O. - MULLAPUR DISTT - LAKHIMPUR KHERI (U.P.) PIN 261505
II) INDUSTRY CATEGORY	Red Category (SUGAR Unit)
III) PRODUCTION CAPACITY	Crushing Sugarcane 14000 TCD & 65.1 MW Co-generation Power
IV) YEAR OF ESTABLISHMENT	1997
V) DATE OF LAST ENVIORNMENTAL STATEMENT SUBMITTED	18.09.2023

PART- B

WATER AND RAW MATERIAL CONSUMPTION

TOTAL INDUSTRIAL WATER CONSUMPTION:

FOR INDUSTRIAL	**821** M3 / Day
FOR DOMESTIC	**243** M3 / Day

NAME OF PRODUCT:	**PROCESS WATER CONSUMPTION PER UNIT PRODUCT OUTPUT**	
	DURING FINANCIAL YEAR 2022-23	**DURING FINANCIAL YEAR 2023-24**
SUGAR	0.729 KL / Ton of sugar	0.851 KL / Ton of sugar

RAW MATERIAL CONSUMPTION

NAME OF RAW MATERIAL	**NAME OF PRODUCT**	**CONSUMPTION OF RAW MATERIAL PER UNIT OF OUTPUT**	
		DURING FINANCIAL YEAR 2022-23	**DURING FINANCIAL YEAR 2023-24**
SUGAR CANE (Qtls / Qtl of Product)	SUGAR	11.52	9.55

PART- C

POLLUTANTS DISCHARGED TO ENVIRONMENT PER UNIT OF OUTPUT

(PARAMETERS AS PER ANALYSIS REPORT OF THE THIRD PARTY MONITORING REPORT)

POLLUTANTS	MAXIMUM QUANTITY OF POLLUTANTS IN DISCHARGE (Mass / Day)	CONCENTRATION POLLUTANTS IN DISCHARGE (Mass / Volume)	PERCENT VARIATION FROM PRESC. STANDARD WITH REASON
WATER			
BOD	30.8 Kg / DAY	14.0 mg / lit	53.33 % Below limit
COD	198.00 Kg / DAY	90.0 mg / lit	64.0 % Below limit
TSS	29.04 Kg / DAY	13.2 mg / lit	56.00% Below limit

NOTE: 1) BASED ON ACTUAL EFFLUENT DISCHARGE @ 18.2 CU.M / DAY
2) CONCENTRATION OF POLLUTANTS IN DISCHARGE IS BASED ON NABL APPROOVED LABORATORY OF ECOMEN LABORATORY LUCKNOW TEST REPORT dated.08/12/2023

AIR

Stack No.-1				
PM	634.4 Kg / day	51.10	mg / Nm^3	47.00 % Below limit
Stack No.-2				
PM	611.85 Kg/day	55.36	mg / Nm^3	52.53 % Below limit
Stack No.-2				
PM	721.52 Kg/day	68.14	mg / Nm^3	43.57% Below limit

NOTE: 1) CONCENTRATION OF POLLUTANTS IN DISCHARGE IS BASED ON NABL APPROOVED LABORATORY OF ECOMEN LABORATORY LUCKNOW TEST REPORT Dated 30.03.2024.

PART –D

HAZARDOUS WASTE

{AS SPECIFIED UNDER HAZARDOUS WASTES (MANAGEMENT) AND HANDLING RULES 1989}

HAZARDOUS WASTES			TOTAL QUANTITY DURING FINANCIAL YEAR 2023-24
a) FROM PROCESS			
i)	**Empty Oil drum & Paint Container**	:	**60 Nos./Year**
ii)	**Oil Soaked Cotton Waste**	:	**00 kg / Year**
b) FROM POLLUTION CONTROL FACILITIES:			
i)	**Recovered Used / Spent Oil**	:	**00 kg/Year**

Note:

Oil & Grease

Separated Oil & Grease is used in cane carrier & Bagasse carrier chains mechanical equipments and burnt in the boiler with Bagasse.

Empty Oil & paint drum/Containers

Properly cleaned & used as flower pots, dustbins and nut & bolt storage & Containers are send to disposal facility

Oil soaked cotton waste

Collected oil soaked cotton waste is burnt in the boiler with Bagasse.

PART – E

SOLID WASTES

SOLID WASTES	TOTAL QUANTITY DURING FINANCIAL YEAR 2022-2023	TOTAL QUANTITY DURING FINANCIAL YEAR 2023-24	MODE OF DISPOSAL
A., FROM PROCESS			
PRESS MUD	85715.3 MT	87107.54 MT	AS MANURE BY CANE GROWER
B. FROM POLLUTION CONTROL FACILITES			
SLUDGE	1565.3 MT	1862 MT	AS MANURE IN FACTORY FARM
C . FROM BOILER			
BOILER ASH	48.84 MT/DAY	30.160 MT/DAY	AS A LAND FILL IN LOW LAND
D. SOLID WASTE RECYCLED OR REUSED	A + B + C		

PART- F

PLEASE SPECIFY THE CHARACTERAISATION (IN TERMS OF COMPOSITION 'AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE 'DISPOSAL PRACTICES ADOPED FOR BOTH CATEGORIES OF WASTES

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1. **BAGASSE AND BAGASSE ASH :**

   The fibrous residue of the mill house is known as Bagasse. It is obtained after extraction of juice from Cane. Bagasse % cane normally varies from 25% to 30 % and during F.Y. 2023-2024 it was 29.28%. Bagasse is used as fuel in sugar factories in India and excess Bagasse is used for co-generation of power or sold to paper or card board factories. It is neither toxic nor hazardous in nature. Similarly, Bagasse ash (about 0.85 %- 1.2%) is disposed with Press mud and used as manure. Bagasse ash is nutrient rich.

2. **FILTER CAKE :**

   In clarification process of juice when juice filtered through vacuum filters and solid mass obtained from therein is known as filter cake. It varies from 3.5 to 5.0 % on cane. During F.Y. 2023-2024 it was 3.9 % on cane. The filter cake produced in sugar factories is neither toxic nor hazardous in nature. It is bio - manure and used as manure. It contains nutrients like Nitrogen (about 0.8 to1 %), Phosphorus (1.0 to 1.5 %) and 30 to 40 % organic matters.

3. **ETP SLUDGE :**

   Sludge is produced in Effluent Treatment Plant, during activated sludge treatment of industrial effluent of sugar plant. It is used as manures in factory R & D farm. It is neither toxic nor hazardous in nature.

4. **OILY WASTE MATERIAL :**

   It is collected from the oil skimmer and oil & grease trap at ETP. The waste is taken out and stored in MS drums and disposed as per HW Authorization.

PART- G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCESAND ON THE COST OF PRODUCTION

A. EFFLUENT TREATMENT PLANT :

For liquid pollution control, factory has installed extended aeration type effluent treatment plant based on activated sludge treatment process to bring down BOD, COD, Suspended solid and Oil & Grease to the level of below 30 ppm, 250 ppm, 30 ppm and 10 ppm respectively. The various units in the treatment process are as follows:

1. SCREEN:

All drains up to oil separator have been properly covered and a proper graded screen has been installed to prevent coarse floating matter like polyethylene bags and other foreign materials entering the influent drain.

2. OIL SKIMMER:

Oil and grease skimmer is installed to recover oily material from the effluent mechanically. Recovered oil and grease is stored in steel drums and used in cane carrier and Bagasse carrier for lubrication.

3. OIL AND GREASE SEPARATOR:

Oil and grease separator is having three chambers. These have been provided for removal of free-floating oil and grease. The oil and grease is skimmed off manually from the top.

4. SPRAY POND OVERFLOW WAER TREATMENT SYSTEM: A separate system has been installed for the treatment of spray pond overflow water. This system adequately reduces the sulphate content and the same is added to the main stream through equalization tank.

5. EQUALISATION TANK:

An equalization Tank has been provided for complete homogenization of the effluent

6. PRIMARY CLARIFIER TANK:

The effluent flows to the primary clarifier tank for removal of suspended solids. This process reduces around 30% COD load from waste water.

7. IC REACTOR: The I.C. reactor has been installed for anaerobic treatment of effluent. The generated bio gas is flared in open atmosphere. It is an advanced anaerobic technology to get effective results in very less time. COD reduction is also very high with compare to conventional Anaerobic Process.

8. AERATION TANK:

The effluent free from suspended solids is further treated in the aeration tank by conventional activated sludge process the organic matter in the effluent is being degraded with the help of micro - organism specially grown and maintained in the aeration tank and in conjunction with dissolved oxygen transferred by defused aeration systems is converted to new cells. The organic matter present in the homogenized effluent is thus converted to stable end products without any nuisance or health hazard. The active sludge process is one of the most widely used processes in waste water purification resulting in 90-95 % reduction in COD. The homogenized effluent is aerated in the aeration tank. During this period a mass of biologically active flock called "Activated Sludge " is formed. Nutrients are also being added to maintain healthy multiplication of Bio-mass and level of BOD: N: P: to 100:5:1 is maintained. The mixed liquor suspended solids concentrations kept around 2500-3000 mg / l.

9. SECONDARY CLARIFIER:

In the second step of the above process the mixed liquor is passed through a clarifier The activated mixed liquor is passed through the clarifier where separation of the activated sludge from aerated water takes place, activated sludge is removed as down flow from the clarifier by pump, part of the sludge is recycled to the Aeration tank to act as seed for the formation of more activated sludge and homogenously maintain the MLSS around 3000 mg/l .The part as excess sludge is sent for filtration and drying on sludge drying beds.

10. Decanter: A decanter has been installed for the separation of sludge generated from Sulphate Treatment Plant as well as from Clarifier tank.

11. SLUDGE DRYING BEDS:

Sediment sludge needs to be dewatered and dried for easy disposal. This is being done on sand gravel filter media. Dewatered sludge in the SDB is dried by natural heat of Sun light. The dried sludge is disposed off as manure. The filtered water from the sludge beds is sent back to process for treatment.

12. MGF & ACF:

MGF & ACF has been installed to reduce suspended solids and to remove odor & colour of the treated effluent.

AIR POLLUTION CONTROL SYSTEM:

The flue gases from the Boiler is passed through the Fly Ash Arrestor, ESP where in the suspended particulate matter and gases are removed to a greater extent resulting in an overall efficiency of 96% removal. The type of scrubber is as under.

ELECTROSTATIC PRECIPITATOR

An electrostatic precipitator (ESP) is a particulate collection device that removes particles from a flowing gas (such as air) using the force of an induced electrostatic charge. Electrostatic precipitators are highly efficient filtration devices that minimally impede the flow of gases through the device, and can easily remove fine particulate matter such as dust and smoke from the air stream.

ESPs continue to be excellent devices for control of many industrial particulate emissions, including smoke from electricity-generating utilities (coal, bio-fuel and oil fired), salt cake collection from black liquor boilers in pulp mills, and catalyst collection from fluidized bed catalytic cracker units in oil refineries to name a few. These devices treat gas volumes from several hundred thousand ACFM to 2.5 million ACFM in the largest coal-fired boiler applications.

Transformer-rectifier systems apply voltages of 50-150 kilovolts at relatively high current densities. Modern controls minimize sparking and prevent arcing, avoiding damage to the components. Automatic rapping systems and hopper evacuation systems remove the collected particulate matter while on line, theoretically allowing ESPs to stay in operation for years at a time.

ELECTROSTATIC PRECIPITATOR

Parameters	Design Conditions
Application: Normal	Flue gas from 100% MCR Bagasse
Gas Flow at IJT-1, 2 & IJT-3 ESP inlet	39.52, 39.52 & 86.10 AM3/Sec.
Temperature	140 °C
Temperature, Mech. Design	250°C
Dust Concentration at ESP Inlet	3.0 g/NM3
Dust concentration at ESP outlet (max)	115 mg/NM3
TR Set Rating each	95 kV (peak)/ 500 mA (mean)
ESP Controller	Electronic TR Controller cum Rapping Controller
Pressure drop across ESP	20-30 mm WG (max)

PART- H

ADDITIONAL MEASURES / INVESTMENT PROPOSAL FOR ENVIRONMENTALPROTECTION INCLUDING ABATEMENT OF POLLUTION - PREVENTION OF POLLUTION

The experiments conducted for utilization of treated water for irrigation in factory Lawn, garden and farm, showed encouraging results. Considering fact that treated effluent containing considerable amount of Nitrogen, Phosphorus Potash, Calcium, Magnesium ,Copper, Manganese, Iron and Zinc etc .and in order to utilize its manorial value, factory has used 100 % treated effluent in their Gardening

PART- I

ANY OTHER PARTICULAR FOR IMPROVING THE QUALITY OF THE ENVIRONMENT

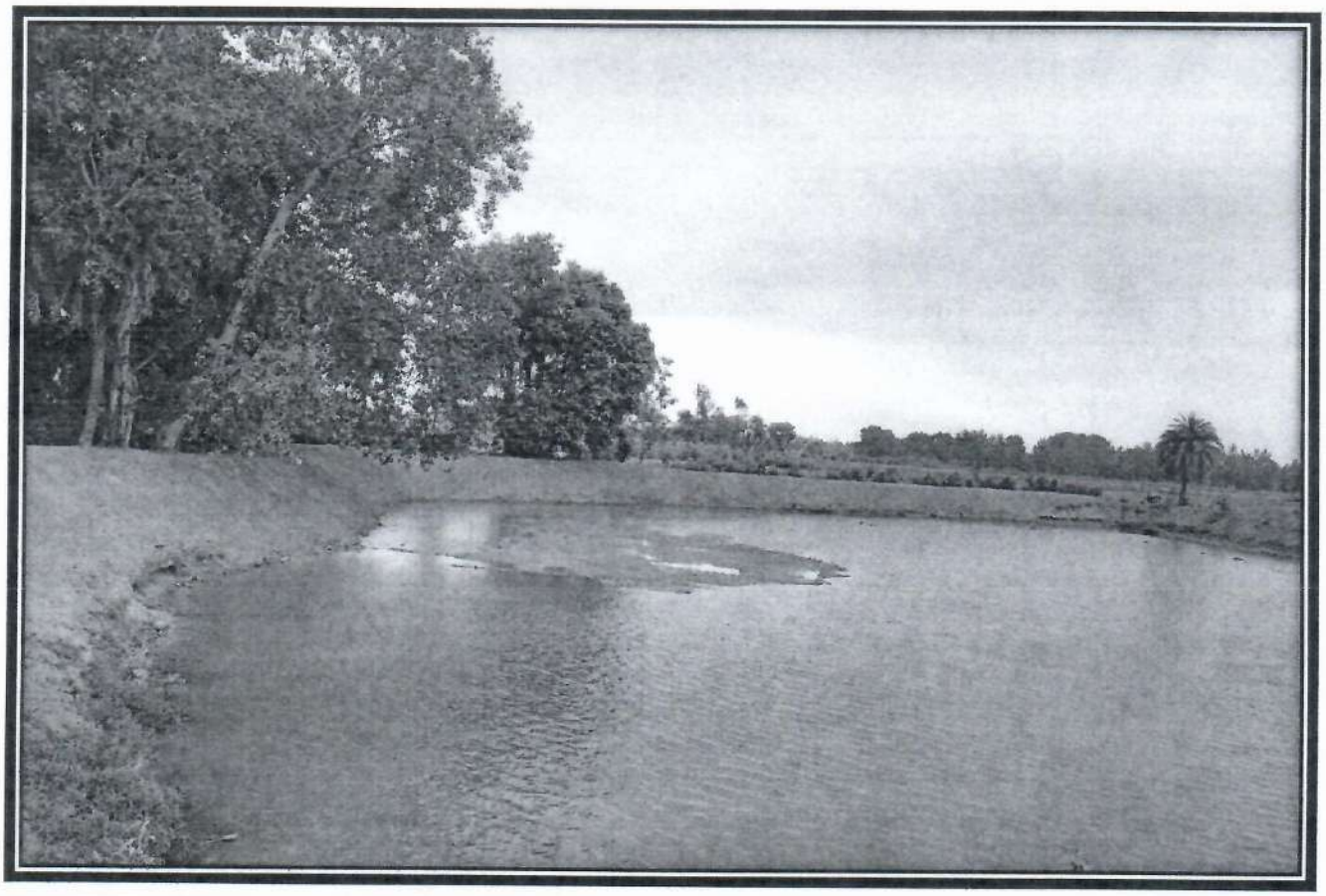
A campaign has been launched to develop and maintaining greenery all around factory campus for the same approximately 1200 trees have been planted in F.Y. 2022-23.& factory has planted approx ...trees during year 2023-24. The industry has kept open any investment proposal for Pollution abatement in future.

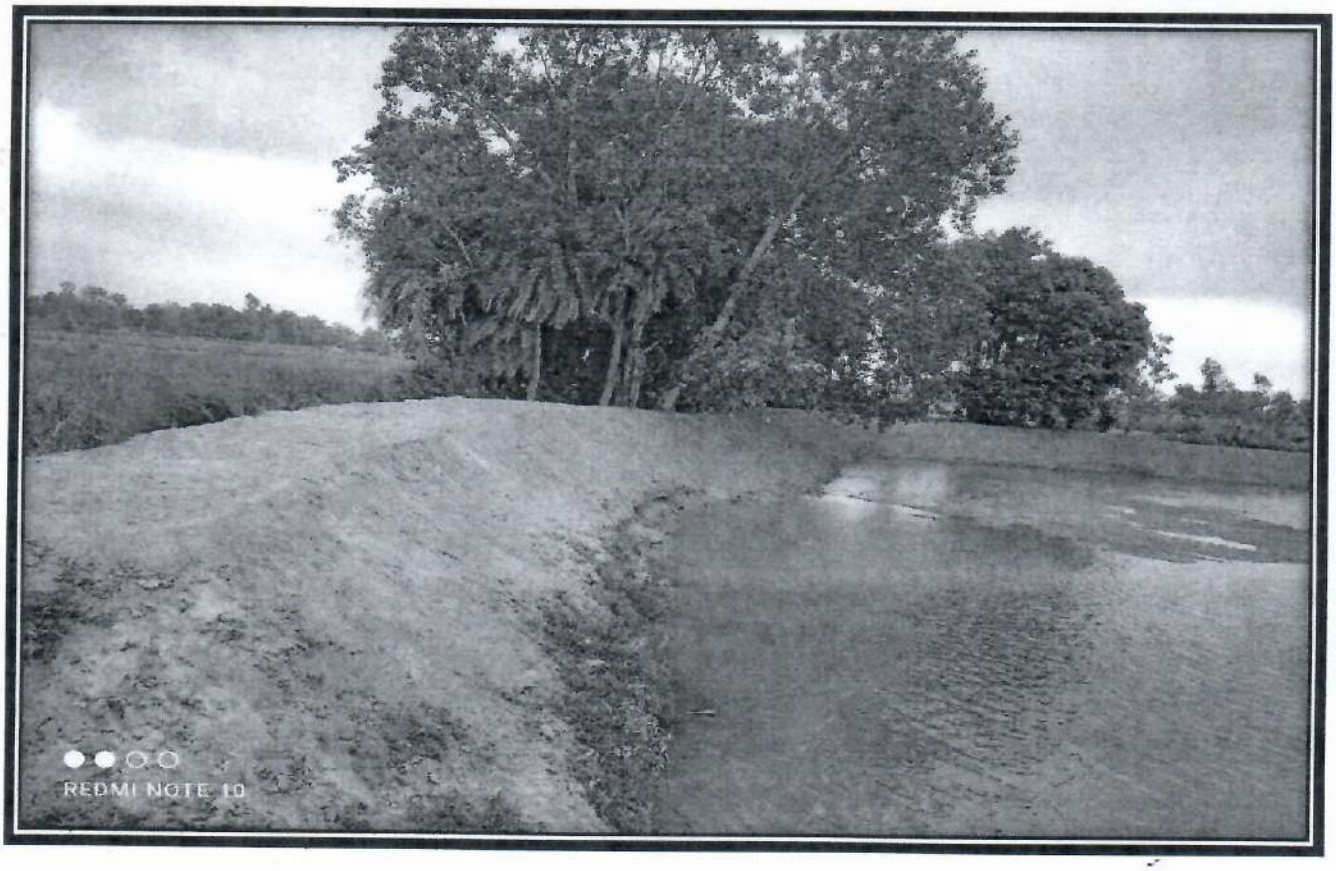
World Environment Day Celebration

Tree Plantation on world Environment Day

Awareness about Environment to Children by Painting competition

Village Ponds Adopted & maintained for Rain water harvesting-




REDMI NOTE 10

Signatures of Audit Team

(Ms. Shristi Kalkar)

(Mr. P.K Singh)

(Mr. M. Arumugasamy)

(Mr. A. K. Arya)

(Mr. O. S. Shukla)