

## **EXECUTIVE SUMMARY**

**For**

**Capacity Expansion of Manufacturing Facilities to Produce Mild Steel Billet 28,800TPA to 246,960TPA; Rerolled Steel Products 234,612TPA Through Hot Charging 160,512TPA and Through Reheating Furnace 74,100TPA and MS Pipe 122,600TPA- Brownfield Project.**

**by**

**M/s Om Shree Rupesh Steel Pvt. Ltd**

**at**

**Village: Chiraipani, near Gerwani, Tehsil and District:  
Raigarh, (C.G) - 469005**

*Study Period: Winter Season  
(December, 2021 to February, 2022)*

### **Applicant**

**Mr. DAYANAND AGRAWAL (Director)**  
M/s. Om Shree Rupesh Steel Private Limited  
Regd. Office : 33/1, N. S. Road, 2nd floor,  
Room No. 234, Kolkata (W.B.)  
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### **Environment Consultant**

**Vardan EnviroNet**  
**(NABET/EIA/2023/SA 0158)**  
**Plot No.82A, Sector 5, IMT Manesar,**  
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## **EXECUTIVE SUMMARY**

### **i. Project Name and Location**

Capacity Expansion of Manufacturing Facilities to Produce Mild Steel Billet 28,800TPA to 246,960TPA; Rerolled Steel Products 234,612TPA Through Hot Charging 160,512TPA and Through Reheating Furnace 74,100TPA and MS Pipe 122,600TPA- Brownfield Project by M/s Om Shree Rupesh Steel Pvt. Ltd at Village: Chiraipani, near Gerwani, Tehsil and District: Raigarh, (C.G) - 469005

#### **Person to be employed**

Total direct employment due to the proposed project will be 190. Also there is potential for indirect employment due to the proposed expansion in the field of Transportation, Travel, Packaging, Information Technology, Telecom, Automobile, Courier Sector etc.

### **ii. Address for Correspondence (Name, Designation and complete address)**

#### **Mr. DAYANAND AGRAWAL (Director)**

M/s. Om Shree Rupesh Steel Private Limited,

Regd. Office: 33/1, N. S. Road, 2nd floor,

Room No. 234, Kolkata (W.B.)

E-mail: [omshreerupesh.env@gmail.com](mailto:omshreerupesh.env@gmail.com)

### **iii. Products and capacities. If expansion proposal then existing products with capacities and reference to earlier EC.**

The production capacity of existing plant is 22,800TPA MS Billets and the threshold capacity for requirement of EC for Secondary Metallurgical Industry units involving operation of Furnaces such as Induction Furnace is 30,000TPA, as per Amendment in Notification S.O. 3067 dated 1st December, 2009, therefore the plant is operating on the basis of CTE and CTO obtained from CECB

The company had proposed to set up a small scale unit to produce steel thru induction furnace route and had obtained consent from Regional office CECB Raigarh (CG) for setting up this Small Scale unit in the year 2009. The CTE was granted for establishing a SSI unit with proposed annual production of 33500TPA M.S. Ingots and 4950TPA TMT Bars vide letter no. 407 & 409/R.O./T.S./C.E.C.B/2009 dt.10/6/2009.

Subsequently the unit established one Induction furnace and started production on 16 March 2010 with production capacity of 16,750TPA M.S. Ingots. Thus production capacity in CTO renewal was reduced to 16,750TPA M.S. Ingots. The consent was subsequently renewed from time to time up to 28/02/2022 by the CECB vide letter no. 940/R.O./T.S./C.E.C.B/2021 dt. 06/09/2021. Later, the CECB issued CTE/CTO for production of M.S. Ingots of capacity of 28,800TPA vide letter no. 1228/RO/TS/CECB/2021dt: 12/10/2021.

The Existing and Proposed Production Facility and Capacity of the Plant is mentioned in **Table 1**.

**Proposal-Capacity Expansion of Manufacturing Facilities to Produce Mild Steel Billet 28,800TPA to 246,960TPA; Rolled Steel Products 234,612TPA Through Hot Charging 160,512TPA and Through Reheating Furnace 74,100TPA and MS Pipe 122,600TPA- Brownfield Project.** by M/s Om Shree Rupesh Steel Pvt. Ltd at Village: Chiraipani, near Gerwani, Tehsil and District: Raigarh, (C.G) - 469005

**Table 1: Existing and Proposed Production Facilities and Capacities**

S.No	Details	Existing Capacity	Proposed Capacity addition	Total After Expansion
1.	<b>Steel Melting Shop</b> (Induction furnace with CCM)	28,800 TPA (1x10T & 1x6T Furnace)	218,160 TPA (Existing IF will be Augmented to 12T and Additional of 4x12T IF will be installed)	<b>246,960 TPA</b> (6x12T Furnace)
2.	<b>Rolling Mill</b>	--		<b>234,612</b>
	(i) Hot Charging based		160,512	
	(ii) Reheating Furnace based on Coal Gasifier		74,100	
3.	<b>Pipe Mill</b>	--	122,600	<b>122,600</b>
4.	<b>Producer Gas Plant</b>	8500Nm <sup>3</sup> /hr	--	<b>8500Nm<sup>3</sup>/hr</b>

**iv. Requirement of land, raw material, water, power, fuel with source of supply (Quantitative)**

**Land Requirement:** The total plant area is 2.4070 Hectare. The project shall be installed within the existing plant area. No additional land shall be procured for the expansion.

**Raw Material Requirement:** Quantity of raw materials required and their source is indicated in the **Table 2**

**Table 2: Raw Material Requirement for the Existing and Proposed Units**

Sl No	Item	Quantity in TPA	Source	Distance in Kms	Mode of Transportation
<b>For Induction Furnace - 246960 TPA</b>					
1.	Sponge Iron	232,075	Local Market/ Captive Production in Scrap	Within 100Kms Within 100Kms Road	Road through Covered Vehicles.
2.	CI/ Pig Iron Heavy Scrap	51,176			
3.	Ferro Alloys	2,559			
4.	Ramming Mass & other Refractory Linings	370	Open market		
<b>For Hot Charging Rolling Mill - 160512 TPA</b>					
1.	Hot Billet	168,960	In House	--	By Conveyors.
<b>For Reheating Furnace based Rolling Mill - 74100 TPA</b>					
1.	Cold Billets	78,000	In House/ Local Market as per requirement	--	By Conveyors/By road through covered trucks.

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Sl No	Item	Quantity in TPA	Source	Distance in Kms	Mode of Transportation
<b>For Induction Furnace – 246960 TPA</b>					
2.	Coal	8,892	SECL Coal Mines/ Open Market/ Local Market	Within 500Kms	By Rail to the nearest railway siding and then by Road through covered vehicles or by port and then by rail to the nearest railway Siding and then by Road through covered vehicles.
<b>For Pipe Mill - 122600 TPA</b>					
1.	MS Strips through reheating furnace and outside market	129,036	In House/ Local Market as per requirement	Within 100Kms	By Conveyors and through Covered trucks from nearby steel plants.

**Power Requirement:** The existing power requirement is 5.5MW which is sourced from Chhattisgarh State Power Distribution Company Limited (CSPDCL). The proposed power requirement after expansion will be 21MW which will be sourced from (CSPDCL) after obtaining permission. The Existing plant already has 1 number of 750kVA of DG sets and additional of 2 numbers of 750kVA of DG sets will be installed during expansion. During total power failure, above DG set will also support for Emergency lighting for personnel movement in some main location of steel plant.

**Water Requirement:** he Plant has an existing water requirement of 80KLD which is met through Ground water. The Permission for the same has been obtained from Central Ground Water Authority (CGWA) and is valid till 20th November 2023 and the NOC for the abstraction of groundwater from CGWA with NOC No. CGWA/NOC/IND/ORIG/2021/11689

**v. Process description in brief. Likely impact on air, water, land and measures for mitigating the impact on the environment**

**Process Description**

**Steel Melting Shop** The technology used in the proposed plant is production of MS Billets through the route of induction furnace and CCM. In the expansion proposal 148,500TPA MS Billets will be produced through 3x15T Induction Furnace (steel melting) along with CCM (2X2 Strand 4/7).

**Induction Furnace:** Induction Furnace is basically furnaces meant for use of Sponge Iron as major raw material to produce mild steel. These furnaces work on the principal of electromagnetic induction. Sponge Iron, Pig Iron, Scrap etc. are brought near Induction furnaces with the help of scrap bucket transfer cars and EOT cranes. Initial quantity of scrap is charged into the Induction Furnace with transformer at full load. After the furnace is switched on, current starts flowing at a high rate and comparatively low voltage through the induction coil of the furnace, producing an induced magnetic field inside the central space of the coils

where the crucible is located. The induced magnetic field thus generated cut through the packed charge in the crucible. As the magnetic flux cut through the Scrap & Pig iron and complete the circuit, they generate an induced current in the scrap. The induced current as it flows the highly resistive path of scrap mix, generate tremendous amount of heat and start melting the scrap. After the scrap & pig iron is fully melted and the temperature of the melt reaches above 1600°C, sponge iron is continuously charged into the furnace. After melting of the charge, addition of Ferro Alloys is done at proper time and with proper temperature. When these additives have melted completely, the power input may be increased to bring the temperature of metal up to the point most desirable for pouring. The current is then turned off and the molten metal is now ready for pouring into the molds of CCM for manufacturing billets.

**Continuous Casting Machine:** In the proposed expansion 1x2 Strand, Rad-4/7m CCM will be installed in addition to already installed 1x2strand, rad-4/7m CCM for Billets production of 148500 TPA. The molten metal is poured in a preheated ladle. The ladle containing liquid steel is placed on the turret and brought over the tundish. The tundish act as a buffer and enable the liquid steel to move homogeneously down through nozzles, provided at the bottom of the tundish into moulds. The automatic mould level controller controls the steel level in the mould. The subsequent primary and secondary cooling transform the liquid steel into billets of the required dimensions and is drawn out with the help of a withdrawal and straightener unit and cut into required length by the shear provided in each strand. Once a ladle is emptied another ladle is brought into the casting position and the casting continues.

**Rolling Mill:** The Company proposes to install 1x25 TPH Hot Rolling Mill for the production of 145,500TPA long rolled products (TMT Bar). 148500 TPA Red hot billets from CCM will be directly charged to the Rolling mill.

Thermo-mechanical processing also known as thermo-mechanical treatment (TMT) is a metallurgical process that integrates work hardening and heat-treatment into a single process, by adopting thermo mechanically treatment process higher strength of TMT bars is obtained.

**Hot Producer Gas plant based on Coal:** In order to provide required thermal energy to Billet reheating furnace in Rolling Mill Two stage coal producer gas plant would be used for which a coal producer gas plant to gasifier about 2 to 2.5 ton per hour C grade coal would be used which would produce about 7000 NM<sup>3</sup> to 8500 NM<sup>3</sup> producer Gas per hour. This would require setting up a 3.6-meter dia. into two PG units or one single PG unit of to 5-meter dia. coal producer gas plant with hot cyclone. The TAR condensate collected from the Hot Cyclone and PG Pipe traps (Water Seals) would be collected and used in the BRH furnace

**Pipe Mill:** Steel Pipes/Tubes are manufactured from mild steel strips sliced from Hot Rolled Low Carbon Steel coils. The strip passes through a series of drive forming and fin rolls and takes the required circular shape and is welded continuously by passage of an electric current of high frequency across the abutting edges. The steel pipes tubes thus formed and welded pass through the sizing sections where dimensional deviations if any are corrected before the tubes are cut into required length by automatic cutting machines. The tubes are then end deburred and pressure tested. Thereafter protective surface finishing operations such as hot dip

Galvanizing or varnishing is done as per specific requirement. The tubes are offered as plain, bevelled, threaded ends or with flanges

**Impact on Air Environment and Mitigation Measures**

Fugitive emissions are expected during transportation of raw materials, dust generated during loading and unloading and transportation of raw materials, charging of raw materials in Induction Furnace and melting operation in Induction Furnaces. Fugitive emission is also generated due to vehicular movement in the premises. The details of Air Pollution Control Facilities are mentioned in **Table 3**.

**Table 3: Details of Air Pollution Control Facilities**

S. No	Location	Pollution Control Equipment	Nos.	Connected with no. of Stack	Stack Height	Stack Emissions
<b>Steel Melting Shop</b>						
1	Induction Fce. 2x12 Tons	Bag Filter	1	1	30 m	< 50 mg/Nm <sup>3</sup>
2	Induction Fce. 2x12 Tons	Bag Filter	1	1	30 m	< 50 mg/Nm <sup>3</sup>
3	Induction Fce. 2x12 Tons	Bag Filter	1	1	30 m	< 50 mg/Nm <sup>3</sup>
4	Reheating Furnace	Wet Scrubber	1	1	30 m	< 50 mg/Nm <sup>3</sup> SO <sub>2</sub> – 300mg/Nm <sup>3</sup> NO <sub>x</sub> – 1000mg/Nm <sup>3</sup>

**Impact on Water Environment and Mitigation Measures**

The water will be mainly used for furnace cooling and domestic purpose only. Potable water is required for plant personnel. In order to minimize consumption of fresh water from the source, company has adopted recirculating systems which permit reuse of cooling water. The plant has been designed based on maximum recycling and zero liquid effluent discharge and will have less impact on ground water as well as surface water hydrology in this region. Rainwater harvesting will be taken up as a measure to conserve water. Waste water discharge from the process and domestic use break and its treatment facilities is provided in **Table 4**

**Table 4: Details of the Water Pollution Control facilities**

Sl. No.	Unit	Type of Pollution Control System	Usages
1.	Softening Plant for SMS	Neutralization Pit	Slag cooling and Dust Suppression
2.	Backwash		
3.	Cooling Tower Blow Down	-	Plantation, Cleaning and Washing
4.	Rolling Mill	ETP	
3.	Pipe mill		
5.	Domestic Wastewater	Soak Pit and Septic Tank	Will be used for Horticulture

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### **Solid Waste Generation and Management**

Solid waste generation and utilization from the existing and proposed plant is given in **Table 5**.

**Table 5: Details of Solid Waste Generation, Handling and Utilization for Existing & proposed Plant**

<b>Solid Wastes</b>	<b>Qty. In TPA</b>	<b>Disposal Practice</b>
<b>Steel Melting Shop</b>		
Defective Billets	2,520	Used as melting/ re-Rolling scrap in own plant.
Mill Scale	2,520	Sold to nearby Ferro Alloy/ Pellet Plants
Slag from IF	29,195	Sold to nearby metal recovery units
Refractory & Ramming Mass Waste	185	Sold to authorized recycler
<b>Rolling Mill</b>		
Mill Scale	4,939	Sold to nearby metal recovery units
Defective and Miss Roll	7,409	Used as melting/ re-Rolling scrap in own plant.
Coal Ash	4,001	Sold to Brick Making units or cement plants
<b>Pipe Mill</b>		
MS scrap from Pipe Mill	6,452	Used as melting/ re-Rolling scrap in own plant.

#### **vi. Capital cost of the project and estimated time of completion**

Total cost for the proposed expansion is estimated as Rs. 40 Crs. Cost of the existing plant is Rs. 8.53 Crores. Hence, total cost of the Plant after the proposed expansion will be Rs 48.53 Crs. 7 months shall be needed for completion of the project after the permission from SEIAA, Jharkhand and JSPCB.

#### **vii. Descriptions of Environmental sensitivity in 10 km radius form the site. Selection of the project - Nature of land - Agricultural (single/double crop), barren, Govt/private land, status of is acquisition, nearby (in 2-3 km.) water body, population, with in 10km other industries, forest, eco-sensitive zones, accessibility.**

**Table 6: Detail of Environmental Features in 10km Radius from Project Site**

<b>S.No.</b>	<b>Particulars</b>	<b>Details</b>
1.	Site Location	Village Chiraipani, near Gerwani, Tehsil and District Raigarh, Chhattisgarh Latitude: :21°58'52.34"N, Longitude: 83°21'53.54"E
2.	Topo-sheet Nos. of Project Site	F44L8
3.	Topo-sheet Nos. for 10km Study area	F44L8, F44R5
4.	Latitude and Longitude Range of Project site	Latitude: 21°18'52.34"N N to 21°58'56.80"N Longitude: 83°21'53.54"E to 83°21'52.06"E

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S.No.	Particulars	Details		
		Points	Latitude	Longitude
5.	GPS Corner Coordinates	1	21°18'52.34"N	83°21'53.54"E
		2	21°58'52.14"N	83°21'51.95"E
		3	21°58'51.20"N	83°21'48.04"E
		4	21°58'52.36"N	83°21'48.89"E
		5	21°58'56.79"N	83°21'46.21"E
		6	21°58'55.74"N	83°21'47.02"E
		7	21°58'52.65"N	83°21'44.79"E
		8	21°58'55.53"N	83°21'52.01"E
		9	21°58'56.34"N	83°21'51.49"E
		10	21°58'56.06"N	83°21'54.95"E
		11	21°58'52.90"N	83°21'54.11"E
		12	21°58'56.80"N	83°21'52.06"E
6.	Height above MSL	311 meters		
7.	Interstate border	Odisha-Chhattisgarh Border at 21.1Km in East		
8.	Nearest Habitation	Village Pali at 1.0Km in East		
9.	Nearest Densely Populated Area	Raigarh city at 10.0 Km in SSE.		
10.	Nearest Police Station	Kotra Police Station 11Km in SSE		
11.	Nearest Post Office	Patrapali Post office in 6Km to SSW		
12.	Nearest Hospital	OP Jindal Hospital in 10Km in SSE		
13.	Nearest Education Facilities	Aryan World School in 6Km in SSE		
14.	Monuments/Religious Place	Shiv Temple in 5.5Km in SSE		
15.	Defense Installation	Nil		
16.	Nearest River/Reservoir/Dam/etc	Kelo River – 1.5 Km in East Kelo Reservoir – 1.6 Km in South East.		
17.	Nearest Airport	Veer Surendra Sai Airport, Jharsuguda 72.9Kms in South East		
18.	Nearest Port	Visakhapatnam Port in 460Km in SE		
19.	Nearest National Highway/ State Highway	SH1 - 0.8Km in East		
20.	Nearest Railway Station	Kirodimal Railway Station 7.0Kms in South West		
21.	Nearest Power Station	Patrapali Power Plant Unit-3 in 6.5Km in S		
22.	Biosphere Reserve/ National Park/ Wildlife Sanctuary / Ecological sensitive area	Nil		
23.	Reserve Forest/ Protected Forest	Urdana RF 3.5 km in South West		



S.No.	Particulars	Details
		Lakha RF 1.0 km in East South East Barkachhar RF 0.70 km in South East Kharidungri RF 2.5 km in East North East Taraimal RF 3.6 km North
24.	Water Requirement	Existing: 80KLD, Proposed: 130 KLD Total after Expansion: 210 KLD <b>Source:</b> Ground water
25.	Total Power Requirement	Existing: 5.50MW, Proposed: 15.5MW Total: 21.0MW <b>Source:</b> CSPDCL Existing DG set – 1x750 kVA Proposed DG set- 2x750KVA
26.	Manpower Requirement	Existing: 48, Proposed:142, Total:190
27.	Land Requirement	Expansion will be within the existing plant premises of 3.471Ha. (8.57 Acres)
28.	Project Cost	Existing: Rs. 8.53Cr. Proposed: Rs. 40.30Cr. Total: Rs. 48.83Cr.

**viii. Baseline environmental data- air quality, surface and ground water quality, soil Characteristic, flora and fauna, socio-economic condition of the nearby population**

To predict the impact of the proposed activities on the surrounding environment, the current baseline environmental status was studied by collecting the data and carrying out monitoring for the period of 1<sup>st</sup> December, 2021 to 28<sup>th</sup> February, 2022. The baseline data for ambient air quality, surface and ground water quality, noise and soil quality was collected and analyzed for various parameters are as per norms. The results of the Baseline Environmental Study is mentioned in **Table 7**.

**Table 7: Baseline Environmental Study Results**

Parameter s	No. of Sites	Description	Permissible Level
Air Quality	8	PM2.5 29.0 µg/m <sup>3</sup> to 40.8 µg/m <sup>3</sup> PM10 54.10 µg/m <sup>3</sup> to 78.7 µg/m <sup>3</sup> SO2 10.1 µg/m <sup>3</sup> to 20.6 µg/m <sup>3</sup> NO2 20.3 µg/m <sup>3</sup> to 30.9 µg/m <sup>3</sup> CO 0.30 mg/m <sup>3</sup> to 1.89 mg/m <sup>3</sup>	60 µg/ m <sup>3</sup> 100 µg/ m <sup>3</sup> 80 µg/ m <sup>3</sup> 80 µg/ m <sup>3</sup> 02 mg/m <sup>3</sup>
Ground Water Quality	8	pH varies from to 7.46 to 7.80 Total Hardness varies from 249 to 296 mg/L. Total Dissolved Solids varies from 249 to 296 mg/L.	6.5-8.5 200-600 mg/L 500-2000 mg/L
Surface Water	8	pH varies from to 7.68 to 7.84	IS:2296 Class C Norms

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Parameter s	No. of Sites	Description	Permissible Level
Quality		Dissolved Oxygen varies from 5.8 to 6.64 mg/L. BOD varies from 12.00 to 16.00 mg/L.	
Soil Quality	8	pH 7.48 to 7.71 Potassium K 118.25 to 169.76 kg/ha Available nitrogen N 134.72 to 206.11 Kg/hect Organic matter 0.37% to 0.60%	----
Noise Level	1	Day Time (6:00 a.m. to 10:00 p.m.) 71.42 Leq dB(A) Night Time (10:00 p.m. to 6:00 a.m.) 64.28 Leq dB(A)	75 Leq dB (A) 70 Leq dB (A)
	7	Day Time (6:00 a.m. to 10:00 p.m.) 41.92 to 71.42 Leq dB(A) Night Time (10:00 p.m. to 6:00 a.m.) 38.81 to 64.28 dB(A)	55 Leq dB (A) 45 Leq dB (A)

**ix. Identification of hazards in handling, processing and storage of hazardous material and safety system provided to mitigate the risk**

**Hazardous Waste:** No hazardous waste shall be generated from the process except the 'Used Oil'. Approximate quantity of 'Used Oil' generation will be approx. 0.2 KL to 0.4KL per year. Used Oil shall be temporary stored in barrels on concrete flooring with bund wall all around to contain spillage, if any 'Used Oil' will be sold to the register recycler.

**Emergency preparedness plan in case of natural or in plant emergencies:**

On-site and Off-site Emergency Preparedness Plan has been developed to control emergency situations. The emergency control room and Assembly area shall be set up at a safe location and marked on the site plan and will be manned round the clock. The control room will be activated in case of an emergency to direct and co-ordinate the operations to handle the emergency. It will be furnished with external and internal telephone connections etc; list of essential telephone numbers; list of key personnel and their address; fire fighting system and site plan. Depending upon site requirements, additional control room will be considered.

**x. Occupational Health Measures:**

The project proponent strongly believes in the safety and health of the workers. The company will conduct regular medical checkup of the worker and on the safer side there will always be a rotation of the job for the worker who are exposed to dust and high noise. Safety being the first policy of the company. Capital Budget of **Rs. 11.0 lakhs** and recurring budget of **Rs. 6.5 lakhs** is allocated to ensure safety of all Employees including contract & casual workers.

**xi. Wildlife Conservation Plan**

Wildlife Conservation Plan for Schedule – I Species such as (Melursus ursinus, Elephas maxismus, Pavo cristatus, and Varanus benghalensis) has been prepared and has been submitted to the Chief Wildlife Warden. The Project Proponent has allocated a budget of Rs. 7 Lakhs for activities like Development of Social Forestry containing plantation of fruit bearing trees & medicinal value plants & medicinal value plants, Creation of Artificial Mineral/ Salt Lick, Habitat development, Soil & Water Conservation, and Creating Awareness among the Public about Flora & Fauna.

#### **xii. Greenbelt Development**

The greenbelt development needs to be carried out in 33% of total plant area i.e. 1.157 Ha (2.86 Acres) as per CPCB guidelines, maintain the tree density of 2500 trees/hectare. Capital Budget of Rs. 13.49 lakhs to be spent in 4 years has been kept for plantation of 3372 additional trees on the 1.157 hectares along the boundary and inside the plant area including gap filling plantation to be done in existing green area (to increase tree density to 2500). The green belt will be maintained every year and the budget of approx. Rs. 2.0 Lakhs shall be kept as yearly maintenance cost.

#### **xiii. Rainwater Harvesting Scheme**

Rain water collected from rooftop, paved area and other open area will be brought to the RWH recharge pits for directly recharging the groundwater. M/s Om Shree Rupesh Steel Pvt. Ltd. shall be constructing 5 number of recharge pits (Length 5.5 & Width 5) filled with standard filter media of volume 8.25m<sup>3</sup> (dia. 4.7m & depth 3.5m), with one boring of 8" dia and 50m depth at the center of each of pit. Capacity of recharge of each pit will be 60.69m<sup>3</sup>/hr.

#### **xiv. Environment Monitoring Program**

Environmental Monitoring is an essential tool for sustainable development and ensuring effective most implementation and monitoring of Environmental Management Plan and mitigation measures. Monitoring involves periodic checking to ascertain whether activities are going according to the plans. A detailed monitoring plan has been prepared to keep regular check on various environmental parameters, performance of pollution control equipment, OH&S plan, Plantation, etc. A budget of Rs. 4.45 Lakhs per year has been kept for the Environmental Monitoring Program.

#### **xv. Environmental Management Plan**

M/s Om Shree Rupesh Steel Pvt. Ltd. through EMC (Environment Management Cell) will maintain data regarding monitoring & analysis and implement all the mitigation measures during construction & operation phases of the project.

The estimated capital expenditure for implementation of EMP during Construction will be Rs. 12.4 lakhs and recurring cost Rs. 2.5 lakhs/year and implementation of EMP during Operation will be Rs. 173.49 lakhs (excluding cost for activities to address public hearing issues) and recurring cost Rs. 29.21 lakhs/year.

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