

M/S SHREE SHYAM GREEN ENERGY PVT. LTD. Proposed Maize processing unit and Manufacturing of Starch, Dextrose and/ or Maltodextrin and/or modified Starch and Sorbitol at Village- Sondh, Tehsil- Berla, District-Bemetara, Chhattisgarh.	DRAFT EIA REPORT
---	-------------------------

EXECUTIVE SUMMARY

1.0 PROJECT DESCRIPTION

M/s Shree Shyam Green Energy Pvt. Ltd. is proposing to set up Maize processing unit and manufacturing of Starch, Dextrose and/ or Maltodextrin and/ or modified starch and sorbitol at Village- Sondh, Tehsil- Berla, District- Bemetara, Chhattisgarh.

Consent to Establish for Maize processing (1, 75,000 TPA), Starch (1, 13,750 TPA), Dextrose and/or Maltodextrin and/or Modified Starch (1,00,100 TPA) has been obtained from Chhattisgarh Environment Conservation Board vide. Consent letter No. 6932/TS/CECB.2023 dated 02.01.2023 for which Environmental Clearance is not required.

No construction has been started till date. Project will come under operation after obtaining Consent to Operate from Chhattisgarh Environment Conservation Board (CECB).

Consequently, company decided to propose Sorbitol manufacturing plant of capacity 1, 05,000 TPA (300 TPD) in the same existing premises for which Environmental Clearance is required. Hence, as per EIA Notification, 2006 and amendment's thereafter, proposed project falls under schedule 5 (f) "Synthetic Organic chemical Project" and as project site located outside the notified industrial area comes under **category "A"** Considering this, we are applying the proposal before EAC, Industry-III.

S.No.	Particulars	Details			
1.	Nature and size of the Project	Proposed Maize processing unit and manufacturing of Starch, Dextrose and/ or Maltodextrin and/ or modified Starch and Sorbitol by M/s Shree Shyam Green Energy Pvt. Ltd. Activity '5(f)', Category 'A'			
2.	Location details				
	Village /Town/Plot No.	Khasra No. 307,417/1, 417/2, 420,421,422,423,424,426, 428,519,520/1,521,522,523, 525,526, 527, 528/1,528/2 & 528/3, Village- Sond			
	Tehsil	Berla			
	District	Bemetara			
	State	Chhattisgarh			
	Latitude and Longitude	Pillars	Latitude	Longitude	Elevation
		1	21°33'5.67"N	81°26'25.27"E	313
		2	21°33'7.75"N	81°26'25.25"E	314
		3	21°33'8.86"N	81°26'21.73"E	299
		4	21°33'9.95"N	81°26'21.79"E	298
		5	21°33'9.89"N	81°26'21.80"E	298
		6	21°33'10.82"N	81°26'20.16"E	303
		7	21°33'10.77"N	81°26'24.57"E	305

M/S SHREE SHYAM GREEN ENERGY PVT. LTD.

Proposed Maize processing unit and Manufacturing of Starch, Dextrose and/ or Maltodextrin and/or modified Starch and Sorbitol at Village- Sondh, Tehsil- Berla, District-Bemetara, Chhattisgarh.

**DRAFT EIA
REPORT**

		8	21°33'13.28"N	81°26'24.36"E	307
		9	21°33'13.19"N	81°26'23.12"E	301
		10	21°33'13.66"N	81°26'18.88"E	302
		11	21°33'12.69"N	81°26'18.76"E	301
		12	21°33'9.05"N	81°26'17.99"E	308
		13	21°33'8.92"N	81°26'18.59"E	308
		14	21°33'8.31"N	81°26'18.54"E	309
		15	21°33'8.14"N	81°26'19.42"E	308
		16	21°33'6.99"N	81°26'19.04"E	310
		17	21°33'7.27"N	81°26'18.27"E	311
		18	21°33'7.11"N	81°26'18.20"E	310
		19	21°33'7.19"N	81°26'17.86"E	310
		20	21°33'4.32"N	81°26'16.25"E	309
		21	21°33'4.05"N	81°26'16.82"E	308
		22	21°33'1.73"N	81°26'17.15"E	305
		23	21°33'1.66"N	81°26'18.55"E	305
		24	21°32'58.85"N	81°26'18.19"E	314
		25	21°32'57.43"N	81°26'20.54"E	312
		26	21°32'57.84"N	81°26'24.19"E	309
		27	21°33'0.20"N	81°26'24.02"E	311
		28	21°33'0.51"N	81°26'23.92"E	312
		29	21°33'1.56"N	81°26'24.40"E	317
		29	21°33'1.79"N	81°26'23.36"E	319
		30	21°33'2.72"N	81°26'23.41"E	321
		31	21°33'2.92"N	81°26'23.01"E	322
		32	21°33'5.78"N	81°26'23.60"E	316
	Toposheet No.	F44P6, F44P7, F44P10&F44P11			
3.	Area Details				
	Total Project Area	6.32 Ha. (63200 Sq.m.)			
4.	Environmental Setting Details (with approximate aerial distance and direction from the project site)				
	Nearest major settlement	Village Karamal at distance of 1.56 km in SE direction.			
	Nearest Highway	SH-7 km at a distance of around 9.75 km in NW direction.			
	Nearest Railway Station	Tidla Railway station at a distance of 41.27 km towards East direction.			
	Nearest Airport	Swami Vivekananda Airport, Raipur at 50 km in South direction.			
	National Parks/ Wild Life Sanctuaries/ Biosphere Reserves/RF and PF within 10km radius	There is no National Park and Biosphere Reserve within 10 Km radius.			
	Nearest Education Institute	<ul style="list-style-type: none"> Govt High School Sond at a distance of 1.13 Km in SSW direction. 			

M/S SHREE SHYAM GREEN ENERGY PVT. LTD. Proposed Maize processing unit and Manufacturing of Starch, Dextrose and/ or Maltodextrin and/or modified Starch and Sorbitol at Village- Sondh, Tehsil- Berla, District-Bemetara, Chhattisgarh.	DRAFT EIA REPORT
---	-------------------------

		<ul style="list-style-type: none"> Govt Primary School Sond at a distance of 1.28 km in South direction.
	Nearest Medical	Sond Health and Wellness Centre at a distance of 0.88 km in West direction.
	Seismic Zone	Zone: II
	Water body	<ul style="list-style-type: none"> Sond Tributary- 0.32 km in East direction Riwa Minor- 0.43 km in East direction Shivanth River- 2.7 km in Northdirection
5.	Cost Details	
	Project Cost	Rs. 120.0 Crores
	Budget for EMP	Rs. 236 lakhs
6.	Basic Requirements of the Proposed Project	
	Fresh Water (m ³ /day)	1423 KLD (Source: Ground Water)
	Manpower	150 nos.
	D.G Sets	500 kVA (2 nos.) Fuel: HSD
	Boiler	65 TPH Fuel: Coal/Rice Husk/ Briquettes

2.0 DESCRIPTION OF ENVIRONMENT

The generation of primary data as well as collection of secondary data and information from the site and surroundings was carried out during **1st March to 31st May 2023**.

S. No.	Parameters	Baseline Status
1	Ambient Air Quality	
i	PM10	41.2 µg/m ³ to 65.3 µg/m ³
ii	PM2.5	19.8 µg/m ³ to 39.2 µg/m ³
iii	SO ₂	6.3 µg/m ³ to 14.2 µg/m ³
iv	NO ₂	11.6 µg/m ³ and 29.3 µg/m ³
v	CO	0.53 mg/m ³ and 1.10 mg/m ³
Values are well within the stipulated standard of CPCB.		
2	Noise Level Monitoring	
i	Day Time (6:00 a.m. to 10:00 p.m.)	48.22 Leq dB and 53.11 Leq dB
ii	Night Time (10:00 p.m. to 6:00 a.m.)	40.17 Leq dB and 43.72 Leq dB
The observed noise levels were found below the stipulated standards of CPCB.		

M/S SHREE SHYAM GREEN ENERGY PVT. LTD. Proposed Maize processing unit and Manufacturing of Starch, Dextrose and/ or Maltodextrin and/or modified Starch and Sorbitol at Village- Sondh, Tehsil- Berla, District-Bemetara, Chhattisgarh.	DRAFT EIA REPORT
---	-------------------------

3	Soil Quality and Characteristics	
i	pH	7.41 to 7.71
ii	Organic Matter	0.24% to 0.42%
iii	Nitrogen	127.25 to 174.12 Kg/ha.
iv	Phosphorus	33.76 to 46.21 Kg/ha.
V	Potassium	175.89 to 221.30 Kg/ha.
4	Ground Water	
i	pH	7.24 to 7.55
ii	Total Hardness	173.02 to 243.13 mg/l
iii	Total Dissolved Solids	380.00 to 491.00 mg/l
5	Surface Water	
i.	pH	7.15 to 7.80
ii.	Total Hardness	76.0 to 272.36 mg/l
iii.	Total Dissolved Solids	245.00 to 720.00 mg/l
iv.	BOD	8.28 to 30.00 mg/l
v.	COD	32.00 to 80.00 mg/l
The concentrations were found to be within permissible limits (Compared with IS 10500:2012)		

3.0 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

S.No.	Particulars	Mitigation measures to be adopted
1	Air Environment	<ul style="list-style-type: none"> • Online Stack Monitoring System will be installed to monitor the emissions of particulate matter. The flue gas emission will remain well within gaseous emission norms prescribed by the CPCB. • Stack height of 6m shall be provided on DG set and 60 m stack height shall be provided on Boiler. • Green belt will be developed on 40.18% area of the total project area which will help in attenuating the pollutants emitted by the plant.

M/S SHREE SHYAM GREEN ENERGY PVT. LTD.

Proposed Maize processing unit and Manufacturing of Starch, Dextrose and/ or Maltodextrin and/or modified Starch and Sorbitol at Village- Sondh, Tehsil- Berla, District-Bemetara, Chhattisgarh.

**DRAFT EIA
REPORT**

S.No.	Particulars	Mitigation measures to be adopted
2.	Water Environment	<ul style="list-style-type: none">• Industrial effluent from the process, cooling tower, Boiler will be send to ETP, RO and Softner and treated water will be reused in cooling tower and manufacturing process. ZLD will be maintained in the plant premises.• Domestic wastewater will be sent to STP for treatment and further will be used in green belt plantation.
3.	Solid/Hazardous Waste Environment	<ul style="list-style-type: none">• Used oil and spent catalyst will be sold to registered recycler.• STP and ETP sludge will be end to TSDF• Domestic waste generation will be send to authorized vendors.• Boiler Ash will be send to cement/ brick manufacturer.
4.	Noise Environment	<ul style="list-style-type: none">• Green belt development (plantation of dense trees across the boundary) will help in reducing noise levels in the plant as a result of attenuation of noise generated due to plant operations and transportation.• Personal protective equipment's like ear plugs and ear muffs will be provided to employees working in the noise prone areas.• Time to time oiling and servicing and O&M of machineries will be done.• Acoustic enclosure for heavy machines/equipment/D.G. sets would be used.• The noise free machines of latest technology will be installed.• A high standard of maintenance and proper lubricants will be practiced for plant machinery and equipment's, which helps to avert potential noise problems.
5.	Odour management	<ul style="list-style-type: none">• Scrubber system will be used to control the odour from the exit gases.• The remedial measures will be taken such as better house-keeping by regular steaming of all the equipment's.• Temperature will be kept under control during the process.

M/S SHREE SHYAM GREEN ENERGY PVT. LTD.

Proposed Maize processing unit and Manufacturing of Starch, Dextrose and/ or Maltodextrin and/or modified Starch and Sorbitol at Village- Sondh, Tehsil- Berla, District-Bemetara, Chhattisgarh.

**DRAFT
REPORT****EIA****4.0 ENVIRONMENTAL MONITORING PROGRAM**

Monitoring of environmental samples will be done as per the guidelines provided by MoEF&CC/ CPCB. The method followed will be recommended / standard method approved / recommended by MoEF&CC /CPCB/SPCB.

S.No.	Environmental Components	Monitoring Points/Locations
1.	Ambient Air	Ambient air quality monitoring at 8 locations within the plant premises having atleast 1 location in upwind direction and 2 locations in Downwind direction.
2.	Water and Waste water	Intake sample of Raw Water Quality and waste water from industry
3.	Noise	At all source and outside the Plant area. At least 3 points near/around the plant Boundary.
4.	Greenbelt/Vegetation Cover	Greenbelt Area at Boundary and Garden
5.	Soil	At least 2 locations from Greenbelt

5.0 ADDITIONAL STUDIES

Public hearing is applicable for the proposed project as per ToR Vide **File No. IA-J-11011/243/2023-IA-II(I)** dated **21.07.2023** because the project is located outside Notified Industrial Area. Public hearing will be conducted as per EIA notification dated 14th September, 2006. The Public Hearing Chapter issued during the public hearing will be implemented along with the action plan, budget and timeline. Assessment studies of risks and hazards and their mitigation measures are presented in the accompanying chapters.

6.0 PROJECT BENEFITS

The management will recruit semi-skilled, unskilled workers from nearby villagers. The Company is committed to the environment and will use technology to minimize the impact from the proposed project and will properly dispose/dispose of the waste as per the requirement of CPCB/SPCB. Direct and indirect employment opportunities will be provided to the local people. The CER activity will be carried out as per the order issued during the public hearing.

7.0 ENVIRONMENT MANAGEMENT PLAN

The total capital investment on environmental control measures is envisaged to be about **Rs. 236 Lakhs** out of a total proposed project cost of **Rs 120.0 Crores**.

M/S SHREE SHYAM GREEN ENERGY PVT. LTD.

Proposed Maize processing unit and Manufacturing of Starch, Dextrose and/ or Maltodextrin and/or modified Starch and Sorbitol at Village- Sondh, Tehsil- Berla, District-Bemetara, Chhattisgarh.

**DRAFT EIA
REPORT**

EMP Cost Details

S. No.	Component	Budget in Rs (Lakhs)	Recurring Cost (Per year)
1	Stacks with Online Monitoring System	25	9.0
2	Air Pollution Control- Scrubber (Stack, Scrubber)	30	10.0
3	Water and Waste Water Management – (STP, ETP, RO, Softener)	60	15.0
4	Rain Water Collection tank	10.0	3.0
5	Green Belt Development	80.01	20.0
6	Occupational Health and Safety	20	5.0
7	Solid and hazardous waste management	5.0	1.5
8	Environment Monitoring of Air, Water, Noise, Soil	-	10.0
9	Energy Conservation- Solar Panel (10 kW)	6	2.0
Total		236	75.5