



# Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

## FORM V

(See Rule 14)

Environmental Audit Report for the financial Year ending the 31st March 2023

### Unique Application Number

MPCB-ENVIRONMENT\_STATEMENT-0000063489

### Submitted Date

23-11-2023

## PART A

### Company Information

#### Company Name

M/s Solar Industries India Limited

#### Application UAN number

0000119394

#### Address

Village- Chakdoh (Bazargaon) District-Nagpur  
-440023 Maharashtra State

#### Plot no

8/1,8/2,8/3, 37,38,39,40, 69,72,73/1,73/2,74,  
75,78,79,95,86

#### Taluka

Katol

#### Village

Chakdoh and Bazargaon

#### Capital Investment (In lakhs)

692.737

#### Scale

Large

#### City

Nagpur

#### Pincode

440023

#### Person Name

Shri Milind Deshmukh

#### Designation

Director

#### Telephone Number

07126634555

#### Fax Number

07122560010

#### Email

milind.deshmukh@solargroup.com

#### Region

SRO-Nagpur I

#### Industry Category

Red

#### Industry Type

R20 Manufacturing of explosives, detonators, fuses  
including management and handling activities

#### Last Environmental statement submitted online

yes

#### Consent Number

Formate 1.0/BO/CAC Cell/UAN  
No. 0000071891/O&A /18th  
CAC-2001001969

#### Consent Issue Date

2020-01-29

#### Consent Valid Upto

2026-06-30

#### Establishment Year

1996

#### Date of last environment statement submitted

Jan 1 1900 12:00:00:000AM

#### Industry Category Primary (STC Code) & Secondary (STC Code)

### Product Information

#### Product Name

Slurry/Emulsion Explosives

#### Consent Quantity

156250.000

#### Actual Quantity

169451.392

#### UOM

MT/A

Detonators (Finished)

125000000

61304000

Nos./Y

Filling and Pressing of Filled shells (Captive)

62500000

61720000

Nos./Y

PETN (C&F)

3000.000

3682800

MT/A

HMX & HMX Compounded Product

300.000

290.507

MT/A

Detonating Fuse (Finished)

150000000

140500100

Mtrs/Y

Pentolite Cast Booster (C&F)	3000.000	3924.475	MT/A
Sorbitan Mono Oleate (SMO) (C&F)	9162.000	3119.850	MT/A
Calcium/Sodium Nitrate Melt (Captive) ive)	3600.000	3560.000	MT/A
PolyisoButylene Succinic Anhydride (PIBSA) C&F	6000.000	1250.498	MT/A
Lead Azide (Captive)	9.000	8.968	MT/A
Lead Styphnate (Captive)	3.000	00	MT/A
ASA/APA Mixing & Drying (Captive)	12.000	8.030	MT/A
GI/Cu Wire Captive)	90000000	86781868	Nos./Y
Solar Pride (Dust Suppressant (Finished)	1000.000	00	MT/A
RDX & RDX Compounded Products	3000.000	130.011	MT/A
Tri nitro Toluene (TNT)	3000.000	1071.495	MT/A
Bulk Emulsion (SME)	125000.000	14960.789	MT/A

### **By-product Information**

<b>By Product Name</b>	<b>Consent Quantity</b>	<b>Actual Quantity</b>	<b>UOM</b>
Weak Nitric Acid (WNA) Generation	0	3841	MT/A
Weak Nitric Acid (WNA) Sale	0	2028	MT/A
Weak Acetic Acid Generation	0	746	MT/A
Weak Acetic acid SALE	0	195	MT/A
Weak Sulphuric Acid Generation	0	2973	MT/A
Weak Sulphuric Acid Sale	0	2893	MT/A

## **Part-B (Water & Raw Material Consumption)**

### **1) Water Consumption in m3/day**

<b>Water Consumption for Process</b>	<b>Consent Quantity in m3/day</b>	<b>Actual Quantity in m3/day</b>
<b>Cooling</b>	548.00	469.60
<b>Domestic</b>	138.00	126.83
<b>All others</b>	95.00	87.07
<b>Total</b>	997.00	887.00

### **2) Effluent Generation in CMD / MLD**

<b>Particulars</b>	<b>Consent Quantity</b>	<b>Actual Quantity</b>	<b>UOM</b>
Trade Effluent	153	152.6	CMD
Domestic Effluent	99	93	CMD

### **2) Product Wise Process Water Consumption (cubic meter of process water per unit of product)**

<b>Name of Products (Production)</b>	<b>During the Previous financial Year</b>	<b>During the current Financial year</b>	<b>UOM</b>
Slurry /Emulsion Explosives	0.286	0.258	
Detonators	42.329	38.216	
Detonating Fuse	66.00	59.587	
Pentolite Cast Booster	6.38	5.76	

PETN /PETN Drying	16.00	14.45
HMX/HMX Compounded Products	139.3	125.7
Sorbitan Mono Oleate (SMO )	0.617	0.557
Poly Iso Butylene Succinic Anhydride	0.617	0.557
Calcium/Sodium Nitrate Melt	0.263	0.237
Lead Azide/Lead Styphnate/ASA/APA Drying	39.06	35.26
Filling & Pressing of Filled shells	38.42	34.68
GI/Copper wire coating	0.203	0.183
RDX /RDX compounded products	21.21	19.15
Tri Nitro Toluene (TNT)	13.45	12.14
Bulk Emulsion (SME)	0.209	0.189

**3) Raw Material Consumption (Consumption of raw material per unit of product)**

<b>Name of Raw Materials</b>	<b>During the Previous financial Year</b>	<b>During the current Financial year</b>	<b>UOM</b>
Ammonium nitrate & Sodium nitrate for Slurry and Emulsion	0.581	0.368	Ton/Ton
Sodium perchlorate for Emulsion	0.019	0.001	Ton/Ton
Salt for Slurry	0.081	0.001	Ton/Ton
Aluminium powder for Slurry	0.016	0.020	Ton/Ton
Guargum for Slurry	0.0016	0.0001	Ton/Ton
Emulsifier for Emulsion	0.0015	0.004	Ton/Ton
Wax for Emulsion	0.0013	0.004	Ton/Ton
Oils for Emulsion	0.032	0.0001	Ton/Ton
Sulphur for Slurry	0.101	0.084	Ton/Ton
Filled shell for Detonator	1	1	Nos./Y
Fuse Head for Detonator	1	1	Nos./Y
GI/Copper wire set for Detonator	1	1	Nos./Y
NONEL Shock Tube for Detonator	1	1	Nos./Y
Penta Erythritol (PE) for PETN	4.44	0.571	Ton/Ton
Nitric acid for PETN	2.57	2.55	Ton/Ton
Acetone of PETN	0.134	0.142	Ton/Ton
Hexamine for HMX	0.846	0.818	Ton/Ton
Nitric acid (98%) for HMX	1.930	1.891	Ton/Ton
Ammonium nitrate for HMX	1.667	1.612	Ton/Ton
Acetic acid for HMX	5.284	6.67	Ton/Ton
Acetic anhydride for HMX	5.322	6.61	Ton/Ton
Solvent for HMX	1.07	0.479	Ton/Ton
PETN for Detonating Fuse	9.786	9.472	Ton/Ton
PVC granules for Detonating Fuse	8.974	8.485	Ton/Ton
BOPP Tape for Detonating Fuse	0.391	0.001	Ton/Ton
PP Yarn for Detonating Fuse	2.406	2.304	Ton/Ton

Mercerized Thread for Detonating Fuse	0.284	0.296	Ton/Ton
TNT for Cast Booster	0.314	0.264	Ton/Ton
PETN for Cast Booster	0.472	0.633	Ton/Ton
Oleic acid /Fatty acid for SMO	0.749	0.746	Ton/Ton
Sorbitol for SMO	0.533	0.533	Ton/Ton
Polyisobutylene for PIBSA	0.911	0.937	Ton/Ton
Maliec anhydride for PIBSA	0.114	0.115	Ton/Ton
Weak Nitric acid (60%) for SN	1.242	1.225	Ton/Ton
Weak Nitric acid (60%) for CN	0.937	1.011	Ton/Ton
Sodium carbonate for SN	0.585	0.585	Ton/Ton
Lime stone for CN	0.417	0.479	Ton/Ton
ONT for TNT	0.682	0.700	Ton/Ton
Nitric acid (98%) for TNT	1.168	1.149	Ton/Ton
Weak Nitric acid (60%) for TNT	4.26	0.789	Ton/Ton
Sodium sulphite for TNT	0.043	0.049	Ton/Ton
Ammonium nitrate for SME	0.340	1.32	Ton/Ton
Furnace oil for SME	0.050	0.09	Ton/Ton
SMO for SME	0.013	0.017	Ton/Ton
Oleum for TNT SMO for SME	1.81	1.883	Ton/Ton

#### 4) Fuel Consumption

<b>Fuel Name</b>	<b>Consent quantity</b>	<b>Actual Quantity</b>	<b>UOM</b>
Briquet for Boiler	16590	5607.8	Ton/Ton
Coal for Boiler	16500	13813.1	Ton/Ton
Briquet for Thermic Fluid Heater	9600	521.2	Ton/Ton
Coal for Thermic Fluid Heater	4320	2281.6	Ton/Ton
HSD for DG sets	5840	147.015	KL/A

## Part-C

### Pollution discharged to environment/unit of output (Parameter as specified in the consent issued)

#### [A] Water

<b>Pollutants Detail</b>	<b>Quantity of Pollutants discharged (kL/day)</b>	<b>Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour</b>	<b>Percentage of variation from prescribed standards with reasons</b>	<b>Standard</b>	<b>Reason</b>
	<b>Quantity</b>	<b>Concentration</b>	<b>%variation</b>		
pH	0	7.34	-	6.0-8.5	Within limit
Total Suspend solids	0.0003	53.25	<98.0	100	Within limit
Biological Oxygen Demand (BOD) 27Deg C,3 days	0.001	9.5	<91.7	100	Within limit
Chemical Oxygen Demand (COD)	0.017	36	<43.1	250	Within limit
Oil and Grease	0.029	0.02	<99.8	10	Within limit
Chloride	0.000003	176.17	<84.8	600	Within limit

Sulphate	0.015	79.9	<90.1	1000	Within limit
Total Dissolved Solids	0.173	1440.25	<35.7	2100	Within limit
Lead as Pb	0.0008	0.042	<55	0.10	Within limit
Nitrate as N	0.0008	5.34	<54.8	10	Within limit
Zinc as ZN	0.00001	0.07	<98.4	5.0	Within limit
Sulphide as S	0.00006	0.03	<98.0	2.0	Within limit
Chromium as Cr 6+	0.00003	0.18	<80	0.1	Within limit
Phenol as C6H5OH	0.0001	0.001	<97.5	1.0	Within limit
Cynide as CN	0.0007	0.004	<99	0.20	Within limit
Mercury as Hg	0.0001	0.0001	<90.0	<0.01	Within limit
Copper as Cu	0.00004	0.003	<99	3.0	Within limit
Bioassay Test %	00	90	23.3	90 %	Within limit

### **[B] Air (Stack)**

<b>Pollutants Detail</b>	<b>Quantity of Pollutants discharged (kL/day)</b>	<b>Concentration of Pollutants discharged(Mg/NM3)</b>	<b>Percentage of variation from prescribed standards with reasons</b>	<b>Standard</b>	<b>Reason</b>
	<b>Quantity</b>	<b>Concentration</b>	<b>%variation</b>		
Stack 1-Thermic Fluid Heater Particulate Matter	0.593	55.675	<62.88	150	Within limit
Stack 1-Thermic Fluid Heater, Sulphur Dioxide	0.669	62.8	Not specified	--	Within limit
Stack 5, Boiler 12 TPH, Particulate Matter	2.52	97.37	<35.08	150	Within limit
Stack 5-Boiler 12 TPH, Sulphur Dioxide	6.38	246.75	<58.88	600	Within limit
Stack 5-Boiler 12 TPH Nitrogen oxides	3.12	120.72	<79.8	600	Within limit
DG set 300 KVA , Particulate Matter	0.018	24.9	<83.4	150	Within limit
DG set 300 KVA , SOx	0.081	108.4	Not specified	--	Within limit
DG set 380 KVA , Particulate Matter	0.014	31	<81.7	150	Within limit
DG set 380 KVA , SOx	0.055	122	Not specified	--	--
DG set 400 KVA , Particulate Matter	0.0255	68.1	<54.6	150	Within limit
DG set 400 KVA , SOx	0.054	144.2	Not specified	--	--
DG set 500 KVA Particulate Matter	0.044	56.95	<62.03	150	Within limit
DG set 500 KVA , SOx	0.118	153.75	Not specified	--	Within limit
Ambient Air Quality-NW, SO2	0.001	9.5	<88	80	Within limit
Ambient Air Quality-NW, NOx	0.01	19.765	<75	80	Within limit
Ambient Air Quality-NW, PM 10	0.01	57.53	<42.4	100	Within limit
Ambient Air Quality NW, PM 2.5	0.01	25.52	<57	60	Within limit
Ambient Air Quality-SW, SO2	0.001	8.2	<89	80	Within limit
Ambient Air Quality-SW, NOx	0.01	17.6	<77	80	Within limit
Ambient Air Quality-SW, PM 10	0.01	52.98	<47	100	Within limit
Ambient Air Quality-NW, PM 2.5	0.01	29.39	<61	60	Within limit

Ambient Air Quality-NE, SO2	0.001	8.93	<88	80	Within limit
Ambient Air Quality-NE, NOx	0.01	19.1	<76	80	Within limit
Ambient Air Quality-NE, PM 10	0.01	57.66	<42	100	Within limit
Ambient Air Quality-NE, PM 2.5	0.01	25.32	<57	60	Within limit
AAQ Ozone	0.01	12.36	<38.2	<20	Within limit
AAQ Ammonia	0.001	10.11	<49.45	<20	Within limit
AAQ Lead as Pb	0.00001	0.03	<40	<0.05	Within limit
AAQ Carbon monoxide	0.00001	0.07	<96.5	2.0	Within limit
AAQ AAQ Benzeen	0	0	BDL	5.0	Within limit
AAQ Benzo Pyrine BaP	0	0	BDL	1.0	Within limit
AAQ Arsenic as As	0	0	BDL	6	Within limit
AAQ Nickel as Ni	0	0	BDL	<20	Within limit

## Part-D

### HAZARDOUS WASTES

#### 1) From Process

<b>Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	0	0	MT/A
5.1 Used or spent oil	0	0	KL/A
5.2 Wastes or residues containing oil	0	0	KL/A

#### 2) From Pollution Control Facilities

<b>Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
35.3 Chemical sludge from waste water treatment	56.680	84.955	MT/A
37.2 Ash from incinerator and flue gas cleaning residue	0.500	0.91	MT/A
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	26.6	11.4	MT/A

## Part-E

### SOLID WASTES

#### 1) From Process

<b>Non Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
Boiler Ash (Sold to Brick Manufacturer)	2197.479	2935.55	MT/A

#### 2) From Pollution Control Facilities

<b>Non Hazardous Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
STP Sludge ( Manure in Garden)	2.675	2.350	MT/A
Organic compost ( Manure in Garden)	0	0.2	MT/A

#### 3) Quantity Recycled or Re-utilized within the unit

<b>Waste Type</b>	<b>Total During Previous Financial year</b>	<b>Total During Current Financial year</b>	<b>UOM</b>
0	0	0	MT/A

## Part-F

Please specify the characteristics(in terms of concentration and quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes.

### 1) Hazardous Waste

Type of Hazardous Waste Generated	Qty of Hazardous Waste	UOM	Concentration of Hazardous Waste
35.3 Chemical sludge from waste water treatment	84.95	MT/A	Lead 0.97, Chloride 56.097,
33.1 Empty barrels /containers /liners contaminated with hazardous chemicals /wastes	11.47	MT/A	NA
37.2 Ash from incinerator and flue gas cleaning residue	0.910	MT/A	NA

### 2) Solid Waste

Type of Solid Waste Generated	Qty of Solid Waste	UOM	Concentration of Solid Waste
STP	2.350	MT/A	Chloride 212.20

## Part-G

Impact of the pollution Control measures taken on conservation of natural resources and consequently on the cost of production.

Description	Reduction in Water Consumption (M3/day)	Reduction in Fuel & Solvent Consumption (KL/day)	Reduction in Raw Material (Kg)	Reduction in Power Consumption (KWH)	Capital Investment(in Lacs)	Reduction in Maintenance(in Lacs)
Waste water Recycling	87.0	0	0	0	0	0
HSD Consumption	0	2.23	0	0	0	0
Renewal Energy Waste water Recycling	0	0	0	3318075	0	0

## Part-H

Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution.

### [A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
AAQ Monitoring Station & PTZ Camera, Flowmeter	AAQ- PM, SO2 NOX Monitoring	10
STP 10 KLD	Treatment & Recycling	11
Organic Compost M/c	Composting of Food waste	5
Revamping of ETP & STP	Treatment	10

### [B] Investment Proposed for next Year

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
Installation of MEEP	Recycle of waste water	180
OCEMS for 20 TPH	Stack- PM, SO2 NOX Monitoring	35

## Part-I

Any other particulars for improving the quality of the environment.

**Particulars**

Plantation of 500 saplings, Online water ETP /STP, &AAQ parameters monitoring , Uses of surface water etc. Note: Revised Production figures uploaded.

**Name & Designation**

Milind Deshmukh , Director

**UAN No:**

MPCB-ENVIRONMENT\_STATEMENT-0000063489

**Submitted On:**

23-11-2023