

VARDHINNI FUELS PRIVATE LIMITED

To,

Date: 30/09/2022

The Member Secretary (Industry-2)
Ministry of Environment, Forests & Climate Change
Indira Paryavaran Bhawan, A1iganj, Jar bagh Road
New Delhi-110003

Sub: Regarding submission of EDS reply given on Environmental Clearance for Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

Reference:

1. Proposal No. IA/MP/IND2/ 290318/2022 dated 27/08/2022

Respected Sir,

As per above mentioned subject, we are submitting here point wise reply of EDS dated 19/09/2022 given on our proposal.

S. No.	EDS Points	Reply
1.	Pl. submit land ownership documents for consideration.	We have received LOI for our project site from MPIDC as we have in process for transfer of amount of other plot which was purchased from MPIDC. Due to which registration of plot for proposed project taking time. In this regard, we have also submitted a request letter to MPIDC for refund of amount, copy of request letter is attached as Annexure-I. and an affidavit regarding this is also enclosed as Annexure II.

We understand that the above requirements are as per the requirements. You are requested to kindly consider our case for issue of Environmental Clearance. For this we shall be ever grateful to you.

Thanking you,

Yours Sincerely,



For M/s Vardhinni Fuels Pvt. Ltd.
(Authorized Person)

ADDRESS: NEXT TO ANIL TRANSPORT COMPANY, JABALPUR -BHOPAL ROAD NH12, TEWAR,
JABALPUR, MADHYA PRADESH: 483053

CONTACT NUMBER: 8966000588 WEBSITE: WWW.ANILGROUP.ORG EMAIL:
VARDHINNIFUELS@ANILGROUP.ORG UIN : U23200MP2021PTC056885

Annexure-I
Request Letter to MPIDC

VARDHINNI FUELS PRIVATE LIMITED

To
The General Manager
MP Industrial Development Corporation Limited,
Udyog Bhawan
Jabalpur

Dated : 20.09.2022

Subject : CANCELLATION OF ALLOTTMENT OF LAND AT VILLAGE BHEETA , KHASRA NO.243/1 AREA IN HEC 15.00 VIDE ALLOTTEMENT ORDER NO. MPIDC(J)LMC/2022/553 DATED 26.04.2022 POSSESSION TAKE VIDE LETTER NO MPIDC/J/DEV/22-23/UNDEVELOPED LAND/1289 DATED 06.08.2022 LEASE DEED EXECUTED ON 31.05.2022 BETWEEN MPIDC LIMITED AND M/s VARDHINNI FUELS PRIVATE LIMITED

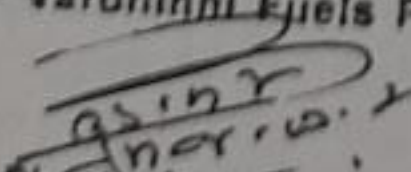
With reference to above we have to advise that we have been allotted the following land at village Bheeta for a specific purpose of installation of Grain Based Ethanol Plant at

KHASRA NO.243/1 AREA IN HEC 15.00 . this land was also transferred on lease for 99 years in the name of M/s Vardhinni Fuels Pvt Ltd through vide registered Lease deed dated 31.05.2022 after paying full value of consideration as under :

1. Premium	Rs. 93,00,000.00
2. Advance Annual Lease Rent	Rs. 1,86,000.00
3. 3 Years Annual lease Rent as security	Rs. 5,86,000.00
4. Total payment made	Rs. 1,00,44,000.00

After getting the EC approval from Government of India, Ministry of Environment , Forest and Climate Change ,we have applied for permission from M P Pollution control Board , Bhopal which was declined on the basis of following reasons vide their letter No. PCB/JBP/CCA/116028-22.07.2022

For- Vardhinni Fuels Pvt. Ltd.


Director/Authorised Signatory



ADDRESS: NEXT TO ANIL TRANSPORT COMPANY, JABALPUR -BHOPAL ROAD NH12, TEWAR,
JABALPUR, MADHYA PRADESH: 483053

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VARDHINNI FUELS PRIVATE LIMITED

"Proposed site is barren land which is located in catchment of River Narmada at downstream of Jabalpur City. As per GPS Coordinates, aerial distance from River Narmada is approx 300 meter from the boundary of the proposed site. During inspection it was found that local small drains which meets to River Narmada was seen in proposed land. Any accidental discharge will directly impact the River Narmada. Some houses of village Bheeta is less than 500 meters from the proposed site. Distance of proposed site from forest is approx 400 meter. The famous Bhedaghat Marble rock which is popular tourist destination is approx 1.5 KM & visitors boating point is approx 1.3 KM from proposed site. The proposed industry is also air polluting in nature (Boiler capacity 34 TPH) which will generate the acidic gases like NOx, SO2 which may adversely impact the marble Rock." (Letter attached)

Since we were in full preparedness to start the project at Bheeta, but on account of PCB rejection we have chosen an alternate land at Hargrh and as per letter of Intent dated 05.08.2022 for the allotment of land at Hargrh we have been asked to pay Rs. 24286972.00, out of this we have made part payment and rest of the payment has to be made from our source.

Therefore, in order to meet out the expenses for acquiring land at Hargrh we are in a need of fund.

Hence, we request you as under:

1. Cancel the allotment given to us for Bheeta land
2. Release the Payment that have been made for taking possession of land at Bheeta

Since this is a new project being undertaken under the Central Government scheme under EBP (Ethanol Blending Program) for promoting Ehanol Production and government is kind enough to promote such projects, hence we request you to please consider full amount of refund without any deductions to meet out the expenses and cost for acquiring alternate land.

Looking forward for your support. For- Vardhinni Fuels Pvt. Ltd.

Authorised Signatory

CC : Regional Manager

MP Industrial Development Corporation Limited, Jayog Bhawan, Jabalpur : FOR office

NECESSARY ACTION PLEASE

Enclosures : 1. Allotment order dated 26.04.2022

2. Letter of Intent No.5325 dated 17.02.2022

3. Possession Letter dated 06.08.2022

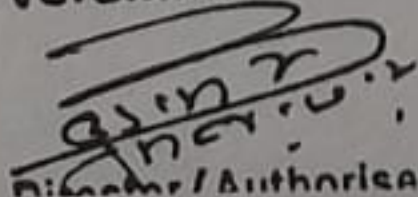
4. Original Lease Deed dated 31.05.2022

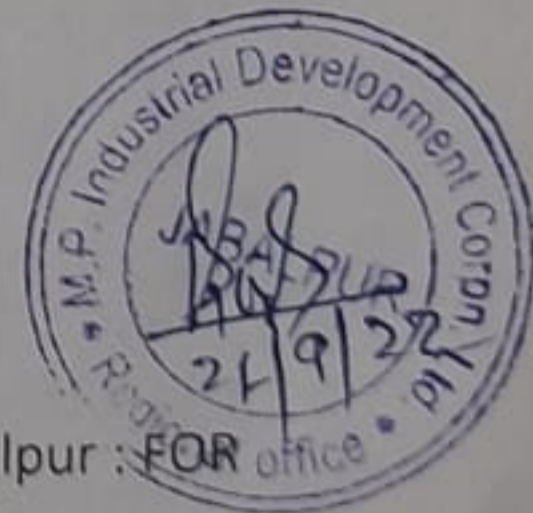
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VARDHINNIFUELS@ANILGROUP.ORG UIN : U23200MP2021PTC056885

For- Vardhinni Fuels Pvt. Ltd.


Authorised Signatory



Annexure-II
Copy of Affidavit



मध्य प्रदेश MADHYA PRADESH

30 AUG 2022

BT 959952

NOTARY
Jabalpur District
India

शपथ पत्र

Ramdas Sharma
NOTARY
Jabalpur District
M.P. India

प्रति
अधिकृत अधिकारी,
समस्त सामान
मिनास्ट्री ऑफ फारवार्डिंग, पोस्ट एंड कलकुरेन्ट विंग (इन्फोर्मेट आरसेलेग्रेजेंट डिपार्टमेंट)
नई दिल्ली

दिनांक: 30.08.2022

मैं शपथकर्ता राजकुमार जैन आरगत श्री अशोक कुमर जैन उम 37 वर्ष, निवासी म.ज.1689, पेट्रोल पंप के पास
सेक्टर टाउन, जबलपुर (म.प्र.) अधिकृत हमलापरकर्ता-सीमा बंधिनी कपूरका या डिभिडेंड, या -अभिजित ट्रांसपोर्ट
कंपनी के पास, भेड़घाट रोड रोवर, जबलपुर को पाले एम्.पी. इंस्टिट्यूट डेवलपमेंट कॉर्पोरेशन लिमिटेड जबलपुर
द्वारा उद्घोषित स्थापत्यार्थ साम भूज, प्लॉट भेड़घाट, सखीन सहापुर, जिला जबलपुर में 15 हेक्टेयर अधिकतम
सामग्रीय भूमि हमारे द्वारा रूपये 10044000.00 का पूर्ण मुद्रागत कर 80 वर्ष की सीज पर प्रत्येक की गयी थी,
जिसका विवरण निम्नानुसार है -

1. यह श्री. अशोक कुमर जैन द्वारा कन्ये की ज.पु.की थी एवं इसी भूमि में 5 G (E) वेन वेस्ट एपेरील वॉलटेज पेट्रोल
हेतु डिस्ट्रिक्ट्री लगाने हेतु एनवायर्नमेंटल क्लीयरेंस (EC) हेतु हमारे आवेदन क्रमांक LA, JWP/IND 2 /272558
/2022 दिनांक 29.08.2022 के आशय पर आपके विभाग द्वारा EC EC 22 A G 60 MP 135305 दिनांक
29.07.2022 के द्वारा स्वीकृत प्रदान की जा चुकी थी.
2. यह श्री. सधारीय कुमर के द्वारा अधिपति के कारण हम इस भूमि में उद्घोषित स्थापित करने में असमर्थ हैं.
3. यह श्री अशोक कुमर का हमारे द्वारा एम्.पी. इंस्टिट्यूट डेवलपमेंट कॉर्पोरेशन लिमिटेड जबलपुर को बताया
गया, इसी समस्या को दखल में रखते हुए एम्.पी. इंस्टिट्यूट डेवलपमेंट कॉर्पोरेशन लिमिटेड जबलपुर ने हमें पूर्ण



Ramdas Sharma
NOTARY
Jabalpur District
M.P. India

30 AUG 2022

में भीड़ में अवैधित/विहित भूमि के कानों में बच हरकत लक्ष्य है। चित्त अवगत मय में उक्त घोषणा लगाते हैं।
ग्राम भूमि अवैधित कर दी है।

एम् पी इंस्टिट्यूट डेवलपमेंट कोरपोरेशन लिमिटेड जबलपुर का पत्र क्रमांक:MPDC /MO JABALPUR /22 -23 /1040001090005 /24312 दिनांक 05 . 08 .2022

प्लॉट नंबर 6 , प्लॉट नंबर 7 , प्लॉट नंबर 8 रोडवेज फेज-8 एकाइ नम्बर 55275 रोडवेज सीटर , लक्ष्य 594975 , 125 50 17

4 . यह डी गैर अवैधित भूमि को बच कानों के लिए हमने द्वारा दिनांक 05 . 08 .2022 को रुपये 15 76 994 .00 एम् पी इंस्टिट्यूट डेवलपमेंट कोरपोरेशन लिमिटेड जबलपुर को भुगतान कर दिया गया है तथा पहले अवैधित भूमि की बच राशि इस भूमि के एचल में समाविष्टित की जायेगी एवं बच बची राशि का भुगतान नियमों के अनुसार हमारा द्वारा कर दिया जायेगा

5 . यह कि हम समय पूर्वक कथन करते हैं की एम् पी इंस्टिट्यूट डेवलपमेंट कोरपोरेशन लिमिटेड जबलपुर के द्वारा हरकत में अवैधित की गयी भूमि का रोप भुगतान हम कोरपोरेशन को उनकी राशि के अनुसार कर देंगे

DEPONENT
हस्ताक्षर - सपथकर्ता
नाम: रामदास शर्मा पञ्चम पा.लिमिटेड
रामदास शर्मा

30 AUG 2022

सपथकर्ता

में सपथकर्ताका राजभुवन जैन आरमज की अलोक कुमार जैन उम्र 57 वर्ष , निवासी म.ज. 5689 , पेटोल पंच के पास रोडवेज टाउन , जबलपुर (म.प.) अधिकृत हस्ताक्षरकर्ता -नेमसे बर्धनि पञ्चम पा.लिमिटेड ,पञ्च -अमित टांकोटे कंपनी के पास , रोडवेज रोड रोप ,जबलपुर का सपथित कलक है की उपरोक्तभुगतान सिंदु क्रमांक 1 से 5 तक दी गयी जानकारी से जानकारी एवं ज्ञान के अनुसार सही एवं सत्य है.

DEPONENT
हस्ताक्षर - सपथकर्ता
नाम: रामदास शर्मा पञ्चम पा.लिमिटेड
रामदास शर्मा



Ramdas Sharma
NOTARY
Jabalpur District
M.P. India

30 AUG 2022

Before me on theday of.....
by Raj Kumar Jain
who has been identified by Shri Ramdas Sharma
who is personally known to whose
signatures are is here appended

Ramdas Sharma
3300246 016
Ramdas



MP INDUSTRIAL DEVELOPMENT
CORPORATION LTD.

MP Industrial Development Corporation Ltd.
21, Arera Hills Bhopal, 462011
helpdesk@mpidc.co.in

LETTER OF INTENT

Application Number : 1040202106005 2431

Dated : 05/08/2022

To,
Raj Kumar Jain

M/s Vardhinni Fuels Private Limited

C/O Anil Jain, S/O Late Nathuram Jain, Tewar, JABALPUR, Distt.- Jabalpur - 482001 (Madhya Pradesh), India.

Subject: Proposal for allotment of land Plot no.6 Sector PHASE-II, Plot no.8 Sector PHASE-II, Plot no.7 Sector PHASE-II in Hargarh Jabalpur, District Jabalpur (Madhya Pradesh).

Reference: Your Online Application Number 1040202106005 Dated : 04/08/2022 06:12 PM

Sir/Madam,

Your above Application is received for allotment of land in Hargarh Jabalpur

We proposed to allot you Plot no.6 Sector PHASE-II, Plot no.8 Sector PHASE-II, Plot no.7 Sector PHASE-II Approx 55275.0 SQMT. in Sector (PHASE-II, PHASE-II, PHASE-II) area of land Being i.e. Approx 594975.125 Sqft in at Hargarh Jabalpur, District Jabalpur (Madhya Pradesh) for setting up a Large Industrial unit for Manufacturing of Others.

The allotment will be subject to following terms and conditions:-

The land will be given on lease for a period of 99 Years

(i). You are required to deposit the following amount within 60 days from the date of issuance of this letter.

No.	Particulars	Amount (in Rs.)
1	Application Processing Fees (Non Refundable)	5,000.00
2	CGST on Application Fees @9%	450.00
3	SGST on Application Fees @9%	450.00
4	Land Premium After Rebate	62,84,375.00
5	Development Charges (@309.0/- Per SQMT.)	1,70,79,975.00
6	Lease Rent per year (@2% of the Premium)	1,25,688.00
7	CGST on Lease Rent @9%	11,312.00
8	SGST on Lease Rent @9%	11,312.00
9	Annual Maintenance Charges of Industrial Area (@6/- per Sqmt.)	3,31,650.00
10	CGST on Maintenance @9%	29,849.00
11	SGST on Maintenance @9%	29,849.00
12	Security Deposit (3 times of Lease Rent)	3,77,064.00
Total Amount (In Rs.)		2,42,86,972.00
Advance Paid Amount (Advance Premium + Application Fee)		15,76,994.00
Remaining Payable Amount (In Rs.)		2,27,09,978.00

(ii). In case the amount specified in para-2 (i) above to not deposited with us within Sixty days, you may deposit the amount within next 60 days with interest @ 10% P.A. After that this letter of intent will stand automatically cancelled.

The allotment shall be subject to the provisions of Madhya Pradesh Rajya Audyogik Bhumi Evam Audyogik Bhawan Prabandhan Niyam, 2019 (as amended from time to time) and to all the terms and conditions contained in the form of lease-deed, hereto annexed, with such modifications and with such additional terms and conditions as the allotting authority may deem fit or necessary to add from time to time.

After receipt of the amount as demanded in para-2 (i) and on completion of the necessary formalities as mentioned above, a letter of allotment shall be issued in your favour. Thereafter, you will be required to execute a lease deed within sixty days. All the conditions of the lease shall have to be strictly complied with.

All costs and expenses incurred or which may be incurred in preparation, execution and registration of the lease deed shall be borne and paid by you. You shall be required to deposit the certified copy of lease deed with us duly registered within 60 days from the date of allotment.

On receipt of the certified copy of registered lease deed, the possession of the land will be handed over to you within seven days.

You will not construct any building unless the construction plans and maps of the building area are approved by the competent authority as required by law.

You shall start the production/implement the project within a period as specified in Madhya Pradesh Rajya Audyogik Bhumi Evam Audyogik Bhawan Prabandhan Niyam- 2019.

In case of air, water & soil pollution and effluent disposal, you shall obtain necessary permission from Madhya Pradesh Pollution Control Board or any other designated authority, authorized for the said objective.

If required, you shall obtain necessary permission for Environment Clearance from the appr

You shall obtain necessary permission/license/registration as may be applicable under the Factories Act, Explosives Act and all other such laws and regulations of Central / State Government or Local Authority, which are in force from time to time and submit a copy of the same.

You shall pay ground rent/shed rent, maintenance charges and other charges as may be fixed by the allotting authority from time to time.

You shall not change the constitution or ownership of the unit without prior permission of the allotting authority in writing.

You will not change use of land for which it is allotted.

In case, you withdraw your application or the allotment is cancelled due to breach of conditions of lease deed or in case of surrender of land, the forfeiture or refund of premium shall be governed by the provisions of Madhya Pradesh Rajya Audyogik Bhumi Evam Bhawan Prabandhan Niyam, 2019.

In acceptance of all the above terms and conditions, please pay the amount as specified in para-2 within 60 days to enable us to issue letter of allotment.

This digitally signed certificate is automatically generated by the designated portal
www.invest.mp.gov.in.

IP Address
127.0.0.1

Endr. No: MPIDC/RO Jabalpur/22-23/1040202106005 2431 ~~6005~~
1. Account / Recovey Section, MPIDC RO Jabalpur

Executive Director
Jabalpur

Date :-

5-8-22

General Manager
Jabalpur

M.P.I.I.D.C. Ltd.
Regional Office, Jabalpur

Signed By : System Generated & Verified
Date : 05-08-2022 15:00:15 IST
Reason : System Verified
Location : MPIDC, Bhopal
Ref No : SIGN:PY5003;SYS:1659691815043

VARDHINNI FUELS PRIVATE LIMITED

To,

Date: 02/09/2022

The Member Secretary (Industry-2)
Ministry of Environment, Forests & Climate Change
Indira Paryavaran Bhawan, A1iganj, Jar bagh Road
New Delhi-110003

Sub: Regarding submission of EDS reply given on Environmental Clearance for Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

Reference:

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Respected Sir,

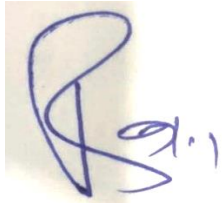
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S. No.	EDS Points	Reply
1.	Copy land ownership document.	We have received LOI for our project site from MPIDC as we have in process for transfer of amount of other plot which was purchased from MPIDC. Due to which registration of plot for proposed project taking time. In this regard, we have also submitted an affidavit which is enclosed as Annexure 1 .
2.	Copy of land use change for industrial purpose.	The project site of proposed project is already falls in Hargarh Industrial Area which is comes under MP Industrial Development Corporation.

We understand that the above requirements are as per the requirements. You are requested to kindly consider our case for issue of Environmental Clearance. For this we shall be ever grateful to you.

Thanking you,

Yours Sincerely,



For M/s Vardhinni Fuels Pvt. Ltd.
(Authorized Person)



मध्य प्रदेश MADHYA PRADESH

30 AUG 2022

BT 959952

NOTARY
Jabalpur District
India

शपथ पत्र

Ramdas Sharma
NOTARY
Jabalpur District
M.P. India

प्रति
अधिकृत अधिकारी,
महान शहर
मिनास्ट्री ऑफ पब्लिक वर्कसेट, पब्लिक एंड कलक्रेडिट बैंक (इन्फोर्मेशन आरसेलेग्रेजेंट डिपार्टमेंट)
भई दिल्ली

दिनांक: 30.08.2022

मैं शपथकर्ता राजकुमार जैन आरगत श्री अशोक कुमर जैन उम्र 37 वर्ष, निवासी म.ज.1689, पेट्रोल पंप के पास
सेक्टर 14, जबलपुर (म.प्र.) अधिकृत हमलापरकर्ता-सीमा बंधिनी कपूरका या डिभिडेंड, या -अभिन्न ट्रांसपोर्ट
कंपनी के पास, मेडगाट रोड रोवर, जबलपुर को पाले एम्पी इंस्टिट्यूट डेवलपमेंट कॉर्पोरेशन लिमिटेड जबलपुर
द्वारा उद्घोषित इन्वॉल्वमेंट बॉनस शीट, पोस्ट मेडगाट, राजनील शालपुर, जिला जबलपुर में 15 हेक्टेयर अधिपतित
शसनीय भूमि हमारे द्वारा रुपये 10044000.00 का पूर्ण मुद्रागत कर 80 वर्ष की सीज पर प्रत्यक्ष की गयी थी,
जिसका विवरण निम्नानुसार है -

1. यह की उक्त भूमि हमारे द्वारा क्रय की जा चुकी थी एवं इसी भूमि में 5 G (E) वेन वेल्ड एपेरोल वॉलटेज पेट्रोल
हेतु डिस्ट्रीब्यूटरी लाइनें हेतु एनवायर्नमेंटल क्लीयरेंस (EC) हेतु हमारे आवेदन क्रमांक LA /MP /IND 2 /272558
/2022 दिनांक 29.08.2022 के आशय पर अपने विवेक द्वारा EC EC 22 A G 60 MP 135305 दिनांक
29.07.2022 के द्वारा स्वीकृत प्रदान की जा चुकी थी.
2. यह की स्थानीय नुसर्करों के द्वारा अधिपतित के कारण हम उक्त भूमि में उद्घोषित अधिपतित करने में असमर्थ हैं.
3. यह की उक्त समस्या को हमारे द्वारा एम्पी इंस्टिट्यूट डेवलपमेंट कॉर्पोरेशन लिमिटेड जबलपुर को बताया
गया, इसी समस्या को दखल में रखते हुए एम्पी इंस्टिट्यूट डेवलपमेंट कॉर्पोरेशन लिमिटेड जबलपुर ने हमें पूर्ण



Ramdas Sharma
NOTARY
Jabalpur District
M.P. India

30 AUG 2022

में भीड़ में अवैध/विक्रित भूमि के कानों में बंध हरण्ड लखनौ जिला, जिना जवनपुर ग्राम में उनात घोरेवट लगाने हेतु प्रिन्स भूमि आवंटित कर दी है।

एम् पी इंस्टिट्यूट डेवलपमेंट कोर्पोरेशन लिमिटेड जवनपुर का पत्र क्रमांक:MPDC /MO JABALPUR /22 -23 /1040202106005 /2431 दिनांक 05 . 08 .2022

प्लॉट नंबर 6 , प्लॉट नंबर 7 , प्लॉट नंबर 8 रोडवट फेज-8 एकाइ नम्बर 55275 रोडवट सीटर , लखनऊ 594975 ,125 50 17

4 . यह डी गैड अवैधित भूमि को कब कबों के लिए हमने द्वारा दिनांक 05 . 08 .2022 को रूपसे 15 76 994 .00 एम् पी इंस्टिट्यूट डेवलपमेंट कोर्पोरेशन लिमिटेड जवनपुर को भुगतान कर दिया गया है तथा पहले अवैधित भूमि की कब राशि इस भूमि के एचल में सम्मिलित की जायेगी एवं कब बची राशि का भुगतान सिस्टम के अनुसार हमारा द्वारा कर दिया जायेगा

5 . यह कि हम कब पूर्ण कथन करते हैं की एम् पी इंस्टिट्यूट डेवलपमेंट कोर्पोरेशन लिमिटेड जवनपुर के द्वारा हरण्ड में आवंटित की गयी भूमि का रोड भुगतान हम कोर्पोरेशन को उनकी सल के अनुसार कर देंगे

DEPONENT
हस्ताक्षर - सपथकर्ता
नाम: रामदास शर्मा प्रमुख प्र.लिमिटेड
रामदास शर्मा

30 AUG 2022

सपथकर्ता

में सपथकर्ताका राजनपुर जैन आरामदास की अलोक कुमार जैन उम्र 57 वर्ष, निवासी म.ज. 5689 , पेटोल पंच के पास रोषियर टाउन , जवनपुर (म.प.) अधिकृत हस्ताक्षरकर्ता -नेमसे बर्धनि प्रमुख प्र.लिमिटेड ,पंच -अमित टांगरोटे कंपनी के पास , रोडवट रोड रोड ,जवनपुर का कार्यपत्र कनाल है की उपरोक्तभुगतान सिंदु क्रमांक 1 से 5 तक दी गयी जवनपुरी से जवनपुरी एवं राज के अनुसार सही एवं सत्य है.

DEPONENT
हस्ताक्षर - सपथकर्ता
नाम: रामदास शर्मा प्रमुख प्र.लिमिटेड
रामदास शर्मा



Ramdas Sharma
NOTARY
Jabalpur District
M.P. India

30 AUG 2022

Before me on theday of.....
by Raj Kumar Jain
who has been identified by Shri Ramdas Sharma
who is personally known to whose
signatures are is here to appended
Ramdas Sharma
3300246 016
Date: 30/8/22



MP INDUSTRIAL DEVELOPMENT
CORPORATION LTD.

MP Industrial Development Corporation Ltd.
21, Arera Hills Bhopal, 462011
helpdesk@mpidc.co.in

LETTER OF INTENT

Application Number : 1040202106005 **2431**

Dated : 05/08/2022

To,
Raj Kumar Jain

M/s Vardhinni Fuels Private Limited

C/O Anil Jain, S/O Late Nathuram Jain, Tewar, JABALPUR, Distt.- Jabalpur - 482001 (Madhya Pradesh), India.

Subject: Proposal for allotment of land Plot no.6 Sector PHASE-II, Plot no.8 Sector PHASE-II, Plot no.7 Sector PHASE-II in Hargarh Jabalpur, District Jabalpur (Madhya Pradesh).

Reference: Your Online Application Number 1040202106005 Dated : 04/08/2022 06:12 PM

Sir/Madam,

Your above Application is received for allotment of land in Hargarh Jabalpur

We proposed to allot you Plot no.6 Sector PHASE-II, Plot no.8 Sector PHASE-II, Plot no.7 Sector PHASE-II Approx 55275.0 SQMT. in Sector (PHASE-II, PHASE-II, PHASE-II) area of land Being i.e. Approx 594975.125 Sqft in at Hargarh Jabalpur, District Jabalpur (Madhya Pradesh) for setting up a Large Industrial unit for Manufacturing of Others.

The allotment will be subject to following terms and conditions:-

The land will be given on lease for a period of 99 Years

(i). You are required to deposit the following amount within 60 days from the date of issuance of this letter.

No.	Particulars	Amount (in Rs.)
1	Application Processing Fees (Non Refundable)	5,000.00
2	CGST on Application Fees @9%	450.00
3	SGST on Application Fees @9%	450.00
4	Land Premium After Rebate	62,84,375.00
5	Development Charges (@309.0/- Per SQMT.)	1,70,79,975.00
6	Lease Rent per year (@2% of the Premium)	1,25,688.00
7	CGST on Lease Rent @9%	11,312.00
8	SGST on Lease Rent @9%	11,312.00
9	Annual Maintenance Charges of Industrial Area (@6/- per Sqmt.)	3,31,650.00
10	CGST on Maintenance @9%	29,849.00
11	SGST on Maintenance @9%	29,849.00
12	Security Deposit (3 times of Lease Rent)	3,77,064.00
Total Amount (In Rs.)		2,42,86,972.00
Advance Paid Amount (Advance Premium + Application Fee)		15,76,994.00
Remaining Payable Amount (In Rs.)		2,27,09,978.00

(ii). In case the amount specified in para-2 (i) above to not deposited with us within Sixty days, you may deposit the amount within next 60 days with interest @ 10% P.A. After that this letter of intent will stand automatically cancelled.

The allotment shall be subject to the provisions of Madhya Pradesh Rajya Audyogik Bhumi Evam Audyogik Bhawan Prabandhan Niyam, 2019 (as amended from time to time) and to all the terms and conditions contained in the form of lease-deed, hereto annexed, with such modifications and with such additional terms and conditions as the allotting authority may deem fit or necessary to add from time to time.

After receipt of the amount as demanded in para-2 (i) and on completion of the necessary formalities as mentioned above, a letter of allotment shall be issued in your favour. Thereafter, you will be required to execute a lease deed within sixty days. All the conditions of the lease shall have to be strictly complied with.

All costs and expenses incurred or which may be incurred in preparation, execution and registration of the lease deed shall be borne and paid by you. You shall be required to deposit the certified copy of lease deed with us duly registered within 60 days from the date of allotment.

On receipt of the certified copy of registered lease deed, the possession of the land will be handed over to you within seven days.

You will not construct any building unless the construction plans and maps of the building area are approved by the competent authority as required by law.

You shall start the production/implement the project within a period as specified in Madhya Pradesh Rajya Audyogik Bhumi Evam Audyogik Bhawan Prabandhan Niyam- 2019.

In case of air, water & soil pollution and effluent disposal, you shall obtain necessary permission from Madhya Pradesh Pollution Control Board or any other designated authority, authorized for the said objective.

If required, you shall obtain necessary permission for Environment Clearance from the appr

You shall obtain necessary permission/license/registration as may be applicable under the Factories Act, Explosives Act and all other such laws and regulations of Central / State Government or Local Authority, which are in force from time to time and submit a copy of the same.

You shall pay ground rent/shed rent, maintenance charges and other charges as may be fixed by the allotting authority from time to time.

You shall not change the constitution or ownership of the unit without prior permission of the allotting authority in writing.

You will not change use of land for which it is allotted.

In case, you withdraw your application or the allotment is cancelled due to breach of conditions of lease deed or in case of surrender of land, the forfeiture or refund of premium shall be governed by the provisions of Madhya Pradesh Rajya Audyogik Bhumi Evam Bhawan Prabandhan Niyam, 2019.

In acceptance of all the above terms and conditions, please pay the amount as specified in para-2 within 60 days to enable us to issue letter of allotment.

This digitally signed certificate is automatically generated by the designated portal www.invest.mp.gov.in.

IP Address
127.0.0.1

Endr. No: MPIDC/RO Jabalpur/22-23/1040202106005 2431 ~~6005~~
1. Account / Recovey Section, MPIDC RO Jabalpur

Executive Director
Jabalpur

Date :- 5-8-22
05/8/2022
General Manager
Jabalpur
M.P.I.I.D.C. Ltd.
Regional Office, Jabalpur

VARDHINNI FUELS PRIVATE LIMITED

To,

Date: 24/08/2022

The Member Secretary (Industry-2)
Ministry of Environment, Forests & Climate Change
Indira Paryavaran Bhawan, A1iganj, Jar bagh Road
New Delhi-110003

Sub: Regarding Environmental Clearance for Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

Dear Sir,

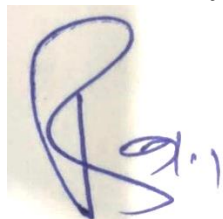
With respect to the Notification S.O. 2339 (E) Dated 16th June, 2021 issued by Ministry of Environment, Forest and Climate Change. (MoEF&CC), Government of India, New Delhi, our above said project falls under "Schedule: 5 (g), Category: B2", hence requires Environment Clearance from the Central level.

We are herewith submitting Form 1 and PFR in the prescribed format of esteemed MoEF&CC, Government of India with the necessary Annexures as for obtaining Environmental Clearance as per EIA Notification dated 14.09.2006 and its subsequent amendments.

Kindly consider the case and award the environmental clearance at your earliest.

Thanking you,

Yours Sincerely,



**For M/s Vardhinni Fuels Pvt. Ltd.
(Authorized Person)**

**ADDRESS: NEXT TO ANIL TRANSPORT COMPANY, JABALPUR -BHOPAL ROAD NH12, TEWAR,
JABALPUR, MADHYA PRADESH: 483053**

**CONTACT NUMBER: 8966000588 WEBSITE: WWW.ANILGROUP.ORG EMAIL:
VARDHINNIFUELS@ANILGROUP.ORG UIN : U23200MP2021PTC056885**

FORM 1, PRE-FEASIBILITY REPORT & EMP

For

*Proposed 120 KLD Grain Based Ethanol plant along with
3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8,
Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur,
M.P.*

PROJECT PROPONENT

M/s Vardhinni Fuels Private Limited

ENVIRONMENTAL CONSULTANT



ASCENSO ENVIRO PVT. LTD.

D-79, Sector-6, Noida, U.P. 201301

Ph. No. 0120-4333226 / 9958149985

Email: eia.ascenso@amcgroup.co.in



A QCI Accredited Environmental Organization

NABET Accreditation No: NABET/EIA/18212/RA/0180

(Valid till 09/09/2022)

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

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3.	EMP	1-18

LIST OF ANNEXURES

Annexure	Description
Annexure-I	Land Document
Annexure-II	Self-Certificate
Annexure-III	Water Permission Letter
Annexure-IV	RH(Risk and Hazard management)
Annexure-V	Authorization Letter

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

**APPENDIX I
(See Paragraph-6)
FORM 1**

(I) Basic Information:

S. No.	Item	Details
1.	Name of the project	Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd
	S. No. in the schedule	5 (g a): Grain based Distillery
3.	Proposed capacity / area / length /tonnage to be handled/command area/lease area/number of wells to be drilled	Grain Based Distillery of 120 KLPD capacity along with 3.4 MW Co-generation Power Plant Project Area- 5.5275 Ha.
4.	New/Expansion/Modernization	New
5.	Existing Capacity/Area etc.	No
6.	Category of Project i.e. 'A' or 'B'	Category # B-2
7.	Does it attract the general condition? If yes, please specify.	No
8.	Does it attract the specific condition? If yes, please specify.	No
9.	Location Plot/Survey/Khasra No. Village Tehsil District State	Latitude: 23°29'9.11"N Longitude: 80°09'59.87"E Plot No. 6,7,8 Hargarh Industrial Area Sihora Jabalpur Madhya Pradesh
10.	Nearest railway station/airport along with distance in kms.	Nearest Railway Station: Sihora Road Railway Station approx. 6 Km towards SW. Nearest Airport: Jabalpur Airport, about 35 Km towards SWS (Source of information: - Google Image)
11.	Nearest Town, city, District Headquarters along with distance in kms.	Sihora – 6.00 Km, West
12.	Village Panchayats, Zilla Parishad, Municipal Corporation, Local body (complete postal addresses with telephone nos. to be given)	Nagar Palika Nigam, Sihora near Nagar Palika, Sihora, Madhya Pradesh 483225
13.	Name of applicant	M/s Vardhinni Fuels Pvt. Ltd
14.	Registered Address	M/s Vardhinni Fuels Pvt. Ltd Next to Anil Transport Company, Jabalpur - Bhopal Road NH12, Tewar, Jabalpur, Madhya Pradesh: 483053

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

15.	Address for correspondence: Name Designation (Owner/Partner/CEO) Address Pin Code Telephone No. Fax No. E-mail	Mr. Raj Kumar Jain Director Next to Anil Transport Company, Jabalpur - Bhopal Road NH12, Tewar, Jabalpur, Madhya Pradesh 483053 ---
16.	Details of Alternative Sites examined, if any. Location of these sites should be shown on a toposheet.	None
17.	Interlinked Projects	No
18.	Whether separate application of interlinked project has been submitted?	No
19.	If yes, date of submission	Not Applicable
20.	If no, reason	Not Applicable
21.	Whether the proposal involves approval/ clearance under: if yes, details of the same and their status to be given. (a)The forest (Conservation) act, 1980? (b) The wildlife (Protection) act, 1972? (C) The C.R.Z Notification, 1991?	No
22.	Whether there is any Government Order/Policy relevant/relating to the site?	Ethanol Blended Petrol Policy, Government of India & MoEF&CC Guidelines for industry
23.	Forest land involved (hectares)	No
24.	Whether there is any litigation pending against the project and /or land in which the project is propose to be set up? (a) Name of the Court (b) Case No. (c) Orders/directions of the Court, if any and its relevance with the proposed project.	No

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

(II) Activity

1. Construction, operation or decommissioning of the Project involving actions, which will cause physical changes in the locality (topography, land use, changes in water bodies, etc.)

S. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.1	Permanent or temporary change in land use, land cover or topography including increase in intensity of land use (with respect to local land use plan)	No	The proposed project will be set up in the area of 5.5275 ha. Land. Present land use is already for industrial purpose.
1.2	Clearance of existing land, vegetation and buildings?	No	Project site is vacant land, so no clearance is required.
1.3	Creation of new land uses?	No	Present land use is already for industrial purpose.
1.4	Pre-construction investigations e.g. bore houses, soil testing?	Yes	Site specific geotechnical and sub-surface investigations will be carried out before construction.
1.5	Construction works?	Yes	There will be construction work for the installation of proposed distillery unit and storage facilities for raw material and finished product.
1.6	Demolition works?	No	No demolition is required.
1.7	Temporary sites used for construction works or housing of construction workers?	No	During construction phase, no housing facilities will be provided to the workers as they will come from the nearby villages. However, proper sanitary facilities will be provided at the construction site in order to avoid contamination to the soil, surface and ground water in the nearby area.
1.8	Above ground buildings, structures or earthworks including linear structures, cut and fill or excavations and fill or excavations	Yes	There will be excavation, cut and fill during the process of construction / erection of proposed project.
1.9	Underground works including mining or tunneling?	No	No underground works including mining or tunneling is required.
1.10	Reclamation works?	No	No reclamation work is required.

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

S. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.11	Dredging?	No	No dredging is involved.
1.12	Offshore structures?	No	Not Applicable
1.13	Production and manufacturing processes?	Yes	The project is Grain Based Distillery and will have the following major Process facilities: <ul style="list-style-type: none"> •Grain storage •Grain milling and flour handling •Slurry preparation & liquefaction •Fermentation •Multi Pressure Distillation •Multi-Effect Evaporator & Dryer •Bulk storage Manufacturing process detail is described in Pre-Feasibility Report.
1.14	Facilities for storage of goods or materials?	Yes	Materials required for process will be stored in tanks, storage warehouse or silos. Finished product (Ethanol) will be collected in respective daily receivers and then transferred to bulk storage tanks.
1.15	Facilities for treatment or disposal of solid waste or liquid effluents?	Yes	<ol style="list-style-type: none"> 1. Brick Manufacturing unit will be installed within the plant premises for utilization of agro waste fly ash. 2. Used Oil will be sold to CPCB authorized vendors for treatment. 3. DDGS will be sold as cattle feed. 4. Process condensate will be recycled into process. 5. Sewage generated will be treated in soak pit. 6. Industrial wastewater will be treated in ETP.
1.16	Facilities for long term housing of operational workers?	No	The operational workers will be employed from nearby area, which may commute daily from their residence for work therefore; no long-term housing will be required.
1.17	New road, rail or sea traffic during construction or operation?	No	Not envisaged
1.18	New road, rail, air water	No	Not envisaged

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

S. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
	borne or other transport infrastructure including new or altered routes and stations, ports, airports etc.?		
1.19	Closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements?	No	No closure or diversion of existing transport routes or infrastructure leading to changes in traffic movements will be there.
1.20	New or diverted transmission lines or pipelines?	No	No new or diverted transmission lines or pipelines are there.
1.21	Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers?	No	No Impoundment, damming, culverting, realignment or other changes to the hydrology of watercourses or aquifers is envisaged.
1.22	Stream crossings?	No	Not envisaged
1.23	Abstraction or transfers of water from ground or surface waters?	Yes	One Time Total water requirement for the project will be 1968 KLD. Total fresh water demand for distillery operation is 488 <u>KLD@3.9</u> KL of water/KL of Ethanol. Net fresh water requirement including domestic use is 513 KLD. which will be sourced from Hargarh Industrial Area, MPIDC.
1.24	Changes in water bodies or the land surface affecting drainage or run-off?	No	There will be no change in the water bodies or the land surface affecting drainage or run-off.
1.25	Transport of personnel or materials for construction, operation or decommissioning?	Yes	Transportation of raw materials & products will be done by road.
1.26	Long-term dismantling or decommissioning or restoration works?	No	No long-term dismantling or decommissioning or restoration works is required.
1.27	Ongoing activity during decommissioning which could have an impact on the environment?	No	Not applicable

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

S. No.	Information/Checklist confirmation	Yes / No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
1.28	Influx of people to an area in either temporarily or permanently?	Yes	During construction phase: 100 persons will be required during project construction. During operation phase: 250 persons will be required during operation phase and the same will be sourced from the nearby areas.
1.29	Introduction of alien species?	No	No alien species will be introduced in the area due to proposed project
1.30	Loss of native species or genetic diversity?	No	There will be no loss of native species or genetic diversity as only native species will be used for plantation/greenbelt development.
1.31	Any other actions?	No	Not envisaged.

2. Use of Natural resources for construction or operation of the Project (such as land, water, materials or energy, especially any resources which are non-renewable or in short supply):

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.1	Land especially undeveloped or agricultural land (ha)	No	Total area required for the proposed project is 15.00 Ha., which is industrial land.
2.2	Water (expected source & competing users) unit: KLD	Yes	One Time Total water requirement for the project will be 1968 KLD. Total fresh water demand for distillery operation is 488 <u>KLD@3.9</u> KL of water/KL of Ethanol. Net fresh water requirement including domestic use is 513 KLD. which will be sourced from Hargarh Industrial Area, MPIDC.
2.3	Minerals (MT)	Yes	The basic raw material for the manufacturing of Ethanol will be Mostly Broken Rice and Maize, which are easily available from the local market.
2.4	Construction material – stone, aggregates, sand /soil (expected source – MT)	Yes	Only locally available building material will be utilized. More of the work will be fabrication work. Some equipment's and machineries will be installed.
2.5	Forests and timber (source – MT)	No	Not envisaged.

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
2.6	Energy including electricity and fuels (source, competing users) Unit: fuel (MT),energy (MW)	Yes	The total power requirement for the proposed project will be 3.4 MW which will be met from Proposed Co-Generation Power plant of 3.4 MW. 1 DG sets of 1000 KVA each will be used for emergency. Fuel: Rice Husk for boiler & diesel for D.G. sets
2.7	Any other natural resources (use appropriate standard units)	No	Not envisaged.

3. Use, storage, transport, handling or production of substances or materials, which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health.

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
3.1	Use of substances or materials, which are hazardous (as per MSIHC rules) to human health or the environment (flora, fauna, and water supplies)	No	No hazardous substances will be used in the proposed project except a small quantity of lube oil which will be generally consumed in oiling, greasing of external parts of machineries. Product ethanol is hazardous and adequate fire protection measures will be taken in storage and transportation.
3.2	Changes in occurrence of disease or affect disease vectors (e.g. insect or water borne diseases)	No	Not envisaged.
3.3	Affect the welfare of people e.g. by changing living conditions?	Yes	There will be positive impact of the project in the area as follows: 1. Direct & Indirect employment opportunities will rise, thus improving the economic status of the villagers. 2. Communication & transport facilities will be improved. 3. Education facilities will be improved. 4. Community health care programmes provide better health and medical facilities not only to the employees but also to the villagers.

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3.4	Vulnerable groups of people who could be affected by the project e.g. hospital patients, children, the elderly etc.	No	No effect envisaged
3.5	Any other causes	No	Not envisaged.

4. Production of solid wastes during construction or operation or decommissioning (MT/month)

S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
4.1	Spoil, overburden or mine wastes	No	There will be no spoil, overburden or mine wastes. However, the spoil generated during construction will be reused for filling.
4.2	Municipal waste (domestic and or commercial wastes)	Yes	Domestic & commercial wastes will be disposed as per Solid Waste Management Rules 2016 & its amendments and local regulation.
4.3	Hazardous wastes (as per Hazardous Waste Management Rules)	Yes	ETP Sludge and small quantity of used oil and grease will be generated from plant machinery/gear box and D.G set as hazardous waste which will be managed as per Hazardous Waste Management Rules, 2016 & its amendments and sold out to the CPCB authorized recycler.
4.4	Other industrial process wastes	Yes	DDGS will be sold as cattle feed. Brick Manufacturing unit will be installed within the plant premises for utilization of agro waste fly ash.
4.5	Surplus product	No	There will be no Surplus Product. However, by –products comprise mainly of Wet Cake/Dry Product (Cattle Feed) – DWGS/DDGS for Grain operation.
4.6	Sewage sludge or other sludge from effluent treatment	Yes	Domestic waste will be treated in soak pits and ETP sludge will be disposed off as per applicable norms.
4.7	Construction or demolition wastes	No	Construction waste like soil, brick bats, etc. will be utilized in leveling of land and construction of roads. No demolition wastes will be generated.
4.8	Redundant machinery or equipment	No	There will no redundant machinery or equipment.

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S. No.	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
4.9	Contaminated soils or other materials	No	There will not be any contaminated soils or other materials.
4.10	Agricultural wastes	No	There will not be any agricultural wastes.
4.11	Other solid wastes	Yes	DDGS will be sold as cattle feed. Brick Manufacturing unit will be installed within the plant premises for utilization of agro waste fly ash.

5. Release of pollutants or any hazardous, toxic or noxious substances to air (Kg/hr)

S. No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
5.1	Emissions from combustion of fossil fuels from stationary or mobile sources	Yes	Gaseous emission due to fuel burning, which consists of common pollutants like SO ₂ , NO ₂ and PM. These pollutants would be discharged into atmosphere through stacks of suitable height. The emissions will be limited & proper mitigation measures will be taken for the proposed plant. ESP/Bag filter will be installed to maintain the emission levels within prescribed standards.
5.2	Emissions from production processes	Yes	CO ₂ generated during fermentation process will be collected, purified, liquefied and sold to vendors.
5.3	Emissions from materials handling including storage or transport	Yes	Dust generated near raw material handling and transfer points will be prevented by suppression through water. Hence there will not be any fugitive dust emissions due to raw material handling. Proposed road will be capable of absorbing this additional traffic. Hence there will not be any adverse effect due to transportation and Storage of raw materials.
5.4	Emissions from construction activities including plant and equipment	Yes	The emissions are negligible which will be only due to transportation activities. The construction activities will also involve

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S. No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			negligible emissions, as most of the work will be of fabrication and erection of structures only and proper mitigation measures would be taken to reduce it further.
5.5	Dust or odours from handling of materials including construction materials, sewage and waste	Yes	During loading & unloading of raw material dust is likely to be generated during construction phase. Water will be sprinkled and covered sheds will be provided for construction materials to reduce dust emission. Odour problems will be properly controlled at source by good operational practices, including physical and management control measures.
5.6	Emissions from incineration of waste	No	There will be no incineration of waste.
5.7	Emissions from burning of waste in open air (e.g. slash materials, construction debris)	No	Not applicable.
5.8	Emissions from any other sources	No	There will be no emissions from any other sources.

6. Generation of Noise and Vibration and Emissions of Light and Heat:

S. No	Information/Checklist confirmation	Yes/No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
6.1	From operation of equipment e.g. engines, ventilation plant, crushers	Yes	In the plant, noise from operation of equipments will be generated. Noise level will be kept below the limit prescribed by CPCB. Noise abatement measures will be taken and persons working close to machines will be provided with personal protective equipments viz. Ear plugs/Ear muffs etc. for further protection.

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6.2	From industrial or similar processes	Yes	Noise will be generated due to the running of the machinery. Proper mitigation measures will be taken for the reduction of noise levels viz. acoustic enclosures etc. The workers will be provided with personal protective equipment.
6.3	From construction or demolition	Yes	Noise generated during construction will be temporary in nature and control measures will be taken to minimize its impact. No demolition work is involved in the proposed activity.
6.4	From blasting or piling	No	No blasting will be carried out
6.5	From construction or operational traffic	Yes	There will be some noise due to movement of machine /vehicle but the same will be maintained within the prescribed limit. Noise will also be generated due to operation of plant. Built-in noise control in plant machinery will reduce the noise levels. Also green belt around the plant boundary will absorb some of the noise.
6.6	From lighting or cooling systems	No	No noise will be generated from lighting or cooling systems
6.7	From any other sources	No	Not envisaged.

7. Risks of contamination of land or water from releases of pollutants into the ground or into sewers, surface waters, groundwater, coastal waters or the sea:

S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
7.1	From handling, storage, use or spillage of hazardous materials	Yes	In the Distillery plant, there is no use / handling of hazardous material except during annual oil change period which will be handled in closed containers. Also, care will be taken during its use for lubrication of external part of equipment, so that nothing falls on ground, which will contaminate the soil. Equipment will be

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S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			kept well maintained, so that they may remain leakage free. Ethanol will be handled and stored as per OSAH's guidelines.
7.2	From discharge of sewage or other effluents to water or the land (expected mode and place of discharge)	No	The distillery will be based on the concept of "Zero liquid Discharge" hence no sewage or other effluent will be discharged outside the plant premises. All treated water will be used within plant premises.
7.3	By deposition of pollutants emitted to air into the land or into water	No	Proper pollution control management will be followed. All necessary pollution control devices will be installed in order to keep the emissions under control. The air emissions will be controlled by providing adequate pollution control equipment such as ESP, water sprinkling etc.
7.4	From any other sources	No	Not applicable
7.5	Is there a risk of long term build-up of pollutants in the environment from these sources?	No	Likelihood of such an event is not foreseen and suitable measures will be adopted so that there will be no such risk in the coming future.

8. Risk of accidents during construction or operation of the Project, which could affect human health or the environment

S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
8.1	From explosions, spillages, fires etc. from storage, handling, use or production of hazardous substances from any other causes.	Yes	The chance of accident on account of explosion, spillage, fire or hazardous substance are very less as the machineries will be properly maintained and operated. The proper maintenance, operation and leakage proof condition of machineries will eliminate the possibilities of fire. However, adequate fire- fighting system will be

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S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
			provided in the plant area. Company will have onsite and offsite emergency action.
8.2	From any other causes	No	All precautions and measures would be followed as per industrial norms.
8.3	Could the project be affected by natural disasters causing environmental damage (e.g. floods, earthquakes, landslides, cloudburst etc)?	No	No such case has been reported in the area and chances are minimal. However, there will be an Emergency and Contingency plan in place.

9. Factors which should be considered (such as consequential development) which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality.

S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
9.1	Lead to development of supporting facilities, ancillary development or development stimulated by the project which could have impact on the environment e.g.: <ul style="list-style-type: none"> • Supporting infrastructure (roads, power supply, waste or waste water treatment, etc.) • housing development • extractive industries • supply industries • Other 	Yes	Employment opportunity and business opportunity will enhance the economic standard of people. There will be overall development of the region with respect to transportation, communication, education health etc., and other socioeconomic aspects.

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S. No.	Information/Checklist confirmation	Yes/ No	Details thereof (with approximate quantities /rates, wherever possible) with source of information data
9.2	Lead to after-use of the site, which could have an impact on the environment	Yes	The after use of the site planned would be better than the present, owing to better greenery and socio-economic condition of the region.
9.3	Set a precedent for later developments	Yes	The project activity will have positive impact on environment by development of greenbelt and improved socio-economic conditions.
9.4	Have cumulative effects due to proximity to other existing or planned projects with similar effects	Yes	Environmental management plan with mitigation measures will be implemented to minimize cumulative effects.

(III) Environmental Sensitivity

S. No.	Areas	Name /Identity	Aerial Distance (within 15 km) proposed project location boundary
1	Areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value	No	There are no areas protected under international conventions, national or local legislation for their ecological, landscape, cultural or other related value within 15 km radius of the plant site.
2	Areas which are important or sensitive for ecological reasons – Wetlands, watercourses or other water bodies, coastal zone, biospheres, mountains, forests	Yes	➤ Heran River - Approx. 2.50 Km towards South East
3	Areas used by protected, important or sensitive species of flora or fauna for breeding, nesting, foraging, resting, over wintering, migration	Yes	Dhanwani RF- 6 km in NorthEast.

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S. No.	Areas	Name /Identity	Aerial Distance (within 15 km) proposed project location boundary
4	Inland, coastal, marine or underground waters	No	There is no coastal or marine water body within 15 Km radius from the plant Site.
5	State, National boundaries	No	None
6	Routes or facilities used by the public for access to recreation or other tourist, pilgrim areas	No	None
7	Defense installations	No	None
8	Densely populated or built-up area	Yes	Village Hargrah – 1.58 Km towards Southwest
9	Areas occupied by sensitive man-made land uses (hospitals, schools, places of worship, community facilities)	Yes	<ul style="list-style-type: none"> ➤ Panchayat Elementary school - approx. 2.60 Km towards South. ➤ Government Primary School Mangeli - Approx. 6.08 Km towards Northeast ➤ Mandir Hospital - Approx. 5.59 Km towards Southwest. ➤ Khitola Government Hospital- 6.01 Km towards West ➤ Shri Siddhan Dham - Approx. 1.44 Km towards Northwest. ➤ Ram Mandir Hargad- Approx. 1.73 Km towards Southwest
10	Areas containing important, high quality or scarce resources (ground water resources, surface resources, forestry, agriculture, fisheries, tourism, minerals)	No	None in close proximity of site to have any effect.
11	Areas already subjected to pollution or environmental damage (those where existing legal environmental standards are exceeded)	No	NA

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S. No.	Areas	Name /Identity	Aerial Distance (within 15 km) proposed project location boundary
12	Areas susceptible to natural hazard which could cause the project to present environmental problems (earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions) similar effects	No	The project site lies in Seismic Zone IV which is prone to earthquakes. Necessary measures will be adopted during Plant and machinery installation.

(IV) Proposed Terms of Reference for EIA studies.

Not Applicable for B-2 projects

“I hereby given undertaking that the data and information given in the application and enclosures are true to the best of my knowledge and belief and I am aware that if any part of the data and information submitted is found to be false or misleading at any stage, the project will be rejected and clearance given, if any to the project will be revoked at our risk and cost.

Date: 24/08/2022

Place: Jablapur



(Authorized Signatory)
M/s Vardhinni Fuels Private Limited.

1. The projects involving clearance under coastal Regulation Zone Notification, 1991 shall submit with the application a C.R Z map duly demarcated by one of the authorized agencies, showing the project activities, w.r.t. C.R.Z (at the stage of TOR) and the recommendations of the State Coastal Zone Management Authority (at the stage of EC). Simultaneous action shall also be taken to obtain the requisite clearance under the provisions of the C.R,Z Notification, 1991 for the activities to be located in the CRZ.
2. The projects to be located within 10 km or the National parks, Sanctuaries, Biosphere Reserves, Migratory corridors of wild Animals, the project proponent shall submit the map duly authenticated by chief wildlife warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden' thereon (at the Stage of EC)."
3. All correspondence with the Ministry of Environment & Forests including submission of application for TOR/Environmental Clearance, subsequent clarifications, as may be required from time to time, participation in the EAC Meeting on behalf of the project proponent shall be made by the authorized signatory only. The authorized signatory should also submit a document in support of his claim of being an authorized signatory for the specific project."

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**CHAPTER - I
EXECUTIVE SUMMARY**

1.0 INTRODUCTION

VARDHINNI FUELS PRIVATE LIMITED is a private limited company incorporated under Companies Act 2013, dated 29/07/2021 vide CIN No. U23200MP2021PTC056885 having its registered office at C/o Anil Jain, S/o Late Nathuram Jain, Tewar, Jabalpur MP 482001 India. The promoters and directors of the company are

- 1) Shri Rajkumar Jain (Director)
- 2) Shri Basant Ghorawat (Additional Director)

Considering the potential of the latest Ethanol policy of government of India, M/s Vardhinni Fuels Private Limited has decided to set up a Greenfield project of distillery plant. This proposal is for implementation of Production facilities for Ethanol based on grain based raw material such as rice and maize, which will be used as raw material for operation, which are easily available from the local market. The salient features of the project are listed below in Table 1.1.

Table 1.1 Salient Features of the Project

1	Name of the Company	M/s. Vardhinni Fuels Private Limited
2	Registered Office Plant & Admin Office	Plant Location: Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. Registered Office: C/ Next to Anil Transport Company, Jabalpur -Bhopal Road NH12, Tewar, Jabalpur, Madhya Pradesh: 483053
3	Name of the Directors	1) Shri Rajkumar Jain (Director) 2) Shri Basant Ghorawat (Additional Director)
4	Proposed Sector	Schedule: 5 (ga), Grain Based Distilleries Producing Ethanol, Cat-B2
5	Area of plant	5.5275 Ha
6	Topo Sheet No	F44C2 (Project Site)
7	Installed Capacity	Grain Base Distillery of 120 KLPD along with Co- Generation Power Plant of 3.4 MW Boiler Capacity – 34 TPH
8	Final Product & By-Product	Ethanol (120 KLPD) DDGS- 54 TPD CO ₂ - 66 TPD
10	Cost of Project	INR 125 Cr
11	Total Manpower	250 Persons (150 permanent + 100 Temporary)
12	Total Power Requirement	3.4 MW fulfilled by Co-Generation Power Plant
13	Total Water Requirement	One Time Total Water Requirement to run the distillery =

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		1968 KLD Total Water Requirement for Process = 488 KLD (@3.9KL/ KL of Ethanol production) Net water requirement including domestic use = 513 KLD
14	Major Raw Material	Grains such as rice and maize will be used.
15	CER	INR 1.25 Cr

1.1 ENVIRONMENT MANAGEMENT PLAN

Air Quality Management:

- ❖ Boiler will be installed with adequate stack height as per CPCB norms (60m) and ESP.
- ❖ CO₂ generated during the fermentation process will be recovered by CO₂ Scrubbers and sold to beverage & packaging industry.
- ❖ DG Sets will have adequate stack height as per CPCB guidelines. Low sulphur diesel will be used.
- ❖ All the internal roads will be asphalted.
- ❖ Online stack monitoring system will be installed.
- ❖ Greenbelt will be developed all around the plant boundary and within the plant premises.
- ❖ Regular monitoring will be done to ensure that ambient air quality standards are met all the time.

Water Quality Management

- ❖ The distillery will be based on “Zero Liquid Discharge”.
- ❖ During Grain Based Operation: Grain Slops (Spent Wash) will be passed through centrifuge decanters for separation of suspended solids separated as Wet Cake (also known as DWG – Distillers Wet Grains). Thin Slops from the Decanter Centrifuge will be partly recycled back to process (20% to 35%) and the balance will be fed to Thin Slop Evaporation Plant for concentration of remaining solids to form Syrup (35% TS). DWGS Drier: The Wet Cake and Syrup mixture (Distillers Wet Grains Soluble -DWGS) will be dried in Steam Tube Bundle Dryer for producing DDGS with 8-10% moisture (max.). The DDGS will be utilized as Cattle, poultry and fish feed ingredients.
- ❖ The process condensate will be treated in condensate treatment plant. The treated water will be recycled back in cooling tower makeup.
- ❖ Domestic waste water generated from the plant will be treated in soak pits.
- ❖ Rain Water harvesting will be done within the plant premises.

Noise Management

- ❖ Personal Protective Equipment like earplugs and earmuffs will be provided to the workers exposed to high noise level.
- ❖ D.G. sets will be provided with acoustic to control the noise level within the prescribed limit.

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- ❖ Proper maintenance, oiling and greasing of machines at regular intervals will be done to reduce generation of noise.
- ❖ Greenbelt of appropriate width inside the plant premises and at the plant boundary will be developed.
- ❖ Regular monitoring of noise level will be carried out and corrective measures in concerned machinery are also being done.

Solid & Hazardous Waste Management

- ❖ During Grain based operation: Solid waste from the grain-based operations generally comprises of fibres and proteins in the form of DDGS, which will be ideally used as Cattle Feed. Yeast sludge will be sent to the sludge drying beds or may be added to the wet cake.
- ❖ Ash from the boiler will be given to brick manufacturing unit.
- ❖ ETP sludge which will be managed as per Hazardous Waste Management Rules, 2016.
- ❖ Used oil & grease generated from plant machinery/gear boxes as hazardous waste will be sold out to the CPCB authorized recyclers.

Greenbelt Development & Plantation

- ❖ Out of the total plant area of 5.5275 Ha., green area is 1.92 Ha. i.e. ~34 % of the total plant area will be developed under greenbelt & plantation.
- ❖ Native plant species will be planted in consultation with local horticulturist.
- ❖ Greenbelt development along with the road & plant boundary attenuates noise level; arrest dusts and improve the environment in plant-surroundings.

Odour Management

- ❖ Adequate greenbelt all around the periphery of the plant.
- ❖ Efficient CO₂ scrubbing to avoid carryover of alcohol vapours & other fumes.
- ❖ DWGS dryer will be installed for complete drying of solids.
- ❖ Better housekeeping, hygienic conditions will be maintained inside as well as surrounding areas of the plant.
- ❖ Regular use of disinfectants in the drains to avoid generation of putrefying Microorganisms.

The details of the proposed investment on Environmental Protection measures are given below in table 1.2.

Table 1.2 Investments on Environmental Protection Measures

S. No	Particulars	Capital Cost In Rs lacs	Annual Recurring Cost in Rs lacs
1	Air pollution control system (ESP/Bag filter) on 34 TPH low pressure boiler	150	25
2	CPU (Condensate Polishing Unit)	175	50

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3	Scrubbing system, compressing system, liquefying system and storage for CO ₂ removal	50	10
4	Spent wash treatment including concentration using MEE (Multiple effect evaporator).	60	10
5	Installation of Water treatment plant (RO)	35	5
6	Rainwater harvesting systems	20	5
7	OCEMS- Online Continuous Emission/Effluent Monitoring System	20	5
8	Occupational Health Management	40	10
9	Green Belt Development	25	5
10	Environment monitoring	-	10
11	Solid/ hazardous waste management	15	5
12	CER	125	-
	Total	715	140

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CHAPTER – 02

INTRODUCTION OF THE PROJECT/BACKGROUND INFORMATION

2.1 IDENTIFICATION OF PROJECT & PROJECT PROPONENT.

M/s Vardhinni Fuels Pvt. Ltd has proposes to install a green field project of grain-based distillery to produce ethanol for blending with petroleum. Since the location of proposed project site in agriculturally prominent area of M.P., it is intended to use grain as raw material. Following facilities are proposed: -

Table: - 2.1 Plant Configuration

S. No	Facility	Capacity
1	Grain Base Distillery Plant Facilities	120 KLPD

Project Promoters

M/s Vardhinni Fuels Pvt. Ltd has following directors as given in below table:-

Table: - 2.2 List of Promoters

S. No.	Directors
1	Shri Raj kumar Jain
2	Shri Basant Ghorawat

2.2 BRIEF DESCRIPTION OF NATURE OF THE PROJECT

The present proposal is to set up a distillery using grains as raw material. The product ethanol is intended for use in blending with petrol under EBP Programme. The project is predominantly grain based and is environment friendly. It will use renewable sources of energy (biomass) to meet power requirement. CO₂ will be the by-product which will be collected, liquefied stored and sold to other users.

Mostly rice and Maize will be used as raw material in the distillery units which is easily available from the local market.

“The project falls under Category ‘B2’ of Schedule 5 (ga), as per the Notification S.O. 2339 (E), dated:-16th June, 2021 and will be appraised by EAC (Industry-II), MoEFCC, New Delhi”

2.3 NEED OF THE PROJECT AND ITS IMPORTANCE TO THE COUNTRY AND/OR REGION.

Fuel Ethanol is basically used for blending petrol supplied by Oil marketing companies (OMCs). The proposed project will contribute to narrow the gap of demand/ supply of Indian made Fuel ethanol. Govt. of India has mandated 10% blending of Ethanol in Petrol by 2022 so as to reduce dependence on imported Crude Oil and to provide a cleaner fuel. The project will help fulfilling the demand for Ethanol. In addition, this will also provide employment.

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This will also increase income of farmers as other feedstock such as cereals like rice, wheat, barley, corn etc., to be used for production of Fuel Ethanol which will benefit a large population of farmers. GOI is encouraging projects to produce ethanol from grains.

2.4 DEMAND – SUPPLY GAP

To reach the Centre’s ambitious target of 20 per cent in blending revise by 2025, a back of the envelope calculation with India’s current fuel consumption shows that there is the requirement of around 1016 crore litres of ethanol in a year. But current ethanol production capacity in India of 426 crore litres derived from molasses-based distilleries, and 258 cr. litres from grain based distilleries is proposed to be expanded to 760 cr. litres and 740 cr. litres respectively to meet the target. (Source: Report of the Expert Committee - NITI Aayog Ministry of Petroleum and Natural Gas).

2.5 IMPORTS VS. INDIGENOUS PRODUCTION

India is self-sufficient in its requirement of ethanol hence there is no import requirement.

2.6 EXPORT POSSIBILITY

The proposed quantity is expected to be consumed in India only and no export potential is envisaged.

2.7 DOMESTIC / EXPORT MARKETS

The target will be domestic market driven by ethanol blending programme.

2.8 EMPLOYMENT GENERATION (DIRECT & INDIRECT) DUE TO THE PROJECT

There will be direct & indirect jobs and business opportunities to the local people such as daily wage labour, transporters and raw material suppliers. During operation phase, total manpower requirement for the proposed project will be 250 (temporary and permanent both).

**CHAPTER - 3
PROJECT DESCRIPTION**

3.1 TYPE OF PROJECT INCLUDING INTERLINKED & INTERDEPENDENT PROJECTS.

Company proposed Greenfield Project for Grain Based distillery project of 120 KLPD at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P.

The proposed project falls under Category “B-2” As per the Notification S.O. 2339 (E), dated:-16th June, 2021 by the Ministry of Environment, Forest and Climate Change, New Delhi and requires Environment Clearance from MoEF&CC.

The proposed project is not interlinked with any other project.

3.2 LOCATION (MAP SHOWING GENERAL LOCATION, SPECIFIC LOCATION, AND PROJECT BOUNDARY & PROJECT SITE LAYOUT) WITH COORDINATES.

3.2.1 Plant Layout

The project site layout, the study area map and the area around 500 Meter radius from plant site are attached below:

The layout of the plant has been developed taking into following considerations:

- Easy availability of raw material and water,
- Sufficient space for storage of raw materials and finished products, Green belt, plantation,
- Adequate space for RWH & pollution control facilities. Process will be consolidated into comprehensive production units. The major utilities and service will be provided.

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

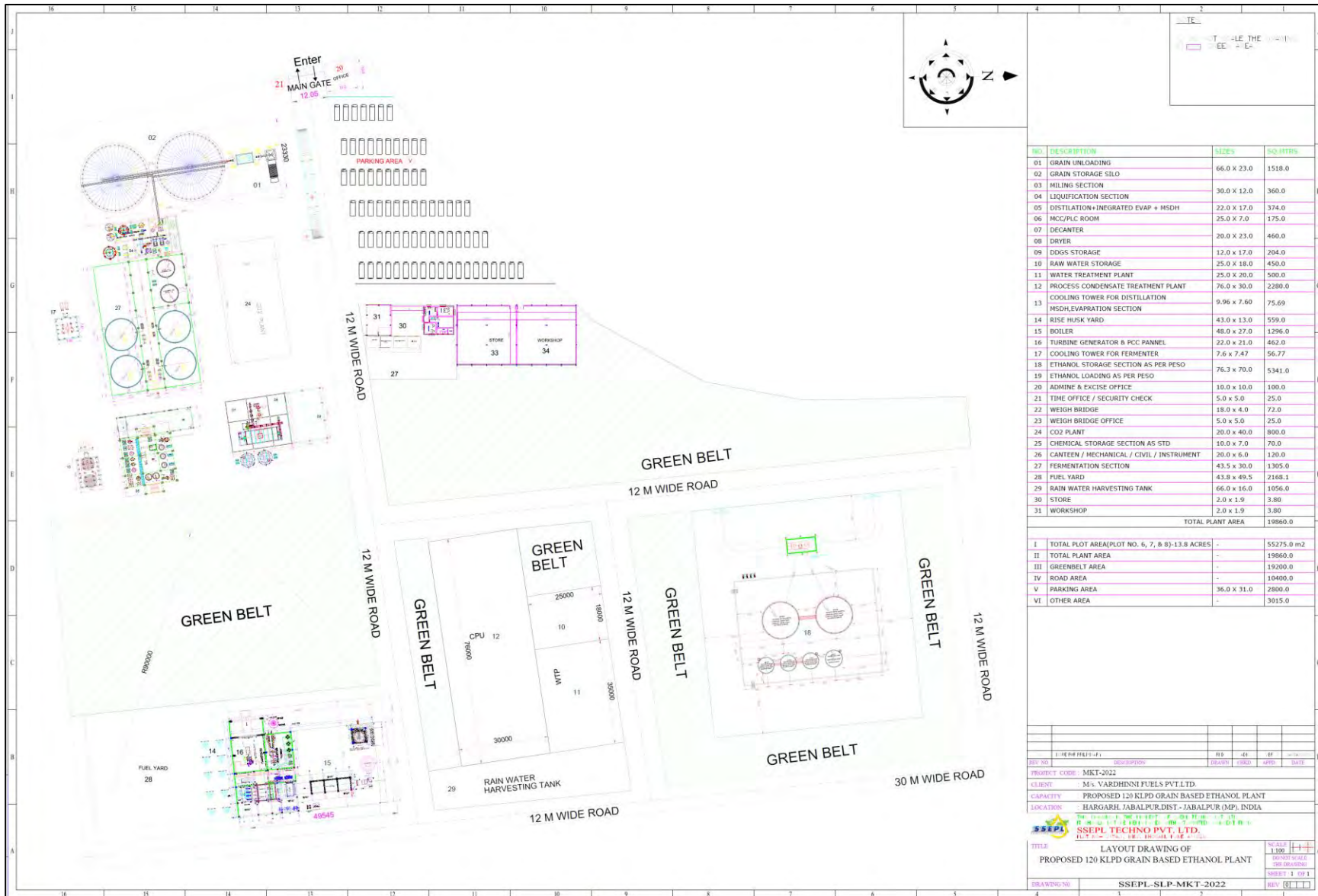


Figure 3.1: Layout Plan

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

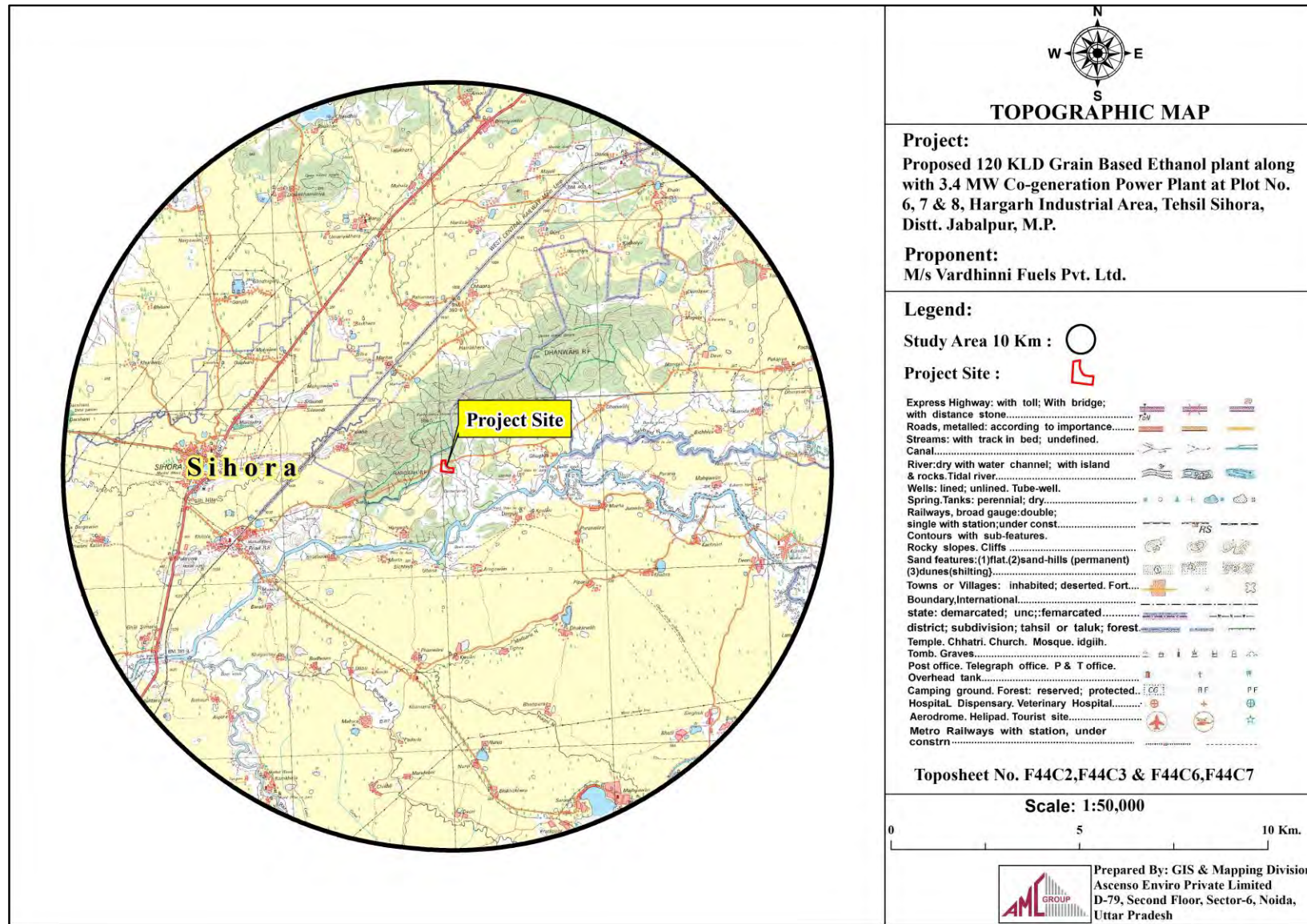


Figure: 3.2- Study Area Map

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

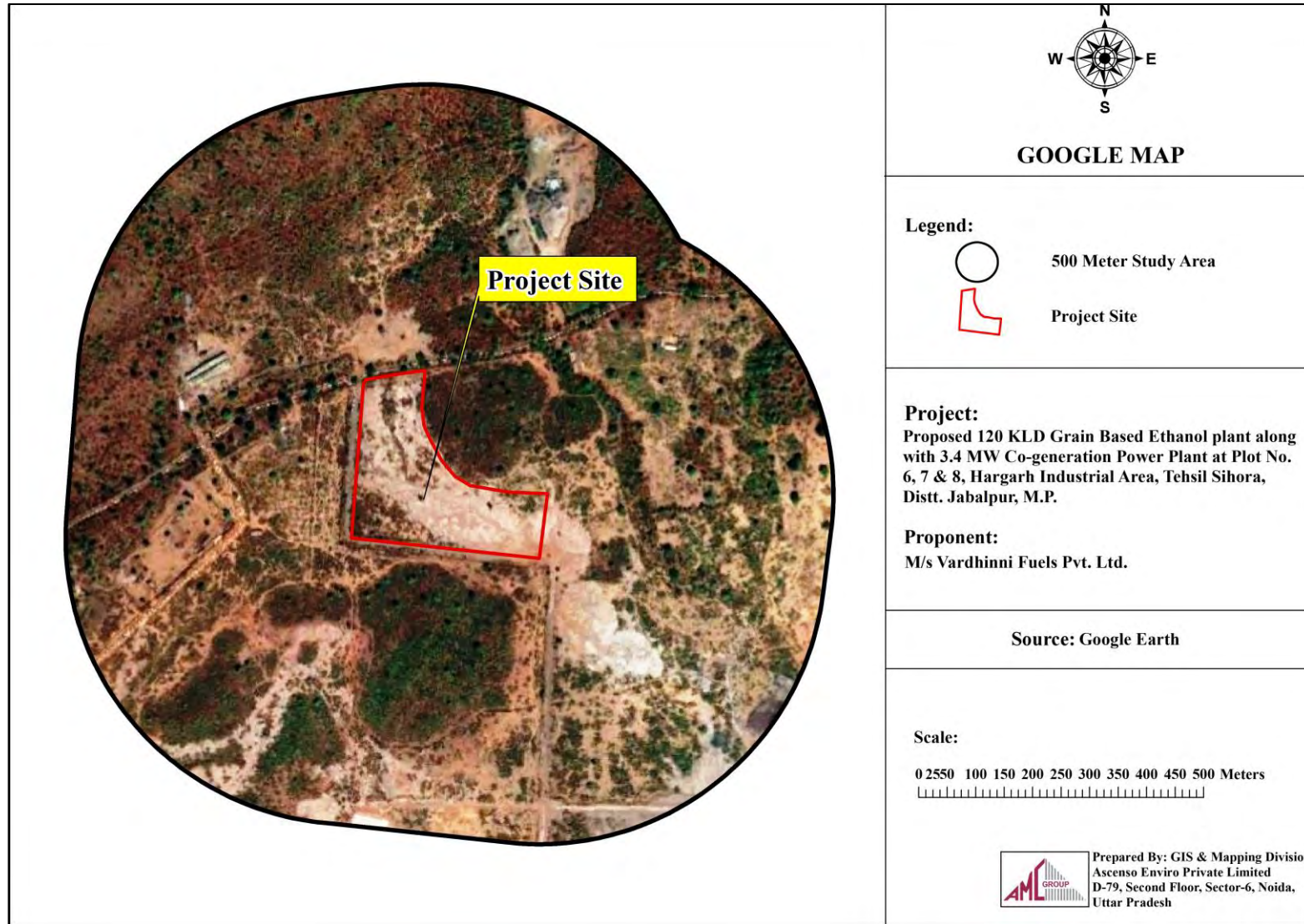


Figure: 3.3- 500 Meter Google Image

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

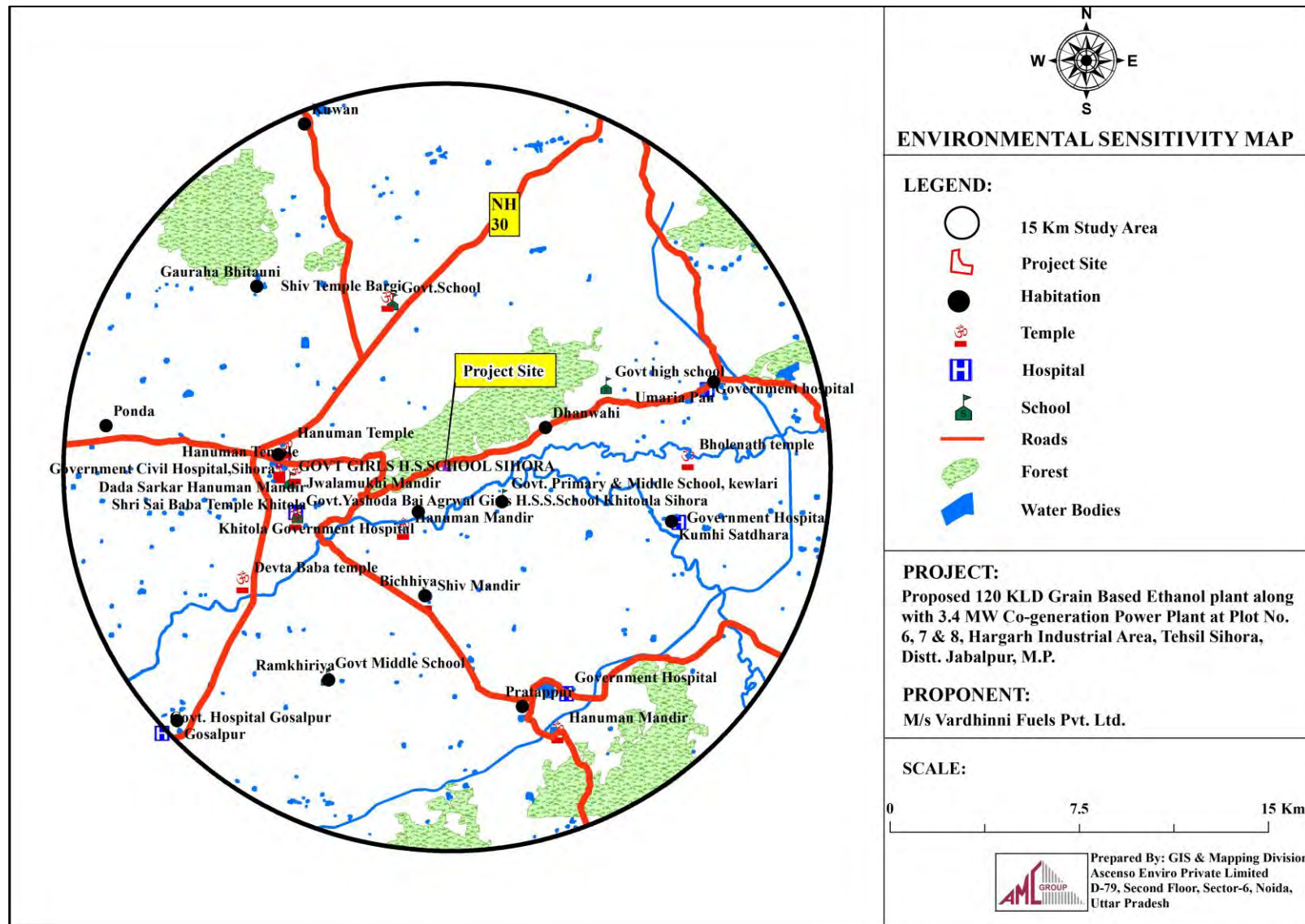


Figure: 3.4- Environment Sensitivity Map

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

3.3 DETAILS OF ALTERNATE SITES CONSIDERED AND THE BASIS OF SELECTING THE PROPOSED SITE, PARTICULARLY THE ENVIRONMENTAL CONSIDERATIONS GONE INTO SHOULD BE HIGHLIGHTED

No alternative site has been taken into consideration as the proposed site has been acquired by the company keeping in mind following mentioned factors:

- Availability of adequate flat land for the proposed plant and its rational future expansion.
- Raw material availability & markets for both products & by-products within the state.
- Proximity to finished goods market.
- Existence of road/Rail connection in the vicinity for transportation of incoming & outgoing materials.
- No NP/WLS, Tiger reserve and elephant corridor present within study area.

3.4 SIZE OR MAGNITUDE OF OPERATION

M/s Vardhinni Fuels Pvt. Ltd is proposing 120 KLPD Grain Based Ethanol Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P.

The process includes basic raw material requirement, process equipment, raw material and product storage, utilities & services, infrastructure facilities & management of waste i.e., generation, their quantity, treatment & safe disposal. Environmental Control Units like bag filter and Effluent Treatment Plant based on zero liquid discharge will be part of the project.

The plant configuration is given below in Table 3.1.

Table: 3.1 Plant Configurations

S. No	Units	Proposed Capacity
1	Installed Capacity	Grain Based Distillery of 120 KLPD
2	Major Raw Material	Grains such as Rice and Maize, will be used.
3	Final Product & By-Product	Final Product- Ethanol (120 KLPD) By Product- DDGS- 54 TPD CO ₂ - 66 TPD
4	Co-Generation Power Plant (1 x 34 TPH-AFBC)	3.4 MW

3.5 PROJECT DESCRIPTION WITH PROCESS DETAILS (A SCHEMATIC DIAGRAM/FLOW CHART SHOWING THE PROJECT LAYOUT, COMPONENTS OF THE PROJECT ETC).

As part of this project, the following facilities will be established:

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

A) Grain Storage Silos, Cleaning, Handling and Milling Section

Grain is received from various sources and is pre-cleaned off stones, husk, etc. and then stored in specially designed storage silos or in bags in storage yard. Grains are continuously lifted from the bottom of the silos, screened and followed by removal of stones in de-stoner and iron matters in magnetic separators. Cleaned Grains are then milled using dry milling process in Hammer Mills. The flour is fed through the bucket elevator and conveyed to the flour silo.

B) Liquefaction Section

In liquefaction process, starch is hydrolyzed to dextrin. The Liquefaction is carried out in Liquefaction Tanks. Feedstock Flour is transferred to Pre-masher and mixed with Recycle Streams, thin stillage and liquefying enzyme. Slurry from Pre-masher is taken to Liquefaction tank where temperature is maintained by means of steam. Necessary retention time is maintained in the Liquefaction Tank. Contents in Slurry Tank are kept in suspension by Agitation. The Liquefied Slurry is then cooled in Slurry Cooler (wide Gap PHE) and transferred to Pre-fermentation and Fermentation section.

C) Fermentation Section

Yeast Activation:

Yeast seed material is prepared in Yeast Activation Vessel (Pre-fermenter) by inoculating sterilized mash with yeast. Optimum temperature is maintained by circulating cooling water. The contents of the Yeast Activation Vessel are then transferred to Fermenter.

The purpose of Fermentation is to convert the fermentable substrate into alcohol. To prepare the mash for Fermentation, it is diluted with water. Yeast is added in sufficient quantity to complete Fermentation to produce alcohol.

Significant heat release takes place during Fermentation. This is removed by passing the mash through heat exchangers to maintain an optimum temperature. The recirculating pumps also serve to empty the Fermenters into Beer Well. CO₂ can then be taken to CO₂ vent line where it is vented out.

After emptying of Fermenter, it is cleaned with CIP using cleaning nozzles. After CIP, Fermenter is ready for next batch to be filled.

D) Distillation

Pre-heated fermented wash is fed into a series of Distillation Columns to increase the alcohol concentration and remove various impurities.

Distillation – (Wash to Ethanol Mode)

Following Columns will be under operation

1. Analyser Column
2. Degasifying Column
3. Rectifier cum Exhaust Column
4. Alcohol Scrubber

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

Molecular sieve dehydration plant (MSDH):

Rectified Spirit containing at least 95% v/v alcohol is pumped from RS feed tank to dehydration section.

Superheated hydrous alcohol vapors are sent to twin Adsorbent Beds. The twin Adsorbent Beds operate in cyclic manner. Twin beds are provided to allow for bed regeneration in continuous operation. While one bed is in dehydration mode, the other is in regeneration mode.

The Adsorbent Bed will absorb moisture present in feed vapors and dehydrated product alcohol vapors are obtained from bottom of the bed.

The Product alcohol vapors are then passed through Product Condenser where product vapors are condensed with the help of cooling water. Condensed product alcohol (@ 99.8 % v/v strength as required for fuel blending) is collected in product receiver.

The Product alcohol from Product Receiver is pumped to Product Cooler where it is cooled with the help of cooling water and then sent for anhydrous alcohol storage.

E) Decantation:

Decantation section comprises of a Centrifuge Decanter for separation of suspended solids from Spent Wash coming out of Grain Distillation Plant. Wet cake is removed from bottom of Decanter.

Thin slops coming out of Decanter are collected in a tank and partly recycled into the process & Evaporation for further concentration. The concentrated thin slops called as Syrup is mixed with Wet cake and sold in wet form as cattle feed (DWGS).

Or as an option, the entire mixture can be dried in a DWGS Dryer and then sold in dry form as Cattle feed (DDGS).

F) Integrated Evaporation

The suggested treatment scheme is a FOUR EFFECT working on the principle of falling film Evaporation for Thin Slop Evaporation Plant.

The following points will elucidate the basic working principle:

1. Shell & Tube type Evaporators working on the principle of Falling film Evaporation has been used.
2. Steam of medium pressure is fed to the first effect.
3. The product at the desired concentration is obtained at the outlet of the finisher.
4. The Pure steam condensate are collected in receiving vessels and can be pumped to desired battery limit
5. The plant is having high level of automation to get consistent output at required concentration.
6. The system operates under vacuum.

G) DWGS Dryer Section

- Wet distiller's grains shall be fed into the dryer housing at controlled rate through a suitable feeding system. The Rotary Tube Bundle is enclosed in an insulated dryer housing and on its

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outer flights are fixed. Dry, saturated steam is to be supplied to the tube bundle through rotary joint at one end & the condensate is discharged through rotary joint mounted of another end.

- The heat transfer is primarily by conduction. The water vapors are exhausted through an Exhaust Blower & passed through a cyclone separator for separating fines.
- Dry product partially recycled back to Feed conditioner for feed conditioning through Product Screw & Recycle Conveyor.

H) Process Condensate Treatment Section

The process condensate from the evaporation section is treated in this unit and this treated condensate is then recycled back to process thus reducing the fresh water consumption.

D) Condensate polishing unit:

The rejects from various treatment plants like DM water plant and cooling tower blow down, condensate from MEE, condensate from dryer etc., will be collected in the collection tank and treated to recover and reuse maximum possible quantity of water and ensure zero discharge. All streams collected in the tank, first fed to the clarifier in which chemical treatment (lime and dolomite treatment) will be given to remove suspended solids, hardness and silica. After this chemical treatment clarified water is first filtered through media-based filter and sent to membrane process system consisting of Ultra Filtration and Reverse Osmosis (RO). RO permeate is recycled back to process. RO rejects will be sent to PCTP.

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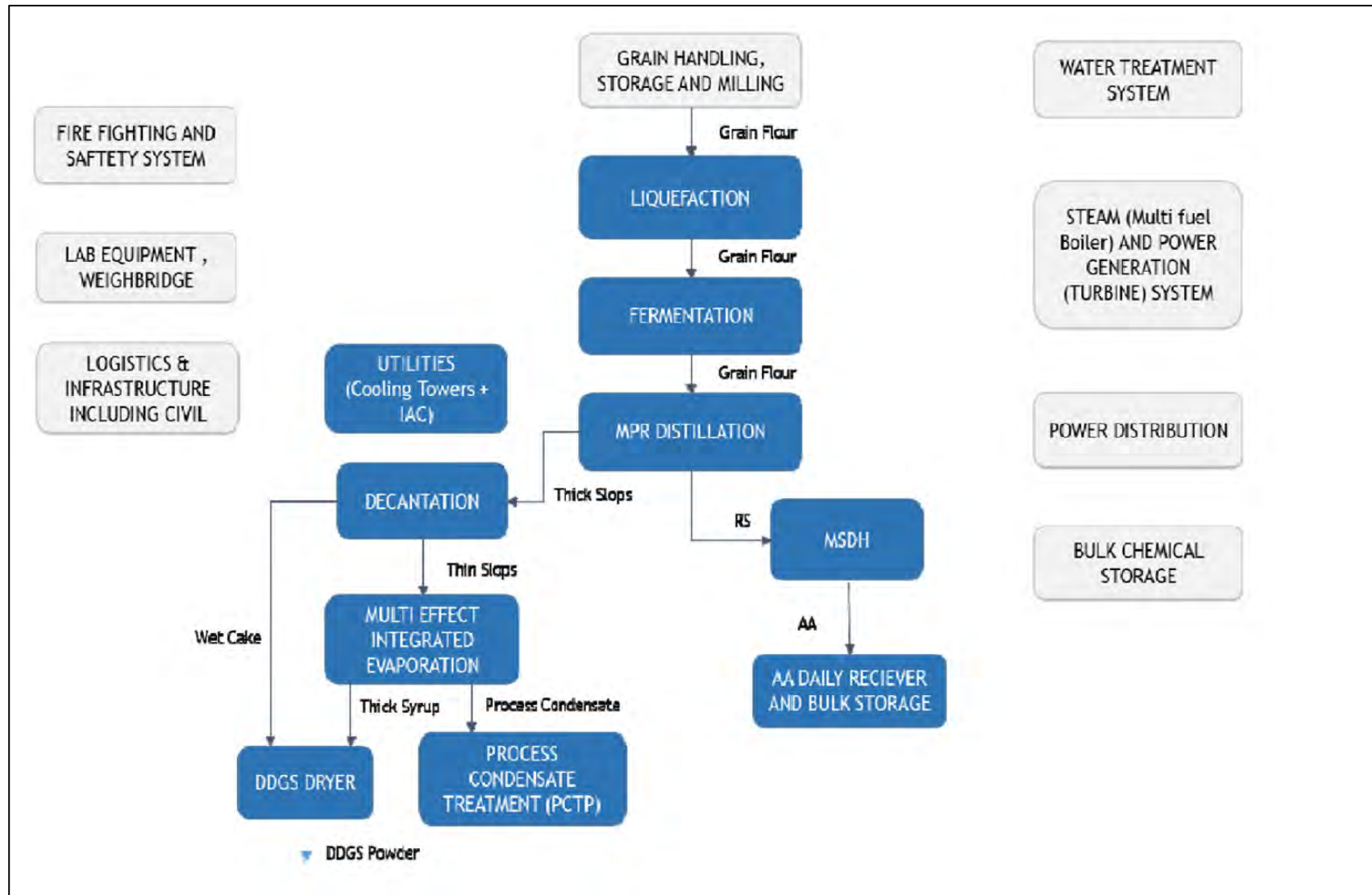


Figure: 3.4- Process Block flow diagram of Grain based Distillery

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

Co-Generation Power Plant (3.4 MW) operations

General principle of boiler: - Steam boiler (AFBC)

This Boiler (1 x 34 TPH) will operate mainly to feed steam to Distillery and 3.4 MW power generations from Turbine. Proposed 3.4 MW co-generation plant consists of a high-pressure water tube steam boiler extraction cum condensing steam turbine. Fuel in the steam boiler will be burnt with the help of air in the boiler furnace. Water will be circulated in the boiler drum and tubes thus getting heated by the flame burning in the boiler furnace. Water comes out of the boiler drum located at the top of the boiler as steam. Flue gases rise in the boiler furnace and come in contact with the steam coming out of boiler drum. Steam after coming in contact with flue gases gets heated up further thus getting superheated. Super-heated steam leaves the boiler in a pipe. Flue gases after super heating the steam pass through economizer where they pre-heat the boiler feed water before it enters the boiler drum. After economizer, flue gases pass through air pre-heaters where they heat the air which is fed to the boiler furnace for burning the fuel. After air pre heaters flue gases pass through ESP where the dust particles are collected. The dust is collected from here.

High pressure superheated steam from boiler is passed through a steam turbine, which is used for distillery process operations. While passing through the turbine, the high pressure and temperature steam rotates the turbine rotor and an electric alternator mounted on the same shaft. Electric power is generated by the alternator. This electric power generated is consumed in house i.e., for running the distillery and utilities like boiler auxiliaries etc. Surplus power will be exported to Grid.

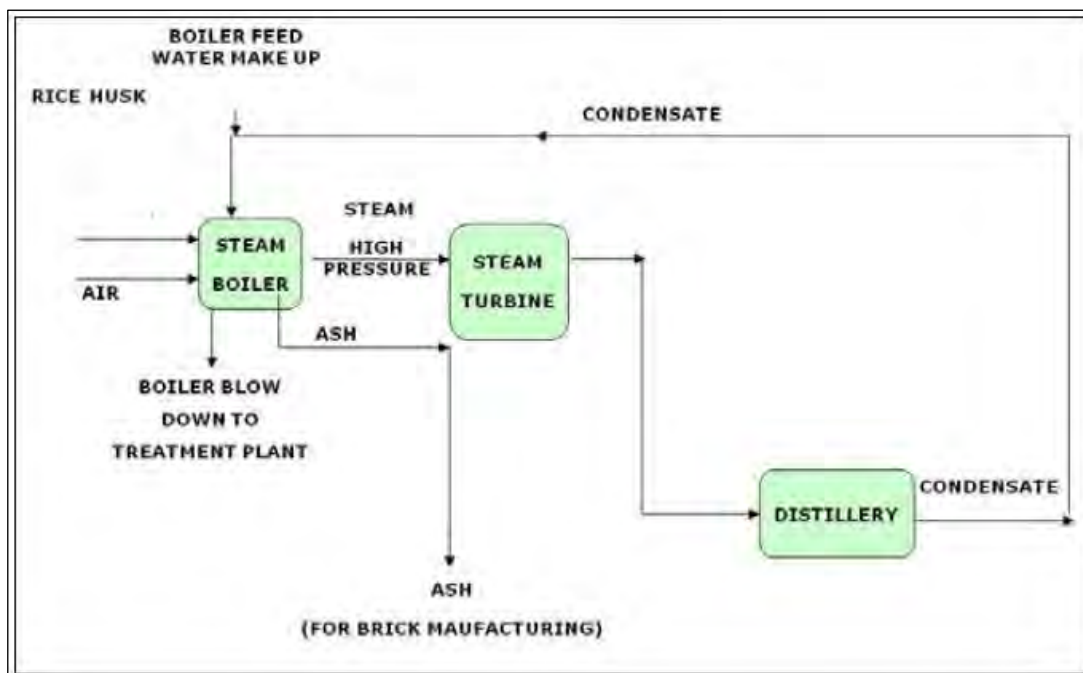


Figure: - 3.5 Process flow chart for Proposed Co-generation Power Plant

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

The list of major Process equipment and machineries is given below in Table 3.2.

Table: 3.2 List of Major Process Equipment & Machineries

Grain based distillery	
SL. No	Description
1	Grain Crushing Mill
2	Liquefaction Tank Agitator (I)
3	Slurry tank Agitator
4	Liquefaction Tank Agitator (II)
5	Distillation plant
6	Multi effect evaporator
7	DDGS Rotary Dryer
8	Decanter-SGDM-405
9	Decanter-NX-4050
10	DDGS Crushing mill
11	CPU/RO system
Co-generation power plant	
12	Co-gen boiler
13	TG Set, Stack, ESP, ID Fan, FD Fan, SA Fan
14	Transformer, DCS
15	Electrical HT & LT
16	Air Compressor
17	Fuel & Ash Handling
18	Fire Fighting System

Ethanol Plant Effluent Treatment Scheme - Process Condensate Treatment Plant

Membrane based Process Plant is proposed to be installed for treatment of Evaporator Condensate & Lease waste water. The proposed Condensate Polishing Unit will comprise of following unit process & equipment

- Filter Feed Pumps
- Dual media Filter
- Activated Carbon Filters
- Micron Filters
- RO
- Degasser Tower
- Treated Water tank

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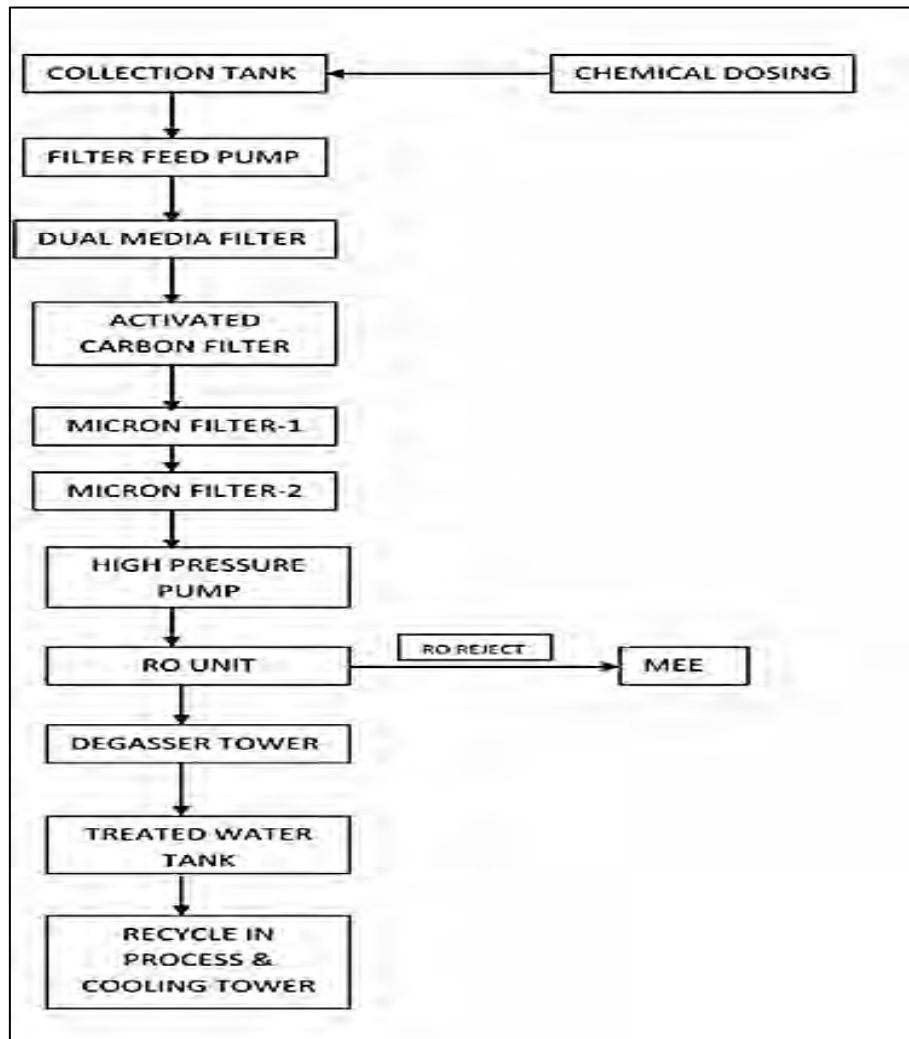


Figure: 3.6 Block diagram for Condensate Polishing Unit (CPU)

Table: 3.3 Characteristics of untreated and treated effluent

Particular	CPU Inlet	CPU Outlet
pH	5.50-7.5	7-8
Total Suspended Solids (mg/l)	300	25-35
BOD (mg/l)	350	<10
COD (mg/l)	1800	<100

Description of Mitigation Measures

The mitigation measures given in this section are for management of the emissions, effluents, solid and hazardous waste generation from the project to meet the environmental standards and environmental operating conditions.

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

Table: 3.4 Mitigation Measures

SL. No.	Project Activity	Aspect	Mitigation
1	Transportation	Dust generation	<ul style="list-style-type: none"> ➤ Paved Road ➤ Speed limit in plant premises ➤ Control for vehicular movement ➤ Water sprinkling ➤ Vehicles should be PUC certified ➤ Greenbelt & plantation on both sides of the internal roads & plant boundary
		Increase in number of vehicles	<ul style="list-style-type: none"> ➤ Flow of vehicles to be maintained ➤ Maintenance of parking area
2	Fermentation	Generation of CO ₂	➤ CO ₂ generated during the fermentation process will be recovered by CO ₂ Scrubbers and sold to beverage & packaging industry.
		Generation of yeast sludge	➤ In Grain based operation, mixed with wet cake (DWGS) and passed through dryer (DDGS).
3	Multi Pressure Distillation, MEE And cooling tower	Generation of spent wash	➤ In Grain based operation, spent wash will be treated by decanter, MEE & dryer and DDGS obtained will be used as cattle feed.
		Spent Lees	➤ Reused in Process
		MEE condensate & cooling tower blow down	➤ Treated water will be recycled
		Generation of wet cake	➤ DWGS passed through dryer and converted into DDGS.
4	Boiler Operation	Particulate matter & gaseous emission	<ul style="list-style-type: none"> ➤ Installation of ESP with adequate stack height ➤ Covered storage for fuel
		Generation of noise	<ul style="list-style-type: none"> ➤ Use of earmuffs, earplugs & ear defenders ➤ Maintenance of equipment ➤ Insulated enclosures ➤ Greenbelt development at project boundary
		Boiler ash (Solid waste)	<ul style="list-style-type: none"> ➤ Fly ash will be stored in silo by pneumatic system ➤ Ash will be supplied to nearby brick manufacturers

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

5	ETP and soak pits	Spent wash lagoon ETP	➤ Well-designed HDPE lined lagoon
6	Storm water	Rain water losses Soil erosion	➤ Rainwater harvesting will be practiced for conservation of water. ➤ Runoff and retention pond

3.6 RAW MATERIAL REQUIRED ALONG WITH ESTIMATED QUANTITY, LIKELY SOURCE, MARKETING AREA OF FINAL PRODUCTS, MODE OF TRANSPORT OF RAW MATERIAL AND FINISHED PRODUCT.

The basic raw material for the manufacturing of Ethanol will be Grain such as rice and maize will be used as raw material which is easily available from the local market.

The raw material for the boiler fuel will be various biomasses such as Rice Husk/paddy straw/ cow dung/poultry waste etc.

Table:-3.5 Raw Material Requirement

SL. No	Particular	Qty./Day	Qty./Annum	Storage	Mode of Transportation
1	Mostly Maize, Wheat and Rice	156 MT/Day	51,480 TPA	Silo & warehouse	Through nearby Mill By road
Chemicals					
SL. No	Particular	Qty. (Kg/day)	Qty. (Ton/Annum)	Storage	Mode of Transportation
1	Sodium Hydroxide (caustic)	300	99	Solid form packed in 30 kg bags & stored in warehouse	From local market by road
2	Nutrients	165	54.45	Liquid form packed in cans and stored in warehouse	
3	Alfa Amylase Enzyme	32	10.55	Liquid form packed in cans and stored in warehouse	
4	Amylo-glucozydase Enzyme	36	11.88	Solid form packed in 25 kg bags & stored in warehouse	
5	Antifoam Agent	33	10.89	Liquid form packed in drums and stored in warehouse	

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6	Yeast (Active Dry Yeast/ Distiller's Yeast)	32	10.55	Solid form & packed in bags and stored in warehouse	
Fuel for Boiler (34 TPH)					
1	Rice Husk	130 TPD	42900 MT	Covered Shed	From Nearby Rice Mill

3.7 RESOURCE OPTIMIZATION/RECYCLING AND REUSE ENVISAGED IN THE PROJECT, IF ANY, SHOULD BE BRIEFLY OUTLINED.

Water as a resource will be recycled at each possible step of the process and latest technology and methodology will be adopted to conserve and reuse the resources.

Rain Water Harvesting:

Runoff Calculation = Rain Water Harvesting:

Average rainfall intensity of the area is considered as 1139.3 mm or 1.14 m. The runoff coefficients for roof top, green area and paved are 0.9, 0.2 and 0.7 respectively.

Roof top area available for rain water harvesting: 19860 m²

Runoff Water from roof top = 19860 x 1.14 x 0.9 = **20376.36 m³**

Total Green Area = 19200 m²

Runoff water from Green Area = 19200 x 1.14 x 0.2 = **4377.6 m³**

Total Road & Paved Area = 16215 m²

Runoff water from road and paved area = 16215 x 1.14 x 0.7 = **12939.57 m³**

Total Rain water can be harvested in Monsoon season (120 days) = **20376.36+4377.6+12939.57= 37693.53 m³** say 80% of this rain water will be used during distillery process (considering 20% evaporation and other losses) = **30154.8 or say 30155 m³**.

Total water consumption of distillery in normal operation = 298 KLPD or 161040 m³/year

Thus total water saved by the company in year = 30155/161040= 18.7 or ~19%/year

Hence, total percentages saving due to rain water use ~19% per year and total water will be reused in distillery process.

3.8 AVAILABILITY OF WATER ITS SOURCE, ENERGY/ POWER REQUIREMENT AND SOURCE SHOULD BE GIVEN

One Time Total water requirement for the project will be 1968 KLD. Total fresh water demand for distillery operation is 488 [KLD@3.9](#) KL of water/KL of Ethanol. Net fresh water requirement

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

including domestic use is 513 KLD. which will be sourced from Hargarh Industrial Area, MPIDC.

Table 3.7 Water Balance & Fresh Water Requirement

INPUTS		OUTPUTS	
	KL		KL
PROCESS WATER IN LIQUEFACTION	598	STEAM CONDENSATE	487
DM WATER FOR BOILER FEED	520	SPENT LEES PRC	130
SOFT WATER FOR VACCUM PUMP & OTHER	50	THIN SLOP	750
SOFT WATER MAKEUP FOR COOLING TOWER	750	SOFT WATER FOR VACCUM PUMP & OTHER	50
MISC. WASHING WATER	25	CT EVAPORATION & DRIFT LOSSES	476
OTHER DOMESTIC USAGE	25	WASHING WATER	50
TOTAL INPUT	1968	DOMESTIC CONSUMPTION	25
		TOTAL OUTPUT	1968

RECYCLE & UTILIZATION STREAMS	
	KL
LEES RECYCLE FOR LIQUEFACTION	130
THIN SLOP RECYCLE FOR LIQUEFACTION	110
STEAM CONDENSATE RECYCLE FOR BOILER	430
PROCESS CONDENSATE RECYCLE AFTER CPU	810
Total Recycling/ Re-utilizations of water / day	1480
TOTAL FRESH WATER INPUTS	488

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

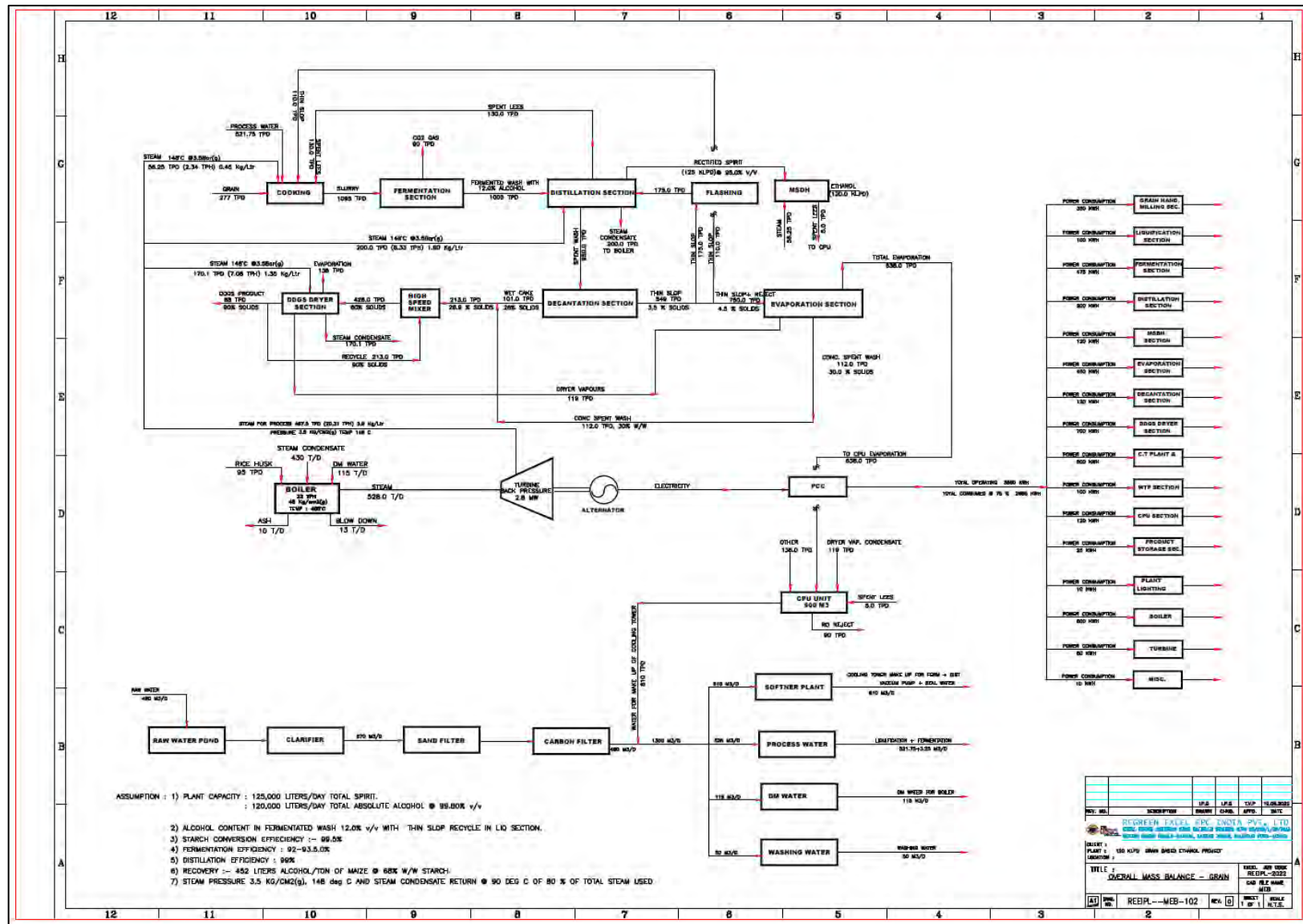


Figure: 3.7- Water Balance

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

Power demand:

During operation phase power requirement will be 3.4 MW and will be fulfilled by 3.4 MW Co-generation power plant within the project site. Surplus power will be connected to State Grid. For emergency, 1 DG sets of 1000 KVA each will be installed within the plant area.

3.9 QUANTITY OF WASTE TO BE GENERATED (LIQUID AND SOLID) AND SCHEME FOR THEIR MANAGEMENT/DISPOSAL

- ❖ The project will be based on “ZERO LIQUID DISCHARGE”.
- ❖ Fresh water requirement of the project will be met by surface water. Efforts will be made to conserve as much water as possible by recycling and reusing waste water.
- ❖ DWGS will be fed to Dryers operating on steam and is dried to make it DDGS – Distillers Dried Grain with Solubles.
- ❖ Process condensate will be cooled and collected into an equalization tank with sufficient residence time. After equalization, this process condensate will be fed for Ecophotox and after treatment it will be used for greenbelt development within the complex.
- ❖ Solid waste from the grain-based operations generally comprises of fibres and proteins in the form of DDGS, which will be ideally used as cattle feed.
- ❖ Ash from the boiler will be given to brick manufacturing unit.
- ❖ Used oil & grease generated from plant machinery/gear boxes & D.G. Set will be partly used in oiling & greasing as lubrication of external parts of machinery & partly will be sold to the CPCB authorized recycler.

Table:-3.8- Details of solid and hazardous waste generated along with their method of collection and mode of disposal.

S. No.	Solid waste/ hazardous waste	Quantity, /day	Method of collection	Mode of disposal
1.	Boiler fly Ash	48 TPD	Mechanical conveyor into common silo for further disposal.	Brick Manufacturing unit will be installed within the plant premises for utilization of agro waste fly ash
2.	DDGS	54 TPD	Mechanical Conveyor	Sold as Cattle Feed, Poultry & Fisheries
3.	Domestic solid waste	75 kg/day	Labour force. Domestic organic solid waste will be composted, while the inorganic solid waste will be handed over to municipality.	Segregated in separate-colored bins at designated places. Disposed to authorized vendors.
4.	Used oil from DG set.	0.5 KL/A	Stored in leak proof sealed barrels	Disposed to SPCB authorized recyclers.
5.	Steam turbine oil waste	1.5 KL/A		

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

**CHAPTER-04
SITE ANALYSIS**

4.1 CONNECTIVITY

The proposed site has good connectivity with the rail and road.

- **Road Connectivity:** Plant site is well connected to NH-30 at about 7.15 km in west direction, MDR road adjacent with project site. The site is suitably located with respect to availability of raw material, water, road network, skilled/semi-skilled/unskilled and professional manpower etc. All communication facilities such as telephone, telefax & internet are available in the vicinity of the plant site.
- **Rail Connectivity:** The nearest railway station is Bheraghat Railway Station 2.66 km in North direction.
- **Airport:** Nearest airport to the project site is Jabalpur Airport is 25.11 km away towards NE.

4.2 LAND FORM, LAND USE AND LAND OWNERSHIP

Total land is 5.5275 Ha and current land use is Agriculture land and will be diverted for Industrial Use. Total land is under the possession of company. The tentative land area statement of proposed project is given as below:-

Table: 4.1 Land Break-up

Land use	Area (ha)
Parking area	0.8291
Green belt	1.9200
Area under roads	0.7924
Plant and machinery	1.9860
Total land area	5.5275

4.3 TOPOGRAPHY (ALONG WITH MAP)

Jabalpur district is located almost in the central part of Madhya Pradesh and it is having 15% tribal population to the total population of the district. The deposits of tale around Bharaghat near the Marble rocks on the Narmda river, about 13 miles west of Jabalpur are the best known. The district lies between the North latitude 22° 49' and 23° 07' North and meridian of longitude 79° 21' and 80°35' East. The district is bounded in the South east and east by Manda & Dindori districts, in the south by Seoni and in the south West Narsingpur district and in the west by Damoh district. The district falls in survey of India Top sheet Nos. 55m, 64A- and 55 N on 1:250,000 scale & occupies an over of 5655 sqkm.

Jabalpur district lies at the Junction of the vindhyan and Satpura range and forms part of the great central watershed of India. The Narmada and its tributaries, the Hiran, Gaur drain the district.

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Chotimahanadi drains a very small area in the east, which is tributary of son river falling in the Ganga basin. The general slope of the Narmada valley is towards west & of Hiran towards south west. The drainage in the district is generally of dendrite type except in the valley of Narmada, along the right banks of Hiran below Katangi where it is of the straight trunk & trellis pattern. The total length of the Narmada river in the district is about 110 km

4.4 Existing Land Use Pattern (Agriculture, On-Agriculture, Forest, Water Bodies (Including Area Under CRZ), Shortest Distances from The Periphery of The Project to The Periphery of The Forests, National Park, Wild Life Sanctuary, Eco Sensitive Areas, Water Bodies (Distance from The HFL Of the River), CRZ In Case of Notified Industrial Area, A Copy of The Gazette Notification Should Be Industrial Area A Copy of The Gazette Notification Should Be Given.

Total plant area i.e. 5.5275 Ha. has already been acquired by the company.

List of the Water bodies present in Study Zone: -

Heran River = Approx. 2.5 km towards Southeast

“No national park/Wild life sanctuary present within the 10 km radius of the project site”

Table: 4.2 Land Use/ Land Cover Analysis of 10 km radius

S. No	Classes	Area (sq.km)	Area in %
1	Settlement	9.19	2.81
2	Open Scrub	9.51	2.90
3	Forest	20.55	6.27
4	Waste Land	4.26	1.30
5	Water Bodies	2.57	0.78
6	Agriculture	281.44	85.93
Total		327.52	100.00

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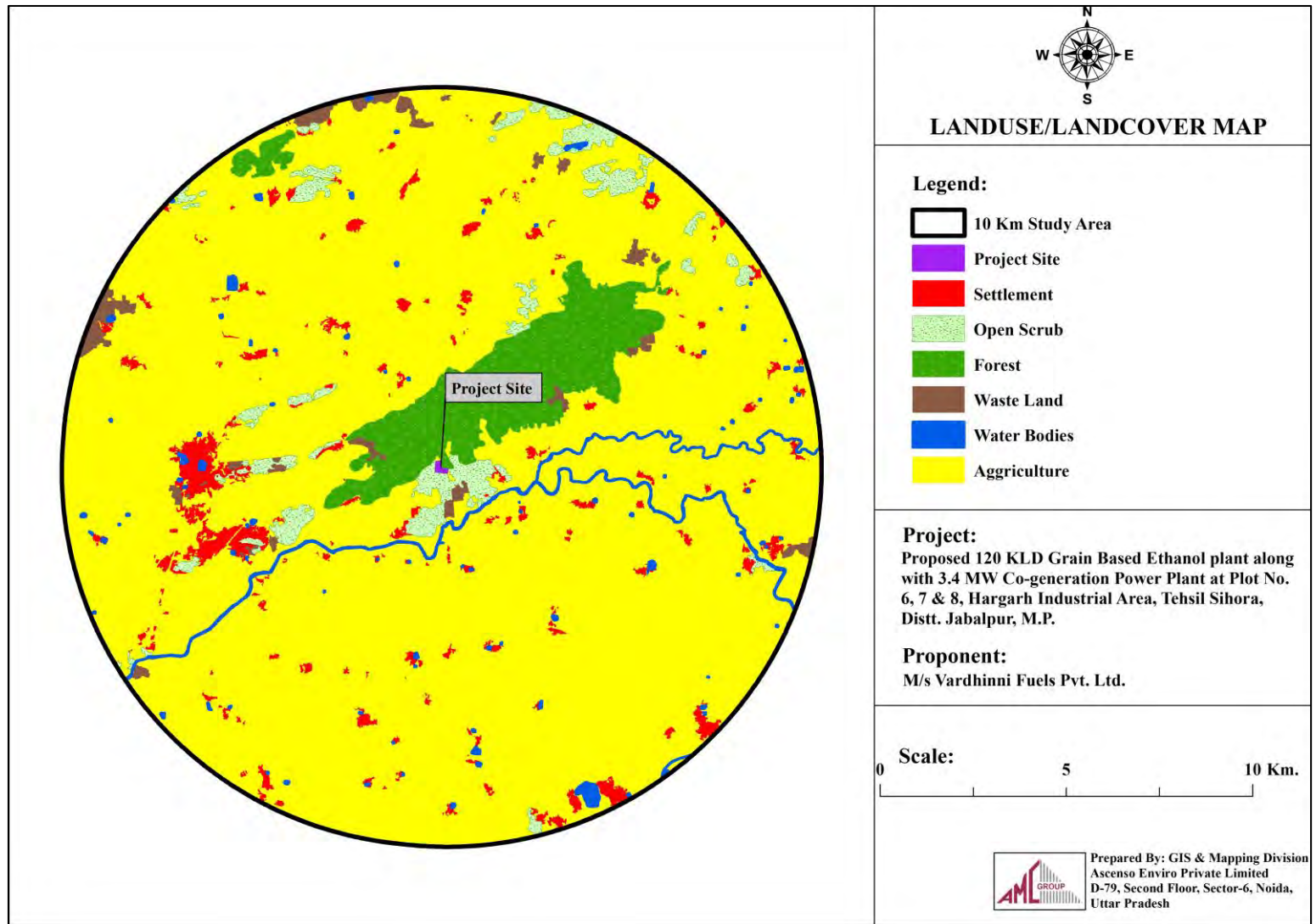


Figure: 4.3 Land Use Map

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

4.5 EXISTING INFRASTRUCTURE

The plant area is as per revenue detail is non-forest land. There is no village or human settlement in the plant area. No existing infrastructure within the plant area. The proposed site is an undeveloped land which does not include forestry, water bodies (including CRZ) etc.

4.6 SOIL CLASSIFICATION

Jabalpur district is covered by three types of soils –

1. The loam to sandy loam confined to the river courses of the Narmada & Hiran falling in Shahpura & Patan blocks.
2. Medium black soil covering Kundam, Bargi, eastern parts of Shahpura, Panagar & Sihora blocks.
3. Deep block soil covering Shahpura, Patan & Sihora blocks. In the Narmada valley, the block soil is composed mainly of clay & silt washed down by rivers.

4.7 CLIMATIC DATA FROM SECONDARY SOURCES.

The climate of Jabalpur District M.P. characterized by a hot summer and general dryness except during the south west monsoon. The year may be divided into four seasons. The cold season, December to February is followed by the hot season from March to about the middle of June. The period from the middle of June to September is the south west monsoon season. October and November form the post monsoon or transition period. The average annual rainfall of Jabalpur District is 1279.50mm. Jabalpur received maximum rainfall during the south west monsoon period i.e. June to September. About 90% of the annual rainfall is received during the monsoon season. Only 10% of the annual rainfall takes place between October to May period. Thus surplus water for ground water recharge is available only during the south west monsoon period. The normal maximum temperature received during the month of December is 90C. The normal annual mean maximum and minimum temperature of Jabalpur District is 32.10C & 18.30C respectively. During the south west monsoon season the relative humidity generally exceeds 87% (August month). In the rest of the year it is drier. The driest part of the year is the summer season. When relative humidity is less than 27%. May is the driest month of the year.

4.8 SOCIAL INFRASTRUCTURE AVAILABLE.

Nearest village is Bilha ~0.55 km in SE direction. There are primary schools, dispensaries, hospitals, railway station, colleges, market and places of worship in the nearby area of the project site. Most of the villages are electrified. Telephone, Medical facilities and Telegraph facilities are also available in the nearby towns.

Table: 4.3 Social Infrastructures

S. No.	Connectivity & Site Surroundings		
	Description	Distance and Direction	
1.	Nearest School & College	1. Government School 2. Govt. Primary & Middle School, Kewlari 3. Panchayat - Elementary school	Approx. 6.56 Km towards West. Approx. 6.56 Km towards Southwest. Approx. 2.60 Km towards South.

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S. No.	Connectivity & Site Surroundings	
	Description	Distance and Direction
		4. Government Primary School Mangeli
2.	Nearest Airport	Jabalpur Airport
3.	Nearest Village/City	1.Hargrah 2. Dhanwahi 3. Sihora
4.	Nearest Hospital	1. Khitola Government Hospital 2. Mandir Hospital 3. Civil Hospital Sihora
5.	Nearest Highway/Roads	1. NH30 2. Road
6.	Railway Station	1.Bheraghat Station 2. Madan Mahal Train station
7.	Places of Worship	1.Shri Siddhan Dham 2.Ram Mandir Hargadh 3.Shiva Mandir 4.Jwalamukhi Mandir
8.	Water Bodies	Heren River

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

**CHAPTER – 05
PLANNING BRIEF**

5.1 PLANNING CONCEPT (TYPE OF INDUSTRIES, FACILITIES, AND TRANSPORTATION ETC.) TOWN AND COUNTRY PLANNING/DEVELOPMENT AUTHORITY CLASSIFICATION.

Proposed industry is a grain based distillery. Facilities required for the project will be provided as per requirement. Transportation of raw material and final product will be done via existing road network and cement concrete road will be developed within the plant premises.

Proposed project activities will be started after getting statutory clearance from related authorities. The project will be completed in 2022-2023. Further proposed project activities will be carried out in compliance with all the rules and regulation of statutory authority and provide the control measure and devices to achieve the standard norms.

5.2 EMPLOYMENT & POPULATION PROJECTION

The industry will provide permanent employment to about 150 Persons and about 100 people will get temporary employment through the project. So, total employment potential of the project will be about 250 persons. Since the plant is located in the Jabalpur district in which trained manpower are already available therefore the employment will be mostly given to local people therefore there is not going to be any substantial increase in the population of local villages. However, due to increase economic growth the local youth will get employed and additional population influx of around 200-300 people in the 10 km radius of plant can at best be estimated, which includes the addition of persons dependent on the job seeking persons.

5.3 LAND USE PLANNING (BREAKUP ALONG WITH GREEN BELT ETC.).

Total land is 5.5275 ha. This land is sufficient for the setup of the Green Field Grain based distillery project. 33.0% land has been earmarked for plantation and greenbelt as per standard norms. Table below gives the % area used in the plant. The tentative land area statement of proposed project is given as below:-

Table: 4.4 Land Break-up

Land use	Area (ha)
Parking area	0.8291
Green belt	1.9200
Area under roads	0.7924
Plant and machinery	1.9860
Total land area	5.5275

“2500 trees/Ha will be planted for green belt development.”

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

5.4 ASSESSMENT OF INFRASTRUCTURE DEMAND (PHYSICAL & SOCIAL)

- The proposed project is Green Field project of Distillery project activity for which no substantial additional infrastructure is required. The available road network and natural sources of water supply and drainage system are adequate;
- It is proposed to adopt rain water harvesting practice within the plant and in surrounding villages;
- Only roof top water inside the plant will be recharged to ground after proper cleaning. Rain water falling on paved and green areas within the plant will be cleaned, stored inside and reused.
- Power will be sourced from in house CPP;
- 1 DG sets of 1000 KVA each will be installed for emergency backup supply to meet the contingencies of power cut and power failure. Thus, no additional emergency arrangement is required;
- There is no other major infrastructural requirement for the project.

5.5 AMENITIES / FACILITIES

The necessary arrangement for proposed project for meeting water supply for drinking purposes, toilet facilities for workers as well as inward/outward transport operators, parking facilities, as well as small canteen for workers and guests will be created. A canteen with rest room will also be available for the supply of tea; snacks; food to the workers and drivers, visitors etc. Sufficient parking space will be created for the parking of Trucks; cars etc.

Parking Details:

Part A

It is estimated that 20 Nos. of trucks per/day will be required for various industrial activities

Traffic load on internal and external road is calculated as under,

Total trucks = 20 trucks/Day

Frequency of trucks (Nos. of trucks x cycle x up and down) = $20 \times 1 \times 2 = 40$ Nos./Day

ECS/Day (Nos. of truck x 3) = $40 \times 3 = 120$ ECS/Day

ECS per hour = 5 ECS

Part B

No of people to be employed = 150 Nos.

Cars of the employees = 25 Nos.

Frequency of cars (Nos. of cars x cycle x up and down) = $25 \times 1 \times 2 = 50$ Nos./Day

ECS / day (Nos. of car x 1) = $50 \times 1 = 50$ ECS/Day

ECS per hour = 2.08 say 2 ECS

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Part C

Two wheelers of the employees = 70 Nos.

Frequency of two wheelers (Nos. of two wheelers x cycle x up and down) = $70 \times 1 \times 2 = 140$ Nos./Day

ECS/day (Nos. of two-wheeler x 0.5) = $140 \times 0.5 = 70$ ECS

ECS per hour = 2.91 say 3 ECS

Grand Total of ECS (A+B+C) = 5+ 2 + 3 = 10 ECS

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

**CHAPTER – 06
PROPOSED INFRASTRUCTURE**

6.1 PROCESSING AREA – INDUSTRIAL USE

Out of the total 5.5275 area, about 1.92 ha. land will be under Plant and Machinery remaining area will be for open space as well as road development, water storage and green belt development etc. as given in land use statement.

6.2 RESIDENTIAL AREA (NON-PROCESSING AREA)

There is no proposal of any residential colony as the required manpower will be sourced from local populace. Few highly skilled posts may be filled from outsiders for whom houses will be leased in nearby residential area. Non-processing area will comprise of facilities within the premises such as – administrative block, road & pollution control equipment area etc. Other social infrastructure like housing, schooling and medical facilities area already developed in nearby area, hence, no residential colony/township is envisaged for employees.

6.3 GREEN BELT

A greenbelt of 1.92 Ha. (33.0%) will be developed in the plant premises. Approx. 10m wide greenbelt will be developed around the plant premises.

Site Preparation: The location earmarked for greenbelt shall be fenced. The soil quality of the plant area is fit for plantation.

Plant propagation: Nursery raised saplings of 2–3 feet height of trees and shrubs will be purchased from local nursery and Forest Dept.

Plantation: This will include digging pits with proper spacing, filling pits with prepared soil, plantation of seedlings and watering. The size of the pit will be 1m x 1m x 1 m for trees and 0.5 m x 0.5 m x 0.5 m for shrubs.

The pits will be filled with soil mixture. The soil will be irrigated soaking wet prior to placing of seedling. The water required for greenbelt development will be met from the treated effluents generated during plant operation. During construction period water supply will be met from available sources.

Plantation will start from the beginning of construction activity (after the site is made clear and demarcating the green portion). Soil proposed to be filled in the pit after plantation will be mixed with compost (1:1). Plantation will be done after first rainfall. Adequate protection will be ensured for achieving high survival rate of the planted saplings. Water and nutrients / manure will be given at appropriate intervals.

Total Trees required as per CPCB/MoEF&CC Norms@2,500/Ha = $1.92 \times 2,500 = 4800$ or say 5000 No's

The species selection will depend upon type of soil and local species with good survival rate will be selected.

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargrah Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

Table: 6.1 List of Big Trees for Proposed Plantation

S. No.	Common Name	No of Trees
1.	Arjun	400
2.	Amla	250
3.	Jamun	200
4.	Aam	300
5.	Pipal	400
6.	Chatim	250
7.	Debdaru	300
8.	Ghora neem	350
9.	Ashoka	750
10.	Jarul	400
11.	Karanj	200
12.	Bauhinia	400
13.	Neem	550
14.	Ankol	250
Total		5000

Species has been selected on following basis: -

- ❖ Fast growth;
- ❖ Capacity to endure water stress and climate extremes after initial establishment;
- ❖ Tolerance to specific conditions or alternatively wide adaptability to eco physiological conditions;
- ❖ Differences in height and growth habits;
- ❖ Pleasing appearances;
- ❖ Providing shade; and

Trees should be tall in peripheral curtain plantation, with large, spreading canopy in the primary and secondary attenuation zones.

6.4 SOCIO-ECONOMIC BENEFITS & SOCIAL INFRASTRUCTURE

Same as Point 4.8

6.5 CONNECTIVITY (TRAFFIC AND TRANSPORTATION ROAD/RAIL/METRO/WATER WAYS ETC.)

Site is well connected NH-30 at about 7.15 km in west direction, MDR road adjacent with project site. The place is connected to railway station and towns by bus, jeeps, taxi and rickshaw. All the civic amenities like market, bus stand, hospital, school, college, hotel, restaurant etc. all are available in the town which is about 5-10 km from the site.

- Hargrah – 1.58 Km towards Southwest

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➤ Sihora – 5.91 Km towards West

6.6 DRINKING WATER MANAGEMENT

The drinking water will be sourced from MPIDC. The water purifier will be provided for the purpose. The maximum demand of drinking water is assessed to be 25 KL/day.

6.7 SEWERAGE SYSTEM

The project will involve about 250 people employment on three shift basis however around 50 people additionally may be visiting in project site as truck drivers or cleaners or visitors etc. thus considering 50 people daily disposing the domestic effluent. The treated sewage from soak pit will be used for irrigation and to meet flushing requirement’.

6.8 INDUSTRIAL WASTE MANAGEMENT

Hazardous waste generated as ETP Sludge, spent oil and grease will be disposed off as per Hazardous Waste Management Rules, 2016 as amended. There will be no other industrial waste from proposed Greenfield project.

The distillery will be based on “**ZERO LIQUID DISCHARGE**”. Waste water generated from plant premises will be treated in ETP.

6.9 SOLID WASTE MANAGEMENT

- ❖ Solid waste from the grain-based operations generally comprises of fibres and proteins in the form of DDGS, which will be ideally used as cattle/poultry/fish feed.
- ❖ Ash from the boiler will be given to brick manufacturers.

6.10 POWER REQUIREMENT & SUPPLY/SOURCE

The total power requirement will be 3.4 MW/day which will be sourced from In-house captive power plant of 3.4 MW and surplus power will be supplied to government.

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

**CHAPTER – 07
REHABILITATION AND RESETTLEMENT (R & R) PLAN**

7.1 POLICY TO BE ADOPTED FOR R & R PLAN WITH RESPECT TO PROJECT-NOT REQUIRED

Total project area is 5.5275 Ha. which is already acquired by the company. There is no displacement of any houses, habitation or livestock. Thus, the project does not require any R & R plan.

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

**CHAPTER – 08
PROJECT SCHEDULE & COST ESTIMATES**

8.1 LIKELY DATE OF START OF CONSTRUCTION AND LIKELY DATE OF COMPLETION (TIME SCHEDULE FOR THE PROJECT TO BE GIVEN)

The industry will take necessary approvals from the consented authority and start the construction immediately after obtaining Environmental Clearance and Consent from state pollution board. About 12-18 months will be required to complete commissioning.

Statutory Clearances

The proposed project will require various statutory approvals and clearances from various authorities of the Government. Clearances required for the proposed project are identified and necessary action initiated to obtain the same.

Project Schedule

The project construction work is likely to be started immediately after receive of Environment Clearance and completed it will take about One-half year to complete it. We are expecting approval by June, 2022 and the construction will thus be beginning from July, 2022 itself. However, the dates cannot be forecasted thus the schedule of implementation is worked out from Zero date to progressive time required in months.

8.2 PROJECT COST

The overall estimated project cost for the proposed unit is 95.28 Cr.

Table: 8.1 Project Cost

S. No.	Particulars	INR Crore
1.	Land Cost	2.43
2.	Building and Construction	12.50
3.	Plant and Machinery	96.67
4.	Other	6.35
5.	Environment Management cost	7.05
	Total Cost	125.00

8.3 CORPORATE ENVIRONMENT RESPOSIBILITY

The estimated CER cost for the proposed unit will be Rs. 1.25 Cr which will be 1% of the total project cost i.e., Rs. 125 Cr.

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

**CHAPTER – 09
ANALYSIS OF PROPOSAL**

Proposed Plant has been promoted by M/s Vardhinni Fuels Pvt. Ltd. The Company has proposed to set-up Greenfield Project of Grain Based Distillery Project of 120 KLD along with Co-Generation Power Plant of 3.4 MW located at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. All infrastructure facilities are available-Local people will get direct financial benefit by way of employment-

- Local people will get direct financial benefit by way of employment.
- Local people will get some contracts of supply and services to get indirect income.
- Project is of national interest and will save foreign exchange which is required for the purchase of crude oil.
- More revenue will be generated by the way of GST to the State & Central exchequers.

Over the last few years, there has been a great change in the Indian Economic Scenario due to Global slowdown which affected the whole world including India.

The owner's family is well known and resourceful with good financial background.

In view of all this fact it is found that the proposed unit has all the desired characteristics of a viable unit, the financial analysis as per details given in financial annexure - shows good profitability, perfect technical feasibility, and commercial studies established very good demand. The total cost of project as Rs. 125 Crores is purpose to be met by Promoters. As per analysis, the overall financial, liquidity and profitability parameters of the project are considered reasonable, achievable and satisfactory.

Environmental, Financial & Social Benefits

With the implementation of the proposed project, Approx. 33.0% area will be developed as green belt which will help in maintaining ecological biodiversity of the project site. Also, the socio-economic status of the local people will improve substantially due to employment generation. The land rates in the area will improve in the nearby areas due to the proposed activity. This will help in up liftment of the social status of the people in the area. Educational institutions will also come-up and will lead to improvement of educational status of the people in the area. Primary health center will also be developed by us and the medical facilities will certainly improve due to the proposed project.

The project will result in growth of the surrounding areas by increasing ancillary development and supporting infrastructure. Special emphasis on financial and social benefits will be given to the local people including tribal population, if any, in the area. Development of social amenities will be in the form of medical facilities, education to underprivileged and creation of self-help groups. Haryana state will get revenues in terms of taxes. Business opportunities for local community will be available like transport of raw material/product to market, fly ash transport to brick manufactures, maintenance & house-keeping contract work etc.

In view of the above the proposed Project of **M/s Vardhinni Fuels Pvt. Ltd.** is technically feasible and financially viable thus, we request EAC to grant **ENVIRONMENTAL CLEARANCE.**

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

ENVIRONMENTAL MANAGEMENT PLAN

1.1.1.1 PROJECT DESCRIPTION

M/s Vardhinni Fuels Private Limited proposes to install a green field project of grain-based distillery to produce ethanol for blending with petroleum. It is intended to use grain as raw material. To meet the power required for the project, a power plant will also be installed. For power generation, fuel is rice husk or bagasse. The project site is located at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. **The plant configuration details and salient features of the plant are given below in Table 1.1 and 1.2 respectively.**

Table: - 1.1 Plant Configuration

SL. No	Facility	Capacity
1	Grain Base Distillery	120 KLPD
2	Co-Generation Power Plant (34 TPH)	3.4 MW

Table 1.2 Salient Features of the Project

1	Name of the Company	M/s. Vardhinni Fuels Private Limited
2	Registered Office Plant & Admin Office	Plant Location: Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. Registered Office: Next to Anil Transport Company, Jabalpur -Bhopal Road NH12, Tewar, Jabalpur, Madhya Pradesh: 483053
3	Name of the Directors	1) Shri Rajkumar Jain (Director) 2) Shri Basant Ghorawat (Additional Director)
4	Proposed Sector	Schedule: 5 (ga), Grain Based Distilleries Producing Ethanol, Cat-B2
5	Area of plant	5.5275 Ha
6	Topo Sheet No	F44C2 (Project Site)
7	Installed Capacity	Grain Base Distillery of 120 KLPD along with Co- Generation Power Plant of 3.4 MW Boiler Capacity – 34 TPH
8	Final Product & By-Product	Ethanol (120 KLPD) DDGS- 54 TPD CO ₂ - 66 TPD
10	Cost of Project	INR 125 Cr
11	Total Manpower	250 Persons (150 permanent + 100 Temporary)
12	Total Power Requirement	3.4 MW fulfilled by Co-Generation Power Plant
13	Total Water Requirement	One Time Total Water Requirement to run the distillery =

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		1968 KLD Total Water Requirement for Process = 488 KLD (@3.9KL/ KL of Ethanol production) Net water requirement including domestic use = 513 KLD
14	Major Raw Material	Grains such as rice and maize will be used.
15	CER	INR 1.25 Cr

1.1 INTRODUCTION

Environmental Management Plan consists of the set of mitigation, management, monitoring and institutional measures to be taken during implementation and operation of a plant to eliminate adverse environmental impacts or reduce them to acceptable levels. The present environmental management plan addresses the components of environment affected during the different activities forming part of the processes of existing plant.

In view of above and based on the evaluation of impacts and baseline conditions, an Environmental Management Plan (EMP) has been delineated to mitigate the adverse impacts on environment of the area due to the project. The EMP is herein outlined after taking into account the various Acts, Rules and Regulations/ Standards concerned with the environmental management.

Aims of EMP

- Overall conservation of the environment and minimization of environmental impacts.
- Minimization of waste generation and pollution.
- Judicious use of natural resources and water.
- Safety, welfare and good health of the work force.
- Ensure effective monitoring of all control measures.
- Vigilance against probable disasters and accidents.
- Monitoring of cumulative and long-time impacts.

1.2 ENVIRONMENT POLICY

M/s. Vardhinni Fuels Private Limited has a well-defined policy to keep the Environment clean and green. The company has decided that all effective steps shall be taken to ensure that flow of information from working level to top level should flow in a smooth and coordinated manner, so that in case any deficiency is noted, it is brought to the notice of top management and preventive and corrective action is initiated in a systematic manner.

An EMC (Environment Management Cell) will be formed by the company & its responsibilities will be as follows:

1.2.1 Interaction with the State Pollution Control Board

EMC shall be in regular touch with SPCB and shall send them environmental monitoring reports regularly in the prescribed format, as per the prevailing practice. Any new regulations considered by State/Central Pollution Control Board for the Industry shall be taken care of by EMC.

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

1.2.2 Provide Training

EMC would be responsible for the implementation of the EMP. For the project, additional training facilities will be developed for environmental control. For proper implementation of the EMP, the officials responsible for EMP implementation will be trained accordingly.

In-plant training facilities will be developed for environmental control. The training will be given to employees to cover the following fields:

- Awareness of pollution control and environmental protection to all.
- Operation and maintenance of specialized pollution control equipment.
- Organize field monitoring, maintenance and calibration of pollution monitoring instruments.
- Laboratory testing of pollutants.
- Repair of pollution monitoring instruments.
- Occupational health/safety.
- Environmental management.
- Afforestation / plantation and post care of plants.
- Knowledge of norms, regulations and procedures.
- Risk assessment and Disaster Management.

1.2.3 Other Responsibilities of the Cell Will Include-

MoEF&CC approved lab will be retained to generate the environment quality data in respect of air, water, noise, soil and meteorology and prepare the Environmental Report.

- Timely renewal of Consents & Authorization will be taken care of.
- Submitting environmental monitoring report to SPCB. The cell will also take mitigative or corrective measures as required or as suggested by the Board.
- Conduct and submit annual Environmental Statement to SPCB.
- Prepare and submit six monthly report on the compliance with the conditions of the environmental clearance
- Keeping the management updated on regular basis about the findings / results of monitoring activities and proposes measures to improve environmental performance.
- Conducting regular safety drills and training programs to educate employees on safety practices. A qualified and experienced safety officer will be responsible for the issues related to occupational safety and health.
- Conducting safety and health audits to ensure that recommended safety and health measures are followed.

1.2.4 SOP for Flow of Information

The Environmental Management Group would consist of executives and supporting staff headed by senior official reporting to Director. During the construction of the project, Project Review Team (PRT) meetings will be held every month wherein officials from the project and corporate centre will participate and discuss the progress and problems related to implementation of schedules of activities for construction, completion and commissioning. It will be ensured that all pollution control measures identified are implemented in a coordinated manner, linking the overall project implementation plans.

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Monthly Operation Review Team (ORT) meetings for the project will be also held during project operation. In these meetings in addition to routine Operation and Maintenance (O&M) problems issues related to environment will also be discussed. The issues related to the compliance of environmental norms including problems associated with the mitigation measures identified will be included in the agenda for quarterly review meetings, wherein action plan for remedial measures will be drawn and monitored.

The Head-Environment will brief the ORT about the environmental performance of the plant and all compliances/non-compliances are brought to the notice of MD. Action plan is drawn for rectifying the Non-compliance.

1.3 EMP DURING CONSTRUCTION PHASE

The land has been acquired at Hargarh Industrial Area, District Jabalpur, M.P. The area of land is 15000 Sq. mtrs. During construction this land will be used for installation of plant and machineries, storage sheds for raw materials, construction of internal roads, parking area and temporary storage of construction materials including oil and chemicals, domestic waste etc.

The impacts due to construction activities will be limited to above area only.

Construction activities will have cumulative impact on environment due to impact on land, soil, air, water and noise environment and their management as follows:

1.3.1 Land Environment

The site for project is flat and already levelled, hence no levelling is required. Earth excavated during civil foundations will be reused for raising the plinth and backfilling the columns. Dust generated due to earthwork including excavation and transportation activities, especially during dry weather conditions, will be controlled by water sprinkling.

1.3.2 Air Environment

Dust will be generated during any levelling of site (if required), dumping of earth and fill material generated from site during excavation for foundations, waste pit construction and other site related activities. These activities will open-up the ground to wind action and will result in dust generation.

Impact on Air Quality -The air quality in the project area may slightly deteriorate for the time being during construction due to poorly paved service lane, excavation, delivery of construction materials, mixing of construction materials, construction of temporary structures, installation of equipment etc. Movement of trucks bringing plant and machinery shall also generate dust and noise. During construction phase, dust generation will be the main pollutant. However, concentration of NO_x and CO may also slightly increase due to increased vehicular traffic movement.

The overall impact of the pollution on the environment during construction phase is localized in nature, reversible and is for a short period. Various measures planned for management of air environment are given below:

- Vehicles with valid Pollution under Control certificates will be used.
- Preventive maintenance of vehicles and equipment.

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- Unnecessary engine operations to be minimized.
- Implementing dust control activities such as water sprinkling on unpaved sites.
- Controlled vehicle speed on site.
- Vehicle to be covered during transportation of material.
- Providing dust collection equipment at all possible points
- Following additional care would be taken for management of air quality during construction phase:
 - The storage and handling of soil, sub-soil, topsoil and materials will be carefully managed to minimize the risk of wind blow down material and dust
 - There will be no on-site burning of any waste arising from any construction activity.
 - Dust masks shall be provided to construction workers, while carrying out operations that may entails potential for dust generation.

1.3.3 Water Environment

Temporary drainage work will be maintained, removed and reinstated as required, and all other precautions will be taken for avoidance of damage by flooding and silt. During construction phase, used construction water is the only effluent generated due to construction activities and most of the effluent generated will be so small that it will either get percolated to ground or get evaporated. Sedimentation pit of sufficient capacity will be constructed to trap silt-laden water during monsoon. The wastewater, if any, will be reused as far as possible for dust suppression.

1.3.4 Noise Environment

The noise generated during the constructed phase will be due to the movement of vehicles and construction equipment. Construction equipment and transport vehicles will be properly maintained so that noise generation is minimized. Regular maintenance schedule will be adopted for all construction equipment and vehicles.

The following measures will also be adopted:

- Preventive maintenance of equipment and vehicles.
- Unnecessary engine operations to be minimized (e.g. equipment with intermitted use switched off when not working)
- DG sets to be provided with acoustic enclosures and exhaust mufflers.

1.3.5 Solid and Hazardous Waste Management

Careful design, planning and good site management would minimize waste of materials such as concrete, mortars and cement grouts. Construction waste will be segregated as much as possible at site itself to increase the feasibility of recycling concrete and masonry as filling material and steel pieces as saleable scrap.

Muck shall be generated from drains and sedimentation pits. The muck shall be collected daily and stored at earmarked place. It shall be finally disposed within the plant premises for plinth raising purpose. Litter disposal and collection points shall be established around the all construction work

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sites. Construction waste shall be segregated as much as possible at site itself to increase the feasibility of recycling concrete and masonry as filling material and steel pieces as saleable scrap.

Care shall be taken in selecting the site for vehicle maintenance, so as to prevent the ground water contamination due to the spillage of oil. Both diesel and petrol engine vehicles will be maintained properly. Unauthorized dumping of waste oil will be prohibited. Wastes will be disposed off to the SPCB approved vendors.

1.3.6 Sanitation & Safety Measures of Construction Workers

Construction workers will be taken from surrounding villages. They will be made aware of possible hazards and safety measures that need to be taken during construction activities through organized training. Personal Protective Equipment (PPEs) such as dust masks, goggles, earplugs/ earmuffs, safety gloves, safety belts, safety shoe with toe protection, gumboots will be made available at construction site. Construction workers and vehicle drivers will be provided with drinking water, canteen and toilet/washroom facility. Rest room facility for truck drivers will be provided. Training will be given contractors workers on company safety policy requirements. Also monitoring of speed and route of project-related vehicles within the project area will be carried out.

1.4 EMP DURING OPERATION PHASE

Air Pollution Dispersion Modeling Studies

During operation there will be two numbers of point sources of air emissions. These are stacks attached with DG sets (one numbers) and one with Boiler. 1 DG sets of 1000 KVA each with stack height of 14m will be used for power backup & Boiler of 34 T/Hr capacity is proposed for the project. The stacks and emissions details from these sources are given below in Table 1.3.

Table 1.3 DG Stack & Boiler Emission Details

Stack No.	DG set Capacity (kVA)/Boiler (TPH)	Stack & Flue details				Pollutants Emission			
		Stack Height (m)	Flue Gas velocity (m/s)	Flue Gas Exit Temp (C)	Stack Dia. (m)	NO ₂ (g/s)	SO ₂ (g/s)	PM (g/s)	CO (g/s)
1.	1000	14	25	536	0.412	0.853	0.025	0.027	0.323
2.	34 TPH	60	15	180	1.7	2.18	0.80	1.2	7.05
Total Emission from 1 DG sets of total capacity (1000 kVA) in g/s & from & 1 boiler of 34 TPH						3.033	0.825	1.227	7.373

In order to assess the impact on air quality of the surrounding area due to the operation of the proposed project, mathematical modeling has been carried out. AERMOD Model has been used to predict the impact on air quality. The model uses regulatory defaults options and meets the guidelines developed by CPCB (PROBES/70/1997-1998).

The mixing height for study period and area is built-in the software. The modeling was carried out for Particulate matters, PM₁₀, NO₂, SO₂ and CO.

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1.4.1 Air Pollution Management Plan

Stack emissions

- Online stack monitoring system will be provided to keep a check on emissions and implement proper measures in case of any failure or violation of prescribed standards.
- Regular cleaning, inspection and maintenance of air pollution control equipment will be carried out.
- Ensuring preventive maintenance of equipment.
- Workers will be trained regarding emergency actions to be taken during equipment failure.
- The whole distillery unit will be provided with facility of inter locking so that any failure of equipment or APCE will result in instant shut down of the complete process.
- DG sets will be used only for emergency purpose and in case of power failure.

1.4.2 Action Plan for Control and Monitoring of Fugitive Emissions

The fugitive dust (PM) emissions shall occur from road, raw material unloading and loading, vehicle movement leading the re-suspension of settled dust, etc. Following mitigation measures are recommended for its control:

- Apply water to suppress dust generation
- Stabilized concreted earthworks with stone, soil, geotextiles, vegetation, compacting.
- Use enclosures – covering for stockpiles – tarpaulin, plastic, fences, screens
- Keep proper shape of stockpiles (avoid steep slopes and faces)
- Remove muck from truck tyres and under bodies prior to leaving the plant premises
- Minimize the drop height of raw materials
- All road surfaces for permanent movement of trucks shall be paved (Concreted)
- Use mechanical road sweeping machine for regular cleaning of roads
- Use industrial vacuum cleaner for cleaning all shop floors and roofs.

1.4.3 Noise Pollution Management Plan

During proposed project, the major noise-generating source will be machinery and equipment. The proposed equipment of the project would be designed for noise levels not exceeding 75 dB (A) at plant boundary.

In general, the following methods will be adopted to control the noise pollution.

- The use of barricades
- The use of vibration insulation techniques at foundation of fans and other moving machinery.
- The use of mufflers, and acoustic louvers in DG sets.
- Proper plantation of trees.
- Providing earmuffs and earplugs to the plant personnel.
- Avoiding continuous (more than 8 hrs) exposure of workers to high noise areas.

1.4.4 Water Pollution Management Plan

Water Requirement:

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

One Time Total water requirement for the project will be 1968 KLD. Total fresh water demand for distillery operation is 488 [KLD@3.9](#) KL of water/KL of Ethanol. Net fresh water requirement including domestic use is 513 KLD. which will be sourced from Hargarh Industrial Area, MPIDC. The water demand and balance of the distillery is shown below in Table 1.5.

In order to reduce the water requirement, it is also proposed to use harvested rainwater in the plant. From the use of collected rain water, the total water requirements are reduced ~10%. The basis for this reduction and quantity estimation are given below:

Rain Water Harvesting:

Average rainfall intensity of the area is considered as 1139.3 mm or 1.14 m. The runoff coefficients for roof top, green area and paved are 0.9, 0.2 and 0.7 respectively.

Roof top area available for rain water harvesting: 19860 m²

Runoff Water from roof top = 19860 x 1.14 x 0.9 = **20376.36 m³**

Total Green Area = 19200 m²

Runoff water from Green Area = 19200 x 1.14 x 0.2 = **4377.6 m³**

Total Road & Paved Area = 16215 m²

Runoff water from road and paved area = 16215 x 1.14 x 0.7 = **12939.57 m³**

Total Rain water can be harvested in Monsoon season (120 days) = **20376.36+4377.6+12939.57= 37693.53 m³** say 80% of this rain water will be used during distillery process (considering 20% evaporation and other losses) = **30154.8 or say 30155 m³**.

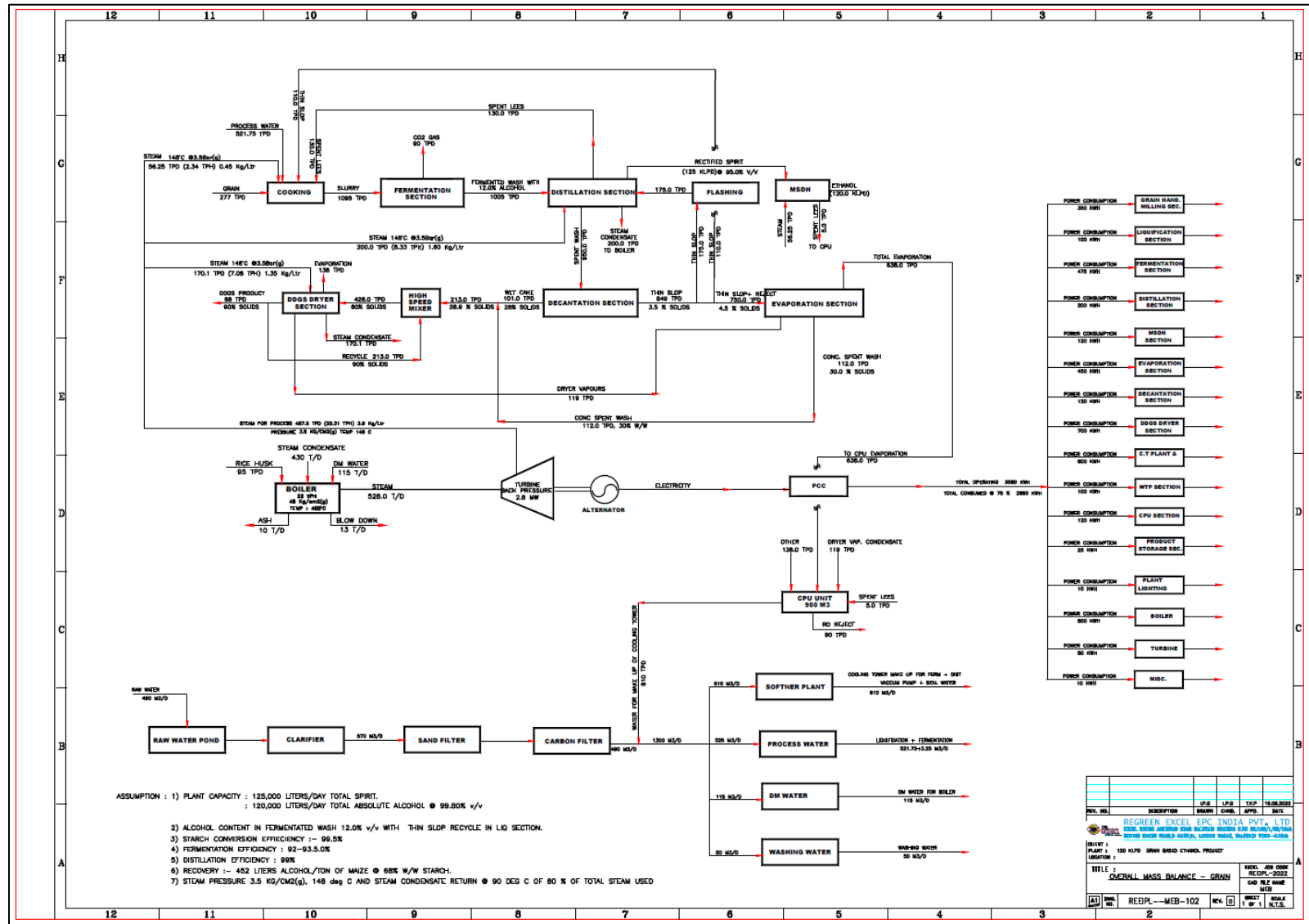
Total water consumption of distillery in normal operation = 298 KLPD or 161040 m³/year

Thus total water saved by the company in year = 30155/161040= 18.7 or ~19%/year

Hence, total percentages saving due to rain water use ~19% per year and total water will be reused in distillery process.

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Table No. 1.5- Water Demand



Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

Water Quality Management

The entire wastewater from the plant will be reused and there will be no discharge of wastewater outside the plant premises under normal circumstances. The distillery will be based on “Zero Liquid Discharge” concept. Following measures will be followed:

- Online monitoring System consisting of flow meter to analyze CPU effluent quality will be installed.
- Proper maintenance of state-of-the-art CPU will be carried out.
- Regular testing of samples at every outlet of CPU will be carried out to monitor the outcome after every treatment process.
- Regular monitoring and maintenance of equipment/machineries will be done and records maintained.
- Periodic checking to find out any leakages or areas susceptible to leaching will be undertaken in order to save the ground water contamination.
- Regular cleaning of all equipment and machineries will be done in order to avoid water clogging areas or any corrosion in the machinery and equipment.

Action plan to control ground water pollution

The distillery will be based on “Zero Liquid Discharge”. The following measures will be adopted to prevent groundwater pollution:-

- During operation phase, spent wash will be treated and will not be discharged on soil/water.
- Treatment of secondary streams like spent lees, condensates, blow downs, etc. shall be in closed loop & any discharge outside the distillery shall not be done.
- Spillage of chemicals/ oils/ etc. will be avoided as best possible.
- The spent wash holding tank will be made up of RCC & steel.
- Regular checking of spent wash storage lagoon will be carried out in order to check for any leakages or leaching.
- Monthly monitoring of water will be done in and around spent wash storage lagoon under environmental monitoring program and parameters will be checked in correlation with drinking water standards IS 10500-1991.
- In case of accidental spillage, proper measures will be undertaken immediately in order to prevent the substance from entering into ground water route.
- Storm water drains will be made along the plant boundary. Sedimentation pits will be provided along the storm water drains. The runoff will be discharged to municipal sewer.
- Garland drains will be provided along the raw material stock yard. The water will be collected in sedimentation tank, treated and then reused for dust suppression.

Water Conservation

The following measures will be adopted to minimize use of ground water-

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- Maximum recycling and reuse of wastewater after treatment. Condensate water will be re used & recycled.
- Total percentage saving due to rain water use ~10% per year and total water will be reused in distillery process.
- Tracking of consumption of water.
- Periodic preventive maintenance of water distribution system.
- Optimum use of process cooling water.
- Training and awareness on water conservation measures.

In addition to above, rainwater harvesting will be done at project site to harvest rainwater from the roof tops and use for various activities at the plant site to conserve fresh water and reduce the water requirement from other sources. Rain water will be collected through open channel & pipelines in to storage tank.

1.4.5 Solid Waste Generation & Disposal

The following will be the solid waste generation from the existing plant and method of disposal:-

- Maximum re-cycling and utilization of generated solid waste shall be done as per the guidelines.
- Unit will prepare Hazardous waste disposal plan, as per applicable statutory conditions under the Hazardous Wastes Act, 2016 and same will be implemented.
- EMC will keep a record of quantity of solid and hazardous waste generated and their proper disposal.
- A separate designated storage area shall be provided with sign boards/labels for storage of hazardous waste.
- The concerned person will prepare a site manual on the total program and activities of solid/hazardous waste management.
- Regular training of employees engaged in solid waste management works.

1.4.6 Hazardous waste generation, storage & disposal

Waste oil generation: 0.5 KL / Annum

This will be stored in covered HDPE drums in a designated area and will be given to SPCB approved vendors.

The lead acid battery or dry battery will be given to authorized recycler having authorization from competent authority. E-waste generated from the plant will be given to authorized recycler having authorization from competent authority;

Details of solid and hazardous waste generated along with their method of collection and mode of disposal are tabulated below in table 1.6:

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Table 1.6 Solid & Hazardous Waste Generation & Its Disposal

S. No.	Solid waste/ hazardous waste	Quantity, /day	Method of collection	Mode of disposal
1.	Boiler fly Ash	48 TPD	Mechanical conveyor into common silo for further disposal.	Brick Manufacturing unit will be installed within the plant premises for utilization of agro waste fly ash
2.	DDGS	54 TPD	Mechanical Conveyor	Sold as Cattle Feed, Poultry & Fisheries
3.	Domestic solid waste	75 kg/day	Labour force. Domestic organic solid waste will be composted, while the inorganic solid waste will be handed over to municipality.	Segregated in separate colored bins at designated places. Disposed to authorized vendors.
4.	Used oil from DG set.	0.5 KL/A	Stored in leak proof sealed barrels	Disposed to SPCB authorized recyclers.
5.	Steam turbine oil waste	1.5 KL/A		

1.4.7 Odour management

Odour Management Plan outlines the methods by which odorous emissions will systematically be assessed, reduced and prevented potentially from the distillery unit.

- A horticulturist will be employed to develop greenbelt according to CPCB guidelines and
- Plantation of such trees that are known to prevent odors.
- Areas having odorous emissions will be covered from all sides with greenbelt/plantation.

1.5 DISASTER MANAGEMENT PLAN

The Company will make provisions for on-site and off-site disaster management plan: For On-site disaster management plan, following points will be taken into consideration:

- To identify, assess, foresee and work out various kinds of possible hazards, their places, potential and damaging capacity and area in case of above happenings.
- Review, revise, redesign, replace or reconstruct the process, plant, vessels and control measures if so assessed.
- Measures to protect persons and property of processing equipment in case of all kinds of accidents, emergencies and disasters.
- To inform people and surroundings about emergency if it is likely to adversely affect them.

For off-site disaster management plan, following points will be taken into consideration:

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- The plan will identify an emergency coordinating officer who would take overall command of the off-site activities.
- Proper co-ordination will be there between the company and outside regulatory authorities.

1.6 MEASURES FOR IMPROVEMENT OF ECOLOGY

There is no ecologically sensitive area within 10 km radius of the project. No wildlife exists in the vicinity of the project. Plantation programme will be undertaken at several areas.

1.6.1 Greenbelt Development

Development of greenbelt is of prime importance due to their capacity to reduce noise and air pollution impacts by attenuation/assimilation and for providing food and habitat for local macro and micro fauna.

A greenbelt of 1.92 ha (34%) will be developed in the plant premises. 10m wide greenbelt will be developed around the plant premises.

Site Preparation: The location earmarked for greenbelt shall be fenced. The soil quality of the plant area is fit for plantation.

Plant propagation: Nursery raised saplings of 2–3 feet height of trees and shrubs will be purchased from local nursery and Forest Dept.

Plantation: This will include digging pits with proper spacing, filling pits with prepared soil, plantation of seedlings and watering. The size of the pit will be 1m x 1m x 1 m for trees and 0.5 m x 0.5 m x 0.5 m for shrubs.

The pits will be filled with soil mixture. The soil will be irrigated soaking wet prior to placing of seedling. The water required for greenbelt development will be met from the treated effluents generated during plant operation. During construction period water supply will be met from available sources.

Plantation will start from the beginning of construction activity (after the site is made clear and demarcating the green portion). Soil proposed to be filled in the pit after plantation will be mixed with compost (1:1). Plantation will be done after first rainfall. Adequate protection will be ensured for achieving high survival rate of the planted saplings. Water and nutrients / manure will be given at appropriate intervals.

Total Trees required as per CPCB/MoEF&CC Norms@2,500/Ha = 1.92 x 2,500 = 4800 or say 5000 No's

The species selection will depend upon type of soil and local species with good survival rate will be selected.

The list of plantation of proposed trees is given below in Table 1.7-

Table: 1.7 List of Big Trees for Proposed Plantation

S. No.	Common Name	No of Trees
1.	Arjun	400

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

2.	Amla	250
3.	Jamun	200
4.	Aam	300
5.	Pipal	400
6.	Chatim	250
7.	Debdaru	300
8.	Ghora neem	350
9.	Ashoka	750
10.	Jarul	400
11.	Karanj	200
12.	Bauhinia	400
13.	Neem	550
14.	Ankol	250
Total		5000

Species has been selected on following basis:-

- ❖ Fast growth;
- ❖ Capacity to endure water stress and climate extremes after initial establishment;
- ❖ Tolerance to specific conditions or alternatively wide adaptability to eco physiological conditions;
- ❖ Differences in height and growth habits;
- ❖ Pleasing appearances;
- ❖ Providing shade; and

The plant layout showing the proposed green belt is given in Figure no. 2.

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhinni Fuels Pvt. Ltd.

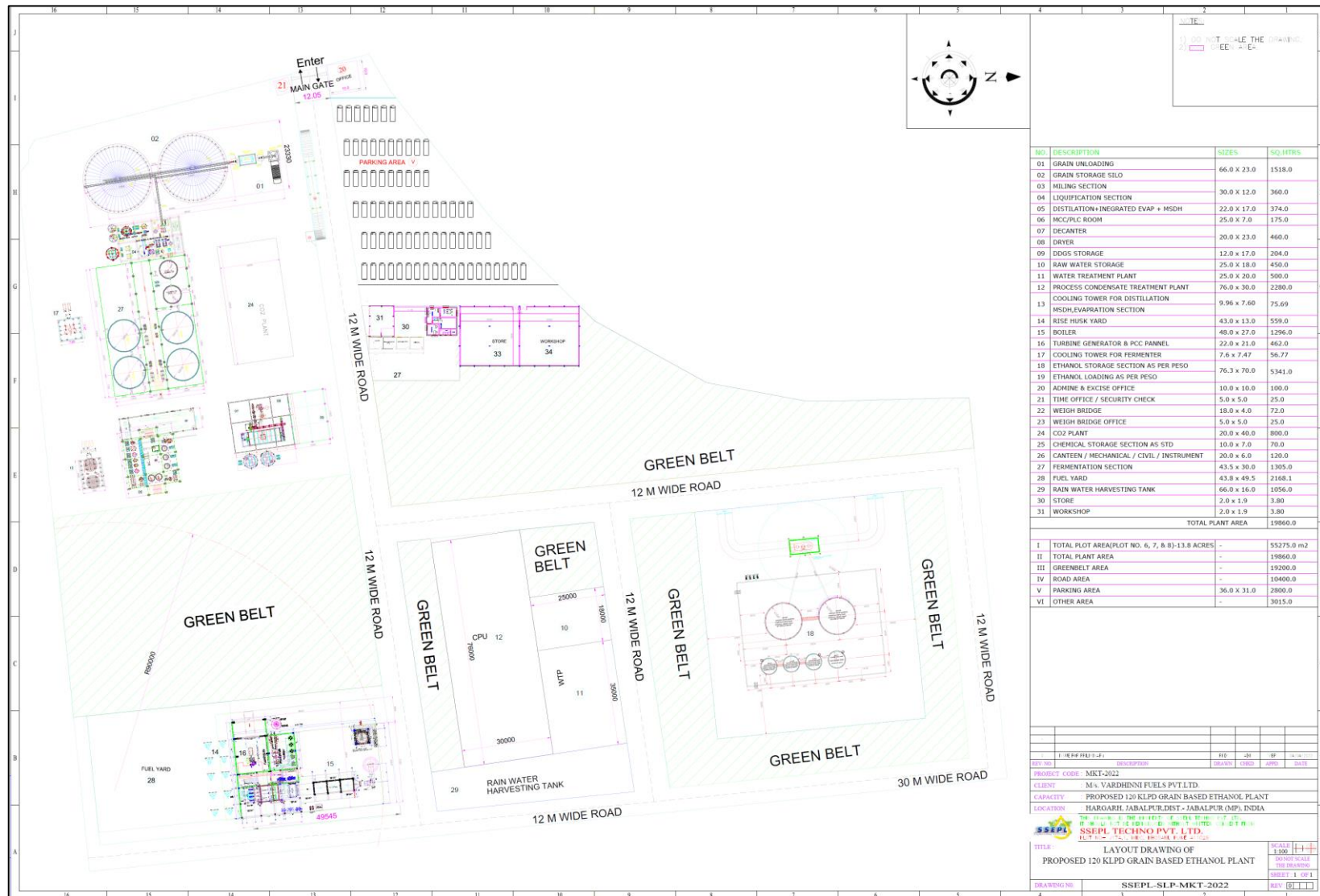


Figure No. 2- Site layout/Green Belt Layout Plan

Proposed 120 KLD Grain Based Ethanol plant along with 3.4 MW Co-generation Power Plant at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P. by M/s Vardhini Fuels Pvt. Ltd.

1.7 BUDGET FOR EMP

The capital cost for environmental management of the project is estimated to be Rs. 715 lakhs & Rs. 140 lakhs per year will be required as annual recurring expenses to meet the recurring expenditure for implementing the measures. The break-up of the investment is shown in **Table 1.8**.

Table 1.8 Investments on Environmental Protection Measures (Rs. in Lakhs)

S. No	Particulars	Capital Cost In Rs lacs	Annual Recurring Cost in Rs lacs
1	Air pollution control system (ESP/Bag filter) on 34 TPH low pressure boiler	150	25
2	CPU (Condensate Polishing Unit)	175	50
3	Scrubbing system, compressing system, liquefying system and storage for CO ₂ removal	50	10
4	Spent wash treatment including concentration using MEE (Multiple effect evaporator).	60	10
5	Installation of Water treatment plant (RO)	35	5
6	Rainwater harvesting systems	20	5
7	OCEMS- Online Continuous Emission/Effluent Monitoring System	20	5
8	Occupational Health Management	40	10
9	Green Belt Development	25	5
10	Environment monitoring	-	10
11	Solid/ hazardous waste management	15	5
12	CER	125	-
	Total	715	140



MP INDUSTRIAL DEVELOPMENT
CORPORATION LTD.

MP Industrial Development Corporation Ltd.
21, Arera Hills Bhopal, 462011
helpdesk@mpidc.co.in

LETTER OF INTENT

Application Number : 1040202106005 **2431**

Dated : 05/08/2022

To,
Raj Kumar Jain

M/s Vardhinni Fuels Private Limited

C/O Anil Jain, S/O Late Nathuram Jain, Tewar, JABALPUR, Distt.- Jabalpur - 482001 (Madhya Pradesh), India.

Subject: Proposal for allotment of land Plot no.6 Sector PHASE-II, Plot no.8 Sector PHASE-II, Plot no.7 Sector PHASE-II in Hargarh Jabalpur, District Jabalpur (Madhya Pradesh).

Reference: Your Online Application Number 1040202106005 Dated : 04/08/2022 06:12 PM

Sir/Madam,

Your above Application is received for allotment of land in Hargarh Jabalpur

We proposed to allot you Plot no.6 Sector PHASE-II, Plot no.8 Sector PHASE-II, Plot no.7 Sector PHASE-II Approx 55275.0 SQMT. in Sector (PHASE-II, PHASE-II, PHASE-II) area of land Being i.e. Approx 594975.125 Sqft in at Hargarh Jabalpur, District Jabalpur (Madhya Pradesh) for setting up a Large Industrial unit for Manufacturing of Others.

The allotment will be subject to following terms and conditions:-

The land will be given on lease for a period of 99 Years

(i). You are required to deposit the following amount within 60 days from the date of issuance of this letter.

No.	Particulars	Amount (in Rs.)
1	Application Processing Fees (Non Refundable)	5,000.00
2	CGST on Application Fees @9%	450.00
3	SGST on Application Fees @9%	450.00
4	Land Premium After Rebate	62,84,375.00
5	Development Charges (@309.0/- Per SQMT.)	1,70,79,975.00
6	Lease Rent per year (@2% of the Premium)	1,25,688.00
7	CGST on Lease Rent @9%	11,312.00
8	SGST on Lease Rent @9%	11,312.00
9	Annual Maintenance Charges of Industrial Area (@6/- per Sqmt.)	3,31,650.00
10	CGST on Maintenance @9%	29,849.00
11	SGST on Maintenance @9%	29,849.00
12	Security Deposit (3 times of Lease Rent)	3,77,064.00
Total Amount (In Rs.)		2,42,86,972.00
Advance Paid Amount (Advance Premium + Application Fee)		15,76,994.00
Remaining Payable Amount (In Rs.)		2,27,09,978.00

(ii). In case the amount specified in para-2 (i) above to not deposited with us within Sixty days, you may deposit the amount within next 60 days with interest @ 10% P.A. After that this letter of intent will stand automatically cancelled.

The allotment shall be subject to the provisions of Madhya Pradesh Rajya Audyogik Bhumi Evam Audyogik Bhawan Prabandhan Niyam, 2019 (as amended from time to time) and to all the terms and conditions contained in the form of lease-deed, hereto annexed, with such modifications and with such additional terms and conditions as the allotting authority may deem fit or necessary to add from time to time.

After receipt of the amount as demanded in para-2 (i) and on completion of the necessary formalities as mentioned above, a letter of allotment shall be issued in your favour. Thereafter, you will be required to execute a lease deed within sixty days. All the conditions of the lease shall have to be strictly complied with.

All costs and expenses incurred or which may be incurred in preparation, execution and registration of the lease deed shall be borne and paid by you. You shall be required to deposit the certified copy of lease deed with us duly registered within 60 days from the date of allotment.

On receipt of the certified copy of registered lease deed, the possession of the land will be handed over to you within seven days.

You will not construct any building unless the construction plans and maps of the building area are approved by the competent authority as required by law.

You shall start the production/implement the project within a period as specified in Madhya Pradesh Rajya Audyogik Bhumi Evam Audyogik Bhawan Prabandhan Niyam- 2019.

In case of air, water & soil pollution and effluent disposal, you shall obtain necessary permission from Madhya Pradesh Pollution Control Board or any other designated authority, authorized for the said objective.

If required, you shall obtain necessary permission for Environment Clearance from the appr

You shall obtain necessary permission/license/registration as may be applicable under the Factories Act, Explosives Act and all other such laws and regulations of Central / State Government or Local Authority, which are in force from time to time and submit a copy of the same.

You shall pay ground rent/shed rent, maintenance charges and other charges as may be fixed by the allotting authority from time to time.

You shall not change the constitution or ownership of the unit without prior permission of the allotting authority in writing.

You will not change use of land for which it is allotted.

In case, you withdraw your application or the allotment is cancelled due to breach of conditions of lease deed or in case of surrender of land, the forfeiture or refund of premium shall be governed by the provisions of Madhya Pradesh Rajya Audyogik Bhumi Evam Bhawan Prabandhan Niyam, 2019.

In acceptance of all the above terms and conditions, please pay the amount as specified in para-2 within 60 days to enable us to issue letter of allotment.

This digitally signed certificate is automatically generated by the designated portal www.invest.mp.gov.in.

IP Address
127.0.0.1

Endr. No: MPIDC/RO Jabalpur/22-23/1040202106005 2431 ~~5005~~
1. Account / Recovey Section, MPIDC RO Jabalpur

Executive Director
Jabalpur

Date :- 5-8-22
05/8/2022
General Manager
Jabalpur
M.P.I.I.D.C. Ltd.
Regional Office, Jabalpur



मध्य प्रदेश MADHYA PRADESH

30 APR 2022
2702 888 03

BU 006266

SELF CERTIFICATE

I, Mr. Raj Kumar Jain s/o Shri Ashok Kumar Jain, Director of M/s Vardhinni Fuels Private Limited hereby self-certify that :-

1. The company has proposed 120 KLPD grain-based Distillery unit and hereby certifies that manufactured quantity will be completely utilised for production of ethanol only so as to participate in Ethanol Blending Program (EBP) of Government of India (GoI)

In accordance to Mo EFCC, New Delhi's Notification vide number S.O. 2339(E) dated 16th June, 2021, it is further self-certified that if it is found that the Ethanol produced based on this EC granted as per the dispensation is not being used completely for Ethanol Blended Petrol (EBP) or if Ethanol is not being produced, or if the Distillery is not fulfilling the requirements based on which the project has appraised as Category B2 Project, the EC shall stand cancelled.

The above is true, correct and to the best of our knowledge and we take the full responsibility of its compliance,

Date : 30.04.2022

Place : Jabalpur

For- Vardhinni Fuels Pvt. Ltd.
For M/s Vardhinni Fuels Private Limited

Director / Authorised Signatory

Solemnly affirmed before me
Declared before me by

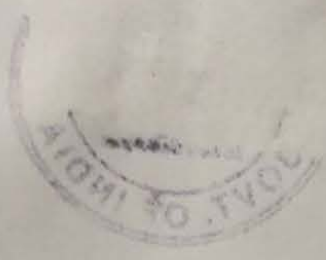
On _____
His wife Div. Sdn. _____
Aged about _____ Years / Occupation _____
Resident of _____
Who is Personally Known to Me / has
been duly identified by _____
Signature of identified _____

HEMLATA CHAUDHARY
NOTARY
Jabalpur District
NC India

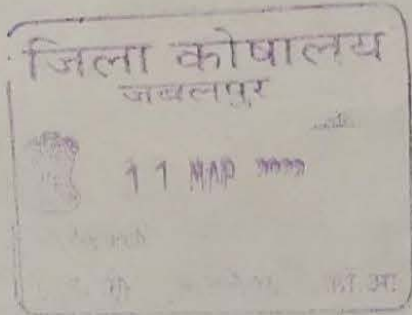
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राजकुमार - लक्ष्मी - निवासी अशोक कुमार
लक्ष्मी - पत्नी - राजकुमार शर्मा शर्मा निवासी
बल्लभपुर -

श्रीमति कल्पना जैन
स्टाम्प विक्रेती
विजय नगर क्षेत्र जबलपुर
कोड नं 204



30 APR 2022
10 58 AM



HEMILATA CHOURHAN
NOTARY
Jabalpur District
M.C. India

श्रीमति कल्पना जैन
श्री राजकुमार शर्मा शर्मा
श्री लक्ष्मी शर्मा शर्मा
श्री अशोक कुमार शर्मा शर्मा
श्री बल्लभपुर शर्मा शर्मा



M P INDUSTRIAL DEVELOPMENT CORPORATION LIMITED.

(Formerly M. P. AUDYOGIK KENDRA VIKAS NIGAM (J) LTD, JABALPUR)
(Government of Madhya Pradesh Undertaking)

REGIONAL OFFICE

"UDYOG BHAWAN", Katanga, Jabalpur (M.P.) - 482 001

Phone : 0761-4004207, 4004209, 2970199 Fax : 0761-2970180

E-mail : akvnjbp@gmail.com, ed.rojbp@mpidc.co.in

Website : www.invest.mp.gov.in

Ref : MP IDC/ROJ/Engg/2022/ 2467

Jabalpur, Dated :- 8/8/22

To,

M/s Vardhinni Fuels Private Limited
Next to Anil Transport Company, Jabalpur-
Bhopal Road, NH-12 Tewar,
Distt. Jabalpur -483053 (M.P.)

Subject :- Providing 600 KLD Water to your unit at Industrial area Hargarh Distt. Jabalpur.

Dear Sir,

In Reference to your letter dated 08.08.2022, Nigam will provide 6.00 Lacs litre water per day to your proposed Grain Based distillery ethanol Project at Industrial Area Hargarh Distt. Jabalpur

By the order of Executive Director

[Signature]
Executive Engineer 08/8/22

CORPORATE OFFICE :

M P INDUSTRIAL DEVELOPMENT CORPORATION LIMITED

SECRETARIAT FOR SINGLE WINDOW SYSTEM

CIN : U51102MP1977SGC001392

"CEDMAP BHAWAN", 16-A, Arera Hills, Bhopal-462011 (India)

Tel. : (91) 755-2559978, 2575773 Fax : (91) 755-2559973 E-mail : facilitation@mptrifac.org Website : www.invest.mp.gov.in
(Formerly Madhya Pradesh Trade and Investment Facilitation Corporation Limited)

1.0 RISK ASSESSMENT AND HAZARD MANAGEMENT

Hazard analysis involves the identification and quantification of the various hazards (unsafe condition) that exist in the plant. On the other hand, risk analysis deals with the identification and quantification of the risk, the plant equipment and Personnel are exposed to, due to accidents resulting from the hazards present in the plant.

Risk analysis involves the identification and assessment of risks to the population exposed to hazards present. This requires an assessment of failure probability, credible accident scenario, vulnerability of population etc. Much of this information is difficult to get or generate consequently, the risk analysis in present case is confined to maximum credible accident studies and safety and risk aspect related to proposed Grain based Distillery and power plant. Activities requiring assessment of risk due to occurrence of most probable instances of hazard and accident are both onsite and off-site.

On-site

- Exposure to fugitive dust, noise, and other emissions
- Housekeeping practices requiring contact with solid and liquid wastes
- Emission/spillage etc. from storage & handling

Off-site

- Exposure to pollutants released from offsite/ storage/related activities
- Contamination due to accidental releases or normal release in combination with natural hazard
- Deposition of toxic pollutants in vegetation / other sinks and possible sudden releases due to accidental occurrences

1.1 Risk Analysis Methodologies

Risk assessment often requires the synthesis of risk profiles, which represent the probability distribution of total annual loss due to a certain set of events or activities. These assessments usually involve estimation of losses for several sub-classifications of the overall process and synthesis of the results into an aggregate risk profile.

Main risk assessment technologies are:

- Hazard and operability study (Hazop), and
- Fault Tree Analysis (FTA)

1.2 Hazop Study

The hazop study is a systematic technique of identifying hazards of operability problems of a process and lists all possible deviations from normal operating condition and how they might occur. The consequences of the process are assessed and the means available to detect and correct the deviations are examined. Thus, within the entire process all “credible” deviations that could lead to hazardous events or operability problems are identified.

1.3 Fault Tree Analysis (FTA)

FTA is primarily a means of analyzing non-identifiable hazards. Hazards of top events (the ultimate happening that is to be avoided) are first identified by other techniques such as HAZOP. Then all combinations of individual failures that can lead to that hazardous event show the logical format of the fault tree. Estimating the individual probabilities and then using the appropriate arithmetical expressions can calculate the top event frequency.

1.4 DISASTER MANAGEMENT PLAN

1.4.1 Definition

A major emergency in an activity/project is one which has the potential to cause serious injury or loss of life. It may cause extensive damage to property and serious disruption both inside and outside the activity/project. It would normally require the assistance of emergency services to handle it effectively.

1.4.2 Scope

An important element of mitigation is emergency planning, i.e. identifying accident possibility, assessing the consequences of such accidents and deciding on the emergency procedures, both on site and off site that would need to be implemented in the event of an emergency.

Emergency planning is just one aspect of safety and cannot be considered in isolation from the proposed project and hence before starting to prepare the plan, works management will ensure that the necessary standards, appropriate to safety legislation, are in place.

1.4.3 OBJECTIVES

The overall objectives of the emergency plan will be:

- To localize the emergency and, eliminate it; and
- To minimize the effects of the accident on people and property.

Elimination will require prompt action by operations and works emergency staff using, for example, fire-fighting equipment, water sprays etc.

Minimizing the effects may include rescue, first aid, evacuation, rehabilitation and giving information promptly to people living nearby.

1.4.4 Identification of Hazards

The following types of hazards may be identified at Globus Spirits Ltd.

- Fire in Electric Panels, Oil room.
- Waste treatment processes.
- Cleaning of barrels, which have held chemical substances. To deal the above emergencies, the Emergency Plan is prepared.

1.4.5 Safety Measures for Storage & Handling

- HANDLING AND STORAGE; Keeping away from heat, sparks and open flame, care will be taken for avoidance of spillage, skin and eye contact, well ventilation, Use of approved respirator if air contamination is above acceptable level will be promoted. For Storage and handling following precautions will be taken:
 - Keeping away from oxidizers, heat and flames.
 - Avoidance of plastics, rubber and coatings in the storage area.
 - Cool, dry, & ventilated storage and closed containers.
 - Grounding of the container and transferring of equipment to eliminate static electric sparks.

In case of any emergency following measures would be taken:

- FIRST AID MEASURES: For Skin contact, Eye contact, & Inhalation.
- FIRE FIGHTING MEASURES:
 - Use of extinguishing media surrounding the fire as water, dry chemicals (BC or ABC powder), CO, Sand, dolomite, etc

- Foam System for firefighting will be provided to control fire from the storage tank. The foam thus produced will suppress fire by separating the fuel from the air (oxygen), and hence avoiding the fire & explosion to occur in the tank. Foam would blanket the fuel surface smothering the fire. The fuel will also be cooled by the water content of the foam.
- The foam blanket suppresses the release of flammable vapors that can mix with the air.
- Special Fire Fighting Procedures; Keeping the fire upwind. Shutting down of all possible sources of ignition, keeping of run-off water out of sewers and water sources. Avoidance of water in straight hose stream which will scatter and spread fire. Use of spray or fog nozzles will be promoted, cool containers will be exposed to flames with water from the side until well after the fire is out.
- Hazardous Decomposition Products: gases of Carbon Monoxide (CO) & Carbon Dioxide (CO₂).
- ACCIDENTAL RELEASE MEASURES: For Spill Cleanup well Ventilation, Shutting off or removal of all possible sources of ignition, absorbance of small quantities with paper towels and evaporate in safe place like fume hood and burning of these towels in a safe manner), Use of respiratory and/or liquid-contact protection by the Clean-up personnel will be promoted.

1.5 Emergency Planning

1.5.1 General

Disaster Management Plan for an industrial unit is necessarily a combination of various actions which are to be taken in a very short time but in a present sequence to deal effectively and efficiently with any disaster, emergency or major accident with an aim to keep the loss of men, material, plant/machinery etc. to the minimum.

The main functions of the Disaster Management Cell are to prepare a detailed Disaster Management Plan, which includes:

- Identification of various types of expected disaster depending upon the type of the industrial unit.
- Identification of various groups, agencies, departments etc. necessary for dealing with a specific disaster effectively.

- Preparation – by intensive training of relevant teams/groups within the organization to deal with a specific disaster and keep them in readiness.
- Establishment of an early detection system for the disaster.
- Development of a reliable instant information/communication system.
- Organization and mobilization of all the concerned departments/ organizations / groups and agencies instantly when needed.
- A major disaster that can be expected due to fire in this proposed distillery.

1.5.2 Emergency Planning For Disaster Due To Fire

Cable rooms, transformer, unit, auxiliary transformers, oil tanks, etc. within the plant are the likely areas for which disaster management plan is to be made to deal with any eventuality of fire. Stores, workshop, canteen and administrative building will be included.

1.5.3 Classification of Fire

Class (A)

Fire involving combustible materials like wood, paper, cloth etc.

Class (B)

Fire due to liquid materials like oil, diesel, petroleum products and all inflammables.

Class (C)

Fires involving domestic and industrial gases like butane and propane etc.

Class (D)

Metal fires etc.

Class (E)

Electrical fires due to short circuiting etc.

1.5.4 Need of Establishing a Fire Fighting Group

A small spark of fire may result into loss of machines and the damage by fire may high economic losses. This type of losses can be avoided by preventing and controlling the fire instantly for which fire-fighting group will be established.

Establish which would house and keep in readiness, the following types of equipment and arrangements.

- CO₂ extinguishers
- Dry powder chemical extinguishers

- Foam extinguishers
- 80 mm. spray hoses
- Fire brigade
- Fire hydrant
- Protocol (chemical to combat oil fires).

In order to avoid fire in cable galleries, all the power and control cables of FRLS type (Fire Resistant Low Smoke) will be used.

1.5.5 Inspection

Fire alarm panel (electrical) will cover the entire plant. The inspection group will periodically inspect fire extinguishers in fire stations and machines and other places.

The groups will display emergency telephone number boards at vital points. The group will regularly carry out general inspection for fire.

1.5.6 Procedure for Extinguishing Fire

The following steps will be taken during a fire accident in the system:

As soon as the message is received about fire, one of the systems will be diverted to the place of the fire accident along with a staff member.

Simultaneously plant fire station will be informed by phone walkie for fire brigades and fire stations of nearby area.

In the meanwhile, the pipe system will be operated to obtain maximum pressure on output. In case cables are within the reach of fire, power supply will be tripped and the cables shifted.

1.5.7 Fire Fighting With Water

Adequate and reliable arrangement is required for fighting the fire with water such as:

1. Provision for Fire brigade and Fire hydrant.
2. Arrangement of pipelines along and around all vulnerable areas.
3. Provision of valves at appropriate points to enable supply of water at the required place/area or divert the same to another direction/pipe line.
4. Provision of overhead tanks which will be providing with the water during power failure and it would work by the gravitational force.

1.5.8 SOURCES OF WATER FOR FIRE FIGHTING

The following two sources of water have been considered for firefighting:

- Overhead Tank

- Raw Water Reservoir

1.5.9 Fire Fighting With Fire Extinguishers

To deal with fire – other than carbonaceous fires, which can be dealt with by water – suitable fire extinguishers are required to do the job effectively. It is therefore, necessary to keep adequate number of extinguishers in readiness at easily approachable places. Adequate number of fire stations would be:

- Further, other spray groups from the system will be diverted to the spot.
- In case of fire in the belt, belt will be cut near the burning portion to save the remaining parts.
- After extinguishing the fire, the area will be well prepared for reuse.
- Foam System for firefighting will be provided to control fire from the storage tank. The foam thus produced will suppress fire by separating the fuel from the air (oxygen), and hence avoiding the fire & explosion to occur in the tank. Foam would blanket the fuel surface smothering the fire. The fuel will also be cooled by the water content of the foam.
- The foam blanket suppresses the release of flammable vapors that can mix with the air.

1.6 Environmental Management Cell

Apart from having an EMP, it is also necessary to have a permanent organizational set up charged with the task of proposed plant with a department consisting of officers from various disciplines to co-ordinate the activities concerned with the management and implementation of the environmental control measures.

Basically this department will undertake to monitor the environmental pollution levels by measuring stack emissions, ambient air quality, water and effluent quality, noise level etc. either departmentally or by appointing external agencies wherever necessary. In case the monitored results of environmental pollution are found exceeding the allowable values, the environmental management cell will suggest remedial action and get these suggestions implemented through the concerned plant authorities. The actual operation and maintenance of pollution control equipment of each unit will be under the respective plant managers. The Environmental Management Cell (EMC) will handle of all the related activities such as collection of statistics of health of workers and population of the region, afforestation and green belt development.

1.7 On–Site Emergency Plan

1.7.1 Introduction

The views of the possible hazards that can arise out of the daily operations in the distillery plant, various measures are adopted to prevent the occurrence of a major accident. This comprises of:

- Built in safety measures, alarms, trips and interlocks etc.
- Standard safe operating and maintenance procedures permit system etc.
- Training of all the involved staff in normal and emergency operating procedures.
- Training of all employees in safety, fire fighting and first aid.

However, in spite of these precautions, it is required to foresee situation of major accident and plan for taking timely action to minimize the effects of such incident on the safety and health of persons working in the plant as well as those living around the premises.

1.7.2 Preparation of Plan

1.7.2.1 Alarm System

A siren shall be provided under the control of Security office in the plant premises to give warning. In case of emergencies this will be used on the instructions to shift in charge that is positioned round the clock. The warning signal for emergency shall be as follows:

- Emergency Siren: Waxing and waning sound for 3 minutes.
- All clear signal: Continuous siren for one minute.

1.7.3 Communication

Walkies & Talkies are located at strategic locations; internal telephone system EPBX with external P&T telephones would be provided.

1.7.4 Fire Protection System

1.7.4.1 Fire Fighting System

The fire protection system for the unit is to provide for early detection, alarm, containment and suppression of fires. The fire detection and protection system has been planned to meet the above objective an all–statutory and insurance requirement of Tariff Advisory Committee (TAC) of India. The complete fire protection system will comprise of the following.

(a) Fire brigade

Automatic / manual fire detection & alarm system

(b) Fire Hydrant

Fire hydrant will be provided at all around in the plant as per TAC Norms.

(c) Portable fire extinguishers

Various areas of the plant will have one or more of the above system depending upon the particular nature of risk involved in that area.

(d) Portable Chemical Fire Extinguishers

These are intended as a first line of defense, and hence will be stationed at strategic locations in different buildings and also for outdoor facilities. Portable fire extinguishers will be foam type; carbon dioxide type and multipurpose dry chemical (MPDC) type.

(e) Fire Detection and Alarm System

Fire detection and alarm system an effective means of detection, visual indication of fire location and audible alarm of any fire at its incipient stage. This system will comprise fire alarm panels, automatic fire detectors, manual call points and fire siren (hooter).

The main fire alarm panel will provide both visual and audible alarm of fire in any protected areas of the plant.

Manual break glass type fire alarms will be provided at strategic locations where high hazards exists.

Automatic fire detectors will be provided for coal handling areas and in plant areas such as control rooms, switchgear rooms, cable galleries etc.

1.7.5 First Aid

A first aid centre with adequate facilities shall be provided. It shall be maintained round the clock by a compounder cum dresser and a doctor. An Ambulance shall also be provided at site to carry affected people to hospital.

1.7.6 Security

The security requirements of the company premises shall be taken care of by CSO assisted by a Fire In charge. The team, apart from the normal security functions will manage the role required during a disaster management operation as a part of the crisis control team.

1.7.7 Safety

The safety wing led by a Safety Manager will meet the requirement of emergencies round the clock. The required safety appliances shall be distributed at different locations of the plant to meet any eventualities. Poster/placards reflecting safety awareness will be placed at different locations in the plant area.

1.7.8 Evacuation Procedure

As the major hazard is only due to fire, which has more or less localized impact no mass evacuation, procedures are required. Evacuation would involve only the people working very close to the fire area.

1.7.9 Emergency Control Center

Provision is made to establish an Emergency Control Centre (ECC) from which emergency operations are directed and coordinated. This centre is activated as soon as on-site emergency is declared.

The ECC consists of one room, located in an area that offers minimal risk being directly exposed to possible accidents.

During an emergency, the Emergency Management Staff, including the site controller will gather in the ECC. Therefore, the ECC is equipped with adequate communication systems in the form of telephones and other equipments to allow unhampered organisations and other nearby facility personnel.

The ECC provides shelter to its occupants against the most common accidents; in addition, the ECC's communication systems are protected from possible shutdown. The ECC has its own emergency lighting arrangement and electric communication systems operation.

Only a limited and prearranged number of people are admitted to the ECC, when in use. This eliminates unnecessary interference and reduces confusion.

The ECC is always ready for operation and provided with the equipment and supplies necessary during the emergency such as:

- Updated copies of the On-site Disaster Management Plan.
- Emergency telephone numbers.
- The names, phone number, and address of external agencies, response organizations and neighboring facilities.
- The adequate number of telephone (more than two).

- Emergency lights, Clocks, Personal protective equipment.
- List of fire extinguishers with their type no. and location, capacity, etc.
- Safety helmets – List of quantity & location.
- Status boards/message board.
- Material safety data sheets for chemicals handled at the facility.
- Several maps of the facility including drainage system for surrounding area showing:
 - Areas where hazardous materials are stored.
 - Plot plans of storage tanks, routes of pipelines, all water permanent lines etc.
 - The locations where personal protective equipment are stored.
 - The position of pumping stations and other water sources.
 - Roads and plant entrances.
 - Assembly areas & layout of Hydrant lines.

1.7.10 Communication Equipment and Alarm Systems

This kind of equipment is absolutely vital for notifying accident; make the emergency known both inside and outside of the facility, and coordinating, the response actions among the various groups involved in response operations.

In particular, this equipment is used to communicate within the facility; communicate between the facility and outside organizations; and inform the public.

Different communications systems can vary in effectiveness, depending on the task. The most common types installed in the plant are given below.

1.7.10.1 Sirens

These are audible alarm systems commonly used in facilities. In case of any emergency siren will be operated short intermittently for 1.5 minutes.

An alarm does more than just emergency warning. It also instructs people to carry out specific assignments, such as reach to assembly point for further instructions and actions, or carry out protective measures; this can be achieved only if the people are familiar with the alarm systems and are trained to respond to it.

1.7.11 Personal Protective Equipments

This equipment is used mainly for three reasons; to protect personnel from a hazard while performing rescue/accident control operations, to do maintenance and repair work under hazardous conditions, and for escape purposes. The list of Personal Protective Equipment provided at the facility and their locations are available in ECC.

Effective command and control accomplish these functions necessitates personal trained in this On-site Disaster Management Plan with adequate facilities and equipments and equipment to carry out their duties and functions. These organizations and the facilities required to support their response are summarized in the following subsections.

1.7.12 Procedure for Testing & Updating the Plan

Simulated emergency preparedness exercises and mock fire fighting exercises including mutual aid scheme resources and in conservation with district emergency authority to be carried out time to time.

1.7.13 Disclosure of Information to Worker and Public Awareness System Anticipated

- Safety awareness among workers by conserving various training programmes and Seminars, competition, slogans etc.
- Practical exercise.
- Distribution and practices of safety Instructions.
- Safety Quiz contests.
- Display of Safety Posters & Safety Slogans.
- Developing Safety Instructions for every Job and ensuring these instructions/booklets or manuals by the workers.

VARDHINNI FUELS PRIVATE LIMITED

Date: 24/08/2022

AUHTORIZATION UNDERTAKING

This is to certify that Raj Kumar Jain, Director whose specimen is attested here below is authorized to represent/sign all papers/documents and make decision on behalf of the company related to Environment Clearance from the office of MoEFCC, New Delhi.

- He will be representative on behalf of **M/s Vardhinni Fuels Pvt Ltd** for Environment Clearance w.r.t. Grain Based Distillery Capacity 120 KLPD along with 3.4 MW Co-generation Power Plant located at Plot No. 6, 7 & 8, Hargarh Industrial Area, Tehsil Sihora, Distt. Jabalpur, M.P.

For M/s Vardhinni Fuels Pvt. Ltd.

Name: Raj Kumar Jain

Designation: Director



**(Authorized Person)
Specimen Signature**

**ADDRESS: NEXT TO ANIL TRANSPORT COMPANY, JABALPUR -BHOPAL ROAD NH12, TEWAR,
JABALPUR, MADHYA PRADESH: 483053**

**CONTACT NUMBER: 8966000588 WEBSITE: WWW.ANILGROUP.ORG EMAIL:
VARDHINNIFUELS@ANILGROUP.ORG UIN : U23200MP2021PTC056885**