Environmental Clearance Compliance Report

## For "M/s. NIRA BHIMA SAHAKARI SAKHAR KARKHANA LTD; SHAHAJINAGAR"



M/s.Nira Bhima Sahakari Sakhar Karkhana Ltd., At Shahajinagar, Post-Redni, Taluka-Indapur, Dist-Pune- 413114

Prepared by

## PRAGMATIC BIO AND ENVIRO

Scheme No-2/1, Sector No-25, Bhel Chowk, Opp. Dhanvantari Hospital, Sindhu Nagar, Nigadi, Pune-44 Maharastra, India Email id- <u>pragenviro@gmail.com</u> Contact No-9765165573

Shahajinagar, Tal. Indapur, Dist. Pune.

Founder:

Hon:Shri.Harshwardhan Shahajirao Patil Ex.Minister:Co-Operation & Parliamentary Affairs Bawada: Tel: 02111-275501,275100

Ref No.: NIRA-BHIMA/

Date: / /201

#### To,

The Additional Director (S), Ministry of Environment, Forest and Climate Change Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Line, Nagpur, Maharastra-440001

Sub: Half Yearly Post Environment Clearance Compliance Report for "Nira Bhima Sahakari Sakhar Kharkhana Ltd" at Shahajinagar, Post- Redni, Tal-Indapur, Dist- Pune, Maharastra...

Ref: Environmental Clearance Letter No. SEAC-2012/CR-177/TC-2

#### Respected Sir,

We are submitting herewith the Half Yearly Post Environment Clearance Compliance Reports (June-2014, December 2014, June 2015, December-2015, June-2016, December-2016 and June 2017) for Nira Bhima Sahakari Sakhar Kharkhana Ltd" at Shahajinagar, Post-Redni, Tal-Indapur, Dist- Pune, Maharastra. EC accorded by Department of Environment, Government of Maharashtra, vide its Letter No. SEAC-2012/CR-177/TC-2, dated 21<sup>st</sup> January 2014.

Also we are enclosing herewith CD of the documents mentioned above for your reference. We will be sending the compliance report regularly to this office.

Thanking you,

Yours Faithfully,

# For M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., (NBSSKL)

Authorized Signature [Mr. D. V. Mane-M.D.]



दर्याहरण, यम एवं जलवायु परिवर्तन मंत्रालय Unistry of Eavironment, Forest & Climate Change दोगों व कार्यालय (पश्चिम मध्य क्षेत्र) Regional Office (Western Central Zone) मू-तल, पूर्व खंड/Ground Floor, East Wing नया सचिवालय भयन/New Secretarist Building शिविल लाईण्स/ Civil Lines

Copy to:-

- 1. Regional office Maharashtra Pollution Control Board, Pune. Nagpur-449 001
- 2. The Member Secretary, Maharashtra Pollution Control Board, Mumbai
- 3. The Member Secretary, State Level Expert Appraisal Committee-(SEAC)

Shahajinagar, Tal. Indapur, Dist. Pune.

Founder:

Hon.Shri.Harshwardhan Shahajirao Patil Ex.Minister:Co-Operation & Parliamentary Affairs Bawada: Tel: 02111-275501,275100

Date: / /201

Ref No .: NIRA-BHIMA/

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Authorized Signature [Mr. D. V. Mane-M.D.]

Copy to:-



1. Regional office Maharashtra Pollution Control Board, Pune.

2. The Member Secretary, Maharashtra Pollution Control Board, Mumbai

A. The Member Secretary, State Level Expert Appraisal Committee-(SEAC)

Shahajinagar, Tal. Indapur, Dist. Pune.

Founder:

Hon.Shri.Harshwardhan Shahajirao Patil Ex.Minister:Co-Operation & Parliamentary Affairs Bawada: Tel: 02111-275501,275100

Ref No.: NIRA-BHIMA/

Date: / /201

Το,

#### The Additional Director (S),

Ministry of Environment, Forest and Climate Change Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Line, Nagpur, Maharastra-440001

- Sub: Half Yearly Post Environment Clearance Compliance Report for "Nira Bhima Sahakari Sakhar Kharkhana Ltd" at Shahajinagar, Post- Redni, Tal-Indapur, Dist- Pune, Maharastra...
- Ref: Environmental Clearance Letter No. SEAC-2012/CR-177/TC-2

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Yours Faithfully,

For M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., (NBSSKL)

Authorized Signature [Mr. D. V. Mane-M.D.]

Copy to:-



Mataraskira Pellution Gonteol Soard Kalpateru Point, 2/3Min Phor. Ston Maturga Schame, Roed Nr. 3. Ston Maturga Schame, Stan (East). P. Ston Ball - 400 022 Marin Schames - 400 022

1. Regional office Maharashire Follution Control Board, Pune.

2. The Member Secretary, Maharashtra Pollution Control Board, Mumbai

3. The Member Secretary, State Level Expert Appraisal Committee-(SEAC)

O/C

Shahajinagar, Tal. Indapur, Dist. Pune.

· Founder:

Hon.Shri.Harshwardhan Shahajirao Patil Ex.Minister:Co-Operation & Parliamentary Affairs Bawada: Tel: 02111-275501,275100

Ref No .: NIRA-BHIMA/

Date: /201

OC

To.

#### The Additional Director (S),

Ministry of Environment, Forest and Climate Change Regional Office (WCZ), Ground Floor, East Wing, New Secretariat Building, Civil Line, Nagpur, Maharastra-440001

Half Yearly Post Environment Clearance Compliance Report for "Nira Bhima Sahakari Sub: Sakhar Kharkhana Ltd" at Shahajinagar, Post- Redni, Tal-Indapur, Dist- Pune, Maharastra...

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Yours Faithfully,

### For M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., (NBSSKL)

Authorized Signature [Mr. D. V. Mane-M.D.]

Copy to:-



Received

Regional Office Pune

1-Regional office Maharashtra Pollution Control Board, Pune.

2. The Member Secretary, Maharashtra Pollution Control Board, Mumbai

3. The Member Secretary, State Level Expert Appraisal Committee-(SEAC)

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Annexure-I

## PART - I - DATA SHEET

# PERIOD OF COMPLIANCE REPORT- [JANUARY 2014 TO MAY 2014]

1.	Project type: River - Valley/ Mining/ Industry/	Industry
	Thermal/ Nuclear/ other (specify)	
2.	Name of the Project	18 MW Bagasse Based Co- generation Power
		Plant by M/s. Nira Bhima Sahakari Sakhar
		Karkhana Ltd., (NBSSKL)
3.	Environment Clearance Letter (s)/OM No. and date	SEAC-2012/CR-177/TC-2 dtd. 21 <sup>st</sup> January 2014
4.	Location:	
	(a) District (s)	Pune
	(b) State (s)	Maharashtra
	(c) Location Latitude/ Longitude	17°59'29.94"N and 74°56'42.45"E
5.	(a) Address for correspondence	M/s. Nira Bhima Sahakari Sakhar Kharkhana Ltd., Shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune – 413114
	(b) Address of Executive Project Engineer/ Manager (with pin code / Fax)	Mr. D.V. Mane- (Managing Director) M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., At Shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune, Maharashtra-413114 Telephone No.: 02111 – 275501/275100 Mob. No- 9146003002 Email id: nirabhima@rediffmail.com
6.	Salient Features	
	(a) Of the project	Please Refer Annexure – II
	(b) Of Environmental Management Plans	Please Refer Annexure – III
7.0	Breakup of the project area	Total Plot Area - 100 (Acre) Built-up Area- 11 (Acre)
	(a) Submergence area: forest & non forest	Not Applicable
	(b) Others	Not Applicable

8.	Breakup of the project affected population with enumeration of those losing houses /dwelling units only, agricultural land only, both dwelling units & agricultural land & landless labourers /artisan.	There is no displacement of population due to project hence not applicable.
	(a) SC, ST /Adivasis	Not Applicable since there is no displacement of population
	<ul> <li>(b) Others</li> <li>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details and years of survey)</li> </ul>	Not Applicable since there is no displacement of population
9.	Financial details	
	<ul> <li>(a) Project cost as originally planned and sub-sequent revised estimates and the year of price reference,</li> </ul>	87.817 Cr
	(b) Allocation made for environmental management plans with item wise and year wise break-up.	Please refer annexure IV
Ī	(c) Benefit cost ratio/Internal rate of Return and the year of assessment	
	(d) Whether (c) include the cost of environmental management as shown in the above.	Yes
	(c) Actual expenditure incurred on the project so far	15.00 Cr
	(f) Actual expenditure incurred on the environmental management plans so far	35 Laes
0.	Forest land requirement.	No Forest land required for project
	(a) The status of approval for diversion of	Not applicable

s of clearing felling s of compensatory a forestation, if ts on the viability & sustainability nsatory a forestation Programme in of actual field experience so far clear felling in non-forest areas submergence area of reservoir, oads), if any with quantitative us of construction. (Actual &/or	Not applicable Not applicable Not applicable Not applicable Not applicable INI NII II I	Actual Foundation in Progress
ts on the viability & sustainability nsatory a forestation Programme in of actual field experience so far clear felling in non-forest areas submergence area of reservoir, oads), if any with quantitative	Not applicable Nil Planned 18 MW Bagasse Based Co-generation Power	50 57000000
nsatory a forestation Programme in of actual field experience so far clear felling in non-forest areas submergence area of reservoir, oads), if any with quantitative	Nil Planned 18 MW Bagasse Based Co-generation Power	
submergence area of reservoir, oads), if any with quantitative	Planned 18 MW Bagasse Based Co-generation Power	
us of construction. (Actual &/or	18 MW Bagasse Based Co-generation Power	48 5702007.)
	Co-generation Power	Foundation in Progress
Commencement (Actual &/or	14 <sup>th</sup> August, 2013.	
ompletion (Actual &/or planned)	28th November, 2014	
e delay if the project is yet to	Not Applicable	
Visits		
ored by the regional office on	Yes, MPCB officer visite	ed the site.
	03.05.2014	
	toring report 1 Bhima Sahakari Sakhar Karkhan	Not Applicable         Visits       Not Applicable         dates on which the project was tored by the regional office on ous occasions, if any.       Yes, MPCB officer visit         of site visit for this Environment       03.05.2014



### PART-1

## DATA SHEET

# PERIOD OF COMPLIANCE REPORT- [JUNE 2014 TO NOVEMBER 2014]

1.	Project type: River -Valley/ Mining/ Industry/	Industry
	Thermal/ Nuclear/ other (specify)	
2.	Name of the Project	18 MW Bagasse Based Co-generation Power
		Plant by M/s. Nira Bhima Sahakari Sakhar
		Karkhana Ltd., (NBSSKL)
3.	Environment Clearance Letter (s)/OM No. and	SEAC-2012/CR-177/TC-2 dtd. 21st January
	date	2014
4.	Location:	
	(d) District (s)	Pune
	(e) State (s)	Maharashtra
	(f) Location Latitude/Longitude	17°59'29.94"N and 74°56'42.45"E
5.	(a) Address for correspondence	M/s. Nira Bhima Sabakari Sakhar Kharkhana
		Ltd., Shahajinagar, Post-Redni, Tal-Indapur,
		Dist-Pune - 413114
	(b) Address of Executive Project Engineer/	Mr. D.V. Mane- (Managing Director) M/s. Nira Bhima Sahakari Sakhar Karkhana
	Manager (with pin code / Fax)	M/s. Nira Bhima Sanakari Sakhar Karkuana Ltd.,
		At Shahajinagar, Post-Redni, Tal-Indapur,
		Dist-Pune, Maharashtra-413114
		Telephone No.: 02111 - 275501/275100 Mob. No- 9146003002
		Email id: nirabhima a rediffinail.com
6.	Salient Features	
	(a) Of the project	Please Refer Annexure – H
	(b) Of Environmental Management Plans	Please Refer Annexure - III
7.	Breakup of the project area	Total Plot Area - 100 (Acre)
		Built-up Area- 11 (Acre)
	(a) Submergence area: forest & non forest	Not Applicable
	(b) Others	Not Applicable

	<ol> <li>Breakup of the project affected population with enumeration of those losing houses /dwellin units only, agricultural land only, both dwelling units &amp; agricultural land &amp; landless labourers /artisan.</li> </ol>	There is no displacement of population due to project hence not applicable.
	(a) SC, ST /Adivasis	Not Applicable since there is no displacement of population
	<ul> <li>(b) Others</li> <li>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details and years of survey)</li> </ul>	Not Applicable since there is no displacement of population
9.	Financial details	
	<ul> <li>(a) Project cost as originally planned and sub-sequent revised estimates and the year of price reference.</li> </ul>	87.817 Cr
	(b) Allocation made for environmental management plans with item wise and year wise break-up.	Please refer annexure IV
	(c) Benefit cost ratio/Internal rate of Return and the year of assessment	
	(d) Whether (c) include the cost of environmental management as shown in the above.	Yes
	(e) Actual expenditure incurred on the project so far	60.00 Cr
	(f) Actual expenditure incurred on the environmental management plans so far	100 Lacs
K	Encoded load and the	No Forest land required for project
1	a be status of annance I for the	Not applicable

	forest land for non-forestry use		
	(b) The status of clearing felling	Not applicable	
	(c) The status of compensatory a forestation, if any	Not applicable	
	(d) Comments on the viability & sustainability of compensatory a forestation Programme in the light of actual field experience so far	Not applicable	
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any with quantitative information	Nil	
12.	Present Status of construction. (Actual &/or planned)	Planned	Actual
		18 MW Bagasse Based Co-generation Power Plant	Work in Progress
	(c) Date of Commencement (Actual &/or planned)	14 <sup>th</sup> August, 2013.	
	(d) Date of completion (Actual &/or planned)	28 <sup>th</sup> November, 2014	
13.	Reason for the delay if the project is yet to start.	Not Applicable	
14.	Dates of Site Visits		
	(c) The dates on which the project was monitored by the regional office on previous occasions, if any.	Yes, MPCB officer visit	ed the site.
	(d) Date of site visit for this Environment monitoring report	03.11.2014	

For M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.,

Authorized Signatory



## PART-1

## DATA SHEET

# PERIOD OF COMPLIANCE REPORT- [DECEMBER 2014 TO MAY 2015]

1.	Project type: River -Valley/ Mining/ Industry/ Thermal/ Nuclear/ other (specify)	Industry		
2.	Name of the Project	18 MW Bagasse Based Co- generation Power Plant by M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., (NBSSKL)		
3.	Environment Clearance Letter (s)/OM No. and date	SEAC-2012/CR-177/TC-2 dtd. 21 <sup>st</sup> January 2014		
4.	Location: (g) District (s) (h) State (s) (i) Location Latitude/ Longitude	Pune Maharashtra 17°59'29.94''N and 74°56'42.45''E		
5.	(a) Address for correspondence	M/s. Nira Bhima Sahakari Sakhar Kharkhana Ltd., Shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune – 413114		
	(b) Address of Executive Project Engineer/ Manager (with pin code / Fax)	Mr. D.V. Mane- (Managing Director) M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., At Shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune, Maharashtra-413114 Telephone No.: 02111 – 275501/275100 Mob. No- 9146003002 Email id: nirabhima@rediffmail.com		
6.	Salient Features	Please Refer Annexure – II		
	(a) Of the project	Please Refer Annexure - III		
-	(b) Of Environmental Management Plans			
7.	Breakup of the project area	Total Plot Area – 100 (Acre) Built-up Area- 11 (Acre)		
_	(a) Submergence area: forest & non forest	Not Applicable		
-	(b) Others	Not Applicable		

8.	Breakup of the project affected population with enumeration of those losing houses /dwelling units only, agricultural land only, both dwelling units & agricultural land & landless labourers /artisan.	There is no displacement of population due to project hence not applicable.
	(a) SC, ST /Adivasis	Not Applicable since there is no displacement of population
	<ul> <li>(b) Others</li> <li>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details and years of survey)</li> </ul>	Not Applicable since there is no displacement of population
9.	Financial details	
	<ul> <li>(a) Project cost as originally planned and sub-sequent revised estimates and the year of price reference.</li> </ul>	87.817 Cr
	(b) Allocation made for environmental management plans with item wise and year wise break-up.	Please refer annexure IV
	(c) Benefit cost ratio/Internal rate of Return and the year of assessment	
	(d) Whether (c) include the cost of environmental management as shown in the above.	Yes
	(c) Actual expenditure incurred on the project so far	10.01 Cr
	(f) Actual expenditure incurred on the environmental management plans so far	65.00 Lacs
10.	Forest land requirement.	No Forest land required for project
	(a) The status of approval for diversion of	Not applicable

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	forest land for non-forestry use		
-	(b) The status of clearing felling	Not applicable	
	(c) The status of compensatory a forestation, if any	Not applicable	
	(d) Comments on the viability & sustainability of compensatory a forestation Programme in the light of actual field experience so far	Not applicable	
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any with quantitative information	Nil	
12.	Present Status of construction. (Actual &/or planned)	Planned	Actual
		18 MW Bagasse Based Co-generation Power Plant	Work is completed
	(e) Date of Commencement (Actual &/or planned)	14 <sup>th</sup> August, 2013.	
	(f) Date of completion (Actual &/or planned)	28th November, 2014	
13.	Reason for the delay if the project is yet to start.	Not Applicable	
14.	Dates of Site Visits		
	(e) The dates on which the project was monitored by the regional office on previous occasions, if any.	Yes, MPCB officer vi	sited the site.
	(f) Date of site visit for this Environment monitoring report	05.05.2015	
	For M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd Authorized Signatory	L.,	

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# PART - I

## DATA SHEET

# PERIOD OF COMPLIANCE REPORT- [JUNE 2015 TO NOVEMBER 2015]

L.	Project type: River -Valley/ Mining/ Industry/ Thermal/ Nuclear/ other (specify)	Industry
2.	Name of the Project	18 MW Bagasse Based Co- generation Power Plant by M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., (NBSSKL)
3.	Environment Clearance Letter (s)/OM No. and date	SEAC-2012/CR-177/TC-2 dtd. 21 <sup>st</sup> January 2014
4.	Location: (j) District (s) (k) State (s) (l) Location Latitude/ Longitude	Pune Maharashtra 17°59'29.94"N and 74°56'42.45"E
5.	(a) Address for correspondence	M/s. Nira Bhima Sahakari Sakhar Kharkhana Ltd., Shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune – 413114
	(b) Address of Executive Project Engineer/ Manager (with pin code / Fax)	Mr. D.V. Mane- (Managing Director) M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., At Shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune, Maharashtra-413114 Telephone No.: 02111 – 275501/275100 Mob. No- 9146003002 Email id: nirabhima a rediffmail.com
6.	Salient Features	Please Refer Annexure - II
	(a) Of the project (b) Of Environmental Management Plans	Please Refer Annexure - III
7.	and the second second second	Total Plot Area - 100 (Acre) Built-up Area- 11 (Acre)
	(a) Submergence area: forest & non forest	Not Applicable
-	(b) Others	Not Applicable

		•
8.	Breakup of the project affected population with enumeration of those losing houses /dwelling units only, agricultural land only, both dwelling units & agricultural land & landless labourers /artisan.	There is no displacement of population due to project hence not applicable.
	(a) SC, ST /Adivasis	Not Applicable since there is no displacement of population
	<ul> <li>(b) Others</li> <li>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details and years of survey)</li> </ul>	Not Applicable since there is no displacement of population
9.	Financial details	
	<ul> <li>(a) Project cost as originally planned and sub-sequent revised estimates and the year of price reference.</li> </ul>	87.817 Cr
	(b) Allocation made for environmental management plans with item wise and year wise break-up.	Please refer annexure IV
	(c) Benefit cost ratio/Internal rate of Return and the year of assessment	
	(d) Whether (c) include the cost of environmental management as shown in the above.	Yes
	(e) Actual expenditure incurred on the project so far	0.00 Cr
	(f) Actual expenditure incurred on the environmental management plans so far	9.58 Lacs
10.	Forest land requirement.	No Forest land required for project
	(a) The status of approval for diversion of	Not applicable

		1. The second se	
-	forest land for non-forestry use		
	(b) The status of clearing felling	Not applicable	
-	(c) The status of compensatory a forestation, if any	Not applicable	
-	(d) Comments on the viability & sustainability of compensatory a forestation Programme in the light of actual field experience so far	Not applicable	
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any with quantitative information	Nil	
12.	Present Status of construction. (Actual &/or planned)	Planned	Actual
		18 MW Bagasse Based Co-generation Power Plant	Work is completed
_	(g) Date of Commencement (Actual &/or planned)	14 <sup>th</sup> August, 2013.	
	(h) Date of completion (Actual &/or planned)	28th November, 2014	
13.	Reason for the delay if the project is yet to start.	Not Applicable	
14.	Dates of Site Visits		
	(g) The dates on which the project was monitored by the regional office on previous occasions, if any.		isited the site.
	(h) Date of site visit for this Environment monitoring report	04.11.2015	

For M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.,

Authorized Signatory



8.	Breakup of the project affected population with enumeration of those losing houses /dwelling units only, agricultural land only, both dwelling units & agricultural land & landless labourers /artisan.	There is no displacement of population due to project hence not applicable.
	(a) SC, ST /Adivasis	Not Applicable since there is no displacement of population
	<ul> <li>(b) Others</li> <li>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details and years of survey)</li> </ul>	Not Applicable since there is no displacement of population
9.	Financial details	
	<ul> <li>(a) Project cost as originally planned and sub-sequent revised estimates and the year of price reference.</li> </ul>	87.817 Cr
	(b) Allocation made for environmental management plans with item wise and year wise break-up.	Please refer annexure IV
	(c) Benefit cost ratio/Internal rate of Return and the year of assessment	
	(d) Whether (c) include the cost of environmental management as shown in the above.	Yes
	(c) Actual expenditure incurred on the project so far	0.00 Cr
	(f) Actual expenditure incurred on the environmental management plans so far	9.86 Lacs
10		No Forest land required for project
	(a) The status of approval for diversion of	Not applicable

	forest land for non-forestry use	Manaliashla	
-	(b) The status of clearing icining	Not applicable	
-	(c) The status of compensatory a forestation, if any	Not applicable	
	(d) Comments on the viability & sustainability of compensatory a forestation Programme in the light of actual field experience so far	Not applicable	
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any with quantitative information	Nil	
12.	Present Status of construction. (Actual &/or planned)	Planned	Actual
		18 MW Bagasse Based Co-generation Power Plant 14 <sup>th</sup> August, 2013.	Work is completed
	(i) Date of Commencement (Actual &/or planned)		
-	(j) Date of completion (Actual &/or planned)	28 <sup>th</sup> November, 2014	
13.	Reason for the delay if the project is yet to start.	Not Applicable	-
14.	Dates of Site Visits	Yes, MPCB officer	visited the site.
	<ul> <li>(i) The dates on which the project was monitored by the regional office on previous occasions if any.</li> </ul>	k+	
	(j) Date of site visit for this Environment	04.05.2016	

For M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.,

Authorized Signatory



## PART-1

### DATA SHEET

# PERIOD OF COMPLIANCE REPORT- [JUNE 2016 TO NOVEMBER 2016]

1.	Project type: River Valley/ Mining/ Industry/ Thermal/ Nuclear/ other (specify)	Industry
2.	Name of the Project	18 MW Bagasse Based Co- generation Power Plant by M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., (NBSSKL)
3.	Environment Clearance Letter (s)/OM No. and date	SEAC-2012/CR-177/TC-2 dtd. 21st January 2014
4.	Location: (p) District (s) (q) State (s) (r) Location Latitude/ Longitude	Pune Maharashtra 17°59'29.94"N and 74°56'42.45"E
5.	(a) Address for correspondence	M/s. Nira Bhima Sahakari Sakhar Kharkhana Ltd., Shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune – 413114
	(b) Address of Executive Project Engineer/ Manager (with pin code / Fax)	Mr. D.V. Mane- (Managing Director) M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., At Shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune, Maharashtra-413114 Telephone No.: 02111 – 275501/275100 Mob. No- 9146003002 Email id: nirabhima grediffinail.com
6.	Salient Features	
-	(a) Of the project	Please Refer Annexure – II
-	(b) Of Environmental Management Plans	Please Refer Annexure – III
7.	Breakup of the project area	Total Plot Area – 100 (Acre) Built-up Area- 11 (Acre)
-	(a) Submergence area: forest & non forest	Not Applicable
-	(b) Others	Not Applicable

8.	Breakup of the project affected population	There is no displacement of population due to
0.	with enumeration of those losing houses /dwelling units only, agricultural land only, both dwelling units & agricultural land & landless labourers /artisan.	project hence not applicable.
	(a) SC, ST /Adivasis	Not Applicable since there is no displacement of population
	<ul> <li>(b) Others</li> <li>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details and years of survey)</li> </ul>	Not Applicable since there is no displacement of population
9.	Financial details	
	<ul> <li>(a) Project cost as originally planned and sub-sequent revised estimates and the year of price reference.</li> </ul>	87.817 Cr
	(b) Allocation made for environmental management plans with item wise and year wise break-up.	Please refer annexure IV
	(c) Benefit cost ratio/Internal rate of Return and the year of assessment	
	(d) Whether (c) include the cost of environmental management as shown in the above.	Yes
	<ul> <li>(e) Actual expenditure incurred on the project so far</li> </ul>	0.00 Cr
	(f) Actual expenditure incurred on the environmental management plans so far	10.96 Lacs
10.	Forest land requirement.	No Forest land required for project
	(a) The status of approval for diversion of	Not applicable

	forest land for non-forestry use		
	(b) The status of clearing felling	Not applicable	
	(c) The status of compensatory a forestation, if any	Not applicable	
	(d) Comments on the viability & sustainability of compensatory a forestation Programme in the light of actual field experience so far	Not applicable	
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any with quantitative information	Nil	
12.	Present Status of construction. (Actual &/or planned)	Planned	Actual
		18 MW Bagasse Based Co-generation Power Plant	Work is completed
_	(k) Date of Commencement (Actual &/or planned)	14 <sup>th</sup> August, 2013.	
-	(1) Date of completion (Actual &/or planned)	28th November, 2014	
13.	Reason for the delay if the project is yet to start.	Not Applicable	
14.	Dates of Site Visits		
	(k) The dates on which the project was monitored by the regional office on previous occasions, if any.	Yes, MPCB officer visite	ed the site.
	<ul> <li>(l) Date of site visit for this Environment monitoring report</li> </ul>	03.11.2016	
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For M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.,

Authorized Signatory



### PART-1

### DATA SHEET

# PERIOD OF COMPLIANCE REPORT- [DECEMBER 2016 TO MAY 2017]

1.	Project type: RiverValley/ Mining/ Industry/ Thermal/ Nuclear/ other (specify)	Industry
2.	Name of the Project	18 MW Bagasse Based Co-generation Power Plant by M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., (NBSSKL)
3.	Environment Clearance Letter (s)/OM No. and date	SEAC-2012/CR-177/TC-2 dtd. 21st January 2014
4.	Location: (s) District (s) (t) State (s) (u) Location Latitude/ Longitude	Pune Maharashtra 17°59'29.94"N and 74°56'42.45"E
5.	(a) Address for correspondence	M/s. Nira Bhima Sahakari Sakhar Kharkhana Ltd., Shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune – 413114
	(b) Address of Executive Project Engineer/ Manager (with pin code / Fax)	Mr. D.V. Mane- (Managing Director) M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd., At Shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune, Maharashtra-413114 Telephone No.: 02111 – 275501/275100 Mob. No- 9146003002 Email id: <u>nirabhima drediffinail.com</u>
6.	Salient Features	
	(a) Of the project	Picase Refer Annexure – II
	(b) Of Environmental Management Plans	Please Refer Annexure - III
7.	Breakup of the project area	Total Plot Area - 100 (Acre) Built-up Area- 11 (Acre)
	(a) Submergence area: forest & non forest	Not Applicable
	(b) Others	Not Applicable

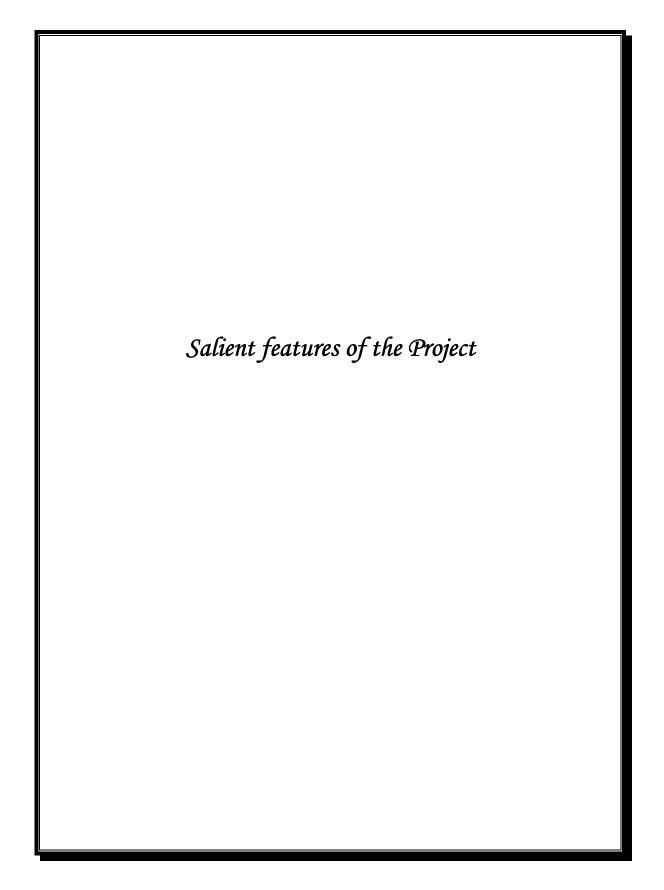
8.	Breakup of the project affected population with enumeration of those losing houses /dwelling units only, agricultural land only, both dwelling units & agricultural land & landless labourers /artisan.	There is no displacement of population due to project hence not applicable.
	(a) SC, ST /Adivasis	Not Applicable since there is no displacement of population
	<ul> <li>(b) Others</li> <li>(Please indicate whether these figures are based on any scientific and systematic survey carried out or only provisional figures, if a survey is carried out give details and years of survey)</li> </ul>	Not Applicable since there is no displacement of population
9.	Financial details	
	<ul> <li>(a) Project cost as originally planned and sub-sequent revised estimates and the year of price reference.</li> </ul>	87.817 Cr
	(b) Allocation made for environmental management plans with item wise and year wise break-up.	Please refer annexure IV
	(c) Benefit cost ratio/Internal rate of Return and the year of assessment	
	<ul> <li>(d) Whether (c) include the cost of environmental management as shown in the above.</li> </ul>	Yes
1	(e) Actual expenditure incurred on the project so far	0.00 Cr
	(f) Actual expenditure incurred on the environmental management plans so far	9.60Lacs
10.	Forest land requirement.	No Forest land required for project
-	(a) The status of approval for diversion of	Not applicable

	forest land for non-forestry use		
-	(b) The status of clearing felling	Not applicable	
	(c) The status of compensatory a forestation, if any	Not applicable	
	(d) Comments on the viability & sustainability of compensatory a forestation Programme in the light of actual field experience so far	Not applicable	
11.	The status of clear felling in non-forest areas (such as submergence area of reservoir, approach roads), if any with quantitative information	Nil	
12.	Present Status of construction. (Actual &/or planned)	Planned	Actual
		18 MW Bagasse Based Co-generation Power Plant	Work is completed
-	(m) Date of Commencement (Actual &/or planned)	14 <sup>th</sup> August, 2013.	
	(n) Date of completion (Actual &/or planned)	28th November, 2014	
13.	Reason for the delay if the project is yet to start.	Not Applicable	
14.	Dates of Site Visits		
	(m)The dates on which the project was monitored by the regional office on previous occasions, if any.		
	(n) Date of site visit for this Environment	07-05-2017	

For M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.,

Authorized Signatory

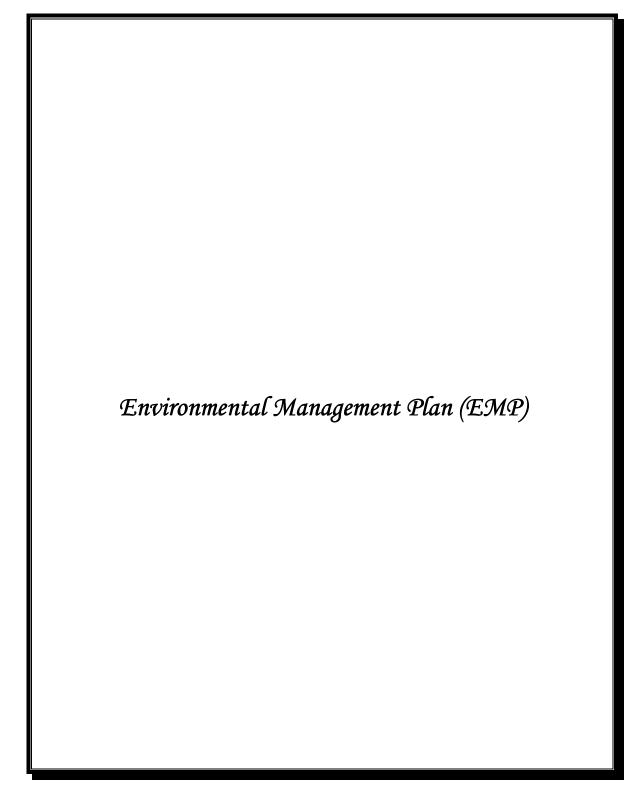




Name of the Project	"Nira Bhima Sahakari Sakhar Karkhana Ltd." (NBSSKL)	
Project Site	The Project Site is located near Shahajinagar, Post-Redni, Dist-Pune, Maharastra	
Installed Capacity	18 MW	
Total Plot Area	100 (Acre)	
Total Built- up Area	11 (Acre)	
Availability of Land	411074 Sq.M.	
	Season (160 Days) : 893 CMD	
Quantity of Water requirement	Off Season (69 Days) 1009 CMD	
Source of Water	Bhima River (8.5 KM)	
Estimated project cost	8187.70 Lakhs	
Nearest Town	Indapur is at a distance of 16 KM	
Nearest railway station	Baramati R.S. is at a distance of 50 KM	
	Nearest Airport is at solapur at a distance of	
Nearest Airport	112 Km	

# Salient Features of the Project

Annexure-III





Environmental Impact Assessment Report of 18MW Co-Gen Power Plant by NBSSKL at Shahajinagar Post Redni, Dist Pune EME/CS/EIA- NBSSKL-IND/2012-13/108:R00dt.:28/11/2012

## CHAPTER 9

# ENVIRONMENTAL MANAGEMENT PLAN

#### 9.1 INTRODUCTION

In view of the global concept of sustainable development, Environment Management is a crucial segment of Industrial Management. Apart from the social obligation, the industries are required to meet a series of statutory norms laid by Government bodies. Better environment management means less waste generation, better resources management leading to cost savings. Further, it gives a better public image. Therefore, preparation of Environmental Management Plan is a must to fulfill bifocal aspect of the statutory compliance as well as that of social concern. The objective of Environment Management Plan (EMP) is to conserve resources, minimize waste generation, treatment of wastes and protect natural properties. Environmental Management Plan (EMP) has been prepared on the basis of existing environmental status of the project location and the expected impacts of the project activities on environment

The management of the M/s. NBSSKL will take all the necessary steps to control and mitigate the environmental pollution in the designing stage of the project. While implementing the project M/s. NBSSKL will follow guidelines specified by CPCB under the Corporate Responsibility for Environmental Protection (CREP) for power plants. The EMP task will likely be administered by the "Health, Safety and Environment (HSE) Department", who will have the authority where necessary to "stop the job" if an environmentally detrimental activity is being conducted.

The EMP operation/implementation will be the responsibility of the "HSE Officer", who will be coordinating, arranging the collection and reporting of the results of all emissions, ambient air quality, noise and water quality monitoring.

Water needs of proposed Sugar Complex may be reasonably low, but generally this resource is declining. Thus, on one hand one should use it less and on the other the source should not be left polluted for others. Air environment needs to be continuously managed, because man needs inhalation every moment, so also is Flora and Fauna dependent on it. The biological aspects, soil and ground water are all interdependent. Thus, there is a need of proper environmental management and a conscious plan for it.



Environmental Impact Assessment Report of 18MW Co-Gen Power Plant by NBSSKL at Shahajinagar Post Redai, Dist Pune EME/CS/EIA- NBSSKL-IND/2012-13/108:R00dt.:28/11/2012 (R-

It is mandatory for the industry to submit Environmental Statement to State Pollution Control Board as per Environment (Protection), Amendment Rule, 1993 for the previous financial year ending 31<sup>st</sup> March on or before 30<sup>th</sup> September every year (Financial environmental statement FY 2011-12 attached as an **Annexure-14**).

To draw a rigid EMP is especially important because, India has to support 16.1% of the world's population only on 2.3 % of the global area with 0.4% of energy reserve. This point of Low Energy Reserve is especially taken note by the Project Proponents. In this respect efforts are oriented towards:

- Bagasse is used for energy
- Ash will be used for Biocomposting to produce manure
- > Treated effluent will be used for green belt development & agricultural purposes.

# 9.2 OBJECTIVES OF ENVIRONMENTAL MANAGEMENT PLAN

- > To define the components of environmental management.
- To prepare an environmental hierarchy.
- To prepare a checklist for statutory compliance.
- To prepare environmental organization.
- To prepare a schedule for monitoring and compliance.

## 9.3 CHECKLIST OF STATUTORY OBLIGATIONS

There are a number of environmental statutes required to be attained by the industries. NBSSKL shall obey the provisions of all relevant Acts, Rules, Notifications and Orders. The checklist of these obligations, which facilitates the obedience of the laws of land are

given below :

- Water (Prevention and Control of Pollution) Act, 1974;
- Water (Prevention and Control of Pollution) Cess Act, 1977;
- Air (Prevention and Control of Pollution) Act, 1981;
- Environment (Protection) Act, 1986;
- Environment (Protection) Rules, 1986;
- Hazardous Waste (Management and Handling) Rules 2003;
- ELA Notification\*2006.

### 9.4 INSTITUTIONL ARRANGEMENTS FOR ENVIRONMENTPROTECTION & CONSERVATION

Environmental Management Cell will be established, which will be supervised and controlled by an independent Plant Manager supported by a team of technically qualified personnel apart from other operating staff. Organization structure of the Environment Management Cell is presented in **Figure 9.1**.

It will be the responsibility of this Cell to supervise the monitoring of environmental attributes viz. 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 contaminants are found to exceed the standard limits, the Environmental Management Cell will suggest remedial measures and get them implemented.

The functions of Environmental Management Cell will be as follows:

- > Obtaining Consent Order from the Maharashtra Pollution Control Board.
- Environmental monitoring.
- Analysis of environmental data, preparation and submission of reports to statutory authorities, Corporate Centre etc.
- Co-ordination with statutory bodies, functional groups of the station, head office etc.
- Interactions for evolving and implementation of modification programs to improve the availability/ efficiency of pollution control devices / systems.
- Conducting Environmental Appraisal (Internal) and Environmental Audit.

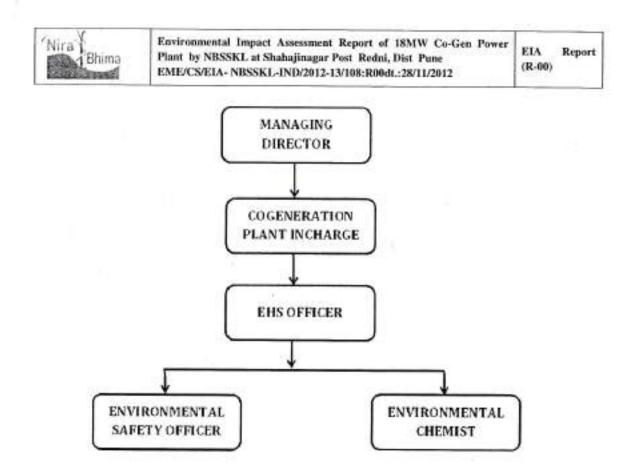


Figure 9.1: Environment Management Cell

Environment management plan will apply the construction as well as operation phase of the plant to mitigate negative impacts due to proposed activity

### 9.5 CONSTRUCTION PHASE ENVIRONMENT MANAGEMENT

The construction activities of the proposed unit will increase in dust concentrations and fugitive emission due to vehicles movement. Frequent water sprinkling in the vicinity of the construction sites will be undertaken. The following control measures are recommended to mitigate the probable adverse impacts:

- During construction phase M/s NBSSKL will be taken care to provide all necessary facilities to construction workers such as water supply, sanitary facilities, temporary housing, sewage treatment facilities, drainage facilities and domestic fuels
- Vehicles transporting loose construction material (clay, sand etc.) to be covered with tarpaulins.
- During construction periods with abnormal wind speeds, in particular during dry weather conditions, workers on the construction site should be provided with adequate inhalation and eyes protection gears. In case particulates in air hamper a clear view over

MITCON Consultancy & Engineering Services Ltd., Pune

- Necessary care will be taken as per the safety norms for the storage of the petroleum products (Diesel, Petrol, Kerosene etc).
- It will be ensured that both gasoline and diesel powered vehicles are properly maintained to comply to the exhaust emission standards.
- Contractor will supervise the safe working of their employees.
- Barricades and fences are provided around the construction area personnel protective equipments e.g. safety helmet, goggles, gumshoes, etc. will be provided to the workers.
- Accidental spill of oils from construction equipment and storage sites will be prevented.
- Though the effect of noise on the nearby inhabitants due to construction activity will be negligible, noise prone activities will be restricted to the day time.
- As soon as construction is over, surplus of excavated material will be utilized to fill up low lying areas and all surfaces will be reinstated.
- Routing and scheduling construction trucks to reduce delays to traffic during peak travel times would reduce secondary air quality impacts caused by a reduction in traffic speeds while waiting for construction trucks
- M/s NBSSKL will give preference to local eligible people through both direct and indirect employment.
- Tree plantation will be undertaken during the construction phase for strengthen the existing green belt so that air pollution will be nullify in operation phase of the project.
- Educational needs of the region will be improved by encouraging the workers to allow their children to attend school.

#### 9.6 OPERATIONAL PHASE ENVIRONMENT MANAGEMENT

#### 9.6.1 Air Environment

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The major pollutants from existing & proposed activity are PM<sub>10</sub> & PM<sub>2.5</sub>, Sulphur Dioxide and Oxides of Nitrogen.

#### 9.6.1.1. Stack Emissions

The following measures will be adopted for the control of emissions from the stacks of the proposed unit.

Report

- The height of the stack will be 75 m for proposed 66 TPH boiler with single chimney as per CPCB Norms.
- Suitably designed ESP with efficiency of 99.9 % will be placed downstream of the stack which will separate out the incoming dust in flue gas so as to maintain the emissions PM10 & PM2.5 (50 mg/Nm3) at the outlet of the stack.
- Stack emissions will be regularly monitored by NBSSKL/external agencies on periodic basis to check the efficiency of air polluting control devices and necessary action.

Generation Capacity	Pollutant	Emission limit	
210 MW or more	Particulate matter	150 mg/Nm3	
Less than 210 MW	Particulate matter	350 mg/Nm3	
State PCB and other imp	plementing agencies und	tion, such as protected area, the er the Environment (Protection Nm <sup>3</sup> , irrespective of generation	
Stack height /limits			
Generation capacity	Stack Height (meters)		
500 MW and above	275		
	220		
200 MW/210 MW & above to less than 500 MW			

## Table 9.1: CPCB Standards for Stack Height

- Based on the above the stack height will be 76 m for proposed unit in order to restrict the GLC of SO<sub>2</sub> and NO<sub>x</sub> within the prescribed limit of CPCB (AAQ standard for SO<sub>2</sub> and NO<sub>x</sub> is <80 µg/m3 for 24 hourly basis).</p>
- The advantage of the grate type boiler where the combustion temperature is in the range 850-900°c resulting in lower NOx emissions.

- To control of the airborne fugitive emissions from the ash handling area will be achieved through regular water sprinkling in this area.
- > Avenue plantation and green belt development will be undertaken in the operation phase.

### 9.6.1.2. Fugitive Emission Management

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The following measures will be adopted to control the fugitive emissions:

- The dust generated from vehicular traffic during operation phase will be suppressed by providing adequate water spray systems.
- All vehicles and their exhausts will be well maintained and will be regularly monitored for emission generated from the vehicle exhaust;
- Provide wheel washers for vehicles to remove particulate matter that would be carried offsite by vehicles that would decrease deposition of particulate matter on area roads and subsequent entrainment from those roads.
- To control of the airborne fugitive emissions from the ash handling area will be achieved through regular water sprinkling in this area.
- The green belt development at ash handling areas will be undertaken.
- Avenue plantation and green belt development will be undertaken in the operation phase.

#### 9.6.1.3. Stack Gas Monitoring

The emissions from the stack will be monitored continuously for exit concentration of the suspended particulate matter,  $SO_2 \mu g/m^3$  and  $NOx \mu g/m^3$ . Sampling ports will be provided in the stacks as per CPCB guidelines. If the concentration of these pollutants exceeds the limits, necessary control measures will be taken.

### 9.6.2 Noise Environment

The design features provided to ensure low noise levels are as given below:

All rotating items will be well lubricated and provided with enclosures as far as possible to reduce noise transmission. Vibration isolators will be provided to reduce vibration and noise wherever possible



- Manufacturers and suppliers of machine/equipment like cane handling equipments i.e. Belt Conveyor, Compressors, STG, Turbine and generators will be manufactured as per OSHA/ MoEF guidelines.
- > The insulation will be provided to reduce noise.
- The personnel safety such as ear muffs, ear plugs and industrial helmets will also act as a noise reducers will be provided workers.
- Layouts of equipment foundations and structures will be designed keeping in view the requirement of noise abatement;
- Central control room(s) provided for operation and supervision of plant and equipment will be air-conditioned, glass fiber insulated frames which will help in reducing noise levels. Necessary enclosures will also be provided on the working platforms/areas to reduce the noise levels;
- The workers working in the high noise areas like compressor houses, crushers, crystallizer, sulphator, blowers, generators, feed pumps, steam generation plant and turbo generator area will be provided with ear muffs/ear plugs
- Acoustic laggings and silencers will be provided in equipment wherever necessary. The compressed air station will be provided with suction side silencers. Ventilation fans will be installed in enclosed premises
- Supply ducts and grills on the ventilation and air conditioning system will be suitably sized for minimum noise level
- > The silencers and mufflers of the individual machines will be regularly checked
- The noise level will not exceed the permissible limit 75 dB (A) during the day time 70 dB (A) night time within the plant premises. Green belt around the plant area will reduce the noise level further.
- > Occupational Health & Safety (OHSAS) System for evaluation of exposure of noise pollution on the associated staff and comparing it with permissible exposure and subsequently taking corrective actions will be developed.
- The adoption of the above measures, it is anticipated that noise levels will be maintained in 45-50 dB (A) range at the boundary of the plant premises. Earth mounds and plantations on the periphery of the plant would further attenuate noise level.

Report

Nira Bhima	Environmental Impact Assessment Report of 18MW Co-Gen Power Plant by NBSSKL at Shahajinagar Post Redni, Dist Pune EME/CS/EIA- NRSSKL-IND/2012-13/108:R00dt.:28/11/2012	EIA J (R-00)	Report
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#### 9.6.3 Ash Evacuation System

The ash handling system envisaged for the Cogeneration power project is of two types:

- 1. Submerged belt conveyor system for grate ash
- 2. Mechanical ash handling system for fly ash

The ash generated from the boiler shall be collected separately and taken to a common ash silo system for disposal. The total generated ash during season and offseason operation are presented **Table 9.2** 

Bagasse based ash removed from the grate is approximately 40% and the fly ash quantity is approximately 60% from the ESP.

Sr No.	Fuel	Season -	Feeding 160 Days n – 72 Days	% of Ash		Ash Ge	neration	
		Season	Off-season		Season (	160 Days)	Off-seas	on (69Days)
		(18MW)	(12 MW)		Bottom Ash	Fly Ash	Bottom Ash	Fly Ash
1	Bagasse	152564 MT	32493 TPH	2	1221MT	1830MT	260 MT	390MT
		Total			1221 MT	1830MT	260 MT	390 MT

## Table 9.2: Ash Generation

### 9.6.3.1. Bottom Ash Handling (BAH) Evacuation System

Bagasse based bottom ash during season i.e 1221MT and during off-season i.e.260 MT shall be collected in water impounded, refractory lined, triple 'v' type bottom ash silo having capacity 100m<sup>3</sup>. The ash received in the grate discharge hoppers will be around 500<sup>0</sup>C,

with ash lumps of size 200 mm maximum. The ash from ash riddling hopper will be dry and powdery in nature and occasionally with hot solids. Generated ash shall be used for biocomposting along with pressmud (generated from sugar factory) because it contains high percentage of potash.



#### 9.6.3.2. Fly Ash Handling System

- The fly ash (as collected in ESP hoppers, APH hopper and duct hoppers) generated during season operation will be 1830 MT. & during off-season 390 MT. A separate system will be designed to collect fly ash in dry form in RCC silo using vacuum cum pressure pneumatic system. From the silos, fly ash could be dispatched to nearest local users in trucks.
- The fly ash conveying air will be vented to the atmosphere through vent bag filter. Bagasse based ash mixed with press mud and used as manure in surrounding agro-field. Separate system will designed for bio-composting.

#### 9.6.3.3. Ash Utilization/Management System

As per the MoEF notification dated on 3rd April 2007 S.O.513 (E) on fly ash utilization, as per the item (2) under the responsibility of cogen-power plant fly ash shall not at any time store more than three months in their storage/ ash pond.

Fly ash generated from the cogen -power plant will be commercially utilized, to the extent possible, in one or more of the following industries: (i) cement, (ii) brick, (iii) fly ash, (iv) road making and paving, (v) agriculture(soil conditioner), (vi) back filling and (vii) any other industry that is technically feasible. Apart from these uses, fly ash can be used for the construction of ash- pond dyke, reclamation of low-lying areas.

The following strategies will be adopted to ensure 100% fly ash utilization

- Bagasse based ash mixed with press mud and used as manure in surrounding agro-field. Existing system will be used for preparation of manure.
- Bagasse based ash contain high percentage of potash it is good nutrient for plant growth in agro-field. So that 100% utilization plan for bagasse ash will be planned.
- Basic technology, as well as initial expert advice for using fly ash in making bricks and cement blocks, will be provided to local brick and cement block makers free of charge.
- The state government will be requested to provide certain financial incentives to brick and cement block makers, and to ensure the use of fly ash building materials in public works projects to the fullest possible extent. The state government can be requested to provide valuable assistance by creating ash depots under its auspices.

Plant Plant	onmental Impact Assessment Report of 18MW Co-Gen Power by NBSSKL at Shahajinagar Post Redni, Dist Pune /CS/EIA- NBSSKL-IND/2012-13/108:R00dt.:28/11/2012	
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#### 9.6.5 Water Environment

#### 9.6.5.1 Wastewater Management

The total fresh water requirement for the proposed activity will be 893 m<sup>3</sup>/day during season and 1003m<sup>3</sup>/day during off-season and waste water generation will be 146 m<sup>3</sup>/day during season and 144 m<sup>3</sup>/day during off-season. The continuous efforts will be made to reduce the water consumption and thereby reduce wastewater generation. Flow meters will be installed on all major water inlets and the flow rates will be continuously monitored. Periodic water audits will be conducted to explore the possibilities of minimizing water consumption.

The wastewater generated from the different units such as cooling tower blow down, boiler blow down, DM plant, domestic waste water of proposed activity shall be treated in existing ETP having capacity 700 m<sup>3</sup>/day. NBSSKL has already modernized existing ETP for effective treatment. (Details ETP along with treated waste water quality results attached as an **Annexure15**).

### 9.6.5.2. Effluent from water treatment plant

The water treatment plant will be based on conventional water treatment system; the requirement of the chemicals will be same as that of a conventional demineralization plant. The acid and alkali effluents generated during the process of the ion-exchangers would be drained into an epoxy lined underground neutralizing pit. Generally these effluents are self neutralizing. However, provisions will be made such that the effluents will be neutralized by addition of either acid or alkali to achieve the required pH of about 7.0. The effluent will then be pumped into the effluent treatment ponds, which from part of the effluent disposal system.

The effluent from the neutralizing pit will be pumped by 2 x 100% capacity pumps to the Effluent Treatment Plant (ETP).

The WTP discharge will be diluted with the blow down from the cooling tower and the other discharges, before letting the same out to the ETP



Environmental Impact Assessment Report of I8MW Co-Gen Power Piant by NBSSKL at Shahajinagar Post Redni, Dist Pune EME/CS/EIA- NBSSKL-IND/2012-13/108:R00dt.:28/11/2012

# 9.6.5.3. Cooling Tower Blow Down

The usage of cooling water is high because the water cooled condenser system for the turbine and generator. In addition to the condenser, the auxiliaries of the turbine / generator, like the oil cooler and generator air cooler use cooling water. The cooling water is circulated through the condenser, the other coolers and through the cooling water. The cooling water is cooled by evaporative cooling and the cooling water consequently gets concentrated with the chemicals in the water.

The number of cycles of concentration is generally limited by the raw water quality and by the blow down water concentration. In addition, residual chlorine of about 0.2 ppm is maintained at the outlet of the cooling tower. This sodium hypochlorite dosing is done mainly to prevent biological growth in the cooling tower system. This will not result in any chemical pollution and also meets the national standards for the liquid effluent.

The level of pollutants from cooling tower will be minimized by reduced COC to 5 cycle. The cooling tower blow down water would be used for dust suppression. The low level of pollutants will be achieved by operating at sufficient blow down levels to prevent the build up of pollutants.

# 9.6.5.4. Boiler Blow Down

The pH and temperature of water are main factors for boiler blow down, as quantity of suspended solids is negligible. The pH will be in the range of 9.8 to 10.3 and the temperature of 100<sup>0</sup>C. The blow down is small and hence, it will be collected in a trench and connected to the effluent ponds. However, the main usage for blow-down water will be for ash quenching.

# 9.6.5.5. DM Plant Blow Down

The effluent from the cation resin units in the water treatment plant (DM plant) are acidic in nature and from the anion resin units are alkaline in nature. The combined wastewater from the DM plant would be neutralized in a neutralizing pit, if required lime dosing for final pH adjustment will be followed. The neutralized effluent is expected to have suspended solids.

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This shall be pumped and mixed with other effluents& the entire treated waste water will be recycled and reused.

The expected quality of the treated effluent will meet the Inland surface and land disposal water quality standards and is presented in **Table 9.3**.

SL No	Parameter	Value
1	рН -	5.5 to 9.0
2	Oil & Grease (mg/l)	<10
3	TSS (mg/l)	<100
4	COD (mg/l)	<250
5	BOD (mg/l)	<30
6	Temperature, 0C	Not exceeding 5°C above the receiving water temperature
7	Total residual chlorine(mg/l)	<1.0
8	Fluoride, (mg/l)	<2.0
9	TDS, mg/l	<2100

### Table 9.3: Projected Treated Effluent Characteristics

### 9.6.5.6. Sewage

Sewage from various buildings in the factory area will be conveyed through separate drains to the septic tank. The effluent from the septic tank will be disposed in soil, by providing disposing trenches. There will be no ground pollution because of leaching. Sludge will be removed frequently used as manure for tress growth. Waste water treatment will be based on discharges of the various waste water to ponds for clarification and filtration. Oily water, if any, will be treated separately to remove oil / grease, before discharge into the effluent pond. The oily water collection in the plant is basically due to floor cleaning, leaky oil filters, etc. Provision for oil/grease separators will be made to skim oil / grease, if present in the waste water.

Final waste stream pH will be controlled to meet the norms of competent authority, by combining various streams to provide a neutral pH product. Where needed, acid or alkali addition will be used to achieve the final pH. Treated water will be used for gardening, ash quenching and for green fields.

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Environmental Impact Assessment Report of 18MW Co-Gen Power Plant by NBSSKL at Shahajinagar Post Redni, Dist Pune EME/CS/EIA- NBSSKL-IND/2012-13/108:R00dt.:28/11/2012

Zero effluent discharge will be practiced by using recycled the waste water for dust suppression, plantation etc.

# 9.6.5.7. Monitoring of Wastewater Treatment

All the treated effluents will be monitored regularly for flow rate and its characteristics in order to assess the performance of the ETPs. Appropriate measures will be taken if the treated effluent quality does not conform to the permissible limits.

# 9.7 STORM WATER MANAGEMENT

Based on the rainfall intensity of the proposed area, storm water drainage system will be designed at the construction stage of the project. Storm water drainage system will consist of well-designed network of open surface drains with rainwater harvesting pits. A separate drainage system will be provided in which plant effluent will not be mixed.

# \* 9.8 RAIN WATER HARVESTING SCHEME

RWH structures will be provided to harvest the rain water from roof TOP and plant area. The collected rain water will be utilized for plant uses to optimize the raw water requirement. The surface water run-off from the main plant area would be led to a sump for settling and the over flow would be collected in the common water basin for further uses in the plant to optimize the raw water requirement of the plant. The excess rain water may be discharged to the nearest surface water body through dedicated storm water drain for recharging the ground water. Tentative Rainwater Harvesting System (RWHS) designs and construction details are given in the **Table 9.4** for ground water recharge system

- Rain Water Harvesting Structure (RWHS) for Ground water Recharge:
- Size: 1.5m x 1.5m x 2.0m

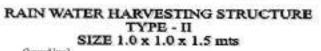
Nira	Environmental Impact Assessment Report of 18MW Co-Gen Power Plant by NBSSKL at Shahajinagar Post Redni, Dist Pune EME/CS/EIA- NBSSKL-IND/2012-13/108:R00dt.:28/11/2012	EIA Report (R-00)
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# Table 9.4: Construction Details of Rain Water Harvesting System For Ground

Water Discharge

S.No	Volume, Cu.m	Description
1	4.5	Excavation in Hard Gravelly and all available soils
2	2.25	65 mm metal
3	1.25	20 mm metal
4	0.675	Coarse sand
5	0.24	CRS masonry in 1:6 prop.
6	4.5	Carting of excavated earth outside RWHS



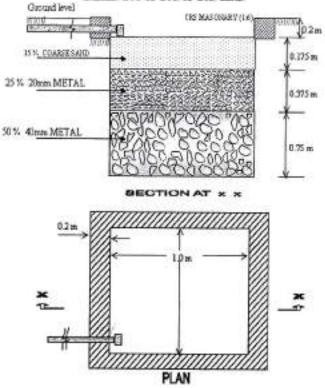


Figure 9.2 : Tentative Rain Water Harvesting Structure

## 9.9 HOUSEKEEPING

Salient features of the practices to be adopted are as follows:

- Mechanized cleaning of roads and floor area inside the plant premises will be carried out;
- > Training on regular basis to all workers and staff about the importance of cleanliness;
- Careful garbage transportation to dumping site and disinfection of transport vehicles body;
- Decorative plantation to improve aesthetics of the plant
- Construction of suitably designed drains all along the roads and boundary of the plant premises.

# 9.10 OCCUPATIONAL HEALTH & SAFETY

During construction stage, dust is the main health hazard. Other health hazards are due to gas cutting, welding, noise and high temperature and micro ambient conditions especially near the boiler and platforms which may lead to adverse effects (Heat cramps, heat exhaustion and heat stress reaction) leading to local and systemic disorders.

The precautionary measures which will be followed to reduce the risk due to dust to the workers engaged in and around the material handling areas are:

- Adequate arrangements for preventing generation of dust by providing the chutes at transfer points to reduce the falling height of material, preventing spillage of material by maintaining the handling equipment, isolating the high dust generating areas by enclosing them in appropriate housing and appropriately de-dusting through high efficiency bag filters;
- Almost all material handling systems will be automated thereby reducing the manpower. The workers engaged in material handling area will be provided with personal protective equipment like dust masks, respirators, helmets, face shields etc;
- All workers engaged in material handling system will be regularly examined through PFT (Pulmonary Function Test) tests for lung diseases;
- Thermal insulation will be provided wherever necessary to minimize heat radiation from the equipment, piping, etc. to ensure protection of workers. Insulation will be done by adequate cleats, wire nets, jackets etc. to avoid loosening. Insulation thickness will

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be such that the covering jacket surface temperature does not exceed the surrounding ambient temperature by more than 15oC.

# 9.11 ECOLOGICAL MONITORING

Flora and fauna inventories within the factory area will be monitored on a twice yearly basis, as well as before and during the construction and early operating activities. This may involve the use of specific indicators, such as the occurrence of nests or nesting bird species of importance. It is intended that the implementation of the monitoring program will be conducted by NBSSKL. During the construction phase, the Project Manager will be responsible for overseeing land clearing activities and be involved in the scheduling of these activities in order to prevent them from being undertaken during periods of heavy rainfall whenever possible. However, in the event the scheduling of the activities must be undertaken during periods of heavy rainfall measures will be employed to reduce the risks of erosion.

### 9.12 GREEN BELT DEVELOPMENT PLAN

The main objective of the green belt is to provide a buffer zone between the sources of pollution and the surrounding areas. The green belt helps to capture the fugitive emissions and attenuate the noise apart from improving the aesthetics quality of the region. An area of about 27 acres for greenbelt already developed by NBSSKL in existing plant premises. Further NBSSKL has planned to strengthen the existing greenbelt by sampling new trees in proposed activity. Details of existing green belt attached as an Annexure7.

The plant species recommended for the greenbelt development are presented in Table 9.5. Approximately 2500 trees per ha will be planted in consultation with the local Forest Department.

The general guidelines for development of greenbelt will be as follows:

- Trees growing up to 5 m or more will be planted along the plant premises and along the road sides
- Planting of trees will be undertaken in rows.
- > Open areas inside the plant boundary will be covered with grass.

- The spacing between the trees will be maintained slightly less than the normal spaces, so that the trees will grow vertically and slightly increase the effective height of the green belt.
- Planting of trees in each row will be in staggered orientation.
- In the front row, shrubs consisting of Callistemon, Prosopis etc. will be grown.
- Since the trunks of the tall trees are generally devoid of foliage, it will be useful to have shrubs in front of the trees so as to give coverage to this portion.
- Shrubs and trees will be planted in encircling rows around the project site.
- The small trees (<10 m height) will be planted in the first two rows (towards plant side) of the green belt. The tall trees (>10 m height) will be planted in the outer three rows (away from plant side).
- For adsorption of dust and gaseous pollutants the following types of plants will be considered,
- Fast growing

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- Thick canopy cover
- Longer duration of foliage.
- Adequate height and spread of crown
- > Big leaves (long and broad laminar surfaces) supported by firm petioles.
- Large number of stomata apertures. (Large leaf area index)
- Perennial and evergreen
- Abundance of surfaces on bark and foliage through roughness of bark, epidermal outgrowth on petioles, abundance of auxiliary hairs, hairs or scales on laminar surfaces and protected stomata (by wax, arches, rings, hairs, etc.)
- The choice of plants will include shrubs that grow 1 to 2 m high and trees of 3 to 5m heights. It will be ensured that the foliage area density in vertical is almost uniform by intermixing the trees and shrubs. Since safety during transport is a major consideration, shrubs in traffic islands and along road dividers will be short enough to be below the eye-level of motorists.
- The species identified for greenbelt development will be planted using pitting technique. The pit size will be either 45 cm X 45 cm X 45 cm or 60 cm X 60 cm X 60 cm .Bigger pit size will be preferred. Soil used for filling the pit will be mixed well with decomposed farm yard manure or sewage sludge at the rate of 2.5 kg (on dry weight

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basis) and 3.6 kg (on dry weight basis) for 45 cm X 45 cm X 45 cm and 60 cm X 60 cm X 60 cm pit respectively. The filling of soil will be completed at least 5-10 days before actual plantation.

SrNo	Botanical name	Habit	Growth rate	Evergreen /Deciduous	Sensitive /Tolerant
1			Quick growing	Deciduous	Tolerant
2	Acacia auriculiformis A. cunn.	Tree	Quick growing	Evergreen	Tolerant
3	Acacia catechu, Willd	Shrub	Quick growing	Evergreen	Tolerant
4	Acacia nilotica (Linn) Willd	Tree	Quick growing	Evergreen	Tolerant
5	Acacia pennataWilld	Shrub	Quick growing	Evergreen	Tolerant
6	Acacia PolyacanthaWilld	Tree	Quick growing	Semi – deciduous	Tolerant
7	Acacia senegalWilld	Tree	Quick growing	Deciduous	Tolerant
8	Acacia sinuata (Lour ) Merrill	Tree	Quick growing	*****	Tolerant
9	Acacia tortilis Hayne	Tree	Quick growing		Tolerant
10	Achrassapota Linn	Tree	Slow growing during early stages	Evergreen	Tolerant
11	ActinodaphneangustifoliaNees	Tree	Slow	Evergreen	Tolerant
12	Adenantherapavonina Linn	Tree	Quick growing	Deciduous	Tolerant
13	Adina cordifoliaRaxb.	Tree	Slow growing	Deciduous	Tolerant
14	Aeglemarmelos (Linn) Correa	Tree	Slow growing	Evergreen	Tolerant
15	Ailanthus excels Raxb.	Tree	Quick growing	Deciduous	Tolerant
16	AlbiziaamaraBoiv	Tree	Quick growing	Deciduous	Tolerant
17	AlbizialebbeckBenth	Tree	Quick growing	Deciduous	Tolerant
18	AlbiziamoluccanaMig.	Tree	Quick growing	Evergreen	Tolerant
19	AlbiziaodorratissimaBenth.	Tree	Quick growing	Evergreen	Tolerant
20	Balanitesroxburghii Planch	Tree	Quick growing	Evergreen	Tolerant
21	Bambusaarundinacia (Retz) Roxb	Shrub	Quick growing	Deciduous	Tolerant

# Table 9.5: Plant Species Suggested For Green Belt Development

Nira	Environmental Impact Assessment Report of 18MW Co-Gen Power Plant by NBSSKL at Shahajinagar Post Redni, Dist Pune EME/CS/EIA- NBSSKL-IND/2012-13/108:R00dt.:28/11/2012	EIA Report (R-00)
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22	Bambusa vulgaris Schrad.	Shrub / tall perennial grasses.	Quick growing	Deciduous	Tolerant
23	Barringtoniaacutangla (L) Gaertn.	Tree	Quick growing	Evergreen	Tolerant
24	Bauhinia acuminata Linn.	Shrub	Quick growing	Deciduous	Tolerant
25	Bauhinia purpurea Linn	Tree	Quick growing	Deciduous	Tolerant
26	Bauhinia recemosaLamk	Small tree	Quick growing	Deciduous	Tolerant
27	Bauhinia semlaWanderlin	Tree	Quick growing	Deciduous	Tolerant
28	Bauhinia varigata Linn	Tree	Quick growing	Deciduous	Tolerant
29	BischofiajavanicaBlume	Tree	Quick growing	Deciduous	Tolerant
30	Caesalpiniapulcherrima (L) Swartz		Quick growing	Evergreen	Tolerant
31	Callistemon citrinus (Curtis) stapf.	Small tree	Slow growing	Evergreen	Tolerant
32	Calophylluminophyllum Linn	Tree	Slow growing	Evergreen	Tolerant
33	Calotropisgigantea R.Br. (Linn)	Shrub	Quick growing	Evergreen	Tolerant
34	Carrisaspinarum Linn	Shrub	Quick growing	Evergreen	Tolerant
35	Cassia fistula Linn	Tree	Quick growing	Deciduous	Tolerant
36	Cassia renigera Wall Ex. Benth	Tree	Quick growing	Deciduous	Tolerant
37	Cassia siameaLamk	Tree	Fast growing	Evergreen	Tolerant
38	DalbergialatifoliaRoxb.	Tree	Quick growing	Semi – deciduous	Tolerant
39	DalbergiasisooRoxb.	Tree	Moderate during 1 <sup>st</sup> year and rapid afterwards	Evergreen	Tolerant
40	EmblicaafficinalisGaertn	Tree	Quick growing	Deciduous	Tolerant
41	EmbryopterisperegrinaGaertn	Tree	Quick growing	Deciduous	Tolerant
42	Erythrinavariegata Linn	Tree	Quick growing	Deciduous	Tolerant
43	Eucalyptus hybrid	Tree	Quick growing	Evergreen	Tolerant
44	Ficusbenghalensis Linn	Tree	Quick growing	Evergreen	Tolerant
45	Ficusbenjamina Linn	Tree	Quick growing	Evergreen	Tolerant
46	FicuselsaticaRoxb.	Tree (Epiphytic)	Quick	Evergreen	Tolerant

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47	Ficusgibb	osaBlwne	Tree	Quick growing	Evergreen	Tolerant
48	Garciniate	ulbottiRaizada	Tree	Slow growing	Evergreen	Tolerant
49	Gardenia jasminoidesEills		Tree	Quick growing	Evergreen	Tolerant
50	Hamelia patens Jacq		Shrub	Quick growing	Evergreen	Tolerant
51	Heterophr DC	agamaroxburghii	Tree	Quick growing	Evergreen	Tolerant
52	Hisbicusre	osa – sinensis Linn	Shrub	Quick growing	Evergreen	Tolerant
53	Ixoraarbo	reaRoxb	Tree	Quick growing	Evergreen	Tolerant
54	Ixorachine	ensis	Shrub	Quick growing	Evergreen	Tolerant
55	Juniperus	communis	Shrub	Quick growing	Evergreen	Sensitive
56	Kigeliaafr	icanaLamk	Small Tree	Quick growing	Evergreen	Tolerant

### 9.13 MEASURES TO IMPROVE SOCIO-ECONOMIC CONDITIONS

The proposed project will generate employment opportunity for skilled and semi skilled persons during construction and operation phase. As per census data it was found that 29006 are non-workers in the study area. Proposed project will definitely helpful in creation of new jobs, small business development etc. It is envisaged to implement welfare measures including provision of basic facilities/amenities. NBSSKL will improve the socio-economic status of the local habitants and proposes to provide scholarships to poor children undertake nursery plantation and conduct health camps. Moreover, provision will be made to provide potable water, schools, and sanitation facilities etc. for the neighboring villages.

Further with the development of industrial and commercial activity in the area there is likelihood of detraining of human values as observed elsewhere in the similar industrial developments. Effective education and enhanced social activities will help to maintain the human values in the region.

The presence of the industry will enhance job opportunities and commercial activities, which inturn will improve the economic conditions of the population. Service infrastructure like transportation, health care, education, communication facilities may improve considerably. The availability of power from the industry will help to reduce the power scarcity and frequent power failures in the region by stabilization of the power in the grid, which will improve power supply to irrigation pump sets and house hold requirements.

# 9.14 FIRE FIGHTING & PROTECTION SYSTEM

### 9.14.1. General

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The fire fighting system will be designed in conformity with the recommendations of the Tariff Advisory Committee (TAC) of Insurance Association of India. While designing the fire protection systems for this power station its extreme ambient conditions need special attention. Codes and Standards of National Fire Protection Association (NFPA) will be followed, as applicable. The different types of fire protection / detection system envisaged for the entire project are given below.

- > Hydrant System for entire area of power plant.
- High Velocity Water Spray System (HVWS) for Generator Transformer (GT), Unit Auxiliary transformer (UAT), Station Transformer (ST), and turbine lube oil canal pipe lines in main plant, Boiler burner front, diesel oil tank of DG set, main lube oil tank, clean and dirty lube oil tanks.
- Medium Velocity Water spray system Cable gallery / Cable spreader room, bagasse conveyors, Transfer points and F.O. pumping station and F.O. tanks.
- Foam system for Fuel oil tanks.
- Portable and mobile fire extinguishers for entire plant.
- Fire tenders (minimum 2 nos.).
- Inert Gas System for Central Control Room, Control Equipment Room, Computer Room and UPS Room in the TG building.
- Fixed Foam System : This system is provided for LDO and HFO storage tanks. The water for the foam system will be tapped from the Hydrant system.
- Inert gas system :Inert gas system will automatically detect and suppress fire within a protected area. The system will be a total flooding fire suppression system with automatic detection and/or manual release capability. Complete system design will be in accordance with NFPA. The inert gas system will be generally provided above false and below false ceiling of Central Control room, UPS Room, Control equipment room and Computer room.



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#### 9.14.2. Fire Detection and Alarm System

Fire Detection and Alarm system will be provided for all Central Control room, Control Equipment Room, battery rooms, all switchgear rooms / MCC rooms, Cable spreader room and Computer rooms located in Power block area and in other auxiliary buildings.

A microprocessor-based Fire Detection and Alarm system shall be provided for the entire plant area consisting of Intelligent Analog Addressable type detectors. The system will consist of a central monitoring station and the main Fire Alarm Panel (FAP) located in unit control room and one fire alarm and control panel and repeater panel provided in the fire station office

An industrial siren will be installed in the turbine generator building. The siren shall have an audible range of 3 Km and produce a minimum sound level of 80 dB (A) above any other noise likely to persist for a period longer than 30 seconds. Additionally all exit routes and hallways in each occupied building shall be provided with sounders and flash light to facilitate safe evacuation in case of fire in the area.

All necessary instruction and warning plates will be displayed.

# 9.15 BUDGETARY PROVISION FOR ENVIRONMENTAL MANAGEMENT PLAN

- The Capital Cost of the proposed 18 MW Cogen Power Plant is 8781.70 (as proposed to be approved by the funding agency/financial institution).
- Cost of EMP is Rs 280. Lakhs.

A Total capital & recurring cost EMP are presented in Table 9.6

Nira	Environmental Image in		
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rable 9.6: Budgetary allocation for	environmentel
1.	environmental protection measures

No.	Particulars	
		Amount in INR, Lakhs
One	Time Installation Cost (Capital Cost)	
1	Air Pollution Control System	
2	Noise Control System	200.00
3	Green Belt Development	20.00
4	Environment Manit	25.00
5	Environment Monitoring and Management Occupational Health & Safety	25.00
	Total	10.0
	rring Cost	280.00
T	Environmental Maria	
	Environmental Monitoring/APH Maintenance General Maintenance of ETP	12.00
	Greenbelt maintenance	15.00
1	Noise Pollution Control	2.50
(	Occupational Health	2.00
1	Environmental Management	2.50
	Total	5.00
	Total	39.00

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Cost of Environmental Management Plan (EMP)

Sr. No.	Particulars	Capital Cost (INR) in Lacs	Recurring Cost (INR/Year) in Lacs
1.	Air pollution Control System	200.00	12.00
2.	Water Pollution Control Systems (E.T.P)		15.00
3.	Noise Pollution Control	20.00	2.00
4.	Green Belt Development/Maintenances	25.00	2.50
5.	Environmental Monitoring/Environmental Management	25.00	5.00
6.	Occupational Health and Safety	10.00	5.00
	Total	280.00	29.00

# Cost of Environmental Management Plan

COMPLIANCE REPORT For "Nira Bhima Sahakari Sakhar Karkhana Ltd" At Shahajinagar, Post-Redni Tal-Indapur, Dist-Pune

EC No.		SEAC- 2012/0	CR-177/TC-2
Project N	Name Nira Bhima Sahakari Sakhar Karkhana Ltd.		Sakhar Karkhana Ltd.
Locati	on	Shahajinagar, Post-Redni, Tal-Indapu	ur, Dist. Pune, Maharashtra- 413114
		PERIOD OF COMPLIANCE REP MAY	
		COMPLIANCE TO THE STIPULAT 21/01/	
		Part – A Specific Cond	litions
Sr. No.		Particulars	Status
Ι	for a	Iditional land shall be used/acquired ny activity of the project without ing proper permission	
ii.			Yes. It is being practiced.
Iii	Regular monitoring of the air quality, including SPM & SO2 levels both in work zone and ambient air shall be carried out in an around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with Maharastra Pollution control Board (MPCB) & Submit report accordingly		
	includ zone a an ar shall monit monit with	ling SPM & SO2 levels both in work and ambient air shall be carried out in ound the power plant and records be maintained. The location of oring stations and frequency of oring shall be decided in consultation Maharastra Pollution control Board	We are monitoring PM-10, PM 2.5, SOx, NOx and CO in ambient air as prescribed in the NAAQS, <b>dated-</b> 03/05/2014
Iv	includ zone a an ar shall monit monit with (MPC Necess adequ	ling SPM & SO2 levels both in workand ambient air shall be carried out inound the power plant and recordsbe maintained. The location oforing stations and frequency oforing shall be decided in consultationMaharastra Pollution control BoardB) & Submit report accordinglysary arrangement shall be made toatesafetyandventilation	SOx, NOx and CO in ambient air as prescribed in the NAAQS, <b>dated</b> -
Iv V	includ zone a an ar shall monit monit with (MPC Neces adequ arran Prope	ling SPM & SO2 levels both in work and ambient air shall be carried out in ound the power plant and records be maintained. The location of oring stations and frequency of oring shall be decided in consultation Maharastra Pollution control Board B) & Submit report accordingly sary arrangement shall be made to ate safety and ventilation gement in furnace area r Housekeeping programmes shall be	SOx, NOx and CO in ambient air as prescribed in the NAAQS, <b>dated-03/05/2014</b>
	includ zone a an ar shall monit monit with (MPC Neces adequ arran Prope imple In the contro shall and s	ling SPM & SO2 levels both in work and ambient air shall be carried out in ound the power plant and records be maintained. The location of oring stations and frequency of oring shall be decided in consultation Maharastra Pollution control Board B) & Submit report accordingly sary arrangement shall be made to ate safety and ventilation gement in furnace area	SOx, NOx and CO in ambient air as prescribed in the NAAQS, <b>dated-</b> 03/05/2014 Noted

Viii       A detailed scheme for rainwater harvesting shall be prepared and implemented to recharge ground water.       Noted         Ix       Arrangement shall be made that waste water and storm water do not get mixed       Noted and Complied         X       Periodic monitoring of ground water shall be undertaken and result anaiyzed to ascertain any change in the quality of water. Results shall be regularely submitted to the Maharastra Pollution Control Board.       The ground water level and its quality is monitored on regular basis Analysis Reports is attached herewit dated-0306/2014         Xi       Leq of Noise level shall be maintained as per standards. For People working in the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc. On all sources of noise generation. The ambient noise level shall confirm to the standards prescribed under Environment (Protection) Act, 1986       All necessary noise control measures including acoustic hoods, silencers, succed as part of Workers' Healt in the disk all confirm to the standards prescribed under Environment (Protection) Act, 1986         Xiii       Green belt shall be developed & maintained around the plant periphery. Green belt shall be carried out consultation with the local DFO/Agriculture Dept.       Devolpment of Green Belt has beer initiated Considering CPCB guidelines including selection of plant species and in consultation with the local DFO/Agriculture Dept.         Xiv       Adequate safety measures shall be provided to limit the risk zone within the plant boundary, in case of accident. Leak detection       Adequate safety measures are take to control the hazard and keep below the acceptabel limit. Leak detection		dispersion of pollutant from DG Set. (If	
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boundary, in case of accident. Leak detection       below the acceptable limit. Lead detection systems are installed an monitored regularly.         Xv       Occupational health surveillance of the       Being Complied	Xiv		
detection     detection systems are installed an monitored regularly.       Xv     Occupational health surveillance of the     Being Complied		-	-
Xv     Occupational health surveillance of the     monitored regularly.			-
Xv Occupational health surveillance of the Being Complied		detection	-
	<b>V</b>	Occurrentianel health areas "	
	ХV	occupational health surveillance of the workers shall be done on a regular basis	Being Complied

	and record maintained as per factories act	
Xvi	The Company shall make the arrangement	Noted and Complied
AVI	for protection of possible fire hazards	Noted and Complied
	during manufacturing process in material	
!!	handling The Project outhouiting must strictly	Concept to Establish is obtained from
xvii	The Project authorities must strictly	Consent to Establish is obtained from
	comply with the rules and regulations with	MPCB vide No-Format
	regard to handling and disposal of	
	hazardous waste in accordance with the	16784-13/E/CAC-6801
	hazardous waste (Management and Handling) Rules, 2003 (amended).	Dated:- 14/08/2013 Attached
	Handling) Rules, 2003 (amended). Authorization from the MPCB shall be	herewith as an Annexure-VI
	obtained for	
	collections/treatment/storage/disposal of hazardous waste	
		Noted and Complied
xviii	The company shall undertake following waste Minimization Measures:	Noted and Complied
	• Metering of quantities of active	
	ingredients to minimize waste	
	• Reuse of by- products from the	
	process as raw materials or as raw	
	material substitutes in other process	
	Maximizing Recoveries.	
	• Use of automated material transfer	
<b>X7</b>	system to minimize spillage.	
Xix	Regular mock drills for the on-site	Noted and Complied
	emergency management plan shall be	
	carried out. Implementation of changes/	
	improvements required, if any in the on-	
V	site management plan shall be ensured.	A
Xx	A separate environment management cell with qualified staff shall be setup for	A separate Environment
	implementation of the stipulated	Management Cell is already set up under the control of Plant
	environmental safeguards.	Head in order to oversee effective
	environmental saleguarus.	implementation of environment
		protection measures and to monitor
		the routine environmental
		performance within the premises.
Xxi	Transportation of ash will be through	Noted and complied
<b>23AI</b>	closed containers and all measures should	
	be taken to prevent spilling of the ash.	
xxii	Separate silos will be provided for	Noted and complied
23/311	collecting and storing bottom ash and fly	roted and comprised
	ash	
xxiii	Separate funds shall be allocated for	Provision made for separate funds for
	implementation of environmental	implementation of environmental
	protection measures/EMP along with item-	protection measures/ EMP and same
	wise breaks-up. These cost shall be	has been included in project cost. All
	included as part of the project cost. The	the reporting will be done on timely
	funds earmarked for the environmental	manner to concerned authorities.
	protection measures shall not be diverted	
	for other purpose and year-wise	
	expenditure should reported to the MPCB	
		1

	& this department	
xxiv	The project Management shall advertise at	Noted and Complied
	least in two local newspapers widely	Noted and Complied
	circulated in the region around the project,	
	one of which shall be in the Marathi	
	language of the local concerned within	
	seven days of issue of this letter, informing	
	that the project has been accorded	
	environmental clearance and copies of	
	clearance letter are available with	
	Maharastra Pollution Control Board and	
	may also be seen at website at	
	http://ec.maharastra.gov.in	
Xxv	Project Management should submit half	Complied.
ΑΧΥ	yearly compliance reports in respect of the	*
	stipulated prior environment clearance	Six monthly Compliance report being
		submitted regularly.
	terms and conditions in hard & Soft Copies	
	to the MPCB & this department, on 1 <sup>st</sup>	
•	June&1 <sup>st</sup> December of each calendar year.	Noted and some lied
xxvi	A copy of Clearance letter shall be sent by	Noted and complied
	proponent to the concerned Municipal	
	corporation and the local NGO, if any,	
	from whom suggestions/representations, if	
	any were received while processing the	
	proposal. The clearance letter shall also be	
	put on the website of the company by the	
xxvii	proponent.	Circ monthly compliance percetain
XXVII	The proponent shall upload the status of compliance of the stipulated EC	Six monthly compliance reports in
	compliance of the stipulated EC Conditions, including results of monitored	respect of Post Environment
	data on their website and shall update the	Clearance Monitoring (Rule 10 of EIA Notification, 2006, dated
	same periodically. It shall simultaneously	14.09.2006) are timely submitted in
	be sent to the regional office of MoEF, the	hard and soft copies to the concerned
	respective zonal office of CPCB & the	regulatory authorities.
	SPCB. The criteria pollutants levels	regulatory authornes.
	namely. SPM, RSPM, SO2, Nox (ambient	
	level as well as stack emissions) or critical	
	sectorai parameters, indicated for the	
	project shall be monitored and displayed at	
	a convenient location near the main gate of	
	the company in the public domain.	
xxviii	The Project proponent shall also submit six	Six monthly reports along with the
лауш	monthly reports on the status of compliance	monitored data are regularly sent to
	of stipulated EC Conditions including	the concerned authorities in hard and
	results of monitored data (both in hard	soft copies.
	copies as well as by email) to the respective	son copies.
	zonal office of CPCB & the SPCB.	
xxix	The environmental statement for each	Annual Environment Statement is
лліл	financial year ending 31 <sup>st</sup> March in Form-V	regularly sent to the MPCB, MoEF
	as is mandated to he submitted by the	Nagpur and CPCB. In addition, a
	project proponent to the concerned State	copy of the statement is also
	Pollution Control Board as prescribed	- ·
	under the Environment (Protection) Rules.	uploaded on the company's website.
	under the Environment (1 fotection) Kules.	

	1986, as amended subsequently, shall also	
	be put on the website of the company along	
	with the status of compliance of EC	
	conditions and shall also be sent to the	
	respective Regional Offices of MoEF by e- mail.	
Xix	The environmental clearance is being	Not Applicable, as no pending case
	issued without prejudice to the court case	in the court of Law.
	pending in the court of law and it does not	
	mean that project proponent has not	
	violated any environmental laws in the past	
	and whatever decision of the Hon'ble court	
	will be binding on the project proponent.	
	Hence this clearance does not give	
	immunity to the project proponent in the	
	case field against him	
4	The environmental clearance is being	Noted
	issued without prejudice to the action	
	initiated under EP Act or any court case	
	pending in the court of law and it does not	
	mean that project proponent has not	
	violated any environmental laws in the past	
	and whatever decision under EP Act or of	
	the Hon'ble court will be binding on the	
	project proponent. Hence this clearance	
	does not give immunity to the project	
	proponent in the case filed against him, if	
	any or action initiated under EP Act.	
5	The Environment department reserves the	Noted
	right to add any stringent condition or to	
	revoke the clearance if conditions	
	stipulated are not implemented to the	
	satisfaction of the department or for that	
	matter, for any other administrative	
	reason.	
6	Validity of Environment Clearance: The	Noted
	environmental clearance accorded shall be	
	valid for a period of 5 years	
7	In case of any deviation or alteration in the	Noted
	project proposed from those submitted to	
	this department for clearance, a fresh	
	reference should be made to the	
	department to assess the adequacy of the	
	condition(s) imposed and to incorporate	
	additional environmental protection	
	measures required, if any.	
8	The above stipulations would be enforced	Noted
	among others under the Water (Prevention	
	and Control of Pollution) Act, 1974, the Air	
	(Prevention and Control of Pollution) Act.	
	1981. The Environment (Protection) Act,	
	1986 and rules there under, Hazardous	
	Wastes (Management and Handling) Rules,	
		<i>ı</i>

	1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	
9	Any appeal against this environmental clearance shall lie with the National Green Tribunal, Van Vigyan Bhawan, Sec-5, R.K. Puram, New Dehli — 110 022, if preferred. Within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted

EC No.		SEAC- 2012/CR-177/TC-2	
Project N	ame	Nira Bhima Sahakari Sakhar Karkhana Ltd.	
Locati	on	Shahajinagar, Post-Redni, Tal-Indapı	ur, Dist. Pune, Maharashtra- 413114
		PERIOD OF COMPLIANCE RI NOVEMB COMPLIANCE TO THE STIPULAT	BER 2014
		21/01/	
		Part – A Specific Condit	tions
Sr. No.		Particulars	Status
I	for a	ditional land shall be used/acquired ny activity of the project without ing proper permission	
ii.  Iii	regula at ap areas	Controlling fugitive natural dust, or sprinkling of water & wind shields opropriate distances in vulnerable of the plant shall be ensured ar monitoring of the air quality,	Yes. It is being practiced. We are monitoring PM-10, PM 2.5,
	In Regular monitoring of the air quanty, including SPM & SO2 levels both in work zone and ambient air shall be carried out in an around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with Maharastra Pollution control Board (MPCB) & Submit report accordingly		SOx, NOx and CO in ambient air as prescribed in the NAAQS, <b>dated-03/11/2014</b>
Iv	Necess adequ	sary arrangement shall be made to	Noted and Complied
V	Prope	r Housekeeping programmes shall be nented	Good House Keeping is maintained all around the plant premises.
Vi	In the contro shall and sl	event of the failure of any pollution of system adopted by the unit, the unit be immediately put out of operation nall not be restarted until the desired ncy has been achieve	Noted
Vii	A Stac capaci disper Applic	ck of adequate height based on DG set ity shall be provided for control and sion of pollutant from DG Set. (If cable)	Noted
viii		ailed scheme for rainwater harvesting be prepared and implemented to	Entire rooftop in township is covered under rainwater harvesting wherein

	1	
	recharge ground water.	the rooftop water is collected and
		channeled into different injection
		wells, pond and check dams
		constructed in the township.
Ix	Arrangement shall be made that waste	Noted and Complied
	water and storm water do not get mixed	
Χ	Periodic monitoring of ground water shall	The ground water level and its
	be undertaken and result analyzed to	quality is monitored on regular basis.
	ascertain any change in the quality of	Analysis Reports is attached herewith
	water. Results shall be regularely submitted	dated-03/11/2014
	to the Maharastra Pollution Control Board.	
Xi	Leq of Noise level shall be maintained as	Regularly carried out Noise
	per standards. For People working in the	Monitoring at the site, report of the
	high noise area, requisite personal	same is attached herewith dated-
	protective equipments like ear plugs etc.	03/11/2014
	Shall be provided.	
Xii	The overall noise levels in and around the	All necessary noise control measures
	plant are shall be kept well within the	including acoustic hoods, silencers,
	standards by providing noise control	enclosures etc. on all sources of noise
	measures including acoustic hoods,	generation are in place and properly
	silencers, enclosures, etc. On all sources of	maintained. Workplace noise level
	noise generation. The ambient noise level	survey is conducted on regular basis
	shall confirm to the standards prescribed	to identify areas with high noise
	under Environment (Protection) Act, 1986	levels. Corrective /preventive actions
	Rules, 1989.	are taken if the noise levels exceed
		the permissible limits as stipulated in
		the EP/Factories Act. Workers
		employed in <b>High Noise Area</b> are
		provided with proper PPEs and their
		exposure to noise is controlled within
		the permissible limits. Periodic
		audiometric tests of the workmen
		employed in High Noise Area is also
		conducted as part of Workers' Health
		Surveillance Program.
		<b>Ambient Noise level</b> is monitored
		regularly and is controlled within the
		stipulated limit.
Xiii	Green belt shall be developed & maintained	Development of Green Belt has been
*****	around the plant periphery. Green belt	initiated Considering CPCB / MPCB
	development shall be carried out	guidelines. Around 300 saplings have
	considering CPCB guidelines including	been planted inside the premises.
	selection of plant species and in	been planted histor the premises.
	consultation with the local	
	DFO/Agriculture Dept.	
Xiv	Adequate safety measures shall be provided	Adequate safety measures are taken
∡ <b>XI V</b>	to limit the risk zone within the plant	to control the hazard and keep it
	boundary, in case of accident. Leak	below the acceptable limit. Leak
	detection	detection systems are installed and
		monitored regularly.
Xv	Occupational health surveillance of the	
ΛV	Occupational health surveillance of the	Being Complied
	workers shall be done on a regular basis and record maintained as per factories act	

Xvi	The Company shall make the arrangement	Fire hydrant and sprinkler system is
28.41	for protection of possible fire hazards	provided and maintained to ensure
	during manufacturing process in material	smooth operation at all times.
	handling	sinooth operation at an times.
xvii	The Project authorities must strictly	Consent to Establish is obtained from
	comply with the rules and regulations with	MPCB vide No-Format
	regard to handling and disposal of	
	hazardous waste in accordance with the	16784-13/E/CAC-6801
	hazardous waste (Management and	Dated:- 14/08/2013 Attached
	Handling) Rules, 2003 (amended).	herewith as an <b>Annexure-VI</b>
	Authorization from the MPCB shall be	
	obtained for	
	collections/treatment/storage/disposal of	
	hazardous waste	
xviii	The company shall undertake following	Noted and Complied
	waste Minimization Measures:	
	• Metering of quantities of active	
	ingredients to minimize waste	
	• Reuse of by- products from the	
	process as raw materials or as raw	
	material substitutes in other process	
	<ul> <li>Maximizing Recoveries.</li> </ul>	
	<ul> <li>Use of automated material transfer</li> </ul>	
	system to minimize spillage.	
Xix	Regular mock drills for the on-site	Mock drills are conducted
	emergency management plan shall be	periodically. Opportunities for
	carried out. Implementation of changes/	improvement are noted and
	improvements required, if any in the on-	incorporated in onsite emergency
	site management plan shall be ensured.	plan. We also successfully carried out
	site munugement plun shun se ensured.	off site mockdrill in coordination
		with various civil authorities
Xx	A separate environment management cell	A separate Environment
2.825	with qualified staff shall be setup for	Management Cell is already
	implementation of the stipulated	set up under the control of Plant
	environmental safeguards.	Head in order to oversee effective
		implementation of environment
		protection measures and to monitor
		the routine environmental
		performance within the premises.
Xxi	Transportation of ash will be through	Noted and complied
	closed containers and all measures should	······································
	be taken to prevent spilling of the ash.	
xxii	Separate silos will be provided for	Noted and complied
	collecting and storing bottom ash and fly	•
	ash	
xxiii	Separate funds shall be allocated for	Provision made for separate funds for
	implementation of environmental	implementation of environmental
	protection measures/EMP along with item-	protection measures/ EMP and same
	wise breaks-up. These cost shall be	has been included in project cost. All
	included as part of the project cost. The	the reporting will be done on timely
	funds earmarked for the environmental	manner to concerned authorities.
	protection measures shall not be diverted	
	for other purpose and year-wise	
		1

	expenditure should reported to the MPCB	
	& this department	
xxiv	The project Management shall advertise at	Noted and Complied
	least in two local newspapers widely	rioted and compiled
	circulated in the region around the project,	
	one of which shall be in the Marathi	
	language of the local concerned within	
	seven days of issue of this letter, informing	
	that the project has been accorded	
	environmental clearance and copies of	
	clearance letter are available with	
	Maharastra Pollution Control Board and	
	may also be seen at website at	
	http:/ec.maharastra.gov.in	
Xxv	Project Management should submit half	Complied.
	yearly compliance reports in respect of the	Six monthly Compliance report being
	stipulated prior environment clearance	submitted regularly.
	terms and conditions in hard & Soft Copies	e .
	to the MPCB & this department, on 1 <sup>st</sup>	
	June&1 <sup>st</sup> December of each calendar year.	
xxvi	A copy of Clearance letter shall be sent by	Noted and complied
	proponent to the concerned Municipal	
	corporation and the local NGO, if any,	
	from whom suggestions/representations, if	
	any were received while processing the	
	proposal. The clearance letter shall also be	
	put on the website of the company by the	
	proponent.	
xxvii	The proponent shall upload the status of	
	compliance of the stipulated EC	respect of Post Environment
	Conditions, including results of monitored	Clearance Monitoring (Rule 10 of
	data on their website and shall update the	EIA Notification, 2006, dated
	same periodically. It shall simultaneously	14.09.2006) are timely
	be sent to the regional office of MoEF, the	submitted in hard and soft copies to
	respective zonal office of CPCB & the	the concerned regulatory authorities.
	SPCB. The criteria pollutants levels	
	namely. SPM, RSPM, SO2, Nox (ambient	
	level as well as stack emissions) or critical	
	sectorai parameters, indicated for the project shall be monitored and displayed at	
	a convenient location near the main gate of	
	the company in the public domain.	
xxviii	The Project proponent shall also submit six	Six monthly reports along with the
23/X V III	monthly reports on the status of compliance	monitored data are regularly sent to
	of stipulated EC Conditions including	the concerned authorities in hard and
	results of monitored data (both in hard	soft copies.
	copies as well as by email) to the respective	op
	zonal office of CPCB & the SPCB.	
xxix	The environmental statement for each	Annual Environment Statement is
*	financial year ending 31 <sup>st</sup> March in Form-V	regularly sent to the MPCB, MoEF
	as is mandated to he submitted by the	Nagpur and CPCB. In addition, a
	project proponent to the concerned State	copy of the statement is also
	Pollution Control Board as prescribed	uploaded on the company's website.
	Province and Province	1

	under the Environment (Protection) Rules.	
	1986, as amended subsequently, shall also	
	be put on the website of the company along	
	with the status of compliance of EC	
	conditions and shall also be sent to the	
	respective Regional Offices of MoEF by e-	
	mail.	
Xix	The environmental clearance is being	Not Applicable, as no pending case
	issued without prejudice to the court case	in the court of Law.
	pending in the court of law and it does not	
	mean that project proponent has not	
	violated any environmental laws in the past	
	and whatever decision of the Hon'ble court	
	will be binding on the project proponent.	
	Hence this clearance does not give	
	immunity to the project proponent in the	
	case field against him	
4	The environmental clearance is being	Noted
-	issued without prejudice to the action	
	initiated under EP Act or any court case	
	pending in the court of law and it does not	
	mean that project proponent has not	
	violated any environmental laws in the past	
	and whatever decision under EP Act or of	
	the Hon'ble court will be binding on the	
	project proponent. Hence this clearance	
	does not give immunity to the project	
	proponent in the case filed against him, if	
	any or action initiated under EP Act.	
5	The Environment department reserves the	Noted
5	right to add any stringent condition or to	Noted
	revoke the clearance if conditions	
	stipulated are not implemented to the	
	satisfaction of the department or for that	
	matter, for any other administrative	
	· ·	
6	reason. Volidity of Environment Cleanance The	Noted
0	Validity of Environment Clearance: The	Noted
	environmental clearance accorded shall be	
	valid for a period of 5 years	NT / 1
7	In case of any deviation or alteration in the	Noted
	project proposed from those submitted to	
	this department for clearance, a fresh	
	reference should be made to the	
	department to assess the adequacy of the	
	condition(s) imposed and to incorporate	
	additional environmental protection	
	measures required, if any.	
8	The above stipulations would be enforced	Noted
	among others under the Water (Prevention	
	and Control of Pollution) Act, 1974, the Air	
	(Prevention and Control of Pollution) Act.	
	1981. The Environment (Protection) Act, 1986 and rules there under, Hazardous	

	Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	
9	Any appeal against this environmental clearance shall lie with the National Green Tribunal , Van Vigyan Bhawan, Sec- 5, R.K. Puram, New Dehli — 110 022, if preferred. Within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted

EC No.		SEAC- 2012/CR-177/TC-2	
Project Name		Nira Bhima Sahakari Sakhar Karkhana Ltd.	
Locati	on	Shahajinagar Post-Redni Tal-Indani	ır Dist Pune Maharashtra- 413114
Locati	011	Shahajinagar, Post-Redni, Tal-Indapur, Dist. Pune, Maharashtra- 413114	
		PERIOD OF COMPLIANCE REPORT: FROM DECEMBER 2014 TO MAY 2015	
		COMPLIANCE TO THE STIPULATED CONDITIONS OF EC DATED- 21/01/2014	
	-	Part – A Specific Condit	tions
Sr. No.		Particulars	Status
I	for a	ditional land shall be used/acquired ny activity of the project without ing proper permission	No additional land used
ii.	For Controlling fugitive natural dust, regular sprinkling of water & wind shields at appropriate distances in vulnerable areas of the plant shall be ensured		Yes. It is being practiced.
Iii	includ zone a an ar shall monit monit	ar monitoring of the air quality, ing SPM & SO2 levels both in work and ambient air shall be carried out in ound the power plant and records be maintained. The location of oring stations and frequency of oring shall be decided in consultation Maharastra Pollution control Board B) & Submit report accordingly	We are monitoring PM-10, PM 2.5, SOx, NOx and CO in ambient air as prescribed in the NAAQS, <b>dated-</b> 05/05/2015
Iv	Necess adequ arrang	sary arrangement shall be made to ate safety and ventilation gement in furnace area	Noted and Complied
V	-	r Housekeeping programmes shall be nented	Good House Keeping is maintained all around the plant premises.
Vi	In the contro shall and sh efficie	event of the failure of any pollution of system adopted by the unit, the unit be immediately put out of operation nall not be restarted until the desired ncy has been achieve	Noted
Vii	capaci	ck of adequate height based on DG set ity shall be provided for control and sion of pollutant from DG Set. (If cable)	Noted
viii		ailed scheme for rainwater harvesting be prepared and implemented to	Entire rooftop in township is covered under rainwater harvesting wherein

		1 C · · · · · · · ·
	recharge ground water.	the rooftop water is collected and
		channeled into different injection
		wells, pond and check dams
		constructed in the township.
Ix	Arrangement shall be made that waste	Noted and Complied
	water and storm water do not get mixed	
X	Periodic monitoring of ground water shall	The ground water level and its
	be undertaken and result anaiyzed to	quality is monitored on regular basis.
	ascertain any change in the quality of	Analysis Reports is attached herewith
	water. Results shall be regularely submitted	dated-05/05/2015
	to the Maharastra Pollution Control Board.	
Xi	Leq of Noise level shall be maintained as	Regularly carried out Noise
	per standards. For People working in the	Monitoring at the site, report of the
	high noise area, requisite personal	same is attached herewith dated-
	protective equipments like ear plugs etc.	05/05/2015
	Shall be provided.	
Xii	The overall noise levels in and around the	All necessary noise control measures
	plant are shall be kept well within the	including acoustic hoods, silencers,
	standards by providing noise control	enclosures etc. on all sources of noise
	measures including acoustic hoods,	generation are in place and properly
	silencers, enclosures, etc. On all sources of	maintained.Workplace noise level
	noise generation. The ambient noise level	survey is conducted on regular basis
	shall confirm to the standards prescribed	to identify areas with high noise
	under Environment (Protection) Act, 1986	levels. Corrective /preventive actions
	Rules, 1989.	are taken if the noise levels exceed
		thepermissible limits as stipulated in
		the EP/Factories Act.Workers
		employed in <b>High Noise Area</b> are
		provided with
		proper PPEs and their exposure to
		noise is controlled within
		the permissible limits. Periodic
		audiometric tests of the
		workmen employed in High Noise
		Area is also conducted as
		part of Workers' Health Surveillance
		Program. Ambient Noise level is
		-
		monitored regularly and is controlled within the stipulated limit.
Xiii	Crean halt shall be developed & maintained	
АШ	Green belt shall be developed & maintained	Development of Green Belt has been initiated Considering CDCB (MDCB
	around the plant periphery. Green belt development shall be carried out	initiated Considering CPCB / MPCB
	1	guidelines. Around 300 saplings have
	considering CPCB guidelines including	been planted inside the premises.
	selection of plant species and in consultation with the local	
V:	DFO/Agriculture Dept.	A deguate cofety and a set 1
Xiv	Adequate safety measures shall be provided	Adequate safety measures are taken
	to limit the risk zone within the plant	to control the hazard and keep in
	boundary, in case of accident. Leak	below the acceptable limit. Leak
	detection	detection systems are installed and
		-
		monitored regularly.
Xv	Occupational health surveillance of the workers shall be done on a regular basis	-

	and record maintained as per factories act	
Xvi	The Company shall make the arrangement	Fire hydrant and sprinkler system is
28.41	for protection of possible fire hazards	provided and maintained to ensure
	during manufacturing process in material	smooth operation at all times.
	handling	smooth operation at an times.
xvii	The Project authorities must strictly	Consent to Establish is obtained from
луп	comply with the rules and regulations with	MPCB vide No-Format
		1.0/BO/JD/(WPC)/EICNo.PN-
	regard to handling and disposal of hazardous waste in accordance with the	16784-13/E/CAC-6801
	hazardous waste in accordance with the hazardous waste (Management and	
	Handling) Rules, 2003 (amended).	herewith as an <b>Annexure-VI</b>
	Authorization from the MPCB shall be	herewith as all Annexure- vi
	obtained for	
	collections/treatment/storage/disposal of hazardous waste	
:::		Noted and Complied
xviii	The company shall undertake following waste Minimization Measures:	Noted and Complied
	• Metering of quantities of active	
	ingredients to minimize waste	
	• Reuse of by- products from the	
	process as raw materials or as raw	
	material substitutes in other process	
	Maximizing Recoveries.	
	• Use of automated material transfer	
	system to minimize spillage.	
Xix	Regular mock drills for the on-site	Mock drills are conducted
	emergency management plan shall be	periodically. Opportunities for
	carried out. Implementation of changes/	improvement are noted and
	improvements required, if any in the on-	incorporated in onsite emergency
	site management plan shall be ensured.	plan. We also successfully carried out
		off site mockdrill in coordination
		with various civil authorities
Xx	A separate environment management cell	A separate Environment
	with qualified staff shall be setup for	Management Cell is already set up
	implementation of the stipulated	under the control of Plant Head in
	environmental safeguards.	order to oversee effective
		implementation of environment
		protection measures and to monitor the routine environmental
V:	Transportation of ask will be through	performance within the premises.
Xxi	Transportation of ash will be through closed containers and all measures should	Noted and complied
xxii	be taken to prevent spilling of the ash.	Noted and complied
XXII	Separate silos will be provided for collecting and storing bottom ash and fly	Noted and complied
	collecting and storing bottom ash and fly	
	ash Senerate funds shall be allocated for	Provision mode for concrete fund-f-
xxiii	Separate funds shall be allocated for implementation of environmental	Provision made for separate funds for
	implementation of environmental	implementation of environmental
	protection measures/EMP along with item-	protection measures/ EMP and same
	wise breaks-up. These cost shall be	has been included in project cost. All
	included as part of the project cost. The	the reporting will be done on timely
	funds earmarked for the environmental	manner to concerned authorities.
	protection measures shall not be diverted	

	for other purpose and year-wise	
	expenditure should reported to the MPCB	
	& this department	
xxiv	The project Management shall advertise at	Noted and Complied
	least in two local newspapers widely	
	circulated in the region around the project,	
	one of which shall be in the Marathi	
	language of the local concerned within	
	seven days of issue of this letter, informing	
	that the project has been accorded	
	environmental clearance and copies of	
	clearance letter are available with	
	Maharastra Pollution Control Board and	
	may also be seen at website at	
	http:/ec.maharastra.gov.in	
Xxv	Project Management should submit half	Complied.
	yearly compliance reports in respect of the	Six monthly Compliance report being
	stipulated prior environment clearance	submitted regularly.
	terms and conditions in hard & Soft Copies	submitted regularly.
	to the MPCB & this department, on $1^{st}$	
	June&1 <sup>st</sup> December of each calendar year.	
xxvi	A copy of Clearance letter shall be sent by	Noted and complied
XXVI	proponent to the concerned Municipal	Noted and complied
	corporation and the local NGO, if any,	
	-	
	from whom suggestions/representations, if	
	any were received while processing the	
	proposal. The clearance letter shall also be	
	put on the website of the company by the	
••	proponent.	
xxvii	The proponent shall upload the status of	
	compliance of the stipulated EC	respect of Post Environment
	Conditions, including results of monitored	Clearance Monitoring (Rule 10 of
	data on their website and shall update the	EIA Notification, 2006, dated
	same periodically. It shall simultaneously	14.09.2006) are timely
	be sent to the regional office of MoEF, the	submitted in hard and soft copies to
	respective zonal office of CPCB & the	the concerned regulatory authorities.
	SPCB. The criteria pollutants levels	
	namely. SPM, RSPM, SO2, Nox (ambient	
	level as well as stack emissions) or critical	
	sectorai parameters, indicated for the	
	project shall be monitored and displayed at	
	a convenient location near the main gate of	
	the company in the public domain.	
xxviii	The Project proponent shall also submit six	Six monthly reports along with the
	monthly reports on the status of compliance	monitored data are regularly sent to
	of stipulated EC Conditions including	the concerned authorities in hard and
	results of monitored data (both in hard	soft copies.
	copies as well as by email) to the respective	
	zonal office of CPCB & the SPCB.	
xxix	The environmental statement for each	Annual Environment Statement is
	financial year ending 31st March in Form-V	regularly sent to the MPCB, MoEF
	as is mandated to he submitted by the	Nagpur and CPCB. In addition, a
	project proponent to the concerned State	copy of the statement is also
		1 1 1

	Pollution Control Board as prescribed	uploaded on the company's website.
	under the Environment (Protection) Rules.	
	1986, as amended subsequently, shall also	
	be put on the website of the company along	
	with the status of compliance of $\overrightarrow{EC}$	
	conditions and shall also be sent to the	
	respective Regional Offices of MoEF by e-	
	mail.	
Xix		Not Applicable of no pending and
ΛΙΧ	The environmental clearance is being	Not Applicable, as no pending case
	issued without prejudice to the court case	in the court of Law.
	pending in the court of law and it does not	
	mean that project proponent has not	
	violated any environmental laws in the past	
	and whatever decision of the Hon'ble court	
	will be binding on the project proponent.	
	Hence this clearance does not give	
	immunity to the project proponent in the	
	case field against him	
4	The environmental clearance is being	Noted
•	issued without prejudice to the action	110104
	initiated under EP Act or any court case	
	pending in the court of law and it does not	
	mean that project proponent has not	
	violated any environmental laws in the past	
	and whatever decision under EP Act or of	
	the Hon'ble court will be binding on the	
	project proponent. Hence this clearance	
	does not give immunity to the project	
	proponent in the case filed against him, if	
	any or action initiated under EP Act.	
5	The Environment department reserves the	Noted
	right to add any stringent condition or to	
	revoke the clearance if conditions	
	stipulated are not implemented to the	
	satisfaction of the department or for that	
	matter, for any other administrative	
	•	
(	reason.	NT-4-1
6	Validity of Environment Clearance: The	Noted
	environmental clearance accorded shall be	
	valid for a period of 5 years	
7	In case of any deviation or alteration in the	Noted
	project proposed from those submitted to	
	this department for clearance, a fresh	
	reference should be made to the	
	department to assess the adequacy of the	
	condition(s) imposed and to incorporate	
	additional environmental protection	
	measures required, if any.	
8	The above stipulations would be enforced	Noted
Ø	-	
	among others under the Water (Prevention and Control of Pollution) Act 1074 the Air	
	and Control of Pollution) Act, 1974, the Air	
	(Prevention and Control of Pollution) Act.	
	1981. The Environment (Protection) Act,	

	1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	
9	Any appeal against this environmental clearance shall lie with the National Green Tribunal, Van Vigyan Bhawan, Sec- 5, R.K. Puram, New Dehli — 110 022, if preferred. Within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted

EC No.		SEAC- 2012/0	CR-177/TC-2	
Project N	lame	Nira Bhima Sahakari S	Sakhar Karkhana Ltd.	
Locati	on	Shahajinagar, Post-Redni, Tal-Indapu	ır Dist Pune Maharashtra- 413114	
		PERIOD OF COMPLIANCE RI NOVEMB	EPORT: FROM JUNE 2015 TO	
		COMPLIANCE TO THE STIPULAT 21/01/	/2014	
		Part – A Specific Condit	tions	
Sr. No.		Particulars	Status	
Ι	for a	ditional land shall be used/acquired ny activity of the project without ing proper permission	No additional land used	
ii.	For Controlling fugitive natural dust, regular sprinkling of water & wind shields at appropriate distances in vulnerable areas of the plant shall be ensured		Yes. It is being practiced.	
Iii	Regular monitoring of the air quality, including SPM & SO2 levels both in work zone and ambient air shall be carried out in an around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with Maharastra Pollution control Board (MPCB) & Submit report accordingly		We are monitoring PM-10, PM 2.5, SOx, NOx and CO in ambient air as prescribed in the NAAQS, <b>dated-</b> 04/11/2015	
Iv	adequ arran	gement in furnace area	Noted and Complied	
V	-	r Housekeeping programmes shall be mented	Good House Keeping is maintained all around the plant premises.	
Vi	In the contro shall and sl efficie	e event of the failure of any pollution ol system adopted by the unit, the unit be immediately put out of operation hall not be restarted until the desired ncy has been achieve	Noted	
Vii	capaci disper Applie		Noted	
viii		ailed scheme for rainwater harvesting be prepared and implemented to	Entire rooftop in township is covered under rainwater harvesting wherein	

		4 6 4 11 4 1
	recharge ground water.	the rooftop water is collected and
		channeled into different injection
		wells, pond and check dams
		constructed in the township.
Ix	Arrangement shall be made that waste	Noted and Complied
	water and storm water do not get mixed	
Χ	Periodic monitoring of ground water shall	The ground water level and its
	be undertaken and result anaiyzed to	quality is monitored on regular basis.
	ascertain any change in the quality of	Analysis Reports is attached herewith
	water. Results shall be regularely submitted	dated-04/11/2015
	to the Maharastra Pollution Control Board.	
Xi	Leq of Noise level shall be maintained as	Regularly carried out Noise
	per standards. For People working in the	Monitoring at the site, report of the
	high noise area, requisite personal	same is attached herewith dated-
	protective equipments like ear plugs etc.	04/11/2015
	Shall be provided.	
Xii	The overall noise levels in and around the	All necessary noise control measures
	plant are shall be kept well within the	including acoustic hoods, silencers,
	standards by providing noise control	enclosures etc. on all sources of noise
	measures including acoustic hoods,	generation are in place and properly
	silencers, enclosures, etc. On all sources of	maintained. Workplace noise level
	noise generation. The ambient noise level	survey is conducted on regular basis
	shall confirm to the standards prescribed	to identify areas with high noise
	under Environment (Protection) Act, 1986	levels. Corrective /preventive actions
	Rules, 1989.	are taken if the noise levels exceed
	Rules, 1909.	thepermissible limits as stipulated in
		the EP/Factories Act.Workers
		employed in <b>High Noise Area</b> are
		provided with
		proper PPEs and their exposure to
		noise is controlled within
		the permissible limits. Periodic
		audiometric tests of the
		workmen employed in High Noise Area is also conducted as
		part of Workers' Health Surveillance
		Program. Ambient Noise level is
		monitored regularly and is
<b>X</b> 7•••		controlled within the stipulated limit.
Xiii	Green belt shall be developed & maintained	Development of Green Belt has been
	around the plant periphery. Green belt	initiated Considering CPCB / MPCB
	development shall be carried out	guidelines. Around 300 saplings have
	considering CPCB guidelines including	been planted inside the premises.
	selection of plant species and in	
	consultation with the local	
<b>X</b> 7•	DFO/Agriculture Dept.	
Xiv	Adequate safety measures shall be provided	Adequate safety measures are taken
	to limit the risk zone within the plant	to control the hazard and keep i
	boundary, in case of accident. Leak	below the acceptable limit. Leal
		1 1
	detection	-
	detection	monitored regularly.
Xv	detection       Occupational health surveillance of the	detection systems are installed and monitored regularly. Being Complied

XviThe Company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handlingFrei bydrant and sprinkler system i provided and maintained to ensure smooth operation at all times.xviiiThe Project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous waste in accordance with the hazardous waste (Management and Handling) Rules, 2003 (amended), Authorization from the MPCB shall be obtained mazerdous wasteConsent to Establish is obtained from CORO/D/WPC/EICNO.PN- 10784-13/E/CAC-6801 Dated: 14/08/2013 Attached herewith as an Annexure-VIxviiiThe company shall undertake following waste Minimization Measures: • Metering of quantities of active ingredients to minimize waste • Reuse of by- products from the process as raw materials or as raw material substitutes in other process • Maximizing Recoveries. • Use of automated material transfer system to minimize spilage.Mock drills are conducted minprovements required, if any in the on- site management plan shall be ensured.XixRegular mock drills for the on-site emergency management plan shall be ensured.Mock drills are conducted minprovenent are noted and order to overse effective implementation of the stipulated environmental safeguards.Mock drills are conducted minprovenent are noted and order to overse effective implementation of ash will be through closed containers and all measures should be taken to provent spilling of the ash.XxiTransportation of ash will be through closed containers and all measures should be taken to provent spilling of the ash.Noted and compliedxxiiiSeparate finds shall		and record maintained as per factories act	
for protection of possible fire hazards during manufacturing process in material handling       provided and maintained to ensure smooth operation at all times.         xvii       The Project authorities must stricity comply with the rules and regulations with regard to handling and disposal of hazardous waste (Management and Handling)       Consent to Establish is obtained from MPCB vide No-Format 1.0/BO/ID/(WPC/EICNO.PN- 16784-13/E/CAC-6801         Authorization from the MPCB shall be obtained       for collections/treatment/storage/disposal frazardous waste       Noted and Complied         xviii       The company shall undertake following waste Minimization Measures: • Metering of quantities of active ingredients to minimize waste • Reuse of by- products from the process as raw materials or as raw material substitutes in other process • Maximizing Recoveries. • Use of automated material transfer system to minimize spillage, miprovements required, if any in the on- site management plan shall be ensured.       Mock drills are conducted incorporated in onsite emergency prodicially. Opportunities of angrovement are noted and incorporated in onsite emergency plan. We also successfully carried ou off site mockdrill in coordination with valous civil authorities         Xx       A separate environment management cell with qualified staff shall be setup for implementation of ash will be through closed containers and all measures should be taken to prevent spilling of the ash.       Noted and complied         Xxi       Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item- wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environmental       Noted and compl	Xvi		Fire hydrant and sprinkler system is
during manufacturing process in material handlingsmooth operation at all times.xviiThe Project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous waste in accordance with the hazardous waste (Management and Handling) Rules, 2003 (amended) Authorization from the MPCB shall be obtainedConsent to Establish is obtained from to/BO/JD/(WPC)/EICNo.PN- 10/80/JD/(WPC)/EICNO.PN- 10/80/JD/(WPC)/EICNO.PN- <br< th=""><th>21.01</th><th></th><th></th></br<>	21.01		
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xvii       The Project authorities must strictly comply with the rules and regulations with regard to handling and disposal hazardous waste in accordance with the hazardous waste (Management and Handling) Rules, 2003 (amended). Authorization from the MPCB shall be obtained for collections/treatment/storage/disposal of hazardous waste       Consent to Establish is obtained from MPCB vide No-Format 10/B/O/D/(WPC/ELCNO.PN- 16784-13/E/CAC-6801 Date:- 14/08/2013 Attached harardous waste         xviii       The company shall undertake following waste Minimization Measures:       Noted and Complied         xviii       The company shall undertake following waste Minimization Measures:       Noted and Complied         xviii       The company shall undertake following waste Minimization Measures:       Noted and Complied         xix       Regular mock drills for the on-site emergency management plan shall be carried out. Implementation of changes/ improvements required, if any in the on- site management plan shall be ensured.       Mock drills are conducted periodically. Opportunities for impovements required, if any in the on- site management plan shall be ensured.         Xx       A separate environment management cell with qualified staff shall be step for implementation of the stipulated environmental safeguards.       Mock drills areal y set up under the control of Plant Head in order to overse effective implementation of ash will be through closed containers and all measures should be taken to prevent spilling of the ash.         Xxii       Separate silos will be provided for inplementation of environmental performance within the premises.         Xxii       Separate funds shall be		0 ° •	smooth operation at an times.
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protection measures/EMP along with item- wise breaks-up. These cost shall be included as part of the project cost. The funds earmarked for the environmentalprotection measures/ EMP and same has been included in project cost. All the reporting will be done on timely manner to concerned authorities.		-	-
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included as part of the project cost. The funds earmarked for the environmentalthe reporting will be done on timely manner to concerned authorities.		-	*
funds earmarked for the environmental manner to concerned authorities.		-	
protection measures snall not be diverted		protection measures shall not be diverted	

	f	
	for other purpose and year-wise	
	expenditure should reported to the MPCB	
	& this department	
xxiv	The project Management shall advertise at	Noted and Complied
	least in two local newspapers widely	
	circulated in the region around the project,	
	one of which shall be in the Marathi	
	language of the local concerned within	
	seven days of issue of this letter, informing	
	that the project has been accorded	
	environmental clearance and copies of	
	clearance letter are available with	
	Maharastra Pollution Control Board and	
	may also be seen at website at	
	http:/ec.maharastra.gov.in	
Xxv	Project Management should submit half	Complied.
	yearly compliance reports in respect of the	Six monthly Compliance report being
	stipulated prior environment clearance	submitted regularly.
	terms and conditions in hard & Soft Copies	
	to the MPCB & this department, on 1 <sup>st</sup>	
	June&1 <sup>st</sup> December of each calendar year.	
xxvi	A copy of Clearance letter shall be sent by	Noted and complied
	proponent to the concerned Municipal	r i i i i i i i i i i i i i i i i i i i
	corporation and the local NGO, if any,	
	from whom suggestions/representations, if	
	any were received while processing the	
	proposal. The clearance letter shall also be	
	put on the website of the company by the	
	proponent.	
xxvii	The proponent shall upload the status of	Six monthly compliance reports in
	compliance of the stipulated EC	respect of Post Environment
	Conditions, including results of monitored	Clearance Monitoring (Rule 10 of
	data on their website and shall update the	EIA Notification, 2006, dated
	same periodically. It shall simultaneously	14.09.2006) are timely
	be sent to the regional office of MoEF, the	submitted in hard and soft copies to
	respective zonal office of CPCB & the	the concerned regulatory authorities.
	SPCB. The criteria pollutants levels	the concerned regulatory authornees.
	namely. SPM, RSPM, SO2, Nox (ambient	
	level as well as stack emissions) or critical	
	sectorai parameters, indicated for the	
	project shall be monitored and displayed at	
	a convenient location near the main gate of	
	the company in the public domain.	
xxviii	The Project proponent shall also submit six	Six monthly reports along with the
лл¥Ш	monthly reports on the status of compliance	monitored data are regularly sent to
	of stipulated EC Conditions including	the concerned authorities in hard and
	results of monitored data (both in hard	soft copies.
	copies as well as by email) to the respective	son copies.
	zonal office of CPCB & the SPCB.	
xxix	The environmental statement for each	Annual Environment Statement is
лліл	financial year ending 31 <sup>st</sup> March in Form-V	regularly sent to the MPCB, MoEF
	as is mandated to he submitted by the	Nagpur and CPCB. In addition, a
	•	
	project proponent to the concerned State	copy of the statement is also

	Pollution Control Board as prescribed	uploaded on the company's website.
	under the Environment (Protection) Rules.	
	1986, as amended subsequently, shall also	
	be put on the website of the company along	
	with the status of compliance of EC	
	conditions and shall also be sent to the	
	respective Regional Offices of MoEF by e-	
	mail.	
Xix	The environmental clearance is being	Not Applicable, as no pending case
	issued without prejudice to the court case	in the court of Law.
	pending in the court of law and it does not	
	mean that project proponent has not	
	violated any environmental laws in the past	
	and whatever decision of the Hon'ble court	
	will be binding on the project proponent.	
	Hence this clearance does not give	
	immunity to the project proponent in the	
4	case field against him	Noted
4	The environmental clearance is being	Noted
	issued without prejudice to the action	
	initiated under EP Act or any court case	
	pending in the court of law and it does not	
	mean that project proponent has not	
	violated any environmental laws in the past	
	and whatever decision under EP Act or of	
	the Hon'ble court will be binding on the	
	project proponent. Hence this clearance	
	does not give immunity to the project	
	proponent in the case filed against him, if	
	any or action initiated under EP Act.	
5	The Environment department reserves the	Noted
	right to add any stringent condition or to	
	revoke the clearance if conditions	
	stipulated are not implemented to the	
	satisfaction of the department or for that	
	matter, for any other administrative	
	reason.	
6	Validity of Environment Clearance: The	Noted
•	environmental clearance accorded shall be	
	valid for a period of 5 years	
7	In case of any deviation or alteration in the	Noted
,	project proposed from those submitted to	1 loted
	this department for clearance, a fresh	
	reference should be made to the	
	department to assess the adequacy of the	
	condition(s) imposed and to incorporate	
	additional environmental protection	
	measures required, if any.	
8	The above stipulations would be enforced	Noted
	among others under the Water (Prevention	
	and Control of Pollution) Act, 1974, the Air	
	(Prevention and Control of Pollution) Act.	
	1981. The Environment (Protection) Act,	

	1986 and rules there under, Hazardous Wastes (Management and Handling) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	
9	Any appeal against this environmental clearance shall lie with the National Green Tribunal, Van Vigyan Bhawan, Sec- 5, R.K. Puram, New Dehli — 110 022, if preferred. Within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted

EC No.		SEAC- 2012/CR-177/TC-2	
Project N	ame	Nira Bhima Sahakari S	Sakhar Karkhana Ltd.
Locatio	on	Shahajinagar, Post-Redni, Tal-Indapu	ur, Dist. Pune, Maharashtra- 413114
Location		PERIOD OF COMPLIANCE REPO MAY COMPLIANCE TO THE STIPULAT	2016 ED CONDITIONS OF EC DATED-
		21/01/ Port A Specific Condi	-
Sr No		Part – A Specific Condit Particulars	
Sr. No. I	No. of	lditional land shall be used/acquired	Status
I	for a	ny activity of the project without ing proper permission	No additional fand used
ii.	For Controlling fugitive natural dust, regular sprinkling of water & wind shields at appropriate distances in vulnerable areas of the plant shall be ensured		Yes. It is being practiced.
Iii	Regular monitoring of the air quality, including SPM & SO2 levels both in work zone and ambient air shall be carried out in an around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with Maharastra Pollution control Board		We are monitoring PM-10, PM 2.5, SOx, NOx and CO in ambient air as prescribed in the NAAQS, <b>dated-</b> 04/05/2016
Iv	Neces: adequ	<b>B) &amp; Submit report accordingly</b> sary arrangement shall be made to ate safety and ventilation gement in furnace area	Noted and Complied
V	Prope	r Housekeeping programmes shall be mented	Good House Keeping is maintained all around the plant premises.
Vi	In the contro shall and sl	e event of the failure of any pollution ol system adopted by the unit, the unit be immediately put out of operation hall not be restarted until the desired ncy has been achieve	Noted
Vii	A Stac	ck of adequate height based on DG set ity shall be provided for control and sion of pollutant from DG Set. (If	Noted
viii	A deta shall	ailed scheme for rainwater harvesting be prepared and implemented to rge ground water.	Entire rooftop in township is covered under rainwater harvesting wherein the rooftop water is collected and

	1	
		channeled into different injection
		wells, pond and check dams
		constructed in the township.
Ix	Arrangement shall be made that waste	Noted and Complied
	water and storm water do not get mixed	
Χ	Periodic monitoring of ground water shall	The ground water level and its
	be undertaken and result analyzed to	quality is monitored on regular basis.
	ascertain any change in the quality of	Analysis Reports is attached herewith
	water. Results shall be regularely submitted	dated-04/05/2016
	to the Maharastra Pollution Control Board.	
Xi	Leq of Noise level shall be maintained as	Regularly carried out Nois
	per standards. For People working in the	Monitoring at the site, report of the
	high noise area, requisite personal	same is attached herewith <b>dated</b>
	protective equipments like ear plugs etc.	04/05/2016
	Shall be provided.	
Xii	The overall noise levels in and around the	All necessary noise control measures
	plant are shall be kept well within the	including acoustic hoods, silencers,
	standards by providing noise control	enclosures etc. on all sources of noise
	measures including acoustic hoods,	generation are in place and properly
	silencers, enclosures, etc. On all sources of	maintained. Workplace noise level
	noise generation. The ambient noise level	survey is conducted on regular basis
	shall confirm to the standards prescribed	to identify areas with high noise
	under Environment (Protection) Act, 1986	levels. Corrective /preventive actions
	Rules, 1989.	are taken if the noise levels exceed
	Rules, 1909.	thepermissible limits as stipulated in
		the EP/Factories Act. Workers
		employed in <b>High Noise Area</b> are
		provided with proper PPEs and their
		exposure to noise is controlled within
		the permissible limits. Periodic
		audiometric tests of the
		workmen employed in High Noise
		Area is also conducted as
		part of Workers' Health Surveillance
		Program. Ambient Noise level is
		monitored regularly and is
<b>X7000</b>		controlled within the stipulated limit.
Xiii	Green belt shall be developed & maintained	Development of Green Belt has been
	around the plant periphery. Green belt	initiated Considering CPCB / MPCB
	development shall be carried out	guidelines. Around 300 saplings have
	considering CPCB guidelines including	been planted inside the premises.
	selection of plant species and in	
	consultation with the local	
	DFO/Agriculture Dept.	
Xiv	Adequate safety measures shall be provided	Adequate safety measures are taken
		to control the hererd and keep
	to limit the risk zone within the plant	
	boundary, in case of accident. Leak	below the acceptable limit. Lea
	-	below the acceptable limit. Lead detection systems are installed and
	boundary, in case of accident. Leak detection	below the acceptable limit. Lead detection systems are installed and monitored regularly.
Xv	boundary, in case of accident. Leak detection Occupational health surveillance of the	below the acceptable limit. Leal detection systems are installed and
	boundary, in case of accident. Leak detectionOccupational health surveillance of the workers shall be done on a regular basis	below the acceptable limit. Leal detection systems are installed and monitored regularly.
	boundary, in case of accident. Leak detection Occupational health surveillance of the	

	for nucleation of negatible fine beyonds	manyided and maintained to another
	for protection of possible fire hazards during manufacturing process in material	provided and maintained to ensure smooth operation at all times.
	handling	smooth operation at an times.
xvii	The Project authorities must strictly	Consent to Establish is obtained from
	comply with the rules and regulations with	MPCB vide No-Format
	regard to handling and disposal of	1.0/BO/JD/(WPC)/EICNo.PN-
	hazardous waste in accordance with the	16784-13/E/CAC-6801
	hazardous waste (Management and	Dated:- 14/08/2013 Attached
	Handling) Rules, 2003 (amended).	herewith as an <b>Annexure-VI</b>
	Authorization from the MPCB shall be	
	obtained for	
	collections/treatment/storage/disposal of	
	hazardous waste	
xviii	The company shall undertake following	Noted and Complied
	waste Minimization Measures:	*
	• Metering of quantities of active	
	ingredients to minimize waste	
	• Reuse of by- products from the	
	process as raw materials or as raw	
	material substitutes in other process	
	Maximizing Recoveries.	
	• Use of automated material transfer	
	system to minimize spillage.	
Xix	Regular mock drills for the on-site	Mock drills are conducted
	emergency management plan shall be	periodically. Opportunities for
	carried out. Implementation of changes/	improvement are noted and
	improvements required, if any in the on-	incorporated in onsite emergency
	site management plan shall be ensured.	plan. We also successfully carried out
		off site mockdrill in coordination
		with various civil authorities
Xx	A separate environment management cell	A separate Environment
	with qualified staff shall be setup for	Management Cell is already set up
	implementation of the stipulated	under the control of Plant Head in
	environmental safeguards.	order to oversee effective
		implementation of environment protection measures and to monitor
		the routine environmental
		performance within the premises.
Xxi	Transportation of ash will be through	Noted and complied
	closed containers and all measures should	
	be taken to prevent spilling of the ash.	
xxii	Separate silos will be provided for	Noted and complied
	collecting and storing bottom ash and fly	1
	ash	
xxiii	Separate funds shall be allocated for	Provision made for separate funds for
	implementation of environmental	implementation of environmental
	protection measures/EMP along with item-	protection measures/ EMP and same
	wise breaks-up. These cost shall be	has been included in project cost. All
	included as part of the project cost. The	the reporting will be done on timely
	funds earmarked for the environmental	manner to concerned authorities.
	protection measures shall not be diverted	
	for other purpose and year-wise	
	expenditure should reported to the MPCB	

	& this department	
xxiv	The project Management shall advertise at	Noted and Complied
28288 4	least in two local newspapers widely	roted and complied
	circulated in the region around the project,	
	one of which shall be in the Marathi	
	language of the local concerned within	
	seven days of issue of this letter, informing	
	that the project has been accorded	
	environmental clearance and copies of	
	clearance letter are available with	
	Maharastra Pollution Control Board and	
	may also be seen at website at	
	http://ec.maharastra.gov.in	
Xxv	Project Management should submit half	Complied.
2 8 28 4	yearly compliance reports in respect of the	Six monthly Compliance report being
	stipulated prior environment clearance	submitted regularly.
	terms and conditions in hard & Soft Copies	sublitted regularly.
	to the MPCB & this department, on 1 <sup>st</sup>	
	June&1 <sup>st</sup> December of each calendar year.	
xxvi	A copy of Clearance letter shall be sent by	Noted and complied
ΔΑΥΙ	proponent to the concerned Municipal	Noted and complied
	corporation and the local NGO, if any,	
	from whom suggestions/representations, if	
	any were received while processing the	
	proposal. The clearance letter shall also be	
	put on the website of the company by the	
	proponent.	
xxvii	The proponent shall upload the status of	Six monthly compliance reports in
	compliance of the stipulated EC	respect of Post Environment
	Conditions, including results of monitored	Clearance Monitoring (Rule 10 of
	data on their website and shall update the	EIA Notification, 2006, dated
	same periodically. It shall simultaneously	14.09.2006) are timely
	be sent to the regional office of MoEF, the	submitted in hard and soft copies to
	respective zonal office of CPCB & the	the concerned regulatory authorities.
	SPCB. The criteria pollutants levels	
	namely. SPM, RSPM, SO2, Nox (ambient	
	level as well as stack emissions) or critical	
	sectorai parameters, indicated for the	
	project shall be monitored and displayed at	
	a convenient location near the main gate of	
	the company in the public domain.	
xxviii	The Project proponent shall also submit six	Six monthly reports along with the
	monthly reports on the status of compliance	monitored data are regularly sent to
	of stipulated EC Conditions including	the concerned authorities in hard and
	results of monitored data (both in hard	soft copies.
	copies as well as by email) to the respective	
	zonal office of CPCB & the SPCB.	
xxix	The environmental statement for each	Annual Environment Statement is
	financial year ending 31 <sup>st</sup> March in Form-V	regularly sent to the MPCB, MoEF
	as is mandated to he submitted by the	Nagpur and CPCB. In addition, a
	project proponent to the concerned State	copy of the statement is also
	Pollution Control Board as prescribed	uploaded on the company's website.
		· - · ·

	1986, as amended subsequently, shall also	
	be put on the website of the company along	
	with the status of compliance of EC	
	conditions and shall also be sent to the	
	respective Regional Offices of MoEF by e-	
***	mail.	
Xix	The environmental clearance is being	Not Applicable, as no pending case
	issued without prejudice to the court case	in the court of Law.
	pending in the court of law and it does not	
	mean that project proponent has not	
	violated any environmental laws in the past	
	and whatever decision of the Hon'ble court	
	will be binding on the project proponent.	
	Hence this clearance does not give	
	immunity to the project proponent in the	
	case field against him	
4	The environmental clearance is being	Noted
	issued without prejudice to the action	
	initiated under EP Act or any court case	
	pending in the court of law and it does not	
	mean that project proponent has not	
	violated any environmental laws in the past	
	and whatever decision under EP Act or of	
	the Hon'ble court will be binding on the	
	project proponent. Hence this clearance	
	does not give immunity to the project	
	proponent in the case filed against him, if	
	any or action initiated under EP Act.	
5	The Environment department reserves the right to odd only stringent condition on to	Noted
	right to add any stringent condition or to revoke the clearance if conditions	
	stipulated are not implemented to the	
	satisfaction of the department or for that matter, for any other administrative	
6	reason. Validity of Environment Clearance: The	Noted
U	environmental clearance accorded shall be	Noted
	valid for a period of 5 years	
7	In case of any deviation or alteration in the	Noted
1	project proposed from those submitted to	
	this department for clearance, a fresh	
	reference should be made to the	
	department to assess the adequacy of the	
	condition(s) imposed and to incorporate	
	additional environmental protection	
	measures required, if any.	
8	The above stipulations would be enforced	Noted
U	among others under the Water (Prevention	
	and Control of Pollution) Act, 1974, the Air	
	(Prevention and Control of Pollution) Act.	
	<b>1981.</b> The Environment (Protection) Act,	
	1986 and rules there under, Hazardous	
	Wastes (Management and Handling) Rules,	
	,, astes (management and franching) Rules,	I

	1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	
9	Any appeal against this environmental clearance shall lie with the National Green Tribunal, Van Vigyan Bhawan, Sec-5, R.K. Puram, New Dehli — 110 022, if preferred. Within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted

EC No.		SEAC- 2012/CR-177/TC-2		
Project N	ame	Nira Bhima Sahakari S	Sakhar Karkhana Ltd.	
Locatio	on	Shahajinagar, Post-Redni, Tal-Indapu	ur, Dist. Pune, Maharashtra- 413114	
		PERIOD OF COMPLIANCE REPORT: FROM JUNE 2016 TO NOVEMBER 2016		
		COMPLIANCE TO THE STIPULAT 21/01/	/2014	
		Part – A Specific Condit	tions	
Sr. No.		Particulars	Status	
I	for a	ditional land shall be used/acquired ny activity of the project without ing proper permission	No additional land used	
ii.	For regula at ap	Controlling fugitive natural dust, or sprinkling of water & wind shields opropriate distances in vulnerable of the plant shall be ensured	Yes. It is being practiced.	
Iii	includ zone a an ar shall monit with	ar monitoring of the air quality, ing SPM & SO2 levels both in work and ambient air shall be carried out in ound the power plant and records be maintained. The location of oring stations and frequency of oring shall be decided in consultation Maharastra Pollution control Board B) & Submit report accordingly	We are monitoring PM-10, PM 2.5, SOx, NOx and CO in ambient air as prescribed in the NAAQS, <b>dated-</b> 03/11/2016	
Iv	Necess adequ	sary arrangement shall be made to	Noted and Complied	
V	Prope	r Housekeeping programmes shall be nented	Good House Keeping is maintained all around the plant premises.	
Vi	In the contro shall and sl	e event of the failure of any pollution of system adopted by the unit, the unit be immediately put out of operation nall not be restarted until the desired ncy has been achieve	Noted	
Vii	A Stac capaci	ck of adequate height based on DG set ity shall be provided for control and sion of pollutant from DG Set. (If	Noted	
viii	A deta shall	ailed scheme for rainwater harvesting be prepared and implemented to rge ground water.	Entire rooftop in township is covered under rainwater harvesting wherein the rooftop water is collected and	

		channeled into different injection
		wells, pond and check dams
		constructed in the township.
Ix	Arrangement shall be made that waste	Noted and Complied
	water and storm water do not get mixed	
Χ	Periodic monitoring of ground water shall	The ground water level and its
	be undertaken and result analyzed to	quality is monitored on regular basis.
	ascertain any change in the quality of	Analysis Reports is attached herewith
	water. Results shall be regularely submitted	dated-03/11/2016
	to the Maharastra Pollution Control Board.	
Xi	Leq of Noise level shall be maintained as	Regularly carried out Nois
	per standards. For People working in the	Monitoring at the site, report of the
	high noise area, requisite personal	same is attached herewith <b>dated</b>
	protective equipments like ear plugs etc.	03/11/2016
	Shall be provided.	
Xii	The overall noise levels in and around the	All necessary noise control measures
	plant are shall be kept well within the	including acoustic hoods, silencers,
	standards by providing noise control	enclosures etc. on all sources of noise
	measures including acoustic hoods,	generation are in place and properly
	silencers, enclosures, etc. On all sources of	maintained. Workplace noise level
	noise generation. The ambient noise level	survey is conducted on regular basis
	shall confirm to the standards prescribed	to identify areas with high noise
	under Environment (Protection) Act, 1986	levels. Corrective /preventive actions
	Rules, 1989.	are taken if the noise levels exceed
	Kules, 1907.	the permissible limits as stipulated in
		the EP/Factories Act. Workers
		employed in <b>High Noise Area</b> are
		provided with proper PPEs and their
		exposure to noise is controlled within
		the permissible limits. Periodic
		audiometric tests of the workmen
		employed in High Noise Area is also
		conducted as part of Workers' Health
		-
		Surveillance Program. Ambient Noise level is monitored regularly
		e ;
		and is controlled within the stipulated
Xiii	Croon halt shall be developed & maintained	limit.
АШ	Green belt shall be developed & maintained	Development of Green Belt has been initiated Considering CPCP (MPCP
	around the plant periphery. Green belt	initiated Considering CPCB / MPCB
	development shall be carried out	guidelines. Around 300 saplings have
	considering CPCB guidelines including	been planted inside the premises.
	selection of plant species and in consultation with the local	
<b>X</b> 7•	DFO/Agriculture Dept.	
Xiv	Adequate safety measures shall be provided	Adequate safety measures are taken
	to limit the risk zone within the plant	to control the hazard and keep i
	boundary, in case of accident. Leak	below the acceptable limit. Leal
	detection	detection systems are installed and
		monitored regularly.
Xv	Occupational health surveillance of the	Being Complied
Xv	workers shall be done on a regular basis	Being Complied
Xv		Being Complied Fire hydrant and sprinkler system is

	for protection of possible fire hazards	provided and maintained to ensure
	during manufacturing process in material	smooth operation at all times.
	handling	-
xvii	The Project authorities must strictly	Consent to Establish is obtained from
	comply with the rules and regulations with	MPCB vide No-Format
	regard to handling and disposal of	
	hazardous waste in accordance with the	16784-13/E/CAC-6801
	hazardous waste (Management and	Dated:- 14/08/2013 Attached
	Handling) Rules, 2003 (amended).	herewith as an Annexure-VI
	Authorization from the MPCB shall be	
	obtained for collections/treatment/storage/disposal of	
	collections/treatment/storage/disposal of hazardous waste	
xviii		Noted and Complied
XVIII	The company shall undertake following waste Minimization Measures:	Noted and Complied
	• Metering of quantities of active ingredients to minimize waste	
	• Reuse of by- products from the	
	process as raw materials or as raw	
	material substitutes in other process	
	<ul> <li>Maximizing Recoveries.</li> </ul>	
	<ul> <li>Use of automated material transfer</li> </ul>	
	system to minimize spillage.	
Xix	Regular mock drills for the on-site	Mock drills are conducted
	emergency management plan shall be	periodically. Opportunities for
	carried out. Implementation of changes/	improvement are noted and
	improvements required, if any in the on-	incorporated in onsite emergency
	site management plan shall be ensured.	plan. We also successfully carried out
		off site mockdrill in coordination
		with various civil authorities
Xx	A separate environment management cell	A separate Environment
	with qualified staff shall be setup for	Management Cell is already set up
	implementation of the stipulated	under the control of Plant Head in
	environmental safeguards.	order to oversee effective
		implementation of environment
		protection measures and to monitor
		the routine environmental
Xxi	Transportation of ach will be thread	performance within the premises.
	Transportation of ash will be through closed containers and all measures should	Noted and complied
	be taken to prevent spilling of the ash.	
xxii	Separate silos will be provided for	Noted and complied
лліі	collecting and storing bottom ash and fly	
	ash	
xxiii	Separate funds shall be allocated for	Provision made for separate funds for
	implementation of environmental	implementation of environmental
	protection measures/EMP along with item-	protection measures/ EMP and same
	wise breaks-up. These cost shall be	has been included in project cost. All
	included as part of the project cost. The	the reporting will be done on timely
	funds earmarked for the environmental	manner to concerned authorities.
	protection measures shall not be diverted	
1		
	for other purpose and year-wise expenditure should reported to the MPCB	

	& this department	
xxiv	The project Management shall advertise at	Noted and Complied
23231 4	least in two local newspapers widely	roted and complied
	circulated in the region around the project,	
	one of which shall be in the Marathi	
	language of the local concerned within	
	seven days of issue of this letter, informing	
	that the project has been accorded	
	environmental clearance and copies of	
	clearance letter are available with	
	Maharastra Pollution Control Board and	
	may also be seen at website at	
	http://ec.maharastra.gov.in	
Xxv	Project Management should submit half	Complied.
2828 4	yearly compliance reports in respect of the	Six monthly Compliance report being
	stipulated prior environment clearance	submitted regularly.
	terms and conditions in hard & Soft Copies	sublitted regularly.
	to the MPCB & this department, on 1 <sup>st</sup>	
	June&1 <sup>st</sup> December of each calendar year.	
xxvi	A copy of Clearance letter shall be sent by	Noted and complied
ΔΑΥΙ	proponent to the concerned Municipal	Noted and complied
	corporation and the local NGO, if any,	
	from whom suggestions/representations, if	
	any were received while processing the	
	proposal. The clearance letter shall also be	
	put on the website of the company by the	
	proponent.	
xxvii	The proponent shall upload the status of	Six monthly compliance reports in
	compliance of the stipulated EC	respect of Post Environment
	Conditions, including results of monitored	Clearance Monitoring (Rule 10 of
	data on their website and shall update the	EIA Notification, 2006, dated
	same periodically. It shall simultaneously	14.09.2006) are timely
	be sent to the regional office of MoEF, the	submitted in hard and soft copies to
	respective zonal office of CPCB & the	the concerned regulatory authorities.
	SPCB. The criteria pollutants levels	
	namely. SPM, RSPM, SO2, Nox (ambient	
	level as well as stack emissions) or critical	
	sectorai parameters, indicated for the	
	project shall be monitored and displayed at	
	a convenient location near the main gate of	
	the company in the public domain.	
xxviii	The Project proponent shall also submit six	Six monthly reports along with the
	monthly reports on the status of compliance	monitored data are regularly sent to
	of stipulated EC Conditions including	the concerned authorities in hard and
	results of monitored data (both in hard	soft copies.
	copies as well as by email) to the respective	•
	zonal office of CPCB & the SPCB.	
xxix	The environmental statement for each	Annual Environment Statement is
	financial year ending 31 <sup>st</sup> March in Form-V	regularly sent to the MPCB, MoEF
	as is mandated to he submitted by the	Nagpur and CPCB. In addition, a
	project proponent to the concerned State	copy of the statement is also
	Pollution Control Board as prescribed	uploaded on the company's website.

1096 as amondod subsequently shall shall	
1986, as amended subsequently, shall also	
be put on the website of the company along	
with the status of compliance of EC	
conditions and shall also be sent to the	
respective Regional Offices of MoEF by e- mail.	
Xix The environmental clearance is being Not Applicable, as no pendir	ng case
issued without prejudice to the court case in the court of Law.	
pending in the court of law and it does not	
mean that project proponent has not	
violated any environmental laws in the past	
and whatever decision of the Hon'ble court	
will be binding on the project proponent.	
Hence this clearance does not give	
immunity to the project proponent in the	
case field against him	
4 The environmental clearance is being Noted	
issued without prejudice to the action	
initiated under EP Act or any court case	
pending in the court of law and it does not	
mean that project proponent has not	
violated any environmental laws in the past	
and whatever decision under EP Act or of	
the Hon'ble court will be binding on the	
project proponent. Hence this clearance	
does not give immunity to the project	
proponent in the case filed against him, if	
any or action initiated under EP Act.	
5 The Environment department reserves the Noted	
right to add any stringent condition or to	
revoke the clearance if conditions	
stipulated are not implemented to the	
satisfaction of the department or for that	
matter, for any other administrative	
reason.	
6 Validity of Environment Clearance: The Noted	
environmental clearance accorded shall be	
valid for a period of 5 years	
7 In case of any deviation or alteration in the Noted	
project proposed from those submitted to	
this department for clearance, a fresh	
reference should be made to the	
department to assess the adequacy of the	
condition(s) imposed and to incorporate	
additional environmental protection	
measures required, if any.	
8 The above stipulations would be enforced Noted	
among others under the Water (Prevention	
and Control of Pollution) Act, 1974, the Air	
(Prevention and Control of Pollution) Act.	
IIIVI (The Unranement (Destastion) A at	
1981. The Environment (Protection) Act,	
1981. The Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling) Rules,	

	1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.	
9	Any appeal against this environmental clearance shall lie with the National Green Tribunal, Van Vigyan Bhawan, Sec-5, R.K. Puram, New Dehli — 110 022, if preferred. Within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted

EC No.	SI	EAC- 2012/CR-177/TC-2
Project Name	Nira Bhin	na Sahakari Sakhar Karkhana Ltd.
I Toject Name	INITA DIIII	ia Saliakali Sakilai Kalkilalia Liu.
Location	Shahajinagar, Post-Redn	i, Tal-Indapur, Dist. Pune, Maharashtra- 413114
	PERIOD OF COMPLIA	NCE REPORT: FROM DECEMBER 2016 TO MAY 2017
	COMPLIANCE TO THE	STIPULATED CONDITIONS OF EC DATED- 21/01/2014
	Part – A Spe	cific Conditions
	Particulars	Status
No additional la	nd shall be used/acquired	No additional land used
	of the project without	
obtaining proper		
	fugitive natural dust,	Yes. It is being practiced.
	g of water & wind shields	
	distances in vulnerable	
areas of the plant	shall be ensured	
Regular monitor	ring of the air quality,	We are monitoring PM-10, PM 2.5, SOx, NOx
	x SO2 levels both in work	and CO in ambient air as prescribed in the
	t air shall be carried out in	NAAQS, dated- 07/05/2017
	power plant and records	
	ained. The location of	
monitoring stat	ions and frequency of	
	be decided in consultation	
with Maharastra	Pollution control Board	
(MPCB) & Subm	it report accordingly	
	gement shall be made to	Noted and Complied
adequate safety and ventilation		
arrangement in fu		
Proper Housekeeping programmes shall be		Good House Keeping is maintained all around the
implemented		plant premises.
	he failure of any pollution	Noted
•	lopted by the unit, the unit	
shall be immediately put out of operation and shall not be restarted until the desired		
efficiency has bee		Noted
-	ate height based on DG set	Noted
	provided for control and llutant from DG Set. (If	
Applicable)	nutant nom DG Set. (II	
	e for rainwater harvesting	Entire rooftop in township is covered under
	red and implemented to	rainwater harvesting wherein the rooftop water is
shan be prepar	cu anu implementeu to	raniwater harvesting wherein the roomop water is

recharge ground water.	collected and
	channeled into different injection wells, pond and
	check dams constructed in the township.
Arrangement shall be made that waste	Noted and Complied
water and storm water do not get mixed	
Periodic monitoring of ground water shall	The ground water level and its quality is
be undertaken and result anaiyzed to	monitored on regular basis. Analysis Reports is
ascertain any change in the quality of	attached herewith dated-07/05/2017
water. Results shall be regularely submitted	
to the Maharastra Pollution Control Board.	
Leq of Noise level shall be maintained as	Regularly carried out Noise Monitoring at the
per standards. For People working in the	site, report of the same is attached herewith
high noise area, requisite personal	dated- 07/05/2017
protective equipments like ear plugs etc.	
Shall be provided.	
The overall noise levels in and around the	All necessary noise control measures including
plant are shall be kept well within the	acoustic hoods, silencers, enclosures etc. on all
standards by providing noise control	sources of noise generation are in place and
measures including acoustic hoods,	properly maintained. Workplace noise level
silencers, enclosures, etc. On all sources of	survey is conducted on regular basis
noise generation. The ambient noise level	to identify areas with high noise levels.
shall confirm to the standards prescribed	Corrective /preventive actions are taken if the
under Environment (Protection) Act, 1986	noise levels exceed the permissible limits as
Rules, 1989.	stipulated in the EP/Factories Act. Workers
	employed in High Noise Area are provided with
	proper PPEs and their exposure to noise is
	controlled within the permissible limits. Periodic
	audiometric tests of the workmen employed in
	High Noise Area is also conducted as part of
	Workers' Health Surveillance Program. Ambient
	Noise level is monitored regularly and is
	controlled within the stipulated limit.
Green belt shall be developed & maintained	Development of Green Belt has been initiated
around the plant periphery. Green belt	Considering CPCB / MPCB guidelines. Around
development shall be carried out	300 saplings have been planted inside the
considering CPCB guidelines including	premises.
selection of plant species and in	
consultation with the local	
DFO/Agriculture Dept.	
Adequate safety measures shall be provided	Adequate safety measures are taken to control the
to limit the risk zone within the plant	hazard and keep it below the acceptable limit.
boundary, in case of accident. Leak	Leak detection systems are installed and
detection	monitored regularly.
Occupational health surveillance of the	Being Complied
workers shall be done on a regular basis	
and record maintained as per factories act	
The Company shall make the arrangement	Fire hydrant and sprinkler system is provided and
for protection of possible fire hazards	maintained to ensure smooth operation at all
during manufacturing process in material	times.
handling	
The Project authorities must strictly	Consent to Establish is obtained from MPCB vide
comply with the rules and regulations with	No-Format 1.0/BO/JD/(WPC)/EICNo.PN-16784-
regard to handling and disposal of	13/E/CAC-6801

hazardous waste in accordance with the	Dated:- 14/08/2013 Attached herewith as an
hazardous waste (Management and	Annexure-VI
Handling) Rules, 2003 (amended).	
Authorization from the MPCB shall be	
obtained for	
collections/treatment/storage/disposal of	
hazardous waste	
The company shall undertake following	Noted and Complied
waste Minimization Measures:	- · · · · · · · · · · · · · · · · · · ·
filetering of quantities of active	
ingredients to minimize waste	
• Reuse of by- products from the	
process as raw materials or as raw	
material substitutes in other process	
Maximizing Recoveries.	
8	
• Use of automated material transfer	
system to minimize spillage.	
Regular mock drills for the on-site	Mock drills are conducted periodically.
emergency management plan shall be	Opportunities for improvement are noted and
carried out. Implementation of changes/	incorporated in onsite emergency plan. We also
improvements required, if any in the on-	successfully carried out off site mockdrill in
	•
site management plan shall be ensured.	coordination with various civil authorities
A separate environment management cell	A separate Environment Management Cell is
with qualified staff shall be setup for	already set up under the control of Plant Head in
implementation of the stipulated	order to oversee effective implementation of
environmental safeguards.	environment protection measures and to monitor
8	the routine environmental performance within the
	premises.
Transportation of ash will be through	Noted and complied
closed containers and all measures should	Noted and complied
be taken to prevent spilling of the ash.	
Separate silos will be provided for	Noted and complied
collecting and storing bottom ash and fly	
ash	
Separate funds shall be allocated for	Provision made for separate funds for
implementation of environmental	implementation of environmental protection
protection measures/EMP along with item-	measures/ EMP and same has been included in
wise breaks-up. These cost shall be	project cost. All the reporting will be done on
included as part of the project cost. The	timely manner to concerned authorities.
funds earmarked for the environmental	
protection measures shall not be diverted	
for other purpose and year-wise	
expenditure should reported to the MPCB	
& this department	
	Noted and Complied
The project Management shall advertise of	
The project Management shall advertise at	Noted and Complied
least in two local newspapers widely	Noted and Complied
least in two local newspapers widely circulated in the region around the project,	Noted and Complied
least in two local newspapers widely	Noted and Complied
least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi	Noted and Complied
least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within	Noted and Complied
least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing	Noted and Complied
least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded	Noted and Complied
least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of	Noted and Complied
least in two local newspapers widely circulated in the region around the project, one of which shall be in the Marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded	

Maharastra Pollution Control Board and	
may also be seen at website at	
http:/ec.maharastra.gov.in	
Project Management should submit half	Complied.
yearly compliance reports in respect of the	Six monthly Compliance report being submitted
stipulated prior environment clearance	regularly.
terms and conditions in hard & Soft Copies	
to the MPCB & this department, on 1 <sup>st</sup>	
June&1 <sup>st</sup> December of each calendar year.	
A copy of Clearance letter shall be sent by	Noted and complied
proponent to the concerned Municipal	rrr
corporation and the local NGO, if any,	
from whom suggestions/representations, if	
any were received while processing the	
proposal. The clearance letter shall also be	
put on the website of the company by the	
proponent.	
The proponent shall upload the status of	Six monthly compliance reports in respect of
compliance of the stipulated EC	Post Environment Clearance Monitoring (Rule 10
Conditions, including results of monitored	of EIA Notification, 2006, dated 14.09.2006) are
data on their website and shall update the	timely submitted in hard and soft copies to the
same periodically. It shall simultaneously	concerned regulatory authorities.
be sent to the regional office of MoEF, the	
respective zonal office of CPCB & the	
SPCB. The criteria pollutants levels	
namely. SPM, RSPM, SO2, Nox (ambient	
level as well as stack emissions) or critical	
sectorai parameters, indicated for the	
project shall be monitored and displayed at	
a convenient location near the main gate of	
the company in the public domain.	
The Project proponent shall also submit six	Six monthly reports along with the monitored
monthly reports on the status of compliance	data are regularly sent to the concerned
of stipulated EC Conditions including	authorities in hard and soft copies.
results of monitored data (both in hard	*
copies as well as by email) to the respective	
zonal office of CPCB & the SPCB.	
The environmental statement for each	Annual Environment Statement is regularly sent
financial year ending 31 <sup>st</sup> March in Form-V	to the MPCB, MoEF Nagpur and CPCB. In
as is mandated to he submitted by the	addition, a copy of the statement is also uploaded
project proponent to the concerned State	on the company's website.
Pollution Control Board as prescribed	on the company of coorder
under the Environment (Protection) Rules.	
1986, as amended subsequently, shall also	
be put on the website of the company along	
with the status of compliance of EC	
conditions and shall also be sent to the	
respective Regional Offices of MoEF by e-	
mail.	Not Applicable on a new diverse in the second
The environmental clearance is being	Not Applicable, as no pending case in the court of
issued without prejudice to the court case	Law.
pending in the court of law and it does not	
mean that project proponent has not	

violated any environmental laws in the past	
and whatever decision of the Hon'ble court	
will be binding on the project proponent.	
Hence this clearance does not give	
immunity to the project proponent in the	
case field against him	
The environmental clearance is being	Noted
issued without prejudice to the action	
initiated under EP Act or any court case	
pending in the court of law and it does not	
mean that project proponent has not	
violated any environmental laws in the past	
and whatever decision under EP Act or of	
the Hon'ble court will be binding on the	
project proponent. Hence this clearance	
does not give immunity to the project	
proponent in the case filed against him, if	
any or action initiated under EP Act.	
The Environment department reserves the	Noted
right to add any stringent condition or to	
revoke the clearance if conditions	
stipulated are not implemented to the	
satisfaction of the department or for that	
matter, for any other administrative	
reason.	
Validity of Environment Clearance: The	Noted
environmental clearance accorded shall be	
valid for a period of 5 years	
In case of any deviation or alteration in the	Noted
project proposed from those submitted to	
this department for clearance, a fresh	
reference should be made to the	
department to assess the adequacy of the	
condition(s) imposed and to incorporate	
additional environmental protection	
measures required, if any.	
The above stipulations would be enforced	Noted
among others under the Water (Prevention	
and Control of Pollution) Act, 1974, the Air	
(Prevention and Control of Pollution) Act.	
1981. The Environment (Protection) Act,	
1986 and rules there under, Hazardous	
Wastes (Management and Handling) Rules,	
1989 and its amendments, the public	
Liability Insurance Act, 1991 and its	
amendments.	
Any appeal against this environmental	Noted
clearance shall lie with the National Green	
Tribunal, Van Vigyan Bhawan, Sec- 5,	
R.K. Puram, New Dehli — 110 022, if	
preferred. Within 30 days as prescribed	
under Section 16 of the National Green	
Tribunal Act, 2010.	

# A COPY OF CONSENT TO ESTABLISH AND CONSENT TO OERATE FROM MAHARASHTRA POLLUTION CONTROL BOARD

# MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010437/24020781/24014701 Exe: 24024068 /24023515 Website: http://mpeb.gov.in E.mail: mpeb@esnl.net



Kalpataru Point, 2<sup>ed</sup> - 4<sup>th</sup> Floor, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E) Mumbai - 400 022

Red/LSI

Date: 14 08 2013

Page 1

Consent No: Forwart 1.0/BO/ID(WPC)/EIC No. PN-16784-13/E/CAC-6801

To,

M/s Nira Bhima SSK Ltd. (Sugar & Cogeneration) At-Shabajinagar.Post-Redni,Tal-Indapur Pune-413114

Subject: Consent to Establish under RED category.

Ref :- 1. Minutes of Consent Appraisal Committee Meeting held on 29.07.2013.

Your application dated 21.01.2013.

For: Consent to Establish under Section 25 of the Water (Prevention & Control of Polintion) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 5 of the Hazardous Wastes (M, FI & T M) Rules 2008 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule 1, 11, 111 & IV annexed to this order.

 The consent is granted for a period up to: Commissioning of the unit or five years from the date 02.08.2012 whichever is carlier.

 The proposed capital investment for expansion of the industry is Rs. 166.06 Cr. (As per Certificate submitted by industry for Sugar unit + Co-Gen unit.)

The Consent is valid for the manufacture of –

ĩ	White Crystal Sugar	8100 MT/M.
	Molasses	2700 MT/M.
3	Bagasse	20000 MT/M.
d	Press mud	2700 MT/M.
. 5	Electricity Generation (Co- Gen)	18 MW.

(The cane crushing Capacity of Sugar Industry shall not exceed 3500 TCD)

Conditions under Water (P&CP), 1974 Act for discharge of effluent:

SK Lin	Description	Permitted quantity of discharge (CME	Standards to be achieved	. Digital
1	Trade effluent	Sugar + Co-gen.	- As per Schedule -I	On land for
		435	- As per schedule -1	trrigation
2.	Domestic effluent	32	As per Schedule -1	On land for brigation

高期·開始時間期·行動的·一元日日 中町. antaws 92.8 つく10113 5. Conditions under Air (P& CP) Act, 1981 for air emissions:

Sto ub	Description	of stack / Number of Stack	Standards to be achieved.
1	Boiler	01	As per Schedule - II

 Conditions under Hazardous Waste (M, H & T M) Rules, 2008 for treatment and disposal of bazardous waste:

SR NG	INDER Wase	Calcrony	Quantity	10(0)/1	Diquidi
I	Used /Spent Oil	5.1	As and when generated	·	Reuse in own boiler as fuel

Non-Hazandous Solid Wastes:

LIZNE.	Dyne of AWakie	Quantity	UOM .	Treatment	Disjocal
_ 1	Fly Ash		MT/M		Sale to Bricks manufacturers

- This Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
- This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government agencies.
- The industry shall not take any effective steps for implementation of the project before obtaining Environmental Clearance as per EIA Notification, 2006 and Amendments thereto.
- This consent is issued with overriding effect to the earlier consent No. BO/JD(WPC)/EIC-PN-13943-12/E/CC-CAC-548, dt. 02/08/2012.



For and on behalf of the Maharashtra-Pojliotion Control Board

(V.M. Motghare) [4[8] Member Secretary

Received Consent fee of -

Sto No.	Amonne()	調査りの良いの言	DER DER	The DOWNLEY
1	282422	694836	29th Feb 2012	Bank of India
2	49808	259572	24th Dec 2012	Bank of India

Copy to:

 Regional Officer MPCB Pune, and Sub-Regional Officet - MPCB Pune-I, They are directed to ensure the compliance of the consent conditions.

- 2. Chief Accounts Officer, MPCB, Mumbai.
- CC/CAC desle- for record & website updation purposes.

580 Pere 1/0/1 (20602001

Schedule-I

#### Terms & Conditions for compliance of Water Pollution Control D

15 AI

2)

- As per your application, you have proposed to install the Effluent Treatment Plant .
- (ETP) with the design capacity of 700 CMD.
- The Applicant shall operate the effluent treatment plant (ETP) to treat the trade 13] effluent so as to achieve the following standards prescribed by the Board or under EP Act, 1986 and Rules made there under from time to time, whichever is stringent

Sr. No.	Parameters	Standards prescribed by Board
		Limiting Concentration in mg/1, except for pH
01	pH	5.5-9.0
02	Oil & Gicase	10
(C3	BOU (3 days 27oC)	30
04	Sulphate	and the second se
05	Suspended Solids	1000 100
06 - 1	COD	
07	Chloride	250
08	Total Dissolved Solids	2100

The treated effluent shall be disposed on land for irrigation on 113 Acres of own CI -Land

- CREP conditions for Sugar Pactory 12]
  - Operation of ETPIshall be started at least one month before starting of cane ł. crushing to achieve desired MLSS. So as to meet prescribed standards from day one the operation of mill
  - Waste water generation shall be reduced to 100 litres per tone of cane crushed. Ū. 111.
  - Industry shall achieve zero discharge into in land surface water bodies iv.
  - 15 days storage capacity tank shall be provided for treated effluent to take care of no demand for irrigation.
- Industry to make necessary arrangement to cover the effluent collection system and E to avoid the ingress of Bagasse other material AL.
  - As per your consent application, you have proposed to install sewage treatment system with the design capacity of --- CMD.
- The Applicant shall operate the sewage treatment system to treat the sewage so as 131 to achieve the following standards.

(1)	Suspended Solids	Not to exceed	100	mg/1.
(2)	BOD 3 days 27°C	Not to exceed		mgy r.
	o o o maja ar e	ant to exceed	100	mg/1

The treated sewage shall be disposed on land for gardening/irrigation. CI

5803 Boor 1/ER/E (2060200)	a colution Gos		
		Page 3	
	(3) attacks (a)		

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.

The industry shall have bilateral agreement with the farmers on whose land the treated effluent is used for irrigation purposes and a copy of the agreements with validity shall be submitted to the Regional/Sub- Regional Office of the Board.

4) The industry shall create Environmental Cell by appointing an Environmental Engineer, Cliemist and Agriculture expert for looking after day to day activities related to Environment and irrigation field where treated effluent is used for irrigation.

## 5) CONDITIONS FOR MOLASSES STORAGE:

- (i) The molasses shall be properly collected and stored in steel tanks which shall be leak proof. At no stage of handling of molasses, there shall be leakage of spillage.
- (ii) The capacity of tanks for storage of molasses shall be such that it will take care of humper production of sugar, non-lifting of molasses etc.
- (iii) All the area on which molasses are stored and handled should be provided with drain for diverting the spills to the treatment plant/ molasses task. Suitable arrangements for accidental discharges of molasses from the tanks shall be provided to contain the same within factory premises.
- (iv) Destruction of molasses and its disposal shall not be done without specific permission in writing from the authorized officer of the Board. Intimation of intention to destroy or dispose of the molasses shall be given to the Board atleast 15 (lifteen) days in advance by registered post under intimation to the Sub-Regional officer and Regional officer of the Board under whose jurisdiction the factory is situated.
- (v) The storage tanks shall be kept in good conditions all the year round with adequate maintenance. The tanks size and capacity per cm, height, total capacity in tonnes shall be displayed prominently near /on the tank.
- (vi) The above conditions shall be in addition to and not in derogation of the provisions contained in the "Bombay Molasses Rules, 1955" and "Maharashtra Molasses Storage and Supply Regulation, 1965".
- 6) The Board reserves its rights to review plans, specifications or other data relating to plantscup for the treatment of waterworks for the purification thereof & the system for the disposal of scwage or trade effluent or in connection with the grant of any consent conditions. The Applicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.
- 7) The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.
- 8) The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines if applicable.



SEO Pinne 1/1/R/1 /20602004

## II) Conditions under Water (Prevention & Control of Pollution) CESS Act, 1977 as amended

The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Cess Act, 1977 and as amended, by installing water meters, filing water cess returns in Form-I and other provisions as contained in the said act.

SLA NG	Purpose for water consumed	Water constitution on qualitity (CMD)	Water consumption quantity (CMD) (Co-Gen)
1	Industrial Cooling, boiler feed etc.,	282	10
2	Domestic purpose	40	110
3	Processing whereby water gets polluted & pollutants are easily biodegradable	488	30
4	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic		



SRO Pare 1/1/0/L/20602801

### Schedule-II

## Terms & conditions for compliance of Air Pollution Control

 As per your application, you have proposed the Air pollution control (APC) system and also proposed to erect following stack (s) to observe the following foel pattern-

ii.	Stack Attached to	Height in meter	Type of Fuel	Quantity	e tom	5 %	
I	Boiler (66 TPH)	75	Bagasse	566	MT/day		2264 Kg/day
			Biogas	500	M3/Hr	-	

- The Applicant shall provide ESP/ Bag filter/ Wet scrubber to the Bagasse fired boiler and Dust Collector to Sugar bagging section as an Air Pollution control equipments OR as per the conditions of EP Act, 1986 and rule made there under from time to time / Environmental Clearance / CREP guidelines.
- The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards:

Particulate matter	Not to exceed	150 mg/Nm <sup>3</sup>
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- The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications, and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
  - The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).



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Schedule-III						
Details of	Bank Guarantees					

Sr.	second the full		Submission Purpose of BG		Compliance	Validity
No.			Period		Period	Date
1	C to E for expansion	Rs. 5.0 Lakhs	15 Days	Towards condition of not to take any effective steps for implementation of the project till obtaining Environmental Cléarance.	,	31/12/ 2017

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### Schedule-IV General Conditions

- The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
- Industry should monitor effluent quality, stack emissions and ambient air quality montbly/quarterly.
- 3) The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification.
- 4) Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.
- 5) The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
- 6) The firm shall submit to this office, the 30<sup>th</sup> day of September every year, the Environmental Statement Report for the financial year ending 31<sup>th</sup> March in the prescribed Form-V as per the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992.
- 7) The industry shall recycle/reprocess/rense?recover Hazardous Waste as per the provision contain in the UW (MH&TM) Rules 2008, which can be recycled /processed /reused recovered and only waste which has to be incinerated shall go to incineration and waste which can be used for land filling and cannot be recycled/reprocessed etc should go for that purpose, in order to reduce load on incineration and landfill site/environment.
- 8) The industry should comply with the Hazardous Waste (M, H & TM) Rules, 2008 and submit the Annual Returns as per Rule 5(6) & 22(2) of Hazardous Waste (M, H & TM) Rules, 2008 for the preceding year April to March in Form-IV by 30<sup>th</sup> June of every year.
- An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
- The applicant shall obtain Consent to Operate from Maharashtra Pollution Control Board before actual commencement of the Unit/ Activity.
- Industry shall strictly comply with the Water (P&CP) Act. 1974, Air (P&CP) Act, 1981 and Environmental Protection Act, 1986 and industry specific standard under EP Rules 1986 which are available on MPCB website (www.mpcb.gov.in).
- 12) The industry shall constitute an Environmental cell with qualified staff/personnel/agency to see the day to day compliance of consent condition towards Environment Protection.
- 13)Separate drainage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
- 14) Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.

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- 15) The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.
- 16) The industry should not cause any nuisance in surrounding area.
- 17) The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
- 15) The applicant shall maintain good housekeeping,
- 19) The applicant shall bring minimum 33% of the available open land under green coverage/ plautation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, number of trees surviving as on 31\* March of the year and number of tices planted by September end.
- 20) The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance / pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
- 21) The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions of hazardous wastes or control equipments provided for without previous written permission of the Board. The industry will not carry out any activity, for which this consent has not been granted/without prior consent of the Board.
- 22) The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.
- 23) The industry shall submit quarterly statement in respect of industries obligation towards consent and pollution control compliance's duly supported with documentary evidences (format can downloaded from MPCB official site).
- 24) The industry shall submit official e-mail address and any change will be duly informed to the
- 25) The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification df 16:11.2009 as amended
- 20) transportation of coal & fly ash shall be by closed system. Conveyor system wherever

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SRO Paus 10/R/LC/Min/Joint

# MAHARASHTRA POLLUTION CONTROL BOARD

Tel: 24010437/24020781/24014701 Fax: 24024068 /24023515 Website: http://mpcb.gov.in E-mail: mpcb@vsnl.net



Kalpataru Point, 2nd - 4th Floor, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E) Mumbai - 400 022

Page 1 of 8

### Red/LSI

Date: 23/03/2016. Consept No: Format 1.0/BO/CAC-CELL/EIC No.PN-25773-15 /R/CAC- 41 76 Te.

M/s. Nira Bhima SSK Ltd., (Sugar Co-gen), At Shahajinagar, Post Redni, Tal. Indapur, Dist. Pune. - 413114

: Renewal of Consent to Operate of 3500 TCD Sugar & 18 MW Co-generation unit Subject under RED category.

Ref

- 1. Consent to Establish for expansion granted by the Board vide no. BO/JD(WPC) /EIC No. PN-16784-13/E/CAC-6801 dtd. 14.08.2013.
- 2. Consent to Operate granted by the Board to the existing unit vide No. BO/CAC-CELL/EIC-PN-13/CAC-9041 dtd. 28.10.2013,
- 3. Minutes of CAC meeting held on 02.02.2016.

Your application: CR1511000055.

Dated: 11.08.2015.

For: Renewal of Consent to Operate of 3500 TCD Sugar & 18 MW Co-generation unit under RED category, under Section 26 of the Water (Prevention & Control of Pollution) Act, 1974 & under Section 21 of the Air (Prevention & Control of Pollution) Act, 1981 and Authorization under Rule 5 of the Hazardous Wastes (M, H & T M) Rules 2008 is considered and the consent is hereby granted subject to the following terms and conditions and as detailed in the schedule I, II, III & IV annexed to this order:

- 1. The consent is granted for a period up to 31.07.2016.
- 2. The actual total investment of the industry is Rs. 215.82 Cr. (As per C. A. Certificate submitted by industry)
- 3. The Consent is valid for the manufacture of -

Sr. No.	Product / By-Product Name	Maximum Quantity in MT/M
1.10	Sugar	12600
2	Molasses	4400
3	Pressmud	4300
4	Bagasse	45000
5	Electric Power (Cogeneration)	

(The cane crushing Capacity of Sugar Industry shall not exceed 3500 TCD) 690

Conditions under Water (P&CP), 1974 Act for discharge of effluent:

/	<u>no.</u>	A CONTRACTOR OF A CONTRACTOR	of discharge (CMD)	Standards to be achieved	Disposal
	1.	Trade effluent	685 (Sugar 278 + Co-gen 407)	As per Schedule -I	407 CMD 100% recycle & 278 CMD on land for irrigation
	2.	Domestic effluent	15	As per Schedule -I	On land for irrigation

ग-मत्या सन्द्रवारा संस	र्धा दर्द	ा मध	1/1/2000	2001
मा-भारता संद्रकारा संस कह क्र	বিশাক ,	.3.	APR	2216

5. Conditions under Air (P& CP) Act, 1981 for air emissions:

Sr. no.	Description of stack / source	Number of Stack	Standards to be achieved
1.	Boiler (66 TPH)	- The second s	As per Schedule – II
2.	Boiler (40 TPH)	1	As per Schedule – II

 Conditions under Hazardous Waste (M, H & T M) Rules, 2008 for treatment and disposal of hazardous waste:

Sr. No.	Type of Waste	Category	Quantity	UOM	Disposal
1	Used /Spent Oil	5.1	200	Kg/M	Reuse in own boiler as fue!

9. Non-Hazardous Solid Wastes:

Sr. No.	Type of Waste	Quantity	UOM	Treatment	Disposal
	Fly/Boiler Ash	451	MT/M		Sale to Bricks manufacturers and used for compost production.

- This Board reserves the right to review, amend, suspend, revoke etc. this consent and the same shall be binding on the industry.
- This consent should not be construed as exemption from obtaining necessary NOC/permission from any other Government agencies.
- Industry shall operate online monitoring system which is installed as per the Directions of CPCB and shall connect/ upload the online monitoring data at MPCB and CPCB server.

For an	id on behalf of the
Maharashtra	<b>Pollution</b> Control Board
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r'r	IAN al	
(Dr. P. An	balaga	h, IAS)
	er Secr	

Sr. No.	Amount (Rs.)	DD, No.	Date	Denne On
01. 110.	comoune (its.)	DD. NO.	Date	Drawn On
1	Rs. 4,31,744/-	669014	669014	Bank of India

Copy to:

- Regional Officer MPCB Pune & Sub -Regional Officer Pune-I, MPCB, They are directed to ensure the compliance of the consent conditions.
- 2. Chief Accounts Officer, MPCB, Mumbai.
- CC/CAC desk- for record & website updation purposes.

#### Schedule-I

#### 1) Terms & Conditions for compliance of Water Pollution Control

A

1)

As per your application, you have provided Effluent Treatment Plant design Capacity of 700 CMD

B] The Applicant shall operate the offluent treatment plant (ETP) to treat the trade effluent so as to achieve the following standards prescribed by the Board or under EP Act; 1986, and Rulessmade sthere, under from time to time, which ever is stringent.

Sr. No.	Parameters	Standards prescribed by Board
1 Aller		Limiting Concentration in mg/l, except for pH
01	pH.	515-910
02	Oil & Grease	10 40
03	BOD (3 days 27oCi);	100
04	Sulphate .	1000
05	Suspended Solids	100
065	COD	250x
07	Chloride	× 500
08	Total Dissolved Solids	2100

- C] The treated effluent 278 CMD generated from Sugar unit shall be disposed on land for irrigation on 50 acres of own land /as per the bilateral agreement with fa mers. In n any case treated/untreated effluent shall find its way outside the factory premise directly or indirectly.
- D] Trade effluent of 407 CMD generated from Co-gen shall be 100% recycle in proces
- E] CREP conditions for Sugar Factory -

M/s. Nire Bhima SSK Ltd. SRO Prime 1/1/

- Operation of ETP shall be started at least one month before starting of cane crushing to achieve desired MLSS. So as to meet prescribed standards from day one the operation of mill.
- ii. Waste water generation shall be maintained as 100 liters per ton of cane crushed
- iii. Industry shall achieve zero discharge into in land surface water bodies.
- iv 15 days storage capacity tank shall be provided for treated effluent to take care of no demand for arrigation.
- F] Industry shall maintain properly the arrangement provided for covering the effluent collection system and to avoid the ingress of Bagasse other material.
  - G] The unit shall operate ETP even after completion of the crushing season so that any effluent generated during washing & maintenance is discharged after proper treatment.
  - H] The unit shall optimize water use in industrial process & maintain records of water consumption & waste water generation.
- 2) A] As per your consent application, for the 18 CMD sewage generation you have provided septic tank & soak pit for the treatment of sewage.

B] The Applicant shall operate the sewage treatment system to treat the sewage so as to achieve the following standards.

Pige3 of 8

(1)	Suspended Solids Not to exceed	100	mg/1.
(2)	BOD 3 days 27°C Not to exceed	100	mg/1.

C] The treated sewage shall be disposed on land for gardening/irrigation.

- 3) The industry shall have bilateral agreement with the farmers on whose land the treated effluent is used for irrigation purposes and a copy of the agreements with validity shall be submitted to the Regional/Sub-Regional Office of the Board
- 4) The industry shall create Environmental Cell by appointing an Environmental Engineer, Chemist and Agriculture expert for looking after day to day activities related to Environment and irrigation field where treated effluent is used for irrigation.

#### 5) CONDITIONS FOR MOLASSES STORAGE:

- (i) The molasses shall be properly collected and stored in steel tanks which shall be leak proof. At no stage of handling of molasses, there shall be leakage or spillage.
- (ii) The capacity of tanks for storage of molasses shall be such that it will take care of bumper production of sugar, non-lifting of molasses etc.
- (iii) All the area on which molasses are stored and handled should be provided with drain for diverting the spills to the treatment plant/ molasses tank. Suitable arrangements for accidental discharges of molasses from the tanks shall be provided to contain the same within factory premises.
- (iv) Destruction of molasses and its disposal shall not be done without specific permission in writing from the authorized officer of the Board. Intimation of intention to destroy or dispose of the molasses shall be given to the Board atleast 15 (fifteen) days in advance by registered post under intimation to the Sub-Regional officer and Regional officer of the Board under whose jurisdiction the factory is situated.
- (v) The storage tanks shall be kept in good conditions all the year round with adequate maintenance. The tanks size and capacity per cm, height, total capacity in tonnes shall be displayed prominently near /on the tank.
- (vi) The above conditions shall be in addition to and not in derogation of the provisions contained in the "Bombay Molasses Rules, 1955" and "Maharashtra Mola ses Storage and Supply Regulation, 1965".
- 6) The Applicant shall provide Specific Water Pollution control system as per the conditions of EP Act, 1986 and rule made there under from time to time/ Environmental Clearance / CREP guidelines if applicable.

# II) <u>Conditions under Water (Prevention & Control of Pollution) CESS Act, 197</u>; as amended

The Applicant shall comply with the provisions of the Water (Prevention & Control of Pollution) Cess Act, 1977 and as amended, by installing water meters, filing water cess returns in Form-I and other provisions as contained in the said act.

Sr. No.	Purpose for water consumed	Water consumption quantity (CMD)
Ι.	Industrial Cooling, boiler feed etc.,	458
2.	Domestic purpose	40
3.	Processing whereby water gets polluted & pollutants are easily biodegradable	312
4.	Processing whereby water gets polluted & pollutants are not easily biodegradable and are toxic	sub

### Schedule-II

# Terms & conditions for compliance of Air Pollution Control

 As per your application, you have provided the Air pollution control (APC) system and also erected following stack (s) to observe the following fuel pattern-

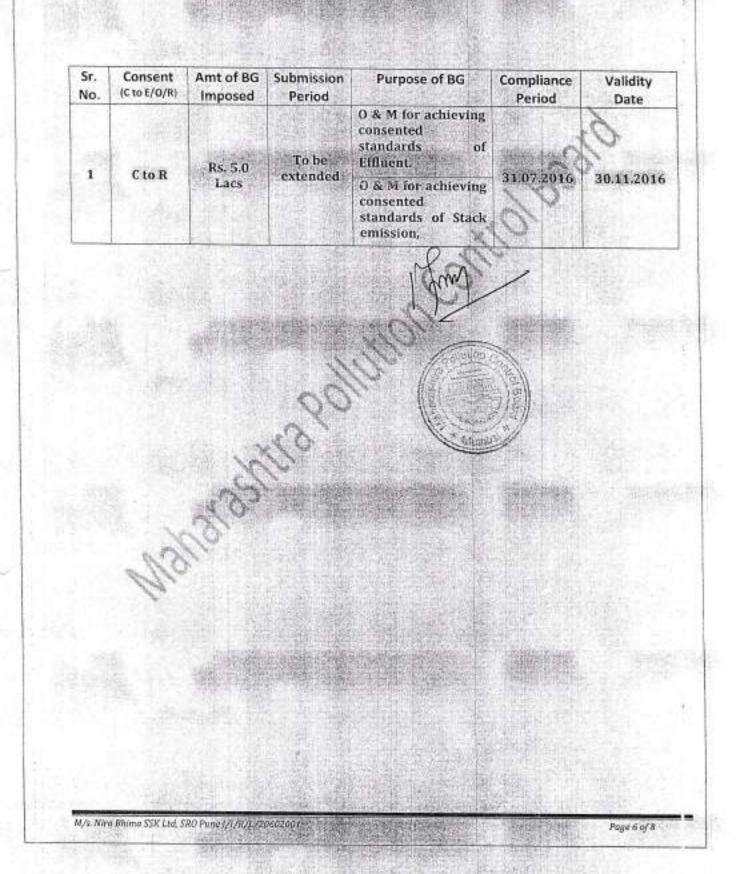
Sr. No.	Stack Attached to	APC System	Height in meter	Type of Fuel	Quantity	S %	SOz Kg/ Day
1.	Boiler (66 TPH)	ESP	75	Bagasse	566 MT/D	0.2 %	2264
2.	Boiler (40 TPH)	Wet Scrubber	60	Bagasse	432 MT/D	0.2 %	1728
3.	DG set of 500 KVA		4.0	HSD	20 Litrs./Hr	1%	9.6

- The Applicant shall provide ESP/ Bag filter/ Wet scrubber to the Bagasse fired boiler and Dust Collector to Sugar bagging section as an Air Pollution control equipments OR as per the conditions of EP Act, 1986 and rule made there under from time to time / Environmental Clearance / CREP guidelines.
- 3. The applicant shall operate and maintain above mentioned air pollution control system, so as to achieve the level of pollutants to the following standards:

Particulate matter	Not to exceed	150 mg/Nm <sup>3</sup>	
			_

- 4. The Applicant shall obtain necessary prior permission for providing additional control equipment with necessary specifications and operation thereof or alteration or replacement/alteration well before its life come to an end or erection of new pollution control equipment.
- 5. The Board reserves its rights to vary all or any of the condition in the consent, if due to any technological improvement or otherwise such variation (including the change of any control equipment, other in whole or in part is necessary).

### Schedule-III Details of Bank Guarantees



#### Schedule-IV General Conditions

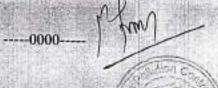
- 1) The applicant shall provide facility for collection of environmental samples and samples of trade and sewage effluents, air emissions and hazardous waste to the Board staff at the terminal or designated points and shall pay to the Board for the services rendered in this behalf.
  - 2) Industry should monitor effluent quality, stack emissions and ambient air quality monthly.
  - 3) The applicant shall provide ports in the chimney/(s) and facilities such as ladder, platform etc. for monitoring the air emissions and the same shall be open for inspection to/and for use of the Board's Staff. The chimney(s) vents attached to various sources of emission shall be designated by numbers such as S-1, S-2, etc. and these shall be painted/ displayed to facilitate identification
  - 4) Whenever due to any accident or other unforeseen act or even, such emissions occur or is apprehended to occur in excess of standards laid down, such information shall be forthwith Reported to Board, concerned Police Station, office of Directorate of Health Services, Department of Explosives, Inspectorate of Factories and Local Body. In case of failure of pollution control equipments, the production process connected to it shall be stopped.
  - 5) The applicant shall provide an alternate electric power source sufficient to operate all pollution control facilities installed to maintain compliance with the terms and conditions of the consent. In the absence, the applicant shall stop, reduce or otherwise, control production to abide by terms and conditions of this consent.
  - 6) The firm shall submit to this office, the 30<sup>th</sup> day of September every year, the Environmental Statement Report for the financial year ending 31<sup>th</sup> March in the prescribed Form-V as per the provisions of rule 14 of the Environment (Protection) (Second Amendment) Rules, 1992.
  - 7) The industry shall recycle/reprocess/reuse/recover Hazardous Waste as per the provision contain in the HW (MH&TM) Rules 2008, which can be recycled /processed /reused /recovered and only waste which has to be incinerated shall go to incineration and waste which can be used for land filling and cannot be recycled/reprocessed etc should go for that purpose, in order to reduce load on incineration and landfill site/environment.
  - 8) The industry should comply with the Hazardous Waste (M, H & TM) Rules, 2008 and submit the Annual Returns as per Rule 5(6) & 22(2) of Hazardous Waste (M, H & TM) Rules, 2008 for the preceding year April to March in Form-IV by 30<sup>th</sup> June of every year.
  - An inspection book shall be opened and made available to the Board's officers during their visit to the applicant.
  - The applicant shall make an application for renewal of the consent at least 60 days before the date of the expiry of the consent.
  - Industry shall strictly comply with the Water (P&CP) Act, 1974, Air (P&CP) Act, 1981 and Environmental Protection Act, 1986 and industry specific standard under EP Rules 1986 which are available on MPCB website (www.mpcb.gov.in).
  - The industry shall constitute an Environmental cell with qualified staff/personnel/agency to see the day to day compliance of consent condition towards Environment Protection.
  - 13) Separate dramage system shall be provided for collection of trade and sewage effluents. Terminal manholes shall be provided at the end of the collection system with arrangement for measuring the flow. No effluent shall be admitted in the pipes/sewers downstream of the terminal manholes. No effluent shall find its way other than in designed and provided collection system.
  - Neither storm water nor discharge from other premises shall be allowed to mix with the effluents from the factory.
  - 15) The applicant shall install a separate meter showing the consumption of energy for operation of domestic and industrial effluent treatment plants and air pollution control system. A register showing consumption of chemicals used for treatment shall be maintained.
  - 16) Conditions for D.G. Set
  - Noise from the D.G. Set should be controlled by providing an acoustic enclosure or by treating the room acoustically.
  - b) Industry should provide acoustic enclosure for control of noise. The acoustic enclosure/ acoustic treatment of the room should be designed for minimum 25 dB (A) insertion loss or for meeting.

Page 7 of 8

M/s. Nira Bhima SSK Ltd, SRO Pune 1/1/P/L/20602001

the ambient noise standards, whichever is on higher side. A suitable exhaust muffler with insertion loss of 25 dB (A) shall also be provided. The measurement of insertion loss will be done at different points at 0.5 meters from acoustic enclosure/room and then average.

- c) Industry should make efforts to bring down noise level due to DG set, outside industrial premises, within ambient noise requirements by proper sitting and control measures.
- Installation of DG Set must be strictly in compliance with recommendations of DG Set manufacturer.
- e) A proper routine and preventive maintenance procedure for DG set should be set and followed in consultation with the DG manufacturer which would help to prevent noise levels of DG set from deteriorating with use.
  - f) D.G. Set shall be operated only in case of power failure
- g) The applicant should not cause any nuisance in the surrounding area due to operation of D.G. Set.
- h) The applicant shall comply with the notification of MoEF dated 17 05.2002 regarding noise limit for generator sets run with diesel.
- 17) The industry should not cause any nuisance in surrounding area.
  - 18) The industry shall take adequate measures for control of noise levels from its own sources within the premises so as to maintain ambient air quality standard in respect of noise to less than 75 dB (A) during day time and 70 dB (A) during night time. Day time is reckoned in between 6 a.m. and 10 p.m. and night time is reckoned between 10 p.m. and 6 a.m.
  - 19) The applicant shall maintain good housekeeping.
  - 20) The applicant shall bring minimum 33% of the available open land under green coverage/ plantation. The applicant shall submit a yearly statement by 30th September every year on available open plot area, number of trees surviving as on 31° March of the year and number of trees planted by September end.
- 21) The non-hazardous solid waste arising in the factory premises, sweepings, etc. be disposed of scientifically so as not to cause any nuisance pollution. The applicant shall take necessary permissions from civic authorities for disposal of solid waste.
- 22) The applicant shall not change or alter the quantity, quality, the rate of discharge, temperature or the mode of the effluent/emissions or hazardous wastes or control equipments provided for without previous written permission of the Board. The industry will not carry out any act vity, for which this consent has not been granted/without prior consent of the Board.
- 23) The industry shall ensure that fugitive emissions from the activity are controlled so as to maintain clean and safe environment in and around the factory premises.
- 24) The industry shall submit quarterly statement in respect of industries obligation towards consent and pollution control compliance's duly supported with documentary evidences (for nat can downloaded from MPCB official site).
- 25) The industry shall submit official c-mail address and any change will be duly informed to the MPCB.
- 26) The industry shall achieve the National Ambient Air Quality standards prescribed vide Government of India, Notification dt. 16, 11, 2009 as amended.
- 27) The Board reserves its rights to review plans, specifications or other data relating to plant setup for the treatment of waterworks for the purification thereof & the system for the disposal of sewage or trade effluent or in connection with the grant of any consent conditions. The A pplicant shall obtain prior consent of the Board to take steps to establish the unit or establish any treatment and disposal system or an extension or addition thereto.
- 28) The industry shall ensure replacement of pollution control system or its parts after expiry of its expected life as defined by manufacturer so as to ensure the compliance of standards and safety of the operation thereof.



M/z. Nira Bhima SSK Ltd, SRO Pune 1/1/R/L/20602001

Paget of 8

# ENVIRONMENTAL MONITORING AT "Nira Bhima Sahakari Sakhar Karkhana Ltd" At shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune

Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-T Block, Plot No.-18/1 Part, MIDC Chinchwad, Pune 411019, Maharashtra, India. Tel.: 020 - 64100118 / 8306805200 • E-mail : Info@aavanira.com • Web : www.aavanira.com CIN NO. 074900PN2010PTC137544



Recognized by Ministry of Environment and Forest (MoEF), Govt. of India ISO 9001: 2008 and OHSAS 18001: 2007 Certified Company

### ENalyse\*

	An	nbient Air Testin	g Report			
	Sample Code	AB/PRO/05/2014-15/1827				
	Sample Location	Redni				
	Name of Client	M/s. Nira Bhima S	Sahakari Sakhar K	arkhana Ltd.		
	Address of Client	Shahajinagar, Pos Pin-413114.				
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,			
	Sample type	Ambient Air				
_	Date of Sampling	03/05/2014				
	Time of Sampling	11:00				
5	ample received in Lab	04/05/2014				
_	Reporting date	10/05/2014				
Sr. No.	Parameter	Result	Unit	NAAQ Standards		
1	Ambient Temp	35	Da.			
2	Dry Bulb Temperature	34	°C			
3	Wet Bulb Temperature	29	"C			
4	Relative Humidity	42	% RH			
5	Sampling Duration	1440	Min			
6	Particulate Matter PM <sub>10</sub>	27.22	µg/M <sup>3</sup>	s 80		
7	Particulate Matter PM <sub>25</sub>	25.72	μg/M <sup>3</sup>	≤ 80		
8	Sulphur Dioxide (SO <sub>2</sub> )	26.10	µg/M <sup>3</sup>	≤ 100		
9	Oxides of Nitrogen (NO <sub>x</sub> )	25.56	µg/M <sup>3</sup>	≤ 60		
10	Carbon Monoxide (CO)	BDL	mg/M <sup>3</sup>	≤ 04		

### REMARKS / OBSERVATIONS:

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- All above results are within National Ambient Air Quality standards.
- BDL Below Detectable Limit.

Signature of Lab Executive

Signature of Technical Manager

Signature of Quality Manager

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## ENalyse\*

	Am	bient Air Testing	g Report			
	Sample Code	AB/PRO/05/2014-15/1828				
	Sample Location	Devkdtevasti				
	Name of Client	M/s. Nira Bhima S	ahakari Sakhar K	arkhana Ltd.		
	Address of Client	Shahajinagar, Pos Pin-413114.	t- Redni, Tal. Inda	apur, DistPune,		
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,			
	Sample type	Ambient Air				
	Date of Sampling	03/05/2014				
	Time of Sampling	12:00				
5	ample received in Lab	04/05/2014				
	Reporting date	10/05/2014				
Sr. No.	Parameter	Result	Unit	NAAQ Standards		
1	Ambient Temp	35	°C			
2	Dry Bulb Temperature	34	°C			
3	Wet Bulb Temperature	29	°C			
4	Relative Humidity	42	% RH			
5	Sampling Duration	1440	Min			
6	Particulate Matter PM <sub>10</sub>	21.36	µg/M <sup>3</sup>	≤ 80		
7	Particulate Matter PM <sub>2.5</sub>	14.50	μg/M <sup>3</sup>	≲ 80		
8	Sulphur Dioxide (SO <sub>2</sub> )	18.26	µg/M <sup>3</sup>	≤ 100		
9	Oxides of Nitrogen (NO <sub>x</sub> )	20.63	μg/M <sup>3</sup>	≤ 60		
10	Carbon Monoxide (CO)	BDL	mg/M <sup>3</sup>	≤ 04		

- > All above results are within National Ambient Air Quality standards.
- BDL Below Detectable Limit.

Signature of Lab-Executive

Signature of Technical Manager

Signature of Quality Manager

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ENalyse<sup>=</sup>

	Work zon	e Air Quality Mor	nitoring Repo	rt		
	Sample Code	AB/PRO/05/2014-15/1829				
	Sample Location	Main Gate				
	Name of Client	M/s. Nira Bhima	Sahakari Sakhar	Karkhana Ltd.		
	Address of Client	Shahajinagar, Po Pin-413114.	st- Redni, Tal. Ind	Japur, DistPune,		
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,			
	Sample type	Work zone Air				
	Date of Sampling	03/05/2014				
	Time of Sampling	13:00				
	Sample received in Lab	b 04/05/2014				
	Reporting date	10/05/2014				
Sr. No.	Parameter	Result	Unit	The Factories Act 1948 standards		
1	Ambient Temperature	35	°C			
2	Dry Bulb Temperature	34	°C			
3	Wet Bulb Temperature	26	°C			
4	Relative Humidity	42	% RH			
5	Sampling Duration	60	Min			
6	Particulate Matter PM <sub>10</sub>	57.87	µg/M <sup>3</sup>	N.S.		
7	Particulate Matter PM <sub>2.5</sub>	35.62	µg/M <sup>3</sup>	N.S.		
8	Sulphur Dioxide	10.46	µg/M <sup>3</sup>	≤ 5000		
9	Oxides of Nitrogen (NQ <sub>2</sub> )	12.52	µg/M <sup>3</sup>	≤ 6000		
10	Carbon Monoxide (CO)	0.06	mg/M <sup>3</sup>	≤ 04		

- All above results are well within The Factories Act, 1948 Standards.
- N.S.: Not Specified

Signature of Lab Executive

Signature of Technical Manager

Signature of Quality Manager

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## ENalyse\*

	Work zon	e Air Quality Mon	itoring Repo	rt		
	Sample Code	AB/PRO/05/2014-15/1830				
	Sample Location	Boiler House				
	Name of Client	M/s. Nira Bhima S	Sahakari Sakhar I	Karkhana Ltd.		
	Address of Client	Shahajinagar, Pos Pin-413114.	t- Redni, Tal. Ind	lapur, DistPune,		
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,			
	Sample type	Work zone Air				
	Date of Sampling	03/05/2014				
	Time of Sampling	13:30				
	Sample received in Lab	04/05/2014				
	Reporting date	10/05/2014				
Sr. No.	Parameter	Result	Unit	The Factories Act 1948, standards		
1	Ambient Temperature	35	°C			
2	Dry Bulb Temperature	34	°C			
3	Wet Bulb Temperature	29	°C			
4	Relative Humidity	42	% RH			
5	Sampling Duration	60	Min			
6	Particulate Matter PM <sub>10</sub>	62.25	μg/M <sup>3</sup>	N.S.		
7	Particulate Matter PM <sub>2.5</sub>	36.74	μg/M <sup>3</sup>	N.S.		
8	Sulphur Dioxide	27.28	µg/M <sup>3</sup>	≤ 5000		
9	Oxides of Nitrogen (NO <sub>2</sub> )	34.08	μg/M <sup>3</sup>	≤ 6000		
10	Carbon Monoxide (CO)	0.11	mg/M <sup>3</sup>	≤ 04		

- All above results are well within The Factories Act, 1948 Standards.
- N.S.: Not Specified

Signature of tab Executive

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Signature of Technical Manager

Signature of Quality Manager

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# ENalyse\*

	Amt	pient Noise Mon	itoring Report			
	Sample Code	AB/PRO/05/2014-15/1831				
	Name of Client	M/s. Nira Bhima	Sahakari Sakhar Karkh	ana Ltd.		
	Address of Client	Shahajinagar, Post- Redni, Tal. Indapur, DistPune, Pin-413114.				
	Sample Collected By	Aavanira Biotec	h Pvt. Ltd.,			
	Sample type	Noise Monitoring				
	Date of Sampling	03/05/2014				
_	Reporting date	10/05/2014				
Sr. No.	Test Location	Unit	Readings			
			Day Time 01:00 p.m.	Night Time 10:30 p.m.		
1	At Shahajinagar Near School	dB(A)	50.9	44.5		
2	Lakhewadi Near Temple	dB(A)	49.2	43.8		

**REMARKS / OBSERVATIONS:** 

#### AMBIENT NOISE LEVEL STATNDARDS

	Limits in dB (A) Leq			
Category of Area	Day Time (6.00 am to 10.00 pm)	Night Time (10.00 pm to 6.00 am		
Industrial Area	75	70		
Commercial Area	65	55		
Residential Area	55	45		
Silence Zone	50	40		

Signature of Lab Executive

Signature of Technical Manager

Signature of Quality Manager

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# ENalyse\*

	Work	zone Noise Mo	onitoring Re	port		
	Sample Code		2014-15/1832			
	Name of Client	M/s. Nira Bh	ima Sahakari S	akhar Kark	hana Ltd.	
	Address of Client	Shahajinagar, Post- Redni, Tal. Indapur, DistPune, Pin-413114.				
_	Sample Collected By	Aavanira Bio	tech Pvt. Ltd.,			
Sample type		Noise				
Date of Sampling		03/05/2014				
	Reporting date	10/05/2014				
	Test Location	Reading				
Sr. No.		Day Time 01:00 pm.	Night Time 10.30 p.m.	Unit	The Factories Act 1948, standards	
1	Main Gate	67.9	61.8	dB(A)	≤ 90	
2	Boiler House	70.1	66.2	dB(A)	≤ 90	

### **REMARK / OBSERVATIONS:**

Limits: The Factories Act, 1948, has prescribed 90 dB (A) as an upper limit of noise level

for 8 hours exposure.

Signature of Lab Executive

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Signature of Technical Manager

Signature of Quality Manager



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CIN NO. U74900PN2010PTC137544

		Drinking V	Vater Test Rep	port	
	Sample Code	AB/PRO/05/20		Join	
	Sample Name	Within plant fro			
	Name of Client				
	Address of Client		a Sahakari Sakha		
5	ample Collected by	Aavanira Bioter	ost- Redni, Tal. In	idapur, Dis	tPune,
	Sample type	Liquid	ch Pvt. Ltd.,		
San	nple received on date	03/05/2014			
245	Analysis Date	04/05/2014 to	10/05/2014		
	Reporting date	10/05/2014 10	10/05/2014		
San	nple returned /stored				
- Post	and recorned / stored	Stored at 4 C h	or 1 week from th Limits as per	e date of n	eporting
Sr.			IS:10500		
No.	Parameter	Results	2012	Units	Standard Method
		Physi	cal Parameter		o control a trice choa
1	Turbidity	0.4	<1.0	NTU	15: 3025 Bart 10 /B 4 - 2002
2	TSS	11	N.S.	mg/lit	IS: 3025 Part-10 (R.A : 2002
2	TDS	295.0	<500	mg/lit	IS: 3025 Part-14 (R.A : 2006 IS: 3025 Part-16 (R.A : 2006
3	Temperature	23	**	°C	IS: 3025 Part-15 (R.A : 2006
4	Colour	<5	<5	Hazen	IS: 3025 Part-12 (R.A : 2006
5	Odour	Unobjectional	Unobjectional		IS: 3025 Part-11 (R.A : 2006
		Contraction of the second of the second s	ical Parameter		10. 3023 Part-11 (R.A. 2000
1	pH	7.86	6.5-8.5		IS: 3025 Part-11 (R.A : 2002
2	E. Conductivity	569	N.S	µS/cm	IS: 3025 Part-14 (R.A : 2002
3	Total Hardness as	297.44	<200	mg/lit	IS: 3025 Part-21 (2009)
4	Total Alkalinity as CaCO <sub>3</sub>	240.36	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)
5	Chloride as Cl	54.26	<250	mg/lit	IS: 3025 Part-32 (R.A : 2003
6	Sulphate as SO <sub>6</sub>	30.48	<200	mg/lit	APHA :22"dedition -(4500-
7	Fluoride as F	0.03	<1.0	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-F
8	Residual chlorine	BDL	>0.2	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-C
9	Nitrate as NO <sub>3</sub>	1.02	<45	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-
10	Calcium as Ca	36.10	<75	mg/lit	IS: 3025 Part-02 (2004)
	Magnesium as Mg	19.12	<30	mg/lit	IS: 3025 Part-02 (2004)
12	Iron as Fe	0.12	<0.3	mg/lit	IS: 3025 Part-02 (2004)
13	Copper as Cu	Nil	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
14	Cadmium as Cd	Nil	< 0.003	mg/lit	1S: 3025 Part-02 (2004)
	Chromium as Cr	Nil	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
16	Lead as Pb	Nil	<0.01	mg/lit	IS: 3025 Part-02 (2004)
17	Selenium as Se	ND	<0.01	mg/lit	IS: 3025 Part-02 (2004)
18	Manganese as Mn	Nil	<0.1	mg/lit	IS: 3025 Part-02 (2004)
20	Zinc as Zn	0.07	<5.0	mg/lit	IS: 3025 Part-02 (2004)
20	Sodium as Na	21.4	N.S.	mg/lit	IS: 3025 Part-02 (2004)
22	Potassium As K Dissolved Oxygen	11.0	N.S.	mg/lit	IS: 3025 Part-02 (2004)
66	Dissolved Oxygen	3.9	N.S.	mg/lit	IS: 3025 Part-02 (2004)

23	Oil & Grease	Nil	N.S.	mg/lit	IS: 3025 Part-02 (2004)
24	Ammonical Nitrogen	0.10	N.S.	mg/lit	IS: 3025 Part-02 (2004)
25	Free Ammonia	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
26	Total Kjeldhal Nitrogen	0.05	N.S.	mg/lit	IS: 3025 Part-02 (2004)
27	Sulphide	N.D.	N.S.	mg/lit	15: 3025 Part-02 (2004)
28	Mercury as Hg	N.D.	<0.001	mg/lit	IS: 3025 Part-02 (2004)
29	Silver	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
30	Arsenic as As	N.D.	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
31	Barlum	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
32	Cyanide as CN	N.D.	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
33	Aluminium as Al	N.D.	< 0.03	mg/lit	IS: 3025 Part-02 (2004)
34	Boron	N.D.	<1	mg/lit	IS: 3025 Part-02 (2004)
35	Nickel	N.D.	N.S.	mg/lit	15: 3025 Part-02 (2004)
36	Phenolic Compund as C <sub>6</sub> H <sub>5</sub> OH	N.D.	<0.001	mg/lit	15: 3025 Part-02 (2004)

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Signature of Lab Executive

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Signature of Technical Manager

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ENalyse\*

		Dug Well V	Vater Test Re	port	
Sample Code AB/PRO/05/2014-15/1834					
	Sample Name	Lakhewadi			
	Name of Client	M/s. Nira Bhim	a Sahakari Sakhai	Karkhana	Itd
	Address of Client		ost- Redni, Tal. In		
5	ample Collected by	Aavanira Bioteo	h Pvt. Ltd.	aupui, oisi	arr une,
	Sample type	Liquid			
San	nple received on date	03/05/2014			
	Analysis Date	04/05/2014 to	10/05/2014		
	Reporting date	10/05/2014			
5an	nple returned /stored		or 1 week from th	e date of r	enorting
Sr. No.	Parameter	Results	Limits as per 15:10500 2012	Units	Standard Method
		Physi	cal Parameter		
1	Turbidity	0.6	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002
2	TSS	12	N.S.	mg/lit	IS: 3025 Part-14 (R.A : 2002
2	TDS	796.0	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006
3	Temperature	25	-500	°C	IS: 3025 Part-15 (R.A : 2006
4	Colour	<5	<5	Hazen	IS: 3025 Part-12 (R.A : 2006
5	Odour	Unobjectional	Unobjectional	mazen	IS: 3025 Part-12 (R.A.: 2006
		the second se	ical Parameter		13. 3023 Part 11 (N.A. 2000
1		7.82	6.5-8.5		IS: 3025 Part-11 (R.A : 2002
2	E. Conductivity	852	N.S	μS/cm	IS: 3025 Part-14 (R.A : 2002
3	Total Hardness as	412.36	<200	mg/lit	IS: 3025 Part-21 (2009)
4	Total Alkalinity as CaCO <sub>3</sub>	280.26	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)
5	Chloride as Cl	100	<250	mg/lit	IS: 3025 Part-32 (R.A : 2003
6	Sulphate as SO <sub>4</sub>	60.36	<200	mg/lit	APHA :22"dedition -(4500-
7	Fluoride as F	0.03	<1.0	mg/lit	APHA :22"dedition -(4500-F
8	Residual chlorine	BDL	>0.2	mg/lit	APHA :22"dedition -(4500-C
9	Nitrate as NO <sub>3</sub>	31.2	<45	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-
10	Calcium as Ca	105.0	<75	mg/lit	IS: 3025 Part-02 (2004)
11		40.32	<30	mg/lit	IS: 3025 Part-02 (2004)
12	the second se	0.22	< 0.3	mg/lit	IS: 3025 Part-02 (2004)
	Copper as Cu	Nil	<0.05	mg/lit	IS: 3025 Part-02 (2004)
14	Cadmium as Cd	Nil	< 0.003	mg/lit	IS: 3025 Part-02 (2004)
15	Chromium as Cr	Nil	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
16	Lead as Pb	Nil	<0.01	mg/lit	IS: 3025 Part-02 (2004)
17	Selenium as Se	ND	<0.01	mg/lit	IS: 3025 Part-02 (2004)
18	Manganese as Mn	Nil	<0.1	mg/lit	IS: 3025 Part-02 (2004)
19	Zinc as Zn	0.06	<5.0	mg/lit	IS: 3025 Part-02 (2004)
20	Sodium as Na	11.0	N.S.	mg/lit	IS: 3025 Part-02 (2004)
21	Potassium As K	5.2	N.S.	mg/lit	IS: 3025 Part-02 (2004)
22	Dissolved Oxygen	3.3	N.S.	mg/lit	IS: 3025 Part-02 (2004)

23	Oil & Grease	Nil	N.S.	mg/lit	IS: 3025 Part-02 (2004)
24	Ammonical Nitrogen	0.14	N.S.	mg/lit	IS: 3025 Part-02 (2004)
25	Free Ammonia	N.D.	N.S.	mg/lit	15: 3025 Part-02 (2004)
26	Total Kjeldhal Nitrogen	0.88	N.S.	mg/lit	IS: 3025 Part-02 (2004)
27	Sulphide	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
28	Mercury as Hg	N.D.	< 0.001	mg/lit	15: 3025 Part-02 (2004)
29	Silver	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
30	Arsenic as As	N.D.	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
31	Barium	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
32	Cyanide as CN	N.D.	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
33	Aluminium as Al	N.D.	< 0.03	mg/lit	IS: 3025 Part-02 (2004)
34	Boron	N.D.	<1	mg/lit	15: 3025 Part-02 (2004)
35	Nickel	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
36	Phenolic Compund as C <sub>6</sub> H <sub>5</sub> OH	N.D.	<0.001	mg/lit	15: 3025 Part-02 (2004)

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Signature of Lab Executive

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Signature of Technical Manager

Signature of Quality Manager

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# ENalyse\*

	Am	bient Air Testing	Report			
	Sample Code	AB/PRO/11/2014-15/2085				
	Sample Location	Redni				
	Name of Client	M/s. Nira Bhima Sa	ahakari Sakhar Ka	arkhana Ltd.		
	Address of Client	Shahajinagar, Post Pin-413114.	- Redni, Tal. Inda	pur, DistPune,		
	Sample Collected By	Aavanira Biotech P	Pvt. Ltd.,			
	Sample type	Ambient Air				
	Date of Sampling	03/11/2014				
	Time of Sampling	11:00				
Sample received in Lab		04/11/2014				
	Reporting date	10/11/2014				
Sr. No.	Parameter	Result	Unit	NAAQ Standards		
1	Ambient Temp	28	°C			
2	Dry Bulb Temperature	27	°C			
3	Wet Bulb Temperature	24	°C			
4	Relative Humidity	64	% RH			
5	Sampling Duration	1440	Min			
6	Particulate Matter PM10	21.30	μg/M <sup>3</sup>	≤ 80		
7	Particulate Matter PM <sub>2.5</sub>	12.22	μg/M <sup>3</sup>	≤ 80		
8	Sulphur Dioxide (SO <sub>2</sub> )	14.40	μg/M <sup>3</sup>	≤ 100		
9	Oxides of Nitrogen (NO <sub>x</sub> )	17.69	μg/M <sup>3</sup>	≤ 60		
10	Carbon Monoxide (CO)	BDL	mg/M <sup>3</sup>	s 04		

#### REMARKS / OBSERVATIONS:

- > All above results are within National Ambient Air Quality standards.
- > BDL - Below Detectable Limit.

Signature of Lab Executive

Signature of Technical Manager

Signature of Quality Manager

#### Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part, MIDC Chinchwad, Pune 411019, Maharashtra, India. Tel.: 020 - 64100118 / 8308805200 • E-mail : info@aavanira.com • Web : www.aavanira.com CIN NO. U74900PN2010PTC137544



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# ENalyse\*

	Am	bient Air Testing	Report		
Sample Code AB/PRO/11/2014-15/2086					
	Sample Location	Devkdtevasti			
	Name of Client	M/s. Nira Bhima Sa	ahakari Sakhar Ka	arkhana Ltd.	
	Address of Client	Shahajinagar, Post Pin-413114.	- Redni, Tal. Inda	pur, DistPune,	
ģ.	Sample Collected By	Aavanira Biotech F	Pvt. Ltd.,		
	Sample type	Ambient Air			
	Date of Sampling	03/11/2014			
	Time of Sampling	12:00			
s	ample received in Lab	04/11/2014			
	Reporting date	10/11/2014			
Sr. No.	Parameter	Result	Unit	NAAQ Standards	
1	Ambient Temp	28	°C		
2	Dry Bulb Temperature	27	°C		
3	Wet Bulb Temperature	24	°C		
4	Relative Humidity	64	% RH		
5	Sampling Duration	1440	Min		
6	Particulate Matter PM <sub>10</sub>	19.52	µg/M <sup>3</sup>	≤ 80	
7	Particulate Matter PM <sub>2.5</sub>	12.17	µg/M <sup>3</sup>	≤ 8D	
8	Sulphur Dioxide (SO <sub>2</sub> )	13.65	μg/M <sup>3</sup>	≤ 100	
9	Oxides of Nitrogen (NO <sub>x</sub> )	18.90	μg/M <sup>3</sup>	≤ 60	
10	Carbon Monoxide (CO)	BDL	mg/M <sup>3</sup>	≤ D4	

#### REMARKS / OBSERVATIONS:

- > All above results are within National Ambient Air Quality standards.
- BDL Below Detectable Limit. r

Signature of Lab Executive

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Signature of Technical Manager

Signature of Quality Manager

Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part, MIDC Chinchwad, Pune 411019, Maharashtra, India. Tel.: 020 - 64100118 / 8308805200 . E-mail : info@aavanira.com . Web : www.aavanira.com CIN NO. U74900PN2010PTC137544



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# ENalyse\*

	Am	bient Air Testing	Report		
	Sample Code	AB/PRO/11/2014-15/2087			
	Sample Location	Khandubawadi			
	Name of Client	M/s. Nira Bhima Sa	ahakari Sakhar Ka	arkhana Ltd.	
	Address of Client	Shahajinagar, Post Pin-413114.	- Redni, Tal. Inda	pur, DistPune,	
3	Sample Collected By	Aavanira Biotech F	Pvt. Ltd.,		
	Sample type	Ambient Air			
	Date of Sampling	03/11/2014			
	Time of Sampling	12:30			
5	ample received in Lab	04/11/2014			
	Reporting date	10/11/2014	10-10-10-10-10		
Sr. No.	Parameter	Result	Unit	NAAQ Standards	
1	Ambient Temp	29	°C		
2	Dry Bulb Temperature	28	°C		
3	Wet Bulb Temperature	25	°C		
4	Relative Humidity	63	% RH		
5	Sampling Duration	1440	Min		
б	Particulate Matter PM10	20.15	μg/M <sup>3</sup>	≤ 80	
7	Particulate Matter PM <sub>2.5</sub>	13.42	μg/M <sup>3</sup>	≤ 80	
8	Sulphur Dioxide (SO <sub>2</sub> )	18.23	μg/M <sup>3</sup>	≤ 100	
9	Oxides of Nitrogen (NO <sub>x</sub> )	19.68	μg/M <sup>3</sup>	≤ 60	
10	Carbon Monoxide (CO)	BDL	mg/M <sup>3</sup>	≤ 04	

#### REMARKS / OBSERVATIONS:

- > All above results are within National Ambient Air Quality standards.
- BDL Below Detectable Limit.  $\mathbf{\tilde{r}}$

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Signature of Technical Manager

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Signature of Quality Manager

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# ENalyse\*

	Work zon	e Air Quality Mon	itoring Repo	rt		
	Sample Code	AB/PRO/11/2014-15/2088				
	Sample Location	Main Gate				
	Name of Client	M/s. Nira Bhima S	ahakari Sakhar I	Karkhana Ltd.		
	Address of Client	Shahajinagar, Pos Pin-413114.	t- Redni, Tal. Ind	lapur, DistPune,		
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,			
	Sample type	Work zone Air				
	Date of Sampling	03/11/2014				
	Time of Sampling	13:00				
	Sample received in Lab	04/11/2014				
	Reporting date	10/11/2014				
Sr. No.	Parameter	Result	Unit	The Factories Act 1948 standards		
1	Ambient Temperature	30	°C			
2	Dry Bulb Temperature	29	°C			
3	Wet Bulb Temperature	25	°C			
4	Relative Humidity	60	% RH			
5	Sampling Duration	60	Min			
6	Particulate Matter PM10	57.10	µg/M <sup>3</sup>	N.S.		
7	Particulate Matter PM <sub>2.5</sub>	32.92	μg/M <sup>3</sup>	N.S.		
8	Sulphur Dioxide	23.58	μg/M <sup>3</sup>	≤ 5000		
9	Oxides of Nitrogen (NO <sub>2</sub> )	32.25	μg/M <sup>3</sup>	\$ 6000		
10	Carbon Monoxide (CO)	0.05	mg/M <sup>3</sup>	≤ 04		

- All above results are well within The Factories Act, 1948 Standards. ۶
- N.S.: Not Specified

Signature of Lab Executive

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Signature of Technical Manager

Signature of Quality Manager

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### ENalyse\*

	Work zon	e Air Quality Mon	itoring Repo	rt		
	Sample Code	AB/PRO/11/2014-15/2089				
	Sample Location	Sugar Godown				
	Name of Client	M/s. Nira Bhima S	ahakari Sakhar I	Karkhana Ltd.		
Address of Client Shahajinagar, Post- Redni, Tal. Indapur, DistPune, Pin-413114.						
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,			
	Sample type	Work zone Air				
	Date of Sampling	03/11/2014				
	Time of Sampling	13:30				
	Sample received in Lab	04/11/2014				
	Reporting date	10/11/2014				
Sr. No.	Parameter	Result	Unit	The Factories Act 1948 standards		
1	Ambient Temperature	30	°C			
Z	Dry Bulb Temperature	29	°C			
3	Wet Bulb Temperature	25	°C			
4	Relative Humidity	60	% RH			
5	Sampling Duration	60	Min			
6	Particulate Matter PM10	59.22	µg/M <sup>3</sup>	N.S.		
7	Particulate Matter PM <sub>2.5</sub>	33.87	µg/M <sup>3</sup>	N.S.		
8	Sulphur Dioxide	29.81	μg/M <sup>3</sup>	≤ 5000		
9	Oxides of Nitrogen (NO <sub>2</sub> )	33.46	µg/M <sup>3</sup>	≤ 6000		
10	Carbon Monoxide (CO)	0.06	mg/M <sup>3</sup>	≤ 04		

- > All above results are well within The Factories Act, 1948 Standards.
- N.S.: Not Specified  $\mathbf{\tilde{r}}$

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Signature of Technical Manager

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# ENalyse\*

	Source	e Emission Monitoring	Report		
Sample Code AB/PRO/11/2014-15/2090					
	Sample Location	Cogen Stack			
	Name of Client	M/s. Nira Bhima Sahakar	i Sakhar Karkhana	a Ltd.	
	Address of Client	Shahajinagar, Post- Redn Pin-413114.	i, Tal. Indapur, Dis	stPune,	
S	ample Collected By	Aavanira Biotech Pvt. Ltd	l.,		
	Sample type	Stack			
	Date of Sampling	03/11/2014			
	Time of Sampling	12:00			
Sa	mple received in Lab	04/11/2014			
	Reporting date	10/11/2014			
Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent	
1	Material of Stack	MS	+		
2	Stack Height from G.L.	75.0	Mtr.		
3	Type of Stack	Round	**		
4	Flue Gas Temperature	418	°K		
5	Differential Pressure	1.5	mmWG		
6	Velocity	6.65	M/s		
7	Diameter of Stack	3.6	Mtr.		
8	Stack Area	10.17	M <sup>2</sup>		
9	Gas Volume	166524.38	NM <sup>3</sup> /Hr		
10	Particulate Matter	114.32	Mg/NM <sup>3</sup>	≤ 150	
11	Sulphur Dioxide	48.60	Mg/NM <sup>3</sup>		
12	Sulphur Dioxide	197.55	Kg/daγ	14	
13	Oxides of Nitrogen	215.0	ppm		
14	Carbon Monoxide	13.0	Mg/NM <sup>3</sup>		

#### **REMARKS / OBSERVATIONS:**

All above results are within MPCB Limits.

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Signature of Technical Manager





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# ENalyse\*

	Sourc	e Emission Monitoring	Report			
	Sample Code	AB/PRO/11/2014-15/2091				
	Sample Location	Sugar Stack				
_	Name of Client	M/s. Nira Bhima Sahakar	ri Sakhar Karkhan	a Ltd.		
	Address of Client	Shahajinagar, Post- Redr Pin-413114.	ii, Tal. Indapur, Di	stPune,		
5	Sample Collected By	Aavanira Biotech Pvt. Lte	d.,			
	Sample type	Stack				
	Date of Sampling	03/11/2014				
	Time of Sampling	12:00				
Sa	ample received in Lab	04/11/2014				
	Reporting date	10/11/2014				
Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent		
1	Material of Stack	MS				
2	Stack Height from G.L.	66.0	Mtr.	1		
3	Type of Stack	Round		1		
4	Flue Gas Temperature	421	۳K	1		
5	Differential Pressure	1.6	mmWG	1		
6	Velocity	6.98	M/s	1		
7	Diameter of Stack	3.4	Mtr.	1		
8	Stack Area	9,08	M <sup>2</sup>	1		
9	Gas Volume	156636.10	NM <sup>3</sup> /Hr			
10	Particulate Matter	112.23	Mg/NM <sup>3</sup>	s 150		
11	Sulphur Dioxide	50.18	Mg/NM <sup>3</sup>			
12	Sulphur Dioxide	200.30	Kg/day			
13	Oxides of Nitrogen	201.0	ppm			
14	Carbon Monoxide	11.0	Mg/NM <sup>3</sup>			

### **REMARKS / OBSERVATIONS:**

All above results are within MPCB Limits.

Signature of tab-Executive

Signature of Technical Manager

Signature of Quality Manager

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	An	nbient Noise Moni	toring Report		
	Sample Code	AB/PRO/11/201	4-15/2092		
	Name of Client	M/s. Nira Bhima	Sahakari Sakhar Karkh	ana Ltd.	
	Address of Client	Shahajinagar, Post- Redni, Tal. Indapur, DistPune, Pin-413114. Aavanira Biotech Pvt. Ltd., Noise Monitoring 03/11/2014			
	Sample Collected By				
	Sample type				
	Date of Sampling				
	Reporting date	10/11/2014			
Sr. No.	Test Location	Unit	Readings		
			Day Time 01:00 p.m.	Night Time 11:00 p.m.	
1	Shahajinagar Near Grampanchayat	dB(A)	52.3	44.8	
2	Reda Near school	dB(A)	52.9	43.7	

#### REMARKS / OBSERVATIONS:

#### AMBIENT NOISE LEVEL STATNDARDS

Limits in dB (A) Leq			
Day Time (6.00 am to 10.00 pm)	Night Time (10.00 pm to 6.00 am)		
75	70		
65	55		
55	45		
50	40		
	Day Time (6.00 am to 10.00 pm) 75 65 55		

Signature of Lito Executive

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Signature of Technical Manager

Signature of Quality Manager



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		ciseià:	2 5.1			
	Work	zone Noise Mo	nitoring Re	port		
	Sample Code	AB/PRO/11/	2014-15/2093			
	Name of Client	M/s. Nira Bh	ima Sahakari S	akhar Ka	khana Ltd.	
	Address of Client	Shahajinaga Pin-413114.	r, Post- Redni,	Tal. Indap	ur, DistPune,	
_	Sample Collected By	Aavanira Bio	tech Pvt. Ltd.,			
	Sample type	Noise				
Date of Sampling 03/11/2014			03/11/2014			
	Reporting date	10/11/2014				
2.00	Test Location	Rea	ding			
Sr. No.		Daytime	Night Time	Unit	The Factories Act 1948 standards	
		01:00 p.m.	11:00 p.m.			
1	Main Gate	69.2	64.3	dB(A)	≤ 90	
2	Boiler House	74.6	69.5	dB(A)	≤ 90	

#### **REMARK / OBSERVATIONS:**

Limits: The Factories Act, 1948, has prescribed 90 dB (A) as an upper limit of noise level

for 8 hours exposure.

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ENalyse\*

		Drinking V	Vater Test Rep	ort			
Sample Code AB/PRO/11/2014-15/2094							
	Sample Name	Within plant from source					
	Name of Client		a Sahakari Sakhar	Karkhana	Ltd.		
	Address of Client		ost- Redni, Tal. In				
	ample Collected by	Aavanira Biotec		aupur, prot	, y une,		
	Sample type	Liquid	and the starty				
Sam	ple received on date	03/11/2014					
	Analysis Date	04/11/2014 to	10/11/2014				
	Reporting date	10/11/2014					
Sam	ple returned /stored		or 1 week from th	e date of re	aporting		
Sr. No.	Parameter	Results	C for 1 week from the date of reporting Limits as per IS:10500 2012 Units Standard Method		Standard Method		
		Physi	ical Parameter				
1	Turbidity	0.3	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)		
2	TSS	09	N.S.	mg/lit	IS: 3025 Part-14 (R.A : 2006)		
2	TDS	287.0	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)		
3	Temperature	23		°C	IS: 3025 Part-15 (R.A : 2006)		
4	Colour	<5	<5	Hazen	IS: 3025 Part-12 (R.A : 2006)		
5	Odour	Unobjectional	Unobjectional	++	IS: 3025 Part-11 (R.A : 2006)		
		the second se	ical Parameter		11010020101121 (111112000)		
1	pH	7.58	6.5-8.5		IS: 3025 Part-11 (R.A : 2002)		
2	E. Conductivity	526	N.S	µS/cm	IS: 3025 Part-14 (R.A : 2002)		
3	Total Hardness as	254.20	<200	mg/lit	IS: 3025 Part-21 (2009)		
4	Total Alkalinity as CaCO <sub>3</sub>	236.02	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)		
5	Chloride as Cl	52.87	<250	mg/lit	IS: 3025 Part-32 (R.A : 2003)		
6	Sulphate as SO <sub>4</sub>	28.63	<200	mg/lit	APHA :22"dedition -(4500-		
7	Fluoride as F	0.01	<1.0	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-F		
8	Residual chlorine	BDL	>0.2	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-Cl		
9	Nitrate as NO <sub>3</sub>	0.8	<45	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-		
10	Calcium as Ca	34.21	<75	mg/lit	IS: 3025 Part-02 (2004)		
11	Magnesium as Mg	16.35	<30	mg/lit	IS: 3025 Part-02 (2004)		
12	Iron as Fe	0.10	< 0.3	mg/lit	IS: 3025 Part-02 (2004)		
13	Copper as Cu	Nil	< 0.05	mg/lit	IS: 3025 Part-02 (2004)		
14	and the second se	Nil	< 0.003	mg/lit	IS: 3025 Part-02 (2004)		
15		Nil	<0.05	mg/lit	IS: 3025 Part-02 (2004)		
16	and the state of t	Nil	< 0.01	mg/lit	IS: 3025 Part-02 (2004)		
17	Selenium as Se	ND	<0.01	mg/lit	IS: 3025 Part-02 (2004)		
18	Manganese as Mn	Nil	<0.1	mg/lit	IS: 3025 Part-02 (2004)		
19	Zinc as Zn	0.06	<5.0	mg/lit	IS: 3025 Part-02 (2004)		
20	Sodium as Na	20.18	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
21	Potassium As K	10.0	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
22	Dissolved Oxygen	3.3	N.S.	mg/lit	IS: 3025 Part-02 (2004)		

Oil & Grease	Nil	N.5.	mg/lit	15: 3025 Part-02 (2004)
Ammonical Nitrogen	0.10	N.S.	mg/lit	15: 3025 Part-02 (2004)
Free Ammonia	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
Total Kjeldhal Nitrogen	0.05	N.S.	mg/lit	IS: 3025 Part-02 (2004)
Sulphide	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
Mercury as Hg	N.D.	<0.001	mg/lit	IS: 3025 Part-02 (2004)
Silver	N.D.	N.S.	mg/lit	15: 3025 Part-02 (2004)
Arsenic as As	N.D.	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
Barium	N.D.	N.5.	mg/lit	IS: 3025 Part-02 (2004)
Cyanide as CN	N.D.	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
Aluminium as Al	N.D.	< 0.03	mg/lit	IS: 3025 Part-02 (2004)
Boron	N.D.	<1	mg/lit	IS: 3025 Part-02 (2004)
Nickel	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
Phenolic Compund as C <sub>6</sub> H <sub>5</sub> OH	N.D.	<0.001	mg/lit	IS: 3025 Part-02 (2004)
	Ammonical NitrogenFree AmmoniaTotal Kjeldhal NitrogenSulphideMercury as HgSilverArsenic as AsBariumCyanide as CNAluminium as AlBoronNickelPhenolic Compund as	Ammonical Nitrogen0.10Free AmmoniaN.D.Total Kjeldhal Nitrogen0.05SulphideN.D.Mercury as HgN.D.SilverN.D.Arsenic as AsN.D.BariumN.D.Cyanide as CNN.D.Aluminium as AlN.D.BoronN.D.NickelN.D.Phenolic Compund asN.D.	Ammonical Nitrogen0.10N.S.Free AmmoniaN.D.N.S.Total Kjeldhal Nitrogen0.05N.S.SulphideN.D.N.S.Mercury as HgN.D.<0.001	Ammonical Nitrogen0.10N.S.mg/litFree AmmoniaN.D.N.S.mg/litTotal Kjeldhal Nitrogen0.05N.S.mg/litSulphideN.D.N.S.mg/litMercury as HgN.D.N.S.mg/litSilverN.D.<0.001

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Signature of Las Executive

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Signature of Quality Manager



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ENalyse\*

		Dug Well V	Nater Test Rep	port	
Sample Code		AB/PRO/11/20	14-15/2095		
Sample Name		Vikaswadi			
Name of Client		M/s. Nira Bhim	a Sahakari Sakhar	Karkhana	Ltd.
	Address of Client	Shahajinagar, P	ost- Redni, Tal. In	dapur, Dist	Pune,
5	ample Collected by	Aavanira Bioteo			
	Sample type	Liquid	Contractor of the Contractor		
San	ple received on date	03/11/2014			
	Analysis Date	04/11/2014 to	10/11/2014		
	Reporting date	10/11/2014			
Sam	ple returned /stored		or 1 week from th	e date of re	eporting
Sr. No.	Parameter	Results	Limits as per IS:10500 2012	Units	Standard Method
		Phys	ical Parameter		
1	Turbidity	0.6	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)
2	TSS	12	N.S.	mg/lit	15: 3025 Part-14 (R.A : 2006)
2	TDS	727.0	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006
3	Temperature	23		°C	IS: 3025 Part-15 (R.A : 2006
4	Colour	<5	<5	Hazen	IS: 3025 Part-12 (R.A : 2006
5	Odour	Unobjectional	Unobjectional		IS: 3025 Part-11 (R.A : 2006
		and the second se	ical Parameter		The owner of all the record
1	pH	7.89	6.5-8.5	-	IS: 3025 Part-11 (R.A : 2002)
2	E. Conductivity	828	N.S	µS/cm	IS: 3025 Part-14 (R.A : 2002
3	Total Hardness as	412.10	<200	mg/lit	IS: 3025 Part-21 (2009)
4	Total Alkalinity as CaCO <sub>3</sub>	264.22	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)
5	Chloride as Cl	101.2	<250	mg/lit	IS: 3025 Part-32 (R.A.: 2003)
6	Sulphate as SO <sub>4</sub>	56.33	<200	mg/lit	APHA :22 <sup>nd</sup> edition -14500-
7	Fluoride as F	0.02	<1.0	mg/lit	APHA :22"dedition -(4500-F
8	Residual chlorine	BDL	>0.2	mg/lit	APHA :22"dedition -(4500-Cl
9	Nitrate as NO <sub>3</sub>	29.8	<45	mg/lit	APHA :22 <sup>rd</sup> edition -(4500-
10	Calcium as Ca	105.3	<75	mg/lit	IS: 3025 Part-02 (2004)
11	Magnesium as Mg	38.65	<30	mg/lit	IS: 3025 Part-02 (2004)
12	Iron as Fe	0.18	<0.3	mg/lit	IS: 3025 Part-02 (2004)
10.000	Copper as Cu	Nil	<0.05	mg/lit	IS: 3025 Part-02 (2004)
14	and the second se	Nil	<0.003	mg/lit	IS: 3025 Part-02 (2004)
15	- Manufacture	Nil	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
16		Nil	<0.01	mg/lit	IS: 3025 Part-02 (2004)
17	Selenium as Se	ND	<0.01	mg/lit	IS: 3025 Part-02 (2004)
18	Manganese as Mn	Nil	<0.1	mg/lit	IS: 3025 Part-02 (2004)
19	Zinc as Zn	0.04	<5.0	mg/lit	IS: 3025 Part-02 (2004)
20	Sodium as Na	10.2	N.S.	mg/lit	IS: 3025 Part-02 (2004)
21	Potassium As K	5.3	N.S.	mg/lit	IS: 3025 Part-02 (2004)
22	Dissolved Oxygen	3.2	N.S.	mg/lit	IS: 3025 Part-02 (2004)

23	Oil & Grease	Nil	N.S.	mg/lit	IS: 3025 Part-02 (2004)
24	Ammonical Nitrogen	0.13	N.S.	mg/lit	IS: 3025 Part-02 (2004)
25	Free Ammonia	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
26	Total Kjeldhal Nitrogen	0.85	N.S.	mg/lit	15: 3025 Part-02 (2004)
27	Sulphide	N.D.	N.S.	mg/lit	15: 3025 Part-02 (2004)
28	Mercury as Hg	N.D.	< 0.001	mg/lit	15: 3025 Part-02 (2004)
29	Silver	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
30	Arsenic as As	N.D.	<0.01	mg/lit	15: 3025 Part-02 (2004)
31	Barium	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
32	Cyanide as CN	N.D.	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
33	Aluminium as Al	N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)
34	Boron	N.D.	<1	mg/lit	IS: 3025 Part-02 (2004)
35	Nickel	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
36	Phenolic Compund as $C_6H_5OH$	N.D.	<0.001	mg/lit	IS: 3025 Part-02 (2004)

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Signature of Lab Executive

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Signature of Technical Manager

Signature of Quality Manager



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### Recognized by Ministry of Environment and Forest (MoEF), Govt. of India ISO 9001: 2008 and OHSAS 18001: 2007 Certified Company

		Soil	<b>Testing Report</b>				
		second	AB/PRO/11/2014-15/2096 Plant Site				
		Plant Site					
	Name of Client	M/s. Nira	M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.				
	Address of Client	ELSE STREET	Shahajinagar, Post- Redni, Tal. Indapur, DistPune, Pin-413114. Aavanira Biotech Pvt. Ltd., Solid 03/11/2014				
Si	ample Collected By	Aavanira E					
	Sample type	Solid					
	Date of Sampling	03/11/201					
	ple received on date	04/11/201	4 to 10/11/2014				
	Reporting date	10/11/201	any state of the second st				
Sam	nple returned /stored	Stored at	4°C for 1 week from 1	the date of reporting			
Sr. No.	Parameter	-	Result	Unit			
1	Colour		Brown				
2	Conductivity		76	Ms/cm			
3	pH (1:5 Suspension)		8.48	pH Scale			
4	Moisture Content		18.2	%			
5	Water Holding Capacit	y	46.0	%			
6	Organic Matter		1.5	%			
7	Total Kjeldahl Nitrogen (as N)		0.004	%			
8	Free Ammoniacal Nitrogen		Nil	%			
9	Total Carbon		1.0	%			
10	Potassium as k		0.001	%			
11	Phasphorous		0.001	%			
12	Copper as Cu		0.26	ppm			
13	Cadmium as Cd		BDL	Ppm			
14	Lead as Pb		BDL	%			
15	Calcium as Ca		2.86	%			
16	Magnesium as Mg		0.22	36			
17	Boron		BDL	Ppm			
18	Iron as Fe		13	Ppm			
19	Chromium		BDL	Ppm			
20	Manganese as Mn		0.42	Ppm			
21	1 Zinc as Zn		0.71	Ppm			
22	P. Humic Acid		0.13	%			
23	Molybdenum		BDL	ppm			
24	Boron		39.22	mg/kg			

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25	Percentage Of Different Components					
	Sand	25	96			
	Slit	55	%			
	Clay	20	%			

**REMARKS / OBSERVATIONS:** 

Signature of Lab Executive

eal.

Signature of Technical Manager

Signature of Quality Manager

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# ENalyse\*

		Soi	I Testing Report				
Sample Code			AB/PRO/11/2014-15/2097				
Sample Name		Khanduba	Khandubawadi				
Name of Client		M/s. Nira	M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.				
18	Address of Client		Shahajinagar, Post- Redni, Tal. Indapur, DistPune, Pin-413114.				
Sa	ample Collected By		Biotech Pvt. Ltd.,				
	Sample type	Solid					
30	Date of Sampling	03/11/20	14				
	ple received on date		14 to 10/11/2014				
	Reporting date	10/11/20	and the second se				
Sam	ple returned /stored		and a first state of the state	the date of reporting			
Sr. No.	Parameter		Result	Unit			
1	Colour		Brown				
2	Conductivity		83	Ms/cm			
3	pH (1:5 Suspension)		7.66	pH Scale			
4	Moisture Content		18.2	%			
5	Water Holding Capacity		47.0	%			
6	Organic Matter		1.2	%			
7	Total Kjeldahl Nitrogen (as N)		0.006	%			
8	Free Ammoniacal Nitrogen		Nil	%			
9	Total Carbon		1.0	%			
10	Potassium as k		0.002	%			
11	Phosphorous		0.002	%			
12	Copper as Cu		0.26	ppm			
13	Cadmium as Cd		BDL	Ppm			
14	Lead as Pb		BDL	20			
15	Calcium as Ca		2.23	%			
16	Magnesium as Mg		0.31	%			
17	Boron		BDL	Ppm			
18	Iron as Fe		12	Ppm			
19	Chromium		BDL	Ppm			
20	Manganese as Mn		0.41	Ppm			
21			0.70	Ppm			
22	and the second se		0.10	%			
23	Molybdenum		BDL	ppm			
24	Boron		40.41	mg/kg			

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25	Percentage Of Different Components					
	Sand	26	94			
	Slit	50	%			
	Clay	21	%			

REMARKS / OBSERVATIONS:

Signature of the Executive

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Signature of Technical Manager

Signature of Quality Manager



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## ENalyse\*

	An	nbient Air Testin	g Report		
	Sample Code	AB/PRO/01/2014-15/1901			
	Sample Location	Bhodani	estation of the second s		
	Name of Client	M/s. Nira Bhima	Sahakari Sakhar H	arkhana Ltd.	
	Address of Client	Shahajinagar, Pos Pin-413114.			
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,		
	Sample type	Ambient Air			
	Date of Sampling	05/01/2015			
	Time of Sampling	11.30			
\$	Sample received in Lab	06/01/2015			
Reporting date		12/01/2015			
Sr. No.	Parameter	Result	Unit	NAAQ Standards	
1	Ambient Temp	29	°C		
2	Dry Bulb Temperature	29	°C		
3	the second retriperatory	25	"C		
4	Relative Humidity	56	% RH		
5	Sampling Duration	1440	Min		
6	Particulate Matter PM <sub>10</sub>	20.36	µg/M <sup>3</sup>	s 80	
7	Particulate Matter PM <sub>2.5</sub>	11.85	µg/M <sup>3</sup>	≤ 80	
8	Sulphur Dioxide (SO <sub>2</sub> )	15.60	µg/M <sup>3</sup>	≤ 100	
9	Oxides of Nitrogen (NOx)	18.67	µg/M <sup>3</sup>	≤ 60	
10	Carbon Monoxide (CO)	BDL	mg/M <sup>3</sup>	≤ 04	

### **REMARKS / OBSERVATIONS:**

- All above results are within National Ambient Air Quality standards. ×
- BDL Below Detectable Limit. ¥

Signature of Lab Executive

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Signature of Technical Manager



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## ENalyse\*

	An	nbient Air Testin	g Report		
	Sample Code	AB/PRO/01/2014-15/1902			
	Sample Location	Shahajinagar			
	Name of Client	M/s. Nira Bhima S	Sahakari Sakhar K	arkhana Ltd.	
	Address of Client	Shahajinagar, Pos Pin-413114.	t- Redni, Tal. Ind	apur, DistPune,	
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,		
	Sample type	Ambient Air			
	Date of Sampling	05/01/2015			
	Time of Sampling	12:00			
5	ample received in Lab	06/01/2015			
Reporting date		12/01/2015			
Sr. No.	Parameter	Result	Unit	NAAQ Standards	
1	Ambient Temp	29	°C		
2	Dry Bulb Temperature	29	°C		
3	Wet Bulb Temperature	25	°C		
4	Relative Humidity	56	% RH		
5	Sampling Duration	1440	Min		
6	Particulate Matter PM <sub>10</sub>	21.60	µg/M <sup>3</sup>	≤ 80	
7	Particulate Matter PM <sub>25</sub>	12.20	µg/M <sup>3</sup>	≤ 80	
8	Sulphur Dioxide (SO <sub>2</sub> )	13.85	μg/M <sup>3</sup>	≤ 100	
9	Oxides of Nitrogen (NO <sub>x</sub> )	19.28	μg/M <sup>3</sup>	≤ 60	
10	Carbon Monoxide (CO)	BDL	mg/M <sup>3</sup>	≤ 04	

### **REMARKS / OBSERVATIONS:**

- > All above results are within National Ambient Air Quality standards.
- BDL Below Detectable Limit.

Signature of Lab Executive

Kalyan

Signature of Technical Manager

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ENalyse\*

	Work zor	e Air Quality Mor	nitoring Repo	ort
Sample Code AB/PRO/01/2014-15/1903				
	Sample Location	Main Gate		
	Name of Client	M/s. Nira Bhima	Sahakari Sakhar	Karkhana Ltd.
	Address of Client	Shahajinagar, Po Pin-413114.	st- Redni, Tal. Ind	dapur, DistPune,
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,	
	Sample type	Work zone Air		
	Date of Sampling	05/01/2015		
	Time of Sampling	13:00		
Sample received in Lab 06/01/2015				
	Reporting date	12/01/2015		
Sr. No.	Parameter	Result	Unit	The Factories Act 1948 standards
1	Ambient Temperature	30	°C	ALL DE LE
2	Dry Bulb Temperature	29	°C	
3	Wet Bulb Temperature	25	°C	
4	Relative Humidity	55	% RH	
5	Sampling Duration	60	Min	
6	Particulate Matter PM <sub>10</sub>	57.20	µg/M <sup>3</sup>	N.S.
7	Particulate Matter PM <sub>2.5</sub>	32.88	µg/M <sup>3</sup>	N.S.
8	Sulphur Dioxide	22.52	µg/M <sup>3</sup>	≤ 5000
9	Oxides of Nitrogen (NO <sub>2</sub> )	30.12	µg/M <sup>3</sup>	≤ 6000
10	Carbon Monoxide (CD)	0.06	mg/M <sup>3</sup>	\$ 04

### **REMARKS / OBSERVATIONS:**

- All above results are well within The Factories Act, 1948 Standards.
- N.S.: Not Specified

Signature of Lab Executive

Kabyam Signature of Technical Manager

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## ENalyse\*

	Work zor	ne Air Quality Mo	nitoring Repo	ort	
Sample Code AB/PRO/01/2014-15/1904					
	Sample Location	ETP Area			
	Name of Client	M/s. Nira Bhima	Sahakari Sakhar	Karkhana Ltd.	
	Address of Client			dapur, DistPune,	
_	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,		
	Sample type	Work zone Air			
	Date of Sampling	05/01/2015			
Time of Sampling 13:30					
	Sample received in Lab	06/01/2015			
_	Reporting date	12/01/2015			
Sr. No.	Parameter	Result	Unit	The Factories Act 1948 standards	
1	Ambient Temperature	30	°C	standarus	
2	Dry Bulb Temperature	29	°C	-	
3	Wet Bulb Temperature	25	°C		
4	Relative Humidity	55	% RH	-	
5	Sampling Duration	60	Min		
6	Particulate Matter PM <sub>10</sub>	54.21	μg/M <sup>3</sup>	N.S.	
7	Particulate Matter PM <sub>2.5</sub>	30.19	μg/M <sup>3</sup>	N.S.	
8	Sulphur Dioxide	22.15	μg/M <sup>3</sup>	≤ 5000	
9	Oxides of Nitrogen (NO2)	30.86	μg/M <sup>3</sup>	≤ 6000	
10	Carbon Monoxide (CO)	0.06	mg/M <sup>3</sup>	≤ 04	

## REMARKS / OBSERVATIONS:

- All above results are well within The Factories Act, 1948 Standards.
- N.S.: Not Specified

Signature of Lab Executive

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Signature of Quality Manager

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# ENalyse\*

	Source	e Emission Monitorin	g Report	
Sample Code AB/PRO/01/2014-15/1905				
_	Sample Location	Cogen Stack		
	Name of Client	M/s. Nira Bhima Sahaka	ari Sakhar Karkhar	baltd
	Address of Client	Shahajinagar, Post- Red Pin-413114.	ini, Tal. Indapur, D	DistPune,
	Sample Collected By	Aavanira Biotech Pvt. L	td.	
_	Sample type	Stack		
	Date of Sampling	05/01/2015		
	Time of Sampling	12:00		
Sample received in Lab 06/01/2015				
	Reporting date	12/01/2015		
Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent
1	Material of Stack	MS		WIP CB Consent
2	Stack Height from G.L.	75.0	Mtr.	
3	Type of Stack	Round		
4	Flue Gas Temperature	420	°K	
5	Differential Pressure	1.7	mmWG	1
6	Velocity	7.18	M/s	-
7	Diameter of Stack	3.7	Mtr.	-
8	Stack Area	10.17	M <sup>2</sup>	-
9	Gas Volume	162536.25	NM <sup>3</sup> /Hr	
10	Particulate Matter	116.22	Mg/NM <sup>3</sup>	≤ 150
11	Sulphur Dioxide	50.21	Mg/NM <sup>3</sup>	2 120
12	Sulphur Dioxide	196.68	Kg/day	
13	Oxides of Nitrogen	198.0	ppm	
14	Carbon Monoxide	11.0	Mg/NM <sup>3</sup>	**

# **REMARKS / OBSERVATIONS:**

All above results are within MPCB Limits.

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Signature of tab Executive

Signature of Technical Manager

Signature of Quality Manager



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# ENalyse\*

	Source	e Emission Monitorin	g Report			
	Sample Code	AB/PRO/01/2014-15/1906				
	Sample Location	Sugar Stack				
_	Name of Client	M/s. Nira Bhima Sahaka	ari Sakhar Karkhar	na Ltd.		
	Address of Client	Shahajinagar, Post- Red Pin-413114.				
	Sample Collected By	Aavanira Biotech Pvt. L	td.,			
	Sample type	Stack				
	Date of Sampling	05/01/2015				
	Time of Sampling	12:00				
Sample received in Lab 06/01/2015						
_	Reporting date	12/01/2015				
Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent		
1	Material of Stack	MS		WIPCD Consent		
2	Stack Height from G.L.	66.0	Mtr.	-		
3	Type of Stack	Round				
4	Flue Gas Temperature	420	°K			
5	Differential Pressure	1.6	mmWG	-		
6	Velocity	7.45	M/s	-		
7	Diameter of Stack	3.4	Mtr.	-		
8	Stack Area	9.07	M <sup>2</sup>	-		
9	Gas Volume	163121.20	NM <sup>3</sup> /Hr	-		
10	Particulate Matter	111.20	Mg/NM <sup>3</sup>	≤ 150		
11	Sulphur Dioxide	51.23	Mg/NM <sup>3</sup>	\$ 150		
12	Sulphur Dioxide	198.32	Kg/day			
13	Oxides of Nitrogen	197.0	ppm	**		
14	Carbon Monoxide	11.0	Mg/NM <sup>3</sup>			

### REMARKS / OBSERVATIONS:

All above results are within MPCB Limits.

Signature Ftab Executive

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Signature of Quality Manager



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## ENalyse\*

	Ar	nbient Noise Mon	itoring Report		
	Sample Code AB/PRO/01/2014-15/1907				
	Name of Client	M/s. Nira Bhima	a Sahakari Sakhar Karki	ana Ltd.	
	Address of Client	Shahajinagar, Post- Redni, Tal. Indapur, DistPune, Pin-413114.			
	Sample Collected By	Aavanira Biotec	h Pvt. Ltd.,		
	Sample type	Noise Monitoring			
	Date of Sampling	05/01/2015			
	Reporting date	12/01/2015			
Sr. No.	Test Location	Unit	R	eadings	
			Day Time 01:00 p.m.	Night Time 10:30 p.m.	
1	Shahajinagar Near Grampanchayat	dB(A)	50.9	42.9	
2	Reda Near school	dB(A)	54.0	43.5	

REMARKS / OBSERVATIONS:

#### AMBIENT NOISE LEVEL STATNDARDS

	Limits in dB (A) Leg		
Category of Area	Day Time (6.00 am to 10.00 pm)	Night Time (10.00 pm to 6.00 am)	
Industrial Area	75	(Letter printe dide any	
Commercial Area	cr.	70	
and the second se	65	55	
Residential Area	55	45	
Silence Zone	50	the second se	
~		40	

Signature of Lab Executive

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Signature of Quality Manager

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## ENalyse\*

-	Work	zone Noise Mo	nitoring Re	port		
_	Sample Code	AB/PRO/01/2	2014-15/1908	port		
_	Name of Client	the second se	ma Sahakari S		rkhana Ltd	
	Address of Client				our, DistPune,	
	Sample Collected By					
	Sample type	Noise				
	Date of Sampling	05/01/2015				
	Reporting date	12/01/2015				
Sr.	Test Location					
No.		Day Time 01:00 p.m.	Night Time 10:30 p.m.	Unit	The Factories Act 1948 standards	
1	Main Gate	66.0	62.3	dB(A)	< 00	
2	Boiler House	74.8	68.6	dB(A)	≤ 90 ≤ 90	

### **REMARK / OBSERVATIONS:**

Limits: The Factories Act, 1948, has prescribed 90 dB (A) as an upper limit of noise level

for 8 hours exposure.

Signature of Lab Executive

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Signature of Quality Manager



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## ENalyse\*

	Am	bient Air Testing	g Report		
	Sample Code	AB/PRO/05/2015	The plant diversity of the state of the stat		
	Sample Location	Bhodani			
	Name of Client	M/s. Nira Bhima S	ahakari Sakhar K	arkhana Ltd.	
	Address of Client	Shahajinagar, Pos Pin-413114.	t- Redni, Tal. Inda	apur, DistPune,	
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,		
	Sample type	Ambient Air			
	Date of Sampling	05/05/2015			
	Time of Sampling 11.30				
S	ample received in Lab	06/05/2015			
Reporting date		12/05/2015			
Sr. No.	Parameter	Result	Unit	NAAQ Standards	
1	Ambient Temp	34	°c		
2	Dry Bulb Temperature	33	°C		
3	Wet Bulb Temperature	29	°C		
4	Relative Humidity	40	% RH		
5	Sampling Duration	1440	Min		
6	Particulate Matter PM <sub>10</sub>	19.43	µg/M <sup>3</sup>	≤ 80	
7	Particulate Matter PM <sub>2.5</sub>	11.14	µg/M <sup>3</sup>	s 80	
8	Sulphur Dioxide (SO <sub>2</sub> )	15.86	µg/M <sup>3</sup>	≤ 100	
9	Oxides of Nitrogen (NO <sub>x</sub> )	19.91	μg/M <sup>3</sup>	s 60	
10	Carbon Monoxide (CO)	BDL	mg/M <sup>3</sup>	≤ 04	

### **REMARKS / OBSERVATIONS:**

- All above results are within National Ambient Air Quality standards.
- BDL Below Detectable Limit.

Signature of ab Executive

kalyani

Signature of Technical Manager

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# ENalyse\*

	Am	bient Air Testing	g Report		
Sample Code AB/PRO/05/2015-16/1809					
	Sample Location	Shahajinagar			
	Name of Client	M/s. Nira Bhima S	ahakari Sakhar K	arkhana Ltd.	
	Address of Client	Shahajinagar, Post Pin-413114.	t- Redni, Tal. Inda	apur, DistPune,	
	Sample Collected By	Aavanira Biotech I	Pvt. Ltd.,		
	Sample type	Ambient Air			
	Date of Sampling	05/05/2015			
	Time of Sampling	12:00			
S	ample received in Lab	06/05/2015			
Reporting date		12/05/2015			
Sr. No.	Parameter	Result	Unit	NAAQ Standards	
1	Ambient Temp	34	°c		
2	Dry Bulb Temperature	33	°C		
3	Wet Bulb Temperature	29	°C		
4	Relative Humidity	40	% RH		
5	Sampling Duration	1440	Min		
6	Particulate Matter PM <sub>10</sub>	18.62	µg/M <sup>3</sup>	≤ 80	
7	Particulate Matter PM <sub>2.5</sub>	11.58	µg/M <sup>3</sup>	s 80	
8	Sulphur Dioxide (SO <sub>2</sub> )	15.60	µg/M <sup>3</sup>	≤ 100	
9	Oxides of Nitrogen (NO <sub>x</sub> )	19.83	µg/M <sup>3</sup>	s 60	
10	Carbon Monoxide (CO)	BDL	mg/M <sup>3</sup>	≤ 04	

### **REMARKS / OBSERVATIONS:**

- All above results are within National Ambient Air Quality standards.
- BDL Below Detectable Limit.

Signature of Lab Executive

Signature of Technical Manager

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## ENalyse\*

	Work zon	e Air Quality Mor	nitoring Repo	rt			
	Sample Code	AB/PRO/05/2015-16/1810					
	Sample Location	Main Gate					
	Name of Client	M/s. Nira Bhima	Sahakari Sakhar	Karkhana Ltd.			
	Address of Client	Shahajinagar, Pos Pin-413114.	Shahajinagar, Post- Redni, Tal. Indapur, DistPune,				
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,				
	Sample type	Work zone Air					
	Date of Sampling	05/05/2015					
Time of Sampling 13:00							
	Sample received in Lab	06/05/2015					
Reporting date		12/05/2015					
Sr. No.	Parameter	Result	Unit	The Factories Act 1948 standards			
1	Ambient Temperature	34	°C				
2	Dry Bulb Temperature	33	°C				
3	Wet Bulb Temperature	28	°C				
4	Relative Humidity	40	% RH	1			
5	Sampling Duration	60	Min				
б	Particulate Matter PM <sub>10</sub>	57.75	µg/M <sup>3</sup>	N.S.			
7	Particulate Matter PM25	32.20	µg/M <sup>3</sup>	N.S.			
8	Sulphur Dioxide	21.87	µg/M <sup>3</sup>	≤ 5000			
9	Oxides of Nitrogen (NO <sub>2</sub> )	27.55	µg/M <sup>3</sup>	≤ 6000			
10	Carbon Monoxide (CO)	0.05	mg/M <sup>3</sup>	≤ 04			

#### **REMARKS / OBSERVATIONS:**

- All above results are well within The Factories Act, 1948 Standards.
- N.S.: Not Specified 5

Signature of Lab Executive

Kalyow

Signature of Technical Manager

Signature of Quality Manager



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CIN NO. U74900PN2010PTC137544

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## ENalyse\*

	Work zon	e Air Quality Mon	itoring Repo	rt			
_	Sample Code	AB/PRO/05/2015-16/1811					
	Sample Location	ETP Area	ETP Area				
	Name of Client	M/s. Nira Bhima	Sahakari Sakhar I	Karkhana Ltd.			
	Address of Client	Shahajinagar, Post- Redni, Tal. Indapur, DistPune, Pin-413114.					
	Sample Collected By	Aavanira Biotech	Pvt. Ltd.,				
	Sample type	Work zone Air					
	Date of Sampling	05/05/2015	05/05/2015				
Time of Sampling Sample received in Lab		13:30 06/05/2015					
Sr. No.	Parameter	Result	Unit	The Factories Act 1948 standards			
1	Ambient Temperature	35	°C				
2	Dry Bulb Temperature	33.5	°C				
3	Wet Bulb Temperature	28.5	°C				
4	Relative Humidity	40	% RH				
5	Sampling Duration	60	Min				
6	Particulate Matter PM10	54.93	µg/M <sup>3</sup>	N.S.			
7	Particulate Matter PM <sub>2.5</sub>	33.25	µg/M <sup>3</sup>	N.S.			
8	Sulphur Dioxide	21.68	μg/M <sup>3</sup>	≤ 5000			
9	Oxides of Nitrogen (NO <sub>2</sub> )	23.87	µg/M <sup>3</sup>	≤ 6000			
10	Carbon Monoxide (CO)	0.06	mg/M <sup>3</sup>	≤ 04			

#### **REMARKS / OBSERVATIONS:**

- > All above results are well within The Factories Act, 1948 Standards.
- N.S.: Not Specified

Signature of Lab Executive

Kalyam

Signature of Quality Manager

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# ENalyse\*

	Sourc	e Emission Monitoring	g Report				
	Sample Code	AB/PRO/05/2015-16/1812					
Sample Location		Cogen Stack					
	Name of Client	M/s. Nira Bhima Sahaka	ri Sakhar Karkhan	a Ltd.			
	Address of Client	Shahajinagar, Post- Red Pin-413114.	Shahajinagar, Post- Redni, Tal. Indapur, DistPune,				
-	Sample Collected By	Aavanira Biotech Pvt. Lt	d.,				
	Sample type	Stack					
	Date of Sampling	05/05/2015					
	Time of Sampling	14:00					
S	ample received in Lab	06/05/2015					
_	Reporting date	12/05/2015					
Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent			
1	Material of Stack	MS					
2	Stack Height from G.L.	75.0	Mtr.	1			
3	Type of Stack	Round		1			
4	Flue Gas Temperature	425	°K	-			
5	Differential Pressure	1.6	mmWG	1			
6	Velocity	6.87	M/s				
7	Diameter of Stack	3.6	Mtr.				
8	Stack Area	10.1736	M <sup>2</sup>	-			
9	Gas Volume	168351.47	NM <sup>3</sup> /Hr				
10	Particulate Matter	110.21	Mg/NM <sup>3</sup>	≤ 150			
11	Sulphur Dioxide	49.81	Mg/NM <sup>3</sup>	**			
12	Sulphur Dioxide	201.46	Kg/day				
13	Oxides of Nitrogen	202.0	ppm				
14	Carbon Monoxide	13.0	Mg/NM <sup>3</sup>				

### **REMARKS / OBSERVATIONS:**

All above results are within MPCB Limits.

Signature of Lab Executive

celly and

Signature of Technical Manager



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# ENalyse\*

	Sourc	e Emission Monitoring	g Report				
	Sample Code	AB/PRO/05/2015-16/1813					
Sample Location		Sugar Stack					
	Name of Client	M/s. Nira Bhima Sahaka	ri Sakhar Karkhan	a Ltd.			
	Address of Client	Shahajinagar, Post- Red Pin-413114.	Shahajinagar, Post- Redni, Tal. Indapur, DistPune,				
3	Sample Collected By	Aavanira Biotech Pvt. Lt	d.,				
	Sample type	Stack					
	Date of Sampling	05/05/2015					
	Time of Sampling	12:00					
5	ample received in Lab	06/05/2015	06/05/2015				
	Reporting date	12/05/2015					
Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent			
1	Material of Stack	MS	2				
2	Stack Height from G.L.	66.0	Mtr.	1			
3	Type of Stack	Round		1			
4	Flue Gas Temperature	422	°K	1			
5	Differential Pressure	1.8	mmWG	1			
6	Velocity	7.12	M/s	1			
7	Diameter of Stack	3.4	Mtr.	1			
8	Stack Area	9.0746	M <sup>2</sup>	1			
9	Gas Volume	164562.30	NM <sup>3</sup> /Hr				
10	Particulate Matter	116.36	Mg/NM <sup>3</sup>	≤ 150			
11	Sulphur Dioxide	51.49	Mg/NM <sup>3</sup>				
12	Sulphur Dioxide	203.47	Kg/day				
13	Oxides of Nitrogen	197.0	ppm				
14	Carbon Monoxide	10.0	Mg/NM <sup>3</sup>				

# REMARKS / OBSERVATIONS:

All above results are within MPCB Limits.

Signature of tab Executive

Kalyani

Signature of Technical Manager



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# ENalyse"

	A	itoring Report					
	Sample Code		AB/PRO/05/2015-16/1814				
_	Name of Client	M/s. Nira Bhima	M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.				
Address of Client		Shahajinagar, Post- Redni, Tal. Indapur, DistPune, Pin-413114.					
	Sample Collected By	Aavanira Biotec	Aavanira Biotech Pvt. Ltd.,				
Sample type		Noise Monitorin	Noise Monitoring				
	Date of Sampling	05/05/2015	05/05/2015 12/05/2015				
_	Reporting date	12/05/2015					
Sr. No.	Test Location	Unit	R	eadings			
			Day Time 01:00 p.m.	Night Time 11:00 p.m.			
1	Shahajinagar Near Grampanchayat	dB(A)	51.6	43.2			
2	Reda Near school	dB(A)	53.3	43.9			

**REMARKS / OBSERVATIONS:** 

### AMBIENT NOISE LEVEL STATNDARDS

	Limits in dB (A) Leq			
Category of Area	Day Time (6.00 am to 10.00 pm)	Night Time (10.00 pm to 6.00 am)		
Industrial Area	75	20		
Commercial Area	65	70		
Residential Area		55		
and the second	55	45		
Silence Zone	50			
0		40		

Signature of Lab Executive

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Signature of Quality Manager

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	Work	zone Noise Moi	nitoring Rep	ort			
	Sample Code		AB/PRO/05/2015-16/1815				
	Name of Client	M/s. Nira Bhi	ma Sahakari Sal	har Karkh	ana Ltd.		
	Address of Client	Shahajinagar, Pin-413114.	Shahajinagar, Post- Redni, Tal. Indapur, DistPune,				
Sample Collected By		Aavanira Biot	ech Pvt. Ltd.,				
Sample type		Noise					
Date of Sampling		05/05/2015					
	Reporting date	12/05/2015					
Test Location Sr.		Rea	Reading		The Factories Act		
No.		Day Time 01:00 p.m.	Night Time 11:00 p.m.	Unit	1948, standards		
1	Main Gate	66.6	61.8	dB(A)	≤ 90		
2	Boiler House	72.7	67.5	dB(A)	s 90		

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### **REMARK / OBSERVATIONS:**

Limits: The Factories Act, 1948, has prescribed 90 dB (A) as an upper limit of noise level

for 8 hours exposure.

Signature of tab Executive

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Signature of Technical Manager

Signature of Quality Manager

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# ENalvse\*

Ambie	nt Air Quality Monitor	ing Report Report No. AB/NBS/11/2015-16/149
	Sample Code	AB/NBS/11/2015-16/1499
Name of Client & Address: M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.	Sample Location	Khandobawadi
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
	Sample type	Ambient Air
	Method of Sampling	As per IS : 5182 Part 1 (2006)
	Date of Sampling	04/11/2015
	Time of Sampling	11:00 am
Shahajinagar, Post- Redni,	Sampling Duration	24 Hrs.
Tal. Indapur, DistPune, Pin-413114.	Ambient Temp. (Dry Bulb/Wet Bulb)	29.0°C/23.0°C
	Relative Humidity(RH)	60 %
	Analysis Date	05/11/2015 to15/11/2015
	Reporting date	15/11/2015
	Instrument Details	Ambient Fine Dust Sampler, AB/Tech/Instr/129
Sample returned /stored	Stored at 4°C for 1 week fro	m the date of reporting

**TEST PARAMETERS** 

		Unit	NAAQ Standards	Standard Method
rticulate Matter (PM10)	37.54	μg/m <sup>3</sup>	≤ 100	IS: 5182 (Part 23)-2006
rticulate Matter (PM25)	16.91	µg/m <sup>3</sup>	≤ 60	
phur Dioxide (SO <sub>2</sub> )	18.66	µg/m <sup>3</sup>	≤ 80	USEPA (40 CFR Ch1)Appendix L to Part 50
ides of Nitrogen (NOx)	the second s	and the second se		IS: 5182 (Part 2)-2001
rbon Monoxide (CO)	BDL	and the second se	the state of the s	IS : 5182 (Part 6)-2006 Manual Instruction
rb	ion Monoxide (CO)	on Monoxide (CO) BDL	on Monoxide (CO) BDL mg/m <sup>3</sup>	A A A A A A A A A A A A A A A A A A A

#### REMARKS / OBSERVATIONS:

All above results are within National Ambient Air Quality standards. ×

BDL - Below Detectable Limit.

Technical Manager

Authorized Signatory

-----End of Report-----



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ENalyse\* Ambient Air Quality Monitoring Report Report No. AB/NBS/11/2015-16/1500 AB/NBS/11/2015-16/1500 Sample Code Near Main Gate Sample Location Aavanira Biotech Pvt. Ltd., Sample Collected By Ambient Air Sample type Name of Client & Address: As per IS : 5182 Part 1 (2006) Method of Sampling 04/11/2015 **Date of Sampling** M/s. Nira Bhima Sahakari Sakhar 11:30 am Time of Sampling Karkhana Ltd. 24 Hrs. Sampling Duration Shahajinagar, Post- Redni, Ambient Temp. Tal. Indapur, Dist.-Pune, 29.1°C/23.3°C (Dry Bulb/Wet Bulb) Pin-413114. Relative Humidity(RH) 61 % 05/11/2015 to 15/11/2015 Analysis Date 15/11/2015 **Reporting date** Instrument Details Ambient Fine Dust Sampler, AB/Tech/Instr/130 Sample returned /stored Stored at 4°C for 1 week from the date of reporting

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	NAAQ Standards	Standard Method
1	Particulate Matter (PM10)	35.69	µg/m <sup>3</sup>	≤ 100	IS: 5182 (Part 23)-2006
2	Particulate Matter (PM2.5)	11.90	µg/m <sup>3</sup>	≤ 60	USEPA (40 CFR Ch1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	14.55	µg/m <sup>3</sup>	≤ 80	IS: 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	21.96	µg/m <sup>3</sup>	≤ 80	IS: 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	BDL	mg/m <sup>3</sup>	≤ 04 (1 Hr.)	Manual Instruction

#### **REMARKS / OBSERVATIONS:**

- All above results are within National Ambient Air Quality standards.
- BDL Below Detectable Limit. >

Technical Manager

Authorized Signatory

-----End of Report-----



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	ENdryse	
Ambie	nt Air Quality Monitor	ing Report Report No. AB/NBS/11/2015-16/150
Name of Client & Address:	Sample Code	AB/NBS/11/2015-16/1501
	Sample Location	Devtekvasti
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
	Sample type	Ambient Air
	Method of Sampling	As per IS : 5182 Part 1 (2006)
	Date of Sampling	04/11/2015
M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.	Time of Sampling	11:50 am
Shahajinagar, Post- Redni,	Sampling Duration	24 Hrs.
Tal. Indapur, DistPune, Pin-413114.	Ambient Temp. (Dry Bulb/Wet Bulb)	29.1°C/23.3°C
	Relative Humidity(RH)	61 %
	Analysis Date	05/11/2015 to 15/11/2015
	Reporting date	15/11/2015
	Instrument Details	Ambient Fine Dust Sampler, AB/Tech/Instr/13
Sample returned /stored	Stored at 4°C for 1 week fro	om the date of reporting

ENalyso\*

#### **TEST PARAMETERS**

Sr. No.	Parameter	Result	Unit	NAAQ Standards	Standard Method
1	Particulate Matter (PM <sub>10</sub> )	32.89	μg/m <sup>3</sup>	≤ 100	IS: 5182 (Part 23)-2006
2	Particulate Matter (PM <sub>2.5</sub> )	19.38	μg/m <sup>3</sup>	≤ 60	USEPA (40 CFR Ch1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	18.96	µg/m³	≤ 80	IS: 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	30.71	µg/m <sup>3</sup>	≤ 80	IS: 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	BDL	mg/m <sup>3</sup>	≤04 (1 Hr.)	Manual Instruction

#### **REMARKS / OBSERVATIONS:**

> All above results are within National Ambient Air Quality standards.

BDL – Below Detectable Limit.

Technical Manager

Authorized Signatory

-----End of Report-----



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# ENalyse\*

Work	zone Air Quality Monito	ring Report Report No. AB/NBS/11/2015-16/1502	
Name of Client & Address: M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.	Sample Code	AB/NBS/11/2015-16/1502	
	Sample Location	Boiler House	
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,	
	Sample type	Workzone Air	
	Method of Sampling	As per IS : 5182 Part 1 (2006)	
	Date of Sampling	04/11/2015	
	Time of Sampling	12:30 pm	
Shahajinagar, Post- Redni,	Sampling Duration	15 Min	
Tal. Indapur, DistPune,	Shop Temperature	28.5°C	
Pin-413114.	Dry Bulb & Wet Bulb Temp.	28.3°C/21.6°C	
	Relative Humidity(RH)	55 %	
	Analysis Date	05/11/2015 to 15/11/2015	
	Reporting date	15/11/2015	
	Instrument Details	Portable Gas Sampler, AB/Tech/Instr/135	
Sample returned /stored	Stored at 4°C for 1 week from the date of reporting		

#### **TEST PARAMETERS**

Sr. No.	Parameter	Result	Unit	The Factories Act 1948, standards	Standard Method
1	Suspended Particulate Matter (SPM)	64.27	μg/m³	N.S.	IS : 5182 (Part 23)-2006
2	Respirable Suspended Particulate Matter (RSPM)	38.91	µg/m³	N.S.	USEPA (40 CFR Ch 1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	0.23	mg/m <sup>3</sup>	≤ 10	IS: 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	0.30	mg/m <sup>3</sup>	≤ 10	IS : 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	13.0	mg/m <sup>8</sup>	≤ 440	Manual Instruction

-----End of Report-----

N.S. = Not Specified

### **REMARKS / OBSERVATIONS:**

All above results are well within The Factories Act, 1948 Standards.

Technical Manager

Authorized Signatory



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# ENalyse\*

Work	zone Air Quality Monito	oring Report Report No. AB/NBS/11/2015-16/1503
	Sample Code	AB/NBS/11/2015-16/1503
	Sample Location	Sugar Godown
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
	Sample type	Workzone Air
Name of Client & Address:	Method of Sampling	As per IS : 5182 Part 1 (2006)
M/s. Nira Bhima Sahakari Sakhar	Date of Sampling	04/11/2015
Karkhana Ltd.	Time of Sampling	01:30 pm
Shahajinagar, Post- Redni,	Sampling Duration	15 Min
Tal. Indapur, DistPune,	Shop Temperature	28.5°C
Pin-413114.	Dry Bulb & Wet Bulb Temp.	28.4°C/21.6°C
	Relative Humidity(RH)	60 %
	Analysis Date	05/11/2015 to 15/11/2015
	Reporting date	15/11/2015
	Instrument Details	Portable Gas Sampler, AB/Tech/Instr/136
Sample returned /stored	Stored at 4°C for 1 week from	n the date of reporting

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	The Factories Act 1948, standards	Standard Method
1	Suspended Particulate Matter (SPM)	44.23	μg/m <sup>3</sup>	N.S.	IS: 5182 (Part 23)-2006
2	Respirable Suspended Particulate Matter (RSPM)	31.54	µg/m³	N.S.	USEPA (40 CFR Ch 1)Appendix L to Part 50
3	Sulphur Dioxide (SO2)	0.15	mg/m <sup>3</sup>	≤ 10	IS: 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	0.24	mg/m <sup>3</sup>	≤ 10	15 : 5182 (Part 6)-2001
5	Carbon Monoxide (CO)	5.0	mg/m <sup>3</sup>	≤ 440	Manual Instruction

N.S. = Not Specified

## **REMARKS / OBSERVATIONS:**

All above results are well within The Factories Act, 1948 Standards.

Technical Manager

Authorized Signatory

-----End of Report-----



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# ENalyse\*

	Sourc	e Emission Monitorin	ng Report Report No. AB/NB5/11/2015-16/150	
		Sample Code	AB/NBS/11/2015-16/1504	
	Name of Client & Address:	Sample Location/Attached To	Cogen Stack	
	Name of Client & Address:	Sample Collected By	Aavanira Biotech Pvt. Ltd.,	
M/:	s. Nira Bhima Sahakari Sakhar	Sample type	Stack	
	Karkhana Ltd.	Method of Sampling	As per IS : 11255 (Part - 1) : 1985	
1	Shahajinagar, Post- Redni,	Date of Sampling	04/11/2015	
	Tal. Indapur, DistPune,	Time of Sampling	02:00 pm	
	Pin-413114.	Analysis Date	05/11/2015 to 15/11/2015	
		Reporting date	15/11/2015	
1		Instrument Details	Stack Monitoring Kit , AB/Tech/Instr/140	
	Sample returned /stored	Stored at 4°C for 1 week from the date of reporting		
		STACK DETAILS		
Sr. No.	Particulars	Details	Unit	
1	Material of Stack	MS	64.	
2	Stack Height from G.L.	75.0	mtr.	
3	Type of Stack	Round	**	
4	Flue Gas Temperature	428	°K	
5	Differential Pressure	1.3	mmWG	
6	Velocity	4.47	m/s	
7	Diameter of Stack	3.7	mtr.	
8	Stack Area	10.17	m²	
9	Gas Volume	114174.40	Nm <sup>3</sup> /Hr	
		TEST PARAMETERS	5	

Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent	Standard Method
1	Total Particulate Matter (TPM)	110.28	mg/Nm <sup>3</sup>	≤ 150	IS:11255 (Part -1)-1985
-	2 Sulphur Dioxide(SO <sub>2</sub> )	47.80	mg/Nm <sup>3</sup>		IS:11255 (Part -2)-1985
2		130.98	Kg/day		
3	Oxides of Nitrogen(NOx)	199.22	mg/Nm <sup>3</sup>	1220	IS:11255 (Part -7)-1985
4	Carbon Monoxide	24.15	mg/Nm <sup>3</sup>		Manual Instructions

#### REMARK / OBSERVATIONS:

All above results are within MPCB Limits.

Technical Manager

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-----End of Report-----

Page 1 of 1

 Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part, MIDC Chinchwad, Pune 411019, Maharashtra, India.
 Tel.: 020 - 64100118 / 8308805200 • E-muil : info@aavanira.com • Web : www.aavanira.com CIN NO. 074900PN2010PTC137544



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ENalyse\*

	Sourc	e Emission N	Ionitorir	ng Report Report N	o. AB/NBS/11/2015-16/150	
		Sample	Code	AB/NBS/11/2015-16/1505		
		Sample Location/Attached To		Sugar Stack		
3	Name of Client & Address:	Sample Coll	ected By	Aavanira Biotech Pvt.	Ltd.,	
M/s	. Nira Bhima Sahakari Sakhar	Sample	type	Stack		
	Karkhana Ltd.	Method of S		As per IS : 11255 (Par	t – 1) : 1985	
5	Shahajinagar, Post- Redni,	Date of Sa		04/11/2015		
	Tal. Indapur, DistPune,	Time of Sa		02:30 pm		
	Pin-413114.	the second s	Analysis Date 05/11/2015 to 15/11/2015		/2015	
		Reporting date		15/11/2015		
		Instrument Details		Stack Monitoring Kit , AB/Tech/Instr/140		
	Sample returned /stored	Stored at 4°C for 1 week from the date of reporting				
		the second se	DETAILS			
Sr. No.	Particulars	Deta	ails	Unit		
1	Material of Stack	M	5			
2	Stack Height from G.L.	66.0		mtr.		
3	Type of Stack	Rou	nd	**		
4	Flue Gas Temperature	42	2	٥K		
5	Differential Pressure	1.6	5	mmWG		
6	Velocity	4.9	3	m/s		
7	Diameter of Stack	3.4	4	mtr.		
8	and the second se		m²			
9	Gas Volume	113765.10		Nm <sup>3</sup> /Hr		
		TEST PA	RAMETER	s		
Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent	Standard Method	

ir. No.	Parameter	Result	Unit	Limits As Per MPCB Consent	Standard Method
1	Total Particulate Matter (TPM)	111.96	mg/Nm <sup>3</sup>	≤ 150	IS:11255 (Part -1)-1985
	2 Sulphur Dioxide(SO <sub>2</sub> )	50.38	mg/Nm <sup>3</sup>		IS:11255 (Part -2)-1985
2 50		137.56	Kg/day		
3	Oxides of Nitrogen(NOx)	204.0	mg/Nm <sup>3</sup>		IS:11255 (Part -7)-1985
4	Carbon Monoxide	12.0	mg/Nm <sup>3</sup>	12	Manual Instructions

#### REMARK / OBSERVATIONS:

All above results are within MPCB Limits.

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-----End of Report-----



Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part.

MIDC Chinchward, Pune 411019, Maharashtra, India. • Tel.: 020 - 64100118 / 8308805200 • E-mail : inio@taavanira.com • Web : www.aavanira.com CIN NO. U74900PN2010PTC137544



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## ENalyse\*

Ambi	ent Noise Monitoring	Report Report No. AB/NBS/11/2015-16/15
Name of Client & Address:	Sample Code	AB/NBS/11/2015-16/1506
Hune of circle of Address.	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
M/s. Nira Bhima Sahakari Sakhar	Sample type	Ambient Noise
Karkhana Ltd.	Method of Sampling	As per IS : 4758
Shahajinagar, Post- Redni,	Date of Sampling	04/11/2015
Tal. Indapur, DistPune, Pin-413114.	Reporting date	15/11/2015
	Instrument Details	Sound Level Meter, AB/Tech/Instr/62

Leo area	100 610 720 320	Rea	ading		
Sr. No.	Test Location	Day Time	Night Time	Unit	
01	Khandobawadi	52.4	42.9	dB(A)	
02	Near Main Gate	54.6	44.4	dB(A)	
03	Devtekvasti	53.1	41.3	dB(A)	

REMARK / OBSERVATIONS:

Limits: Maharashtra Pollution Control Board has prescribed 55 dB (A) as an upper limit of Noise Level during day time &45 dB (A) as an upper limit of Noise Level during Night time. Above results are within the prescribed limits by MPCB.

Area	Category of Area	Limit	s dB(A) Leq
		Day Time	Night Time
А	Industrial Area	<75	<70
В	Commercial Area	<65	<55
с	Residential Area	<55	<45
D	Silence Zone	<50	<40

Note: 1 Day Time shall mean from 06:00 am to 10:00 pm

Note: 2 Night Time shall mean from 10:00 pm to 06:00 am

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-----End of Report-----

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 Web : www.aayanira.com CIN NO. U74900PN2010PTC137544



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# ENalyse\*

Workzone I	Noise Monitoring Rep	OORT Report No. AB/NBS/11/2015-16/1507
Name of Client & Address:	Sample Code	AB/NBS/11/2015-16/1507
Hune of client & Address.	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
M/s. Nira Bhima Sahakari Sakhar	Sample type	Workzone Noise
Karkhana Ltd.	Method of Sampling	As per IS : 4758
Shahajinagar, Post- Redni,	Date of Sampling	04/11/2015
Tal. Indapur, DistPune,	Reporting date	15/11/2015
Pin-413114.	Instrument Details	Sound Level Meter, AB/Tech/Instr/62

Sr. No.	AND 200 100	Rea	ding	Unit	Limit As per The Factories Act, 1948
	Test Location	Day Time 01:30 p.m.	Night Time 10:30 p.m.		
01	Sugar Godown	68.2	62.3	dB(A)	<90
02	Boiler House	84.5	78.9	dB(A)	<90

REMARK / OBSERVATIONS:

Limits: The Factories Act, 1948, has prescribed 90 dB (A) as an upper limit of noise level for 8 hours exposure.

Above results are within the prescribed limits by The Factories Act, 1948.

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-----End of Report-----



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# ENalyse\*

			Ervaryse fort Bonort			
			fest Report	-	REPORT NO- AB/NBS/11/2015-16/150	
Name of Client & Address:		Sample Code		AB/NBS/11/2015-16/1508		
		Sample Nam			plant from source	
		Sample Colle	the local sector is a sector of the sector o	Aavanir	a Biotech Pvt. Ltd.	
M/s.	. Nira Bhima Sahakari Sakhar	Method for S	ampling	15:3025	(Part 1)	
	Karkhana Ltd.	Sample Type		Drinkin	g Water	
	hahajinagar, Post- Redni,	Sample Colle	cted On	04/11/2	2015	
20	Tal. Indapur, DistPune,	Sample Recei	ived on Date	05/11/2	2015	
	Pin-413114.	Analysis Date	1	05/11/2	2015 to 15/11/2015	
	-1102-2102-40-001-0-04	Reporting Da	te	15/11/2		
1	Sample returned /stored	Stored at 4°C	for 1 week from the d	late of repo	orting	
Sr.			Limits as Per IS:			
No.	Parameter	Results	10500 Standards	Units	Standard Method	
			Physical Parameter	C.I.I.C.	Standard Method	
1	Turbidity	0.2	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)	
2		7.0	N.S.	mg/lit	IS: 3025 Part-14 (R.A.: 2002)	
3		299.0	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)	
4	Temperature	22		°C	IS: 3025 Part-15 (R.A : 2006)	
5		<5	<5	Hazen	IS: 3025 Part-12 (R.A.: 2006)	
		and the second se	chemical Parameter	Thateen	10.0020 (alt-12 [h.H. 2000]	
1	pH	7.78	6.5-8.5		IS: 3025 Part-11 (R.A : 2002)	
2	E. Conductivity	496	N.S	μS/cm	IS: 3025 Part-14 (R.A : 2002)	
3	Total Hardness as CaCO <sub>3</sub>	185.67	<200	mg/lit	IS: 3025 Part-21 (2009)	
4	Total Alkalinity as CaCO3	195.22	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)	
5		20.38	250	mg/lit	IS: 3025 Part-32 (R.A.: 2003)	
6	Sulphate as SO <sub>4</sub>	25.18	<200	mg/lit	APHA :22 <sup>nd</sup> edition -(4500- SO <sub>4</sub> <sup>2</sup> E)	
7	Residual chlorine	BDL	>0.2	mg/lit	APHA :22"dedition -(4500-Cl B)	
8	Nitrate as NO <sub>3</sub>	0.7	<45	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-NO <sub>3</sub> <sup>2</sup> 8)	
9	Fluoride as F	0.01	<1.0	mg/lit	APHA :22"edition -(4500- KO1 B)	
10	Sulphide	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
11	Phenolic Compound as	N.D.	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)	
12	Dissolved Oxygen	3.4	N.S.	mg/lit	15: 3025 Part-02 (2004)	
13	Oil & Grease	BDL	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
14	Ammonical Nitrogen	0.06	N.5.	mg/lit	IS: 3025 Part-02 (2004)	
15	Free Ammonia	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
16	Total Kjeldhal Nitrogen	0.04	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
		and the second se	emental Parameter	ing/inc	1 101 0020 1011:02 (2004)	
1	Aluminium as Al	N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)	
2	Arsenic as As	N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)	
3	Boron as B*	N.D.	<0.5	mg/lit	15: 3025 Part-02 (2004)	
4	Calcium as Ca	31.66	<75	mg/lit	15: 3025 Part-02 (2004)	
5	Cadmium as Cd	BDL	<0.003	mg/lit	IS: 3025 Part-02 (2004)	
	Iron as Fe	0.09	<0.3	mg/lit	IS: 3025 Part-02 (2004)	
7	Mercury as Hg	N.D.	<0.001	mg/lit	IS: 3025 Part-02 (2004)	



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8	Lead as Pb	BDL	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
9	Selenium as Se	ND	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
10	Copper as Cu	BDL	< 0.05	mg/lit	
11	Manganese as Mn	BDL	<0.1		IS: 3025 Part-02 (2004)
12	Magnesium as Mg	14.90	<30	mg/lit mg/lit	IS: 3025 Part-02 (2004)
13	Nickel	N.D.	<0.02	mg/lit	IS: 3025 Part-02 (2004)
14	Zinc as Zn	0.04	<5.0	mg/lit	15: 3025 Part-02 (2004)
15	Barium	N.D.	<0.7	mg/lit	IS: 3025 Part-02 (2004) IS: 3025 Part-02 (2004)
16	Silver	N.D.	<0.1	mg/lit	IS: 3025 Part-02 (2004)
17	Chromium as Cr	BDL	<0.05	mg/lit	
18	Sodium as Na	17.0	N.S.	mg/lit	IS: 3025 Part-02 (2004)
19	Potassium As K	1.2	N.S.	mg/lit	IS: 3025 Part-02 (2004)
20	Cyanide as CN	N.D.	<0.05	mg/lit	IS: 3025 Part-02 (2004) IS: 3025 Part-02 (2004)

Technical Manager

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-----End of Report-----



Page 2 of 2

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EI	Val	lvs	e*
_		.,	-

			Test Report		REPORT NO- AB/NBS/11/2015-16/150		
		Sample Code		AB/NBS	AB/NBS/11/2015-16/1509		
Name of Client & Address:		Sample Nam	e	Bhodan			
		Sample Colle	cted By	Aavanir	a Biotech Pvt. Ltd.		
M/s.	Nira Bhima Sahakari Sakhar	Method for S		IS:3025			
	Karkhana Ltd.	Sample Type			g Water		
S	hahajinagar, Post- Redni,	Sample Colle		04/11/2			
	Tal. Indapur, DistPune,	Sample Rece		05/11/2			
	Pin-413114.	Analysis Date		and the second sec	2015 to 15/11/2015		
	11.000.00000000	Reporting Da		15/11/2			
5	Sample returned /stored		for 1 week from the d	ate of ren	orting		
ŝr.		- stored at t c	Limits as Per IS:	ate of rept	i ting		
No.	Parameter	Results	10500 Standards	(18 Ma	Provide and an end of the		
	referre		the second se	Units	Standard Method		
1	Turbidity		Physical Parameter				
2		0.4	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)		
3	TDS	10	N.S.	mg/lit	IS: 3025 Part-14 (R.A : 2006)		
4	11.2220	708.0	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)		
5		23		°C	IS: 3025 Part-15 (R.A : 2006)		
2	colour	<5	<5	Hazen	IS: 3025 Part-12 (R.A : 2006)		
1	- H		Chemical Parameter				
2	pH E. Conductivity	7.11	6.5-8.5		IS: 3025 Part-11 (R.A : 2002)		
3		698	N.5	μS/cm	IS: 3025 Part-14 (R.A : 2002)		
4	Total Hardness as CaCO <sub>3</sub>	408.2	<200	mg/lit	IS: 3025 Part-21 (2009)		
5	Total Alkalinity as CaCO <sub>3</sub>	264.5	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)		
6	Chloride as Cl Sulphate as SO <sub>4</sub>	91.3	250	mg/lit	IS: 3025 Part-32 (R.A : 2003)		
7	Residual chlorine	51.37	<200	mg/lit	APHA :22"dedition -(4500- SO42 E)		
8		BDL	>0.2	mg/lit	APHA :22"dedition -(4500-CL B)		
9	Nitrate as NO <sub>3</sub>	27.4	<45	mg/lit	APHA :22" edition -(4500- NO32 B)		
	Fluoride as F	0.02	<1.0	mg/lit	APHA :22"dedition -(4500-F F)		
10	Sulphide	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
11	Phenolic Compound as	N.D.	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)		
12	Dissolved Oxygen	3.4	N.S.	mg/lit	15: 3025 Part-02 (2004)		
13	Oil & Grease	BDL	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
14	Barrie Barrier	0.14	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
15	Free Ammonia	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
16	Total Kjeldhal Nitrogen	0.78	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
			emental Parameter				
1	Aluminium as Al	N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)		
2	Arsenic as As	N.D.	<0.01	mg/lit	IS: 3025 Part-02 (2004)		
3	Boron as B*	N.D.	<0.5	mg/lit	IS: 3025 Part-02 (2004)		
4	Calcium as Ca	97.5	<75	mg/lit	IS: 3025 Part-02 (2004)		
5	Cadmium as Cd	BDL	<0.003	mg/lit	IS: 3025 Part-02 (2004)		
6	Iron as Fe	0.18	<0.3	mg/lit	IS: 3025 Part-02 (2004)		
7	Mercury as Hg	N.D.	< 0.001	mg/lit	IS: 3025 Part-02 (2004)		

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8	Lead as Pb	BDL	<0.01		
9	Selenium as Se	ND		mg/lit	IS: 3025 Part-02 (2004)
10	Copper as Cu	the second se	<0.01	mg/lit	IS: 3025 Part-02 (2004)
11		BDL	<0.05	mg/lit	IS: 3025 Part-02 (2004)
	Manganese as Mn	BDL	<0.1	mg/lit	IS: 3025 Part-02 (2004)
12	Magnesium as Mg	31.44	<30	mg/lit	IS: 3025 Part-02 (2004)
13	Nickel	N.D.	< 0.02	mg/lit	IS: 3025 Part-02 (2004)
14	Zinc as Zn	0.04	<5.0	mg/lit	IS: 3025 Part-02 (2004)
15	Barium	N.D.	<0.7	mg/lit	
16	Silver	N.D.	<0.1		IS: 3025 Part-02 (2004)
17	Chromium as Cr	BDL	and the second se	mg/lit	IS: 3025 Part-02 (2004)
18	Sodium as Na		< 0.05	mg/lit	IS: 3025 Part-02 (2004)
19	Potassium As K	8.0	N.S.	mg/lit	IS: 3025 Part-02 (2004)
		4.8	N.S.	mg/lit	IS: 3025 Part-02 (2004)
20	Cyanide as CN	N.D,	< 0.05	mg/lit	IS: 3025 Part-02 (2004)

Technical Manager

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-----End of Report-----



Page 2 of 2

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ENalyse\*

-			Liveryse				
		T	est Report		REPORT NO- AB/NB5/11/2015-16/151		
		Sample Code		AB/NB	AB/NBS/11/2015-16/1510		
	Vame of Client & Address:	Sample Name		Shahaji			
00.04		Sample Collect	ted By		ra Biotech Pvt. Ltd.		
M/s	. Nira Bhima Sahakari Sakhar	Method for Sa	mpling	and the part of the second sec	(Part 1)		
	Karkhana Ltd.	Sample Type			g Water		
5	ihahajinagar, Post- Redni,	Sample Collect	ted On	04/11/			
	Tal. Indapur, DistPune,	Sample Receiv		05/11/			
	Pin-413114.	Analysis Date		the second se	2015 to 15/11/2015		
	2022/10/11/2022/22	Reporting Date	2	15/11/2			
	Sample returned /stored		or 1 week from the o	ate of rend	arting		
Sr.			Limits as Per IS:	are of rept	Sichig		
No.	Parameter	Results	10500 Standards	Units	Standard Method		
			hysical Parameter	Units	Standard Wethod		
1	Turbidity	0.5	<1.0	NITU	10. 2025 P 40 (D		
2	TSS	10	N.S.	NTU	IS: 3025 Part-10 (R.A : 2002)		
3		711.0	<500	mg/lit	IS: 3025 Part-14 (R.A : 2006)		
4	and the second se	21	<500	mg/lit °C	IS: 3025 Part-16 (R.A : 2006)		
5		<5	<5		IS: 3025 Part-15 (R.A : 2006)		
6	and the second se	Unobjectional	Unobjectionalble	Hazen	15: 3025 Part-12 (R.A : 2006)		
			emical Parameter	**	IS: 3025 Part-11 (R.A : 2006)		
1	pH	7.58					
2		7.56	6.5-8.5	+*	IS: 3025 Part-11 (R.A : 2002)		
3		408.2	N.S	μS/cm	IS: 3025 Part-14 (R.A : 2002)		
4	Total Alkalinity as CaCO <sub>3</sub>	257.85	<200	mg/lit	IS: 3025 Part-21 (2009)		
5		and the second sec	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)		
6	Sulphate as SO <sub>4</sub>	92.30	250	mg/lit	IS: 3025 Part-32 (R.A : 2003)		
7	Residual chlorine	51.33 BDL	<200	mg/lit	APHA :22 <sup>rd</sup> edition -{4500- SO <sub>6</sub> <sup>2</sup> E}		
8	Nitrate as NO <sub>3</sub>	28.4	>0.2	mg/lit	APHA :22 <sup>rd</sup> edition -(4500-Cl B)		
9	Fluoride as F	0.02	<45	mg/lit	APHA :22 <sup>nd</sup> edition -(4500- NO <sub>3</sub> <sup>2</sup> · B)		
10		and the second se	<1.0	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-F <sup>-</sup> F)		
11	Phenolic Compound as	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
12	Dissolved Oxygen	N.D.	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)		
13		3.2	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
	Ammonical Nitrogen	BDL	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
15	Free Ammonia	0.14	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
16		N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
	rotar igeiditar Nicrogen	0.78	N.S.	mg/lit	IS: 3025 Part-02 (2004)		
1	Aluminium as Al		mental Parameter		1		
2	Arsenic as As	N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)		
3	Boron as B*	N.D.	<0.01	mg/lit	IS: 3025 Part-02 (2004)		
4	Calcium as Ca	N.D.	<0.5	mg/lit	IS: 3025 Part-02 (2004)		
5	Cadmium as Cd	97.6	<75	mg/lit	IS: 3025 Part-02 (2004)		
6		BDL	< 0.003	mg/lit	IS: 3025 Part-02 (2004)		
7	Mercury as Hg	0.15	<0.3	mg/lit	IS: 3025 Part-02 (2004)		
1	intercury as rig	N.D.	< 0.001	mg/lit	IS: 3025 Part-02 (2004)		

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8	Lead as Pb	8DL	<0.01	mg/lit	10. 2025 0
9	Selenium as Se	ND	the second se		IS: 3025 Part-02 (2004)
10	Copper as Cu	BDL	<0.01	mg/lit	IS: 3025 Part-02 (2004)
11	Manganese as Mn		<0.05	mg/lit	IS: 3025 Part-02 (2004)
12	Magnesium as Mg	BDL	<0.1	mg/lit	15: 3025 Part-02 (2004)
13	Nickel	37.8	<30	mg/lit	IS: 3025 Part-02 (2004)
		N.D.	< 0.02	mg/lit	IS: 3025 Part-02 (2004)
14	Zinc as Zn	0.03	<5.0	mg/lit	IS: 3025 Part-02 (2004)
15	Barium	N.D.	<0.7	mg/lit	15: 3025 Part-02 (2004)
16	the later of the l	N.D.	< 0.1	mg/lit	IS: 3025 Part-02 (2004)
17		BDL	< 0.05	mg/lit	
18	Sodium as Na	8.0	N.S.		IS: 3025 Part-02 (2004)
19	Potassium As K	4.8	N.S.	mg/lit	IS: 3025 Part-02 (2004)
20		N.D.		mg/lit	IS: 3025 Part-02 (2004)
- Contraction		N.U.	< 0.05	mg/lit	IS: 3025 Part-02 (2004)

Technical Manager

Authorized Signatory

-----End of Report-----



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### Recognized by Ministry of Environment and Forest (MoEF), Govt. of India ISO 9001: 2008 and OHSAS18001: 2007 Certified Company

ENalyse\*

	Test Report	REPORT NO- AB/NBS/11/2015-16/1511		
	REPORT NO	AB/NBS/11/2015-16/1511		
Name of Client & Address:	Sample Name	Project Site		
9012 1911/1920 (2013/201 1975/922	Sample Collected By	Aavanira Biotech Pvt. Ltd.		
M/s. Nira Bhima Sahakari Sakhar	Method for Sampling			
Karkhana Ltd.	Sample Type	Soil		
Shahajinagar, Post- Redni,	Sample Collected On	04/11/2015		
Tal. Indapur, DistPune,	Sample Received on	05/11/2015		
Pin-413114.	Analysis Date	05/11/2015 to 15/11/2015		
	Reporting Date	15/11/2015		
Sample returned /stored	Stored at 4°C for 1 week from the date of reporting			

Sr. No.	Parameter	Result	Unit	Standard Method
		Physical P	arameter	
1	Moisture Content	17.4	percent	IS : 2720
2	Water Holding Capacity	50.0	percent	15 : 2720
	Sand	26	1	
3	Slit	47	percent	IS: 2720
	Clay	27		
4	Color	Brown		C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
		Chemical P	arameter	
1	pH (1:5 Suspension)	8.91		C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
2	Conductivity	89	μS/cm	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
3	Organic Matter	1.8	percent	C.A. Black, American Society of Agronomy S <sup>th</sup> Edition, 65-15800
4	Total Kjeldahl Nitrogen (as f	0.005	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
5	Total Nitrogen	401.91	mg/kg	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
6	Free Ammoniacal Nitrogen	BDL	%	C.A. Black, American Society of Agronomy S <sup>th</sup> Edition, 65-15800
		Elemental	Testing	
1	Potassium as k	0.003	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
2	Phosphorous	0.004	%	APHA (Edition 22 <sup>rd</sup> ) 3120 B
3	Calcium as Ca	2.83	%	APHA (Edition 22 <sup>rd</sup> ) 3120 B
4	Magnesium as Mg	0.42	%	APHA (Edition 22 <sup>rd</sup> ) 3120 B
5	Iron as Fe	15	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
6	Copper as Cu	0.28	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
7	Chromium	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B



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8	Cadmium as Cd	BDL	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
9	Lead as Pb	BDL	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
10	Manganese as Mn	0.39	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
11	Zinc as Zn	0.75	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
12	Total Carbon	1.2	%	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
13	Boron	BDL	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
14	Molybdenum	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B

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-----End of Report-----



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ENalyse\*

	Test Report	REPORT NO- AB/NBS/11/2015-16/1512		
	REPORT NO	AB/NBS/11/2015-16/1512		
Name of Client & Address:	Sample Name	Devtekvasti		
and a set of the set of the	Sample Collected By	Aavanira Biotech Pvt. Ltd.		
M/s. Nira Bhima Sahakari Sakhar	Method for Sampling	-		
Karkhana Ltd.	Sample Type	Soil		
Shahajinagar, Post- Redni,	Sample Collected On	04/11/2015		
Tal. Indapur, DistPune,	Sample Received on	05/11/2015		
Pin-413114.	Analysis Date	05/11/2015 to 15/11/2015		
	Reporting Date	15/11/2015		
Sample returned /stored	Stored at 4°C for 1 week from the date of reporting			

Sr. No.	Parameter	Result	Unit	Standard Method
	I	Physical P	arameter	
1	Moisture Content	17.0	percent	IS : 2720
2	Water Holding Capacity	45.0	percent	IS : 2720
	Sand	25		
3	Slit	50	percent	IS: 2720
	Clay	25	1	
4	Color	Brown	3223	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
		Chemical P	arameter	
1	pH (1:5 Suspension)	7.84	140	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
2	Conductivity	82	μS/cm	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
3	Organic Matter	1.5	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
4	Total Kjeldahl Nitrogen (as N)	0.003	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
5	Free Ammoniacal Nitrogen	BDL	%	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
		Elemental	Testing	
1	Potassium as k	0.003	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
2	Phosphorous	0.002	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
3	Calcium as Ca	2.93	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
4	Magnesium as Mg	0.35	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
5	Iron as Fe	15	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
6	Copper as Cu	0.28	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
7	Chromium	BDL	ppm	APHA (Edition 22") 3120 B



## Recognized by Ministry of Environment and Forest (MoEF), Govt. of India ISO 9001: 2008 and OHSAS18001: 2007 Certified Company REPORT NO- AB/NB5/11/2015-16/1512

8	Cadmium as Cd	BDL		
9	Lead as Pb		ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
	The second s	BDL	%	APHA (Edition 22 <sup>rd</sup> ) 3120 B APHA (Edition 22 <sup>rd</sup> ) 3120 B
10	Manganese as Mn		ppm	
11	Zinc as Zn	0.79	A Designed and the second s	
		0.75	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
12	Total Carbon	tal Carbon 1.2	%	C.A. Black, American Society o
13	Boron	BDL	3.0000	Agronomy 5 <sup>th</sup> Edition, 65-1580
14	Molybdenum		ppm	APHA (Edition 22") 3120 B
**	worybaenun	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B

Technical Manager

-----End of Report-----





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# ENalyse\*

Ambier	nt Air Quality Monitori	ng Report Report No. AB/NBS/05/2016-17/1280		
	Sample Code	AB/NBS/05/2016-17/1280		
	Sample Location	Khandobawadi		
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,		
	Sample type	Ambient Air		
Name of Client & Address:	Method of Sampling	As per IS : 5182 Part 1 (2006)		
M/s. Nira Bhima Sahakari Sakhar	Date of Sampling	04/05/2016		
Karkhana Ltd.	Time of Sampling	11:00 am		
Shahajinagar, Post- Redni,	Sampling Duration	24 Hrs.		
Tal. Indapur, DistPune, Pin-413114.	Ambient Temp. (Dry Bulb/Wet Bulb)	39.0°C/23.0°C		
	Relative Humidity(RH)	27 %		
	Analysis Date	05/05/2016 to 13/05/2016		
	Reporting date	13/05/2016		
	Instrument Details	Ambient Fine Dust Sampler, AB/Tech/Instr/129		
Sample returned /stored	Stored at 4°C for 1 week from the date of reporting			

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	NAAQ Standards	Standard Method
1	Particulate Matter (PM10)	69.27	μg/m <sup>3</sup>	≤ 100	IS: 5182 (Part 23)-2006
2	Particulate Matter (PM2.5)	26.50	µg/m <sup>3</sup>	≤ 60	USEPA (40 CFR Ch1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	23.65	µg/m <sup>3</sup>	≤ 80	IS: 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	39.60	µg/m <sup>3</sup>	≤ 80	IS : 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	1.67	mg/m <sup>3</sup>	≤ 04 (1 Hr.)	Manual Instruction

#### **REMARKS / OBSERVATIONS:**

All above results are within National Ambient Air Quality standards.

BDL – Below Detectable Limit.

Technical Manager

Authorized Signatory

-----End of Report-----



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# ENalvse\*

Ambien	t Air Quality Monitori	ng Report Report No. AB/NBS/05/2016-17/1281
	Sample Code	AB/NBS/05/2016-17/1281
	Sample Location	Near Main Gate
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
	Sample type	Ambient Air
Name of Client & Address:	Method of Sampling	As per IS : 5182 Part 1 (2006)
	Date of Sampling	04/05/2016
M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.	Time of Sampling	11:30 am
Shahajinagar, Post- Redni,	Sampling Duration	24 Hrs.
Tal. Indapur, DistPune, Pin-413114.	Ambient Temp. (Dry Bulb/Wet Bulb)	39.0°C/23.0°C
	Relative Humidity(RH)	31 %
	Analysis Date	05/05/2016 to 13/05/2016
	Reporting date	13/05/2016
	Instrument Details	Ambient Fine Dust Sampler, AB/Tech/Instr/130
Sample returned /stored	Stored at 4°C for 1 week fro	om the date of reporting

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	NAAQ Standards	Standard Method
1	Particulate Matter (PM <sub>10</sub> )	63.25	µg/m <sup>3</sup>	≤ 100	IS: 5182 (Part 23)-2006
2	Particulate Matter (PM2.5)	27.45	µg/m <sup>3</sup>	≤ 60	USEPA (40 CFR Ch1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	23.69	µg/m <sup>3</sup>	≤ 80	IS : 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	36.94	µg/m <sup>3</sup>	≤ 80	IS : 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	1.24	mg/m <sup>3</sup>	≤ 04 (1 Hr.)	Manual Instruction

#### **REMARKS / OBSERVATIONS:**

> All above results are within National Ambient Air Quality standards.

BDL – Below Detectable Limit.

**Technical Manager** 

Authorized Signatory

-----End of Report-----



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# ENalyse\*

Ambient	Air Quality Monitorin	g Report Report No. AB/NBS/05/2016-17/1282	
	Sample Code	AB/NBS/05/2016-17/1282	
	Sample Location	Devtekvasti	
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,	
5 S252 5 S8	Sample type	Ambient Air	
Name of Client & Address:	Method of Sampling	As per IS : 5182 Part 1 (2006)	
M/s. Nira Bhima Sahakari Sakhar	Date of Sampling	04/05/2016	
Karkhana Ltd.	Time of Sampling	11:50 am	
Shahajinagar, Post- Redni,	Sampling Duration	24 Hrs.	
Tal. Indapur, DistPune, Pin-413114.	Ambient Temp. (Dry Bulb/Wet Bulb)	39.0°C/23.0°C	
	Relative Humidity(RH)	29 %	
	Analysis Date	05/05/2016 to 13/05/2016	
	Reporting date	13/05/2016	
	Instrument Details	Ambient Fine Dust Sampler, AB/Tech/Instr/130	
Sample returned /stored	Stored at 4°C for 1 week fro	om the date of reporting	

#### **TEST PARAMETERS**

Sr. No.	Parameter	Result	Unit	NAAQ Standards	Standard Method
1	Particulate Matter (PM10)	64.82	µg/m <sup>3</sup>	≤ 100	IS: 5182 (Part 23)-2006
2	Particulate Matter (PM <sub>2.5</sub> )	32.98	$\mu g/m^3$	≤ 60	USEPA (40 CFR Ch1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	28.57	µg/m <sup>3</sup>	≤ 80	IS : 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	41.20	µg/m <sup>3</sup>	≤ 80	IS: 5182 (Part 6)-2006
	Carbon Monoxide (CO)	1.60	mg/m <sup>3</sup>	≤ 04 (1 Hr.)	Manual Instruction

#### REMARKS / OBSERVATIONS:

All above results are within National Amblent Air Quality standards. 7

> BDL - Below Detectable Limit.

Technical Manager

Authorized Signatory

-----End of Report-----



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# ENalyse\*

Work	zone Air Quality Monito	ring Report Report No. AB/NB5/05/2016-17/128
	Sample Code	AB/NB5/05/2016-17/1283
	Sample Location	Boiler House
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
	Sample type	Workzone Air
Name of Client & Address:	Method of Sampling	As per IS : 5182 Part 1 (2006)
	Date of Sampling	04/05/2016
M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.	Time of Sampling	12:30 pm
Shahajinagar, Post- Redni,	Sampling Duration	15 Min
Tal. Indapur, DistPune,	Shop Temperature	28.5°C
Pin-413114.	Dry Bulb & Wet Bulb Temp.	34.2°C/23.3°C
	Relative Humidity(RH)	40 %
	Analysis Date	05/05/2016 to 13/05/2016
	Reporting date	13/05/2016
	Instrument Details	Portable Gas Sampler, AB/Tech/Instr/135
Sample returned /stored	Stored at 4°C for 1 week from	

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	The Factories Act 1948, standards	Standard Method
1	Suspended Particulate Matter (SPM)	59.60	μg/m³	N.S.	IS : 5182 (Part 23)-2008
2	Respirable Suspended Particulate Matter (RSPM)	29.07	μg/m³	N.S.	USEPA (40 CFR Ch 1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	0.32	mg/m <sup>3</sup>	≤ 10	IS: 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	0.40	mg/m <sup>3</sup>	≤ 10	IS: 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	11.0	mg/m <sup>3</sup>	≤ 440	Manual Instruction

N.S. = Not Specified

#### **REMARKS / OBSERVATIONS:**

All above results are well within The Factories Act, 1948 Standards.

**Technical Manager** 

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-----End of Report-----



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CIN NO. U74900PN2010PTC137544

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ENalyse\* Workzone Air Quality Monitoring Report Report No. AB/NB5/05/2016-17/1284 AB/NBS/05/2016-17/1284 Sample Code Sample Location Sugar Godown Aavanira Biotech Pvt. Ltd., Sample Collected By Workzone Air Sample type Name of Client & Address: As per IS : 5182 Part 1 (2006) Method of Sampling 04/05/2016 Date of Sampling M/s. Nira Bhima Sahakari Sakhar Time of Sampling 01:30 pm Karkhana Ltd. 15 Min Sampling Duration Shahajinagar, Post- Redni, 28.5°C Shop Temperature Tal. Indapur, Dist.-Pune, 34.5°C/23.9°C Pin-413114. Dry Bulb & Wet Bulb Temp. Relative Humidity(RH) 41 % 05/05/2016 to 13/05/2016 Analysis Date 13/05/2016 Reporting date Instrument Details Portable Gas Sampler, AB/Tech/Instr/136 Sample returned /stored Stored at 4°C for 1 week from the date of reporting

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	The Factories Act 1948, standards	Standard Method
1	Suspended Particulate Matter (SPM)	41.55	µg/m³	N.S.	IS : 5182 (Part 23)-2006
2	Respirable Suspended Particulate Matter (RSPM)	30.17	µg/m³	N.S.	USEPA (40 CFR Ch 1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	0.19	mg/m <sup>3</sup>	≤ 10	IS: 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	0.27	mg/m <sup>3</sup>	≤ 10	IS : 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	7.0	mg/m <sup>3</sup>	≤ 440	Manual Instruction

N.S. = Not Specified

#### REMARKS / OBSERVATIONS:

All above results are well within The Factories Act, 1948 Standards.

Technical Manager

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Page 1 of 1

-----End of Report-----

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# ENalyse\*

	Source	e Emission Monitorin	g Report Report No. AB/NBS/05/2016-17/1285			
		Sample Code	AB/NBS/05/2016-17/1285			
Name of Client & Address:		Sample Location/Attached To	Cogen Stack			
	Name of citent & Address.	Sample Collected By	Aavanira Biotech Pvt. Ltd.,			
M/	s. Nira Bhima Sahakari Sakhar	Sample type	Stack			
	Karkhana Ltd.	Method of Sampling	As per IS : 11255 (Part - 1) : 1985			
	Shahajinagar, Post- Redni,	Date of Sampling	04/05/2016			
	Tal. Indapur, DistPune,	Time of Sampling	02:00 pm			
	Pin-413114.	Analysis Date	05/05/2016 to 13/05/2016			
		Reporting date	13/05/2016			
		Instrument Details	Stack Monitoring Kit , AB/Tech/Instr/140			
	Sample returned /stored	Stored at 4°C for 1 week from the date of reporting				
		STACK DETAILS				
Sr. No.	Particulars	Details	Unit			
1	Material of Stack	MS				
2	Stack Height from G.L.	75.0	mtr.			
3	Type of Stack	Round	14			
4	Flue Gas Temperature	433	°K			
5	Differential Pressure	1.1	mmWG			
6	Velocity	4.14	m/s			
7	Diameter of Stack	3.7	mtr.			
8	Stack Area	10.17	m²			
9	Gas Volume	104417.03	Nm <sup>3</sup> /Hr			
		TEST PARAMETERS				

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent	Standard Method
1	Total Particulate Matter (TPM)	102.65	mg/Nm <sup>3</sup>	≤ 150	IS:11255 (Part -1)-1985
2	2 Sulphur Dioxide(SO <sub>2</sub> )	53.20	mg/Nm <sup>3</sup>	**	
2 Supror Dioxide(502)	4	133.32	Kg/day		IS:11255 (Part -2)-1985
3	Oxides of Nitrogen(NOx)	201.06	mg/Nm <sup>3</sup>	122	IS:11255 (Part -7)-1985
4	Carbon Monoxide	20.90	mg/Nm <sup>3</sup>		Manual Instructions

#### REMARK / OBSERVATIONS:

All above results are within MPCB Limits.

Technical Manager

Authorized Signatory

-----End of Report-----

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# ENalyse\*

	Sourc	e Emission Monitorir	g Report Report No. AB/NBS/05/2016-17/1286			
		Sample Code	AB/NBS/05/2016-17/1286			
Name of Client & Address:		Sample Location/Attached To	Sugar Stack			
3	Name of client & Address:	Sample Collected By	Aavanira Biotech Pvt. Ltd.,			
M/s	s. Nira Bhima Sahakari Sakhar	Sample type	Stack			
	Karkhana Ltd.	Method of Sampling	As per IS : 11255 (Part - 1) : 1985			
4	Shahajinagar, Post- Redni,	Date of Sampling	04/05/2016			
	Tal. Indapur, DistPune,	Time of Sampling	02:30 pm 05/05/2016 to 13/05/2016			
	Pin-413114.	Analysis Date				
		Reporting date	13/05/2016			
		Instrument Details	Stack Monitoring Kit , AB/Tech/Instr/140			
	Sample returned /stored	Stored at 4°C for 1 week from the date of reporting				
		STACK DETAILS				
Sr. No.	Particulars	Details	Unit			
1	Material of Stack	MS				
2	Stack Height from G.L.	66.0	mtr.			
3	Type of Stack	Round	**			
4	Flue Gas Temperature	417	۵K			
S	Differential Pressure	1.4	mmWG			
6	Velocity	4.59	m/s			
7	Diameter of Stack	3.4	mtr.			
8	Stack Area	9.07	m <sup>2</sup>			
9	Gas Volume	107053.60	Nm <sup>3</sup> /Hr			
		TEST PARAMETER				

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent	Standard Method
1	Total Particulate Matter (TPM)	109.30	mg/Nm <sup>3</sup>	≤ 150	IS:11255 (Part -1)-1985
	2 Sulphur Dioxide(SO <sub>2</sub> )	53.41	mg/Nm <sup>3</sup>		IS:11255 (Part -2)-1985
2 Sulphur Dioxide(SO <sub>2</sub> )	2	137.23	Kg/day	**	
3	Oxides of Nitrogen(NOx)	186.0	mg/Nm <sup>3</sup>		IS:11255 (Part -7)-1985
4	Carbon Monoxide	18.0	mg/Nm <sup>3</sup>	-	Manual Instructions

REMARK / OBSERVATIONS:

All-above results are within MPCB Limits.

Technical Manager

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-----End of Report-----



 Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part, MIDC Chinchwad, Pune 411019, Maharashtta, India.
 Tel.: 020 - 64100118 / 8308805200 • E-mail : info@aavanira.com • Web : www.aavanira.com CIN ND. U74900PN2010PTC137544



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# ENalyse\*

Ambie	nt Noise Monitoring I	Report Report No. AB/NBS/05/2016-17/1283
Name of Client & Address:	Sample Code	AB/NBS/05/2016-17/1287
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.	Sample type	Ambient Noise
	Method of Sampling	As per IS : 4758
Shahajinagar, Post- Redni,	Date of Sampling	04/05/2016
Tal. Indapur, DistPune, Pin-413114.	Reporting date	13/05/2016
	Instrument Details	Sound Level Meter, AB/Tech/Instr/62

		Re	ading	
Sr. No.	Test Location	Day Time	Night Time	Unit
01	Khandobawadi	52.9	43.1	dB(A)
02	Near Main Gate	54.0	44.0	dB(A)
03	Devtekvasti	54.3	42.6	dB(A)

REMARK / OBSERVATIONS:

Limits: Maharashtra Pollution Control Board has prescribed 55 dB (A) as an upper limit of Noise Level during day time &45 dB (A) as an upper limit of Noise Level during Night time. Above results are within the prescribed limits by MPCB.

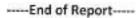
Area	Category of Area	Limits dB(A) Leq		
		Day Time	Night Time	
Α	Industrial Area	<75	<70	
В	Commercial Area	<65	<55	
С	Residential Area	<55	<45	
D	Silence Zone	<50	<40	

Note: 1 Day Time shall mean from 06:00 am to 10:00 pm

Note: 2 Night Time shall mean from 10:00 pm to 06:00 am

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# ENalyse\*

Workzone	Noise Monitoring Rep	oort Report No. AB/NB5/05/2016-17/1288
Name of Client & Address:	Sample Code	AB/NBS/05/2016-17/1288
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
M/s. Nira Bhima Sahakari Sakhar	Sample type	Workzone Noise
Karkhana Ltd.	Method of Sampling	As per 15 : 4758
Shahajinagar, Post- Redni,	Date of Sampling	04/05/2016
Tal. Indapur, DistPune, Pin-413114.	Reporting date	13/05/2016
	Instrument Details	Sound Level Meter, AB/Tech/Instr/62

Sr	Sr. Test Location Day Time Night Time 01:30 p.m. 10:30 p.m.	200 20 20 20 20	Reading			Limit As not The
No.		A CONTRACT OF A	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Unit	Limit As per The Factories Act, 1948	
01	Sugar Godown	66.7	60.5	dB(A)	<90	
02	Boiler House	81.0	77.2	dB(A)	<90	

REMARK / OBSERVATIONS:

Limits: The Factories Act, 1948, has prescribed 90 dB (A) as an upper limit of noise level for 8 hours exposure.

Above results are within the prescribed limits by The Factories Act, 1948.

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# ENalyse\*

_			Test Report		REPORT NO- AB/NBS/05/2016-17/128	
Name of Client & Address:		Sample Code	1	AB/NBS	AB/NBS/05/2016-17/1289	
		Sample Name			plant from source	
		Sample Colle	cted By		a Biotech Pvt. Ltd.	
M/	s. Nira Bhima Sahakari Sakhar	Method for S			(Part 1)	
	Karkhana Ltd.	Sample Type			g Water	
	Shahajinagar, Post- Redni,	Sample Colle		04/05/2		
	Tal. Indapur, DistPune,	Sample Rece		05/05/2		
	Pin-413114.	Analysis Date		Contracting the Name of Street Street	2016 to 13/05/2016	
	1000 CONTRACTOR (1000)	Reporting Date		13/05/2		
	Sample returned /stored		for 1 week from the d	ate of cent	arting	
Sr.			Limits as Per IS:	ate of rept	in this	
No.	Parameter	Results	10500 Standards	Units	Provide all the state of	
		nesurs		Units	Standard Method	
1	Turbidity	0.41	Physical Parameter	A (***) (		
	TSS	11.0	<1.0 N.S.	NTU	IS: 3025 Part-10 (R.A : 2002)	
3	TDS	364.0		mg/lit	IS: 3025 Part-14 (R.A : 2006)	
	Temperature	24	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)	
5		<5		°C	IS: 3025 Part-15 (R.A : 2006)	
	Cologi	40	<5	Hazen	IS: 3025 Part-12 (R.A : 2006)	
1	pH		Chemical Parameter		1	
2	E. Conductivity	7.11	6.5-8.5		IS: 3025 Part-11 (R.A : 2002)	
3		473	N.5	μS/cm	IS: 3025 Part-14 (R.A : 2002)	
4	Total Hardness as CaCO <sub>3</sub>	174.2	<200	mg/lit	IS: 3025 Part-21 (2009)	
5	Total Alkalinity as CaCO <sub>3</sub> Chloride as Cl	183.67	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)	
6	Sulphate as SO <sub>4</sub>	23.71	250	mg/lit	IS: 3025 Part-32 (R.A : 2003)	
7	Residual chlorine	24.61	<200	mg/lit	APHA :22 <sup>nd</sup> edition -(4500- SO <sub>4</sub> <sup>2</sup> E)	
8	Nitrate as NO <sub>3</sub>	BDL	>0.2	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-Cl B)	
9	Fluoride as F	0.5	<45	mg/lit	APHA :22 <sup>rd</sup> edition -{4500- NO <sub>3</sub> <sup>2</sup> B}	
10	Sulphide	0.04	<1.0	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-F F)	
11	Phenolic Compound as	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
12	Dissolved Oxygen	N.D.	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)	
13	Oil & Grease	3.4	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
14	Ammonical Nitrogen	BDL	N.S.	mg/lit	15: 3025 Part-02 (2004)	
15	Free Ammonia	0.09	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
16	Total Kjeldhal Nitrogen	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
44	resar ideiditar Mitrogen	0.08	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
1	Aluminium as Al		Elemental Parameter			
2		N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)	
3	Arsenic as As Boron as B*	N.D.	<0.01	mg/lit	IS: 3025 Part-02 (2004)	
4		N.D.	<0.5	mg/lit	IS: 3025 Part-02 (2004)	
5	Calcium as Ca Cadmium as Cd	31.24	<75	mg/lit	IS: 3025 Part-02 (2004)	
6	Iron as Fe	BDL	<0.003	mg/lit	IS: 3025 Part-02 (2004)	
7	Mercury as Hg	0.03	<0.3	mg/lit	IS: 3025 Part-02 (2004)	
1	werculy as ng	N.D.	<0.001	mg/lit	IS: 3025 Part-02 (2004)	





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8	Lead as Pb	BDL	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
9	Selenium as Se	ND	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
10	Copper as Cu	BDL	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
11	Manganese as Mn	BDL	<0.1	mg/lit	IS: 3025 Part-02 (2004)
12	Magnesium as Mg	13.74	<30	mg/lit	IS: 3025 Part-02 (2004)
13	Nickel	N.D.	< 0.02	mg/lit	IS: 3025 Part-02 (2004)
14	Zinc as Zn	0.01	<5.0	mg/lit	IS: 3025 Part-02 (2004)
15	Barium	N.D.	<0.7	mg/lit	IS: 3025 Part-02 (2004)
16	Silver	N.D.	<0.1	mg/lit	IS: 3025 Part-02 (2004)
17	Chromium as Cr	BDL	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
18	Sodium as Na	14.6	N.S.	mg/lit	IS: 3025 Part-02 (2004)
19	Potassium As K	1.21	N.S.	mg/lit	15: 3025 Part-02 (2004)
20	Cyanide as CN	N.D.	< 0.05	mg/lit	IS: 3025 Part-02 (2004)

Technical Manager

-----End of Report-----



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Page 2 of 2

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# ENalyse\*

			Test Report		REPORT NO- AB/NBS/05/2016-17/129
Name of Client & Address:		Sample Code		AB/NBS/05/2016-17/1290	
		Sample Name		Bhodani	
		Sample Colle	cted By	Aavanir	a Biotech Pvt. Ltd.
M/	s. Nira Bhima Sahakari Sakhar	Method for S		IS:3025	
	Karkhana Ltd.	Sample Type	the second se	the second se	g Water
	Shahajinagar, Post- Redni,	Sample Colle		04/05/2	
	Tal. Indapur, DistPune,	Sample Rece		05/05/2	
	Pin-413114.	Analysis Date			2016 to 13/05/2016
		Reporting Da		13/05/2	
	Sample returned /stored		for 1 week from the d	ate of repr	arting
Sr.	[		Limits as Per IS:	are or repu	Ating
No.	Parameter	Results	10500 Standards	Units	Chandraid Mash ad
		resurs	and the second se	Units	Standard Method
1	Turbidity	0.66	Physical Parameter	ACT11	15 2025 B
2	TSS	13.0	<1.0 N.S.	NTU	IS: 3025 Part-10 (R.A : 2002)
3	TDS	656.0	<500	mg/lit	IS: 3025 Part-14 (R.A : 2006)
4	Temperature	23.7		mg/lit °C	IS: 3025 Part-16 (R.A : 2006)
5	Colour	<5	<5		IS: 3025 Part-15 (R.A : 2006)
-	Cologi	10	Chemical Parameter	Hazen	IS: 3025 Part-12 (R.A : 2006)
1	pH	7.05	and the second se		
2	E. Conductivity	7.06	6.5-8.5		IS: 3025 Part-11 (R.A : 2002)
3	Total Hardness as CaCO <sub>1</sub>	CONTRACTOR AND A DESCRIPTION OF A DESCRI	N.S.	μS/cm	IS: 3025 Part-14 (R.A : 2002)
4	Total Alkalinity as CaCO <sub>3</sub>	251.3	<200	mg/lit	IS: 3025 Part-21 (2009)
5	Chloride as Cl	277.27	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)
6	Sulphate as SO4	86.49 49.27	250	mg/lit	IS: 3025 Part-32 (R.A : 2003)
7	Residual chlorine	and the second se	<200	mg/lit	APHA :22 <sup>nd</sup> edition -(4500- SO <sub>4</sub> <sup>2</sup> E)
8	Nitrate as NO <sub>3</sub>	BDL	>0.2	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-Cl B)
9	Fluoride as F	25.46 0.07	<45	mg/lit	APHA:22 <sup>rd</sup> edition -(4500- NO <sub>3</sub> <sup>2</sup> B)
10	Sulphide	N.D.	<1.0	mg/lit	APHA :22 <sup>rd</sup> edition -{4500-F F}
11	Phenolic Compound as		N.S.	mg/lit	IS: 3025 Part-02 (2004)
12	Dissolved Oxygen	N.D. 3.9	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)
13	Oil & Grease	BDL	N.S.	mg/lit	IS: 3025 Part-02 (2004)
14	Ammonical Nitrogen	0.19	N.S.	mg/lit	IS: 3025 Part-02 (2004)
15	Free Ammonia	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
16	Total Kjeldhal Nitrogen	0.67	N.S. N.S.	mg/lit	IS: 3025 Part-02 (2004)
	and the second second second		Elemental Parameter	mg/lit	IS: 3025 Part-02 (2004)
1	Aluminium as Al	N.D.	and the second se	and the	15, 3035 0. 4 00 (000.1)
2	Arsenic as As	N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)
3	Boron as B*	N.D.	<0.01	mg/lit	IS: 3025 Part-02 (2004)
4	Calcium as Ca		<0.5	mg/lit	IS: 3025 Part-02 (2004)
5	Cadmium as Cd	91.27	<75	mg/lit	IS: 3025 Part-02 (2004)
6	Iron as Fe	BDL 0.24	<0.003	mg/lit	IS: 3025 Part-02 (2004)
7	Mercury as Hg	0.24	<0.3	mg/lit	IS: 3025 Part-02 (2004)
-	interestly us rig	N.D.	< 0.001	mg/lit	I5: 3025 Part-02 (2004)



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8	Lead as Pb	BDL	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
9	Selenium as Se	ND	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
10	Copper as Cu	BDL	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
11	Manganese as Mn	BDL	<0.1	mg/lit	15: 3025 Part-02 (2004)
12	Magnesium as Mg	29.13	<30	mg/lit	IS: 3025 Part-02 (2004)
13	Nickel	N.D.	< 0.02	mg/lit	IS: 3025 Part-02 (2004)
14	and the second se	0.01	<5.0	mg/lit	IS: 3025 Part-02 (2004)
15	CONTRACTOR OF THE OWNER OF	N.D.	<0.7	mg/lit	IS: 3025 Part-02 (2004)
16	Silver	N.D.	<0.1	mg/lit	IS: 3025 Part-02 (2004)
17	Chromium as Cr	BDL	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
18	Sodium as Na	7.49	N.S.	mg/lit	IS: 3025 Part-02 (2004)
19	Potassium As K	5.11	N.S.	mg/lit	IS: 3025 Part-02 (2004)
20	Cyanide as CN	N.D.	< 0.05	mg/lit	IS: 3025 Part-02 (2004)

Technical Manager

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-----End of Report-----



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# ENalyse\*

			Livalyse			
		Te	st Report		REPORT NO- AB/NBS/05/2016-17/129	
Name of Client & Address:		Sample Code		AB/NBS/05/2016-17/1291		
		Sample Name		Shahajinagar		
		Sample Collected	Ву	the second s	a Biotech Pvt. Ltd.	
M/:	s. Nira Bhima Sahakari Sakhar	Method for Samp		IS:3025		
	Karkhana Ltd.	Sample Type		Drinking		
- 3	Shahajinagar, Post- Redni,	Sample Collected	On	04/05/2		
	Tal. Indapur, DistPune,	Sample Received		05/05/2		
	Pin-413114.	Analysis Date			016 to 13/05/2016	
		Reporting Date		13/05/2		
- 8	Sample returned /stored		1 week from the da			
Sr. No.	Parameter	Results	Limits as Per IS: 10500 Standards	Units	Standard Method	
			ysical Parameter		Standard Include	
1	Turbidity	0.49	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)	
2	TSS	15.0	N.S.	mg/lit	IS: 3025 Part-14 (R.A : 2006)	
3	TDS	742.19	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)	
4	Temperature	23		°C	IS: 3025 Part-15 (R.A : 2006)	
5	Colour	<5	<5	Hazen	IS: 3025 Part-12 (R.A : 2006)	
6	Odour	Unobjectionable	Unobjectionable	++	IS: 3025 Part-11 (R.A : 2006)	
_		Che	emical Parameter			
1	pH	7.16	6.5-8.5		IS: 3025 Part-11 (R.A : 2002)	
2	E. Conductivity	673.0	N.5	µS/cm	IS: 3025 Part-14 (R.A : 2002)	
3	Total Hardness as CaCO <sub>3</sub>	319.07	<200	mg/lit	IS: 3025 Part-21 (2009)	
4	Total Alkalinity as CaCO <sub>3</sub>	232.18	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)	
5	Chloride as Cl	99.71	250	mg/lit	IS: 3025 Part-32 (R.A : 2003)	
6	Sulphate as SO <sub>4</sub>	66.79	<200	mg/lit	APHA :22 <sup>rd</sup> edition -(4500- SO <sub>4</sub> <sup>2</sup> E)	
7	Residual chlorine	8DL	>0.2	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-Cl B)	
8	Nitrate as NO <sub>3</sub>	26.73	<45	mg/lit	APHA :22 <sup>rd</sup> edition -(4500- NO <sub>3</sub> <sup>2</sup> B)	
9	Fluoride as F	0.09	<1.0	mg/lit	APHA :22 <sup>rd</sup> edition -(4500-F F)	
10	Sulphide	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
11	Phenolic Compound as	N.D.	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)	
12	Dissolved Oxygen	3.6	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
13	Oil & Grease	BDL	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
14	the second se	0.27	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
	Free Ammonia	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
16	Total Kjeldhal Nitrogen	0.97	N.5.	mg/lit	IS: 3025 Part-02 (2004)	
	A la sue fue la suit de la		mental Parameter	1012012000		
1	Aluminium as Al	N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)	
2		N.D.	<0.01	mg/lit	IS: 3025 Part-02 (2004)	
3	Boron as B*	N.D.	<0.5	mg/lit	IS: 3025 Part-02 (2004)	
4	the second se	116.4	<75	mg/lit	IS: 3025 Part-02 (2004)	
5		BDL	< 0.003	mg/lit	15: 3025 Part-02 (2004)	
5	and the second se	0.29	<0.3	mg/lit	IS: 3025 Part-02 (2004)	
7	Mercury as Hg	N.D.	<0.001	mg/lit	IS: 3025 Part-02 (2004)	



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8	Lead as Pb	BDL	-0.01	1	
9			< 0.01	mg/lit	IS: 3025 Part-02 (2004)
10	1.11	ND	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
11		BDL	<0.05	mg/lit	IS: 3025 Part-02 (2004)
12		BDL	< 0.1	mg/lit	IS: 3025 Part-02 (2004)
13	Distantin and the D	34.18	<30	mg/lit	IS: 3025 Part-02 (2004)
	Contraction of the local division of the loc	N.D.	< 0.02	mg/lit	IS: 3025 Part-02 (2004)
14		0.06	<5.0	mg/lit	IS: 3025 Part-02 (2004)
15	Barium	N.D.	< 0.7	mg/lit	15: 3025 Part-02 (2004)
16		N.D.	<0.1	mg/lit	15: 3025 Part-02 (2004)
17	Chromium as Cr	BDL	<0.05		IS: 3025 Part-02 (2004)
18	Sodium as Na	9.13		mg/lit	IS: 3025 Part-02 (2004)
19	Potassium As K	5.19	N.S.	mg/lit	IS: 3025 Part-02 (2004)
20	Cyanide as CN		N.S.	mg/lit	IS: 3025 Part-02 (2004)
- 1		N.D.	<0.05	mg/lit	IS: 3025 Part-02 (2004)

Technical Manager

-----End of Report-----



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ENalyse\*

	Test Report	REPORT NO- AB/NBS/05/2016-17/1292	
	REPORT NO	AB/NBS/05/2016-17/1292	
Name of Client & Address:	Sample Name	Project Site	
A	Sample Collected By	Aavanira Biotech Pvt. Ltd.	
M/s. Nira Bhima Sahakari Sakhar	Method for Sampling	-	
Karkhana Ltd.	Sample Type	Soil	
Shahajinagar, Post- Redni,	Sample Collected On	04/05/2016	
Tal. Indapur, DistPune,	Sample Received on	05/05/2016	
Pin-413114.	Analysis Date	05/05/2016 to 13/05/2016	
	Reporting Date	13/05/2016	
Sample returned /stored	Stored at 4°C for 1 week from the date of reporting		

Sr. No.	Parameter	Result	Unit	Standard Method
		Physical P	arameter	
1	Moisture Content	18.0	percent	IS: 2720
2	Water Holding Capacity	52.0	percent	
	Sand	25	percent	15 : 2720
3	Slit	49	percent	IS : 2720
	Clay	26		13.2720
4	Color	Brown		C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
	T	Chemical P	arameter	
1	pH (1:5 Suspension)	8.67	**	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
2	Conductivity	81.0	μS/cm	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
3	Organic Matter	1.2	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
4	Total Kjeldahl Nitrogen (as f	0.001	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
5	Total Nitrogen	369.16	mg/kg	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
6	Free Ammoniacal Nitrogen	BDL	%	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
-		Elemental	Testing	
1	Potassium as k	0.006	%	APHA (Edition 22 <sup>nd</sup> ) 3120 8
2	Phosphorous	0.003	%	APHA (Edition 22") 3120 B
3	Calcium as Ca	2.16	%	APHA (Edition 22 <sup>rd</sup> ) 3120 B
4	Magnesium as Mg	0.22	%	APHA (Edition 22") 3120 B
5	Iron as Fe	22	ppm	APHA (Edition 22") 3120 B
6	Copper as Cu	0.21	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
7	Chromium	BDL	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B

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### Recognized by Ministry of Environment and Forest (MoEF), Govt. of India ISO 9001: 2008 and OHSAS18001: 2007 Certified Company REPORT NO- AB/NBS/05/2016-17/1292

8	Cadmium as Cd	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
9	Lead as Pb	BDL	%	APHA (Edition 22") 3120 B
10	Manganese as Mn	0.32	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
11	Zinc as Zn	0.66	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
100	Total Carbon	1.8	%	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
13	Boron	BDL	ppm	APHA (Edition 22"d) 3120 B
14	Molybdenum	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B

Technical Manager

Authorized Signatory

-----End of Report-----



Page 2 of 2

Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part, MIDC Chinchwad, Pune 411019, Maharashtra, India. • Tel.: 020 - 64100118 / 8308805200 • E-mail : info@aavanira.com • Web : www.aavanira.com CIN NO. 074900PN2010PTC137544



# Recognized by Ministry of Environment and Forest (MoEF), Govt. of India ISO 9001: 2008 and OHSAS18001: 2007 Certified Company

ENalyse\*

	Test Report	REPORT NO- AB/NBS/05/2016-17/1293		
	REPORT NO	AB/NBS/05/2016-17/1293		
Name of Client & Address:	Sample Name	Devtekvasti		
8424786 - 1988 - 1975, CO - 19878	Sample Collected By	Aavanira Biotech Pvt. Ltd.		
M/s. Nira Bhima Sahakari Sakhar	Method for Sampling	-		
Karkhana Ltd.	Sample Type	Soil		
Shahajinagar, Post- Redni,	Sample Collected On	04/05/2016		
Tal. Indapur, DistPune,	Sample Received on	05/05/2016		
Pin-413114.	Analysis Date	05/05/2016 to 13/05/2016		
	Reporting Date	13/05/2016		
Sample returned /stored	Stored at 4°C for 1 week from the date of reporting			

Sr. No.	Parameter	Result	Unit	Standard Method
		Physical P	arameter	
1	1 Moisture Content21.0		percent	IS : 2720
2	Water Holding Capacity	48.0	percent	15:2720
	Sand	27.0		
3	Slit	46.0	percent	IS : 2720
	Clay	27.0		
4	Color	Brown	-	C.A. Black, American Society of Agronomy S <sup>th</sup> Edition, 65-15800
		Chemical P	arameter	
1	pH (1:5 Suspension)	7.13	144	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
2	Conductivity	77	μS/cm	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
3	Organic Matter	1.9	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
4	Total Kjeldahl Nitrogen (as N)	0.009	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
5	Free Ammoniacal Nitrogen	BDL	%	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
		Elemental	Testing	
1	Potassium as k	0.007	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
2	Phosphorous	0.006	%	APHA (Edition 22 <sup>rd</sup> ) 3120 B
3	Calcium as Ca	3.12	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
4	Magnesium as Mg	0.49	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
5	Iron as Fe	19	ppm	APHA (Edition 22"d) 3120 8
6	Copper as Cu	0.33	ppm	APHA (Edition 22"d) 3120 B
7	Chromium	BDL	nga	APHA (Edition 22nd) 3120 B



Recognized by Ministry of Environment and Forest (MoEF), Govt. of India ISO 9001: 2008 and OHSAS18001: 2007 Certified Company REPORT NO- AB/NBS/05/2016-17/1293

8	Cadmium as Cd	BDL	ppm	APHA (Edition 22") 3120 B
9	Lead as Pb	BDL	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
10	Manganese as Mn	0.71	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
11	Zinc as Zn	0.83	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
12	Total Carbon	1.5	%	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
13	Boron	BDL	ppm	APHA (Edition 22"d) 3120 B
14	Molybdenum	BDL	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B

Technical Manager

-----End of Report-----





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# ENalyse\*

Ambien	t Air Quality Monitori	ng Report Report No. AB/NBS/11/2016-17/1239
	Sample Code	AB/NBS/11/2016-17/1239
Name of Client & Address:	Sample Location	Khandobawadi
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
	Sample type	Ambient Air
	Method of Sampling	As per IS : 5182 Part 1 (2006)
	Date of Sampling	03/11/2016
M/s. Nira Bhima Sahakari Sakhar	Time of Sampling	11:00 am
Karkhana Ltd. Shahajinagar, Post- Redni,	Sampling Duration	24 Hrs.
Tal. Indapur, DistPune, Pin-413114.	Ambient Temp. (Dry Bulb/Wet Bulb)	29.5°C/22.1°C
11111122241	Relative Humidity(RH)	52 %
	Analysis Date	04/11/2016 to 10/11/2016
	Reporting date	10/11/2016
	Instrument Details	Ambient Fine Dust Sampler, AB/Tech/Instr/129
Sample returned /stored	Stored at 4°C for 1 week fro	om the date of reporting

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	NAAQ Standards	Standard Method
1	Particulate Matter (PM <sub>10</sub> )	47.90	µg/m <sup>3</sup>	≤ 100	IS : 5182 (Part 23)-2006
2	Particulate Matter (PM25)	20.15	µg/m <sup>3</sup>	≤ 60	USEPA (40 CFR Ch1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	19.65	µg/m <sup>3</sup>	≤ 80	IS: 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	26.81	µg/m <sup>3</sup>	≤ 80	IS: 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	0.98	mg/m <sup>3</sup>	≤ 04 (1 Hr.)	Manual Instruction

#### REMARKS / OBSERVATIONS:

All above results are within National Ambient Air Quality standards.

BDL – Below Detectable Limit.

Verified By - Eesha Wadzirkar Quality Manager

Govt. Analyst Dr. Bikash Aich Managing Director ---End of Report---

Authorized By - Yadnesh Kesari Technical Manager



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ENalyse\*

Ambier	nt Air Quality Monitori	ing Report Report No. AB/NBS/11/2016-17/1240	
	Sample Code	AB/NBS/11/2016-17/1240	
Name of Client & Address: M/s. Nira Bhima Sahakari Sakhar	Sample Location	Near Main Gate	
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,	
	Sample type	Ambient Air	
	Method of Sampling	As per IS : 5182 Part 1 (2006)	
	Date of Sampling	03/11/2016	
	Time of Sampling	11:30 am	
Karkhana Ltd. Shahajinagar, Post- Redni,	Sampling Duration	24 Hrs.	
Tal. Indapur, DistPune, Pin-413114.	Ambient Temp. (Dry Bulb/Wet Bulb)	29.4°C/22.2°C	
	Relative Humidity(RH)	50 %	
	Analysis Date	04/11/2016 to 10/11/2016	
	Reporting date	10/11/2016	
	Instrument Details	Ambient Fine Dust Sampler, AB/Tech/Instr/130	
Sample returned /stored	Stored at 4°C for 1 week fro	om the date of reporting	

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	NAAQ Standards	Standard Method
1	Particulate Matter (PM10)	41.93	µg/m <sup>1</sup>	≤ 100	IS: 5182 (Part 23)-2006
2	Particulate Matter (PM2 5)	16.82	ug/m <sup>1</sup>	≤ <del>6</del> 0	USEPA (40 CFR Ch1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	12.05	µg/m <sup>3</sup>	≤ 80	IS : 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	19.72	µg/m <sup>3</sup>	≤ 80	IS: 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	1.12	mg/m <sup>3</sup>	≤ 04 (1 Hr.)	Manual Instruction

#### REMARKS / OBSERVATIONS:

> All above results are within National Ambient Air Quality standards.

> BDL - Below Detectable Limit.

Verified By - Eesha Wadzirkar **Quality Manager** 

Govt. Analyst Dr. Bikash Aich Managing Director ---End of Report---

Authorized By - Yadnesh Kesari **Technical Manager** 



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ENalyse\*

Ambien	t Air Quality Monitori	ng Report Report No. AB/NBS/11/2016-17/1241
	Sample Code	AB/NBS/11/2016-17/1241
Name of Client & Address:	Sample Location	Devtekvasti
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
	Sample type	Ambient Air
	Method of Sampling	As per IS : 5182 Part 1 (2006)
	Date of Sampling	03/11/2016
M/s. Nira Bhima Sahakari Sakhar	Time of Sampling	11:50 am
Karkhana Ltd. Shahajinagar, Post- Redni,	Sampling Duration	24 Hrs.
Tal. Indapur, DistPune, Pin-413114.	Ambient Temp. (Dry Bulb/Wet Bulb)	29.5°C/22.0°C
1111 922224	Relative Humidity(RH)	51 %
	Analysis Date	04/11/2016 to 10/11/2016
	Reporting date	10/11/2016
	Instrument Details	Ambient Fine Dust Sampler, AB/Tech/Instr/13
Sample returned /stored	Stored at 4°C for 1 week fro	om the date of reporting

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	NAAQ Standards	Standard Method
1	Particulate Matter (PM10)	44.66	µg/m <sup>3</sup>	≤ 100	IS: 5182 (Part 23)-2006
2	Particulate Matter (PM25)	20.58	µg/m <sup>3</sup>	≤ 60	USEPA (40 CFR Ch1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	15.45	µg/m <sup>3</sup>	≤ 80	IS : 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	21.78	µg/m <sup>1</sup>	≤ 80	IS : 5182 (Part 6)-2006
	Carbon Monoxide (CO)	1.02	mg/m <sup>3</sup>	≤ 04 (1 Hr.)	Manual Instruction

**REMARKS / OBSERVATIONS:** 

> All above results are within National Ambient Air Quality standards.

BDL – Below Detectable Limit.

Verified By - Eesha Wadzirkar **Quality Manager** 

Govt. Analyst Dr. Bikash Aich **Managing Director** ----End of Report----

Authorized By - Yadnesh Kesari **Technical Manager** 



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# ENalyse\*

Workzo	one Air Quality Monitor	ing Report Report No. AB/NBS/11/2016-17/1242	
	Sample Code	AB/NB5/11/2016-17/1242	
	Sample Location	Boiler House	
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,	
	Sample type	Workzone Air	
Name of Client & Address: M/s. Nira Bhima Sahakari Sakhar	Method of Sampling	As per IS : 5182 Part 1 (2006)	
	Date of Sampling	03/11/2016	
	Time of Sampling	12:30 pm	
Karkhana Ltd. Shahajinagar, Post- Redni,	Sampling Duration	15 Min	
Tal. Indapur, DistPune,	Shop Temperature	29.0°C	
Pin-413114.	Dry Bulb & Wet Bulb Temp.	28.6°C/21.4°C	
	Relative Humidity(RH)	53 %	
	Analysis Date	04/11/2016 to 10/11/2016	
	Reporting date	10/11/2016	
	Instrument Details	Portable Gas Sampler, AB/Tech/Instr/135	
Sample returned /stored	Stored at 4°C for 1 week from	n the date of reporting	

#### **TEST PARAMETERS**

Sr. No.	Parameter	Result	Unit	The Factories Act 1948, standards	Standard Method
1	Suspended Particulate Matter (SPM)	51.75	μg/m³	N.S.	IS : 5182 (Part 23)-2006
2	Respirable Suspended Particulate Matter (RSPM)	32.62	μg/m <sup>3</sup>	N.5.	USEPA (40 CFR Ch 1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	0.27	mg/m <sup>3</sup>	≤ 10	IS: 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	0.36	mg/m <sup>3</sup>	≤ 10	IS: 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	10.0	mg/m <sup>3</sup>	≤ 440	Manual Instruction

N.S. = Not Specified

#### REMARKS / OBSERVATIONS:

All above results are well within The Factories Act, 1948 Standards.

Verified By - Eesha Wadzirkar Quality Manager

Govt. Analyst Dr. Bikash Aich Managing Director ---End of Report---





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# ENalyse\*

Work	one Air Quality Monito	ring Report Report No. AB/NBS/11/2016-17/124
	Sample Code	AB/NB5/11/2016-17/1243
	Sample Location	Sugar Godown
	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
	Sample type	Workzone Air
Name of Client & Address:	Method of Sampling	As per IS : 5182 Part 1 (2006)
	Date of Sampling	03/11/2016
M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.	Time of Sampling	01:30 pm
Shahajinagar, Post- Redni,	Sampling Duration	15 Min
Tal. Indapur, DistPune,	Shop Temperature	29.3°C
Pin-413114.	Dry Bulb & Wet Bulb Temp.	29.0°C/21.8°C
	Relative Humidity(RH)	53 %
	Analysis Date	04/11/2016 to 10/11/2016
	Reporting date	10/11/2016
	Instrument Details	Portable Gas Sampler, AB/Tech/Instr/136
Sample returned /stored	Stored at 4°C for 1 week from	the second se

#### **TEST PARAMETERS**

Sr. No.	Parameter	Result	Unit	The Factories Act 1948, standards	Standard Method
1	Suspended Particulate Matter (SPM)	48.06	µg/m³	N.S.	IS : 5182 (Part 23)-2006
2	Respirable Suspended Particulate Matter (RSPM)	29.64	µg/m³	N.S.	USEPA (40 CFR Ch 1)Appendix L to Part 50
3	Sulphur Dioxide (SO <sub>2</sub> )	0.19	mg/m <sup>3</sup>	≤ 10	IS: 5182 (Part 2)-2001
4	Oxides of Nitrogen (NOx)	0.27	mg/m <sup>3</sup>	≤ 10	IS: 5182 (Part 6)-2006
5	Carbon Monoxide (CO)	4.0	mg/m <sup>3</sup>	≤ 440	Manual Instruction

N.S. = Not Specified

#### REMARKS / OBSERVATIONS:

All above results are well within The Factories Act, 1948 Standards.

Verified By - Eesha Wadzirkar Quality Manager

Govt. Analyst Dr. Bikash Aich Managing Director ---End of Report--- Authorized By - Yadnesh Kesari Technical Manager



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# ENalyse\*

	Source	<b>Emission Monitoring</b>	Report Report No. AB/NBS/11/2016-17/1244	
		Sample Code	AB/NBS/11/2016-17/1244	
Name of Client & Address:		Sample Location/Attached To	Cogen Stack	
	dune of chem & Address.	Sample Collected By	Aavanira Biotech Pvt. Ltd.,	
M/	s. Nira Bhima Sahakari Sakhar	Sample type	Stack	
53	Karkhana Ltd.	Method of Sampling	As per IS : 11255 (Part - 1) : 1985	
	Shahajinagar, Post- Redni,	Date of Sampling	03/11/2016	
	Tal. Indapur, DistPune,	Time of Sampling	02:00 pm	
	Pin-413114.	Analysis Date	04/11/2016 to 10/11/2016	
		Reporting date	10/11/2016	
		Instrument Details	Stack Monitoring Kit , AB/Tech/Instr/140	
	Sample returned /stored	Stored at 4°C for 1 week from the date of reporting		
		STACK DETAILS	the same of reporting	
Sr. No.	Particulars	Details	Unit	
1	Material of Stack	MS		
2	Stack Height from G.L.	75.0	mtr.	
3	Type of Stack	Round		
4	Flue Gas Temperature	431	°K	
5	Differential Pressure	1.1	mmWG	
6	Velocity	4.13	m/s	
7	Diameter of Stack	3.7	mtr.	
8	Stack Area	10.17	m²	
9	Gas Volume	104659.02	Nm <sup>3</sup> /Hr	

#### TEST PARAMETERS

Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent	Standard Method
1	Total Particulate Matter (TPM)	101.22	mg/Nm <sup>3</sup>	≤ 150	IS:11255 (Part -1)-1985
2	2 Sulphur Dioxide(SO <sub>2</sub> )	51.04	mg/Nm <sup>3</sup>		
2 Jourphur Dioxide(302)			128.20	Kg/day	22
3	Oxides of Nitrogen(NOx)	187.0	mg/Nm <sup>3</sup>		15:11255 (Part -7)-1985
4	Carbon Monoxide	16.0	mg/Nm <sup>3</sup>		Manual Instructions

#### REMARK / OBSERVATIONS:

All above results are within MPCB Limits.

(29 Verified By - Eesha Wadzirkar **Quality Manager** 

Govt. Analyst Dr. Bikash Aich Managing Director ---End of Report---

Authorized By - Yadnesh Kesari Technical Manager



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# ENalyse\*

	Sourc	e Emission Monitorin	ng Report Report No. AB/NBS/11/2016-17/1245	
		Sample Code	AB/NBS/11/2016-17/1245	
Name of Client & Address:		Sample Location/Attached To	Sugar Stack	
		Sample Collected By	Aavanira Biotech Pvt. Ltd.,	
M/s	. Nira Bhima Sahakari Sakhar	Sample type	Stack	
53953	Karkhana Ltd.	Method of Sampling	As per IS : 11255 (Part - 1) : 1985	
1	Shahajinagar, Post- Redni,	Date of Sampling	03/11/2016	
Tal. Indapur, DistPune, Pin-413114.		Time of Sampling	02:30 pm	
		Analysis Date	04/11/2016 to 10/11/2016	
		Reporting date	10/11/2016	
		Instrument Details	Stack Monitoring Kit , AB/Tech/Instr/140	
	Sample returned /stored	Stored at 4°C for 1 week from the date of reporting		
		STACK DETAILS		
Sr. No.	Particulars	Details	Unit	
1	Material of Stack	MS		
2	Stack Height from G.L.	66.0	mtr.	
3	Type of Stack	Round		
4	Flue Gas Temperature	425	°K	
5	Differential Pressure	1.3	mmWG	
б	Velocity	4.46	m/s	
7	Diameter of Stack	3.4	mtr.	
В	Stack Area	9.07	m <sup>2</sup>	
9	Gas Volume	102183.90	Nm <sup>3</sup> /Hr	

#### **TEST PARAMETERS**

Sr. No.	Parameter	Result	Unit	Limits As Per MPCB Consent	Standard Method
1	Total Particulate Matter (TPM)	105.0	mg/Nm <sup>3</sup>	≤ 150	IS:11255 (Part -1)-1985
2	Sulphur Dioxide(SO <sub>2</sub> )	46.98	mg/Nm <sup>3</sup>		15-11055 /0 01 1001
		115.21	Kg/day	22	IS:11255 (Part -2)-1985
3	Oxides of Nitrogen(NOx)	193.0	mg/Nm <sup>3</sup>		IS:11255 (Part -7)-1985
4	Carbon Monoxide	14.0	mg/Nm <sup>3</sup>		Manual Instructions

#### **REMARK / OBSERVATIONS:**

All above results are within MPCB Limits. ¥

Verified By - Eesha Wadzirkar **Quality Manager** 

Govt. Analyst Dr. Bikash Aich Managing Director ----End of Report----

Authorized By - Yadnesh Kesari **Technical Manager** 



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# ENalyse\*

Workzone I	Noise Monitoring Rep	DORT Report No. AB/NBS/11/2016-17/1247
Name of Client & Address:	Sample Code	AB/NBS/11/2016-17/1247
Hante of cheft & Address.	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
M/s. Nira Bhima Sahakari Sakhar	Sample type	Workzone Noise
Karkhana Ltd.	Method of Sampling	As per IS : 4758
Shahajinagar, Post- Redni,	Date of Sampling	03/11/2016
Tal. Indapur, DistPune, Pin-413114.	Reporting date	10/11/2016
	Instrument Details	Sound Level Meter, AB/Tech/Instr/62

Sr.	Reading		10000 00 00	Reading		Reading			Limit As nos The
No.	Test Location	Day Time 01:30 p.m.	Night Time 10:30 p.m.	Unit	Limit As per The Factories Act, 1948				
01	Sugar Godown	70.0	65.9	dB(A)	<90				
02	Boiler House	83.6	73.5	dB(A)	<90				

REMARK / OBSERVATIONS:

Limits: The Factories Act, 1948, has prescribed 90 dB (A) as an upper limit of noise level for 8 hours exposure.

Above results are within the prescribed limits by The Factories Act, 1948. 2

Verified By - Eesha Wadzirkar **Quality Manager** 

Govt. Analyst Dr. Bikash Aich Managing Director --- End of Report---

Authorized By - Yadnesh Kesari **Technical Manager** 



Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part, MIDC Chinchwad, Pune 411019, Maharashtra, India. Tel.: 020 - 64100118 / 8309805200 • E-mail : info@aavanira.com • Web : www.aavanira.com CIN NO. U74900PN2010PTC137544



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# ENalyse\*

Ambien	t Noise Monitoring Re	eport Report No. AB/NBS/11/2016-17/1246
	Sample Code	AB/NBS/11/2016-17/1246
Name of Client & Address:	Sample Collected By	Aavanira Biotech Pvt. Ltd.,
M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd.	Sample type	Ambient Noise
	Method of Sampling	As per IS : 4758
Shahajinagar, Post- Redni,	Date of Sampling	03/11/2016
Tal. Indapur, DistPune, Pin-413114.	Reporting date	10/11/2016
	Instrument Details	Sound Level Meter, AB/Tech/Instr/62

Sr. No.		Re	ading	Unit
	Test Location	Day Time	Night Time	
01	Khandobawadi	53.6	43.1	dB(A)
02	Near Main Gate	54.5	44.8	dB(A)
03	Devtekvasti	54.2	42.6	dB(A)

**REMARK / OBSERVATIONS:** 

Limits: Maharashtra Pollution Control Board has prescribed 55 d8 (A) as an upper limit of Noise Level during day time &45 dB (A) as an upper limit of Noise Level during Night time. Above results are within the prescribed limits by MPCB.

Area	Category of Area	Limits dB(A) Leq	
		Day Time	Night Time
A	Industrial Area	<75	<70
в	Commercial Area	<65	<55
с	Residential Area	<55	<45
D	Silence Zone	<50	<40

Note: 1 Day Time shall mean from 06:00 am to 10:00 pm

Note: 2 Night Time shall mean from 10:00 pm to 06:00 am 2

Verified By - Eesha Wadzirkar **Quality Manager** 

Govt. Analyst Dr. Bikash Aich Managing Director

--- End of Report---

Authorized By - Vadnesh Kesari **Technical Manager** 



Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part, MIDC Chinchwad, Pune 411019, Maharashtra, India.



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EN	la	lys	e*

			Test Report		DEDODT NO AD /NOT /11 /2016 12 /12	
		Sample Code	CONTRACTOR AND A CONTRACTOR OF A CONTRACTOR OFFA CONTRACTOR OF	AD/NDC	REPORT NO- AB/NB5/11/2016-17/124	
N	ame of Client & Address:	Sample Code		AB/NBS/11/2016-17/1248 Within plant from source		
	ame of chefit & Address.	the second s	I CONTRACTOR AND A DECIMAL AND A	the second second second second		
BALE	Nira Bhima Sahakari Sakhar	Sample Colle			a Biotech Pvt. Ltd.	
11/5.	Karkhana Ltd.	Method for S		15:3025		
		Sample Type			g Water	
	hahajinagar, Post- Redni,	Sample Colle		03/11/2		
	Tal. Indapur, DistPune,	Sample Recei		04/11/2		
	Pin-413114.	Analysis Date			2016 to 10/11/2016	
		Reporting Da		10/11/2		
	ample returned /stored	Stored at 4°C	for 1 week from the d	ate of repo	orting	
Sr.			Limits as Per IS:			
No.	Parameter	Results	10500 Standards	Units	Standard Method	
			Physical Parameter			
1		0.5	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)	
2	TSS	10.0	N.S.	mg/lit	IS: 3025 Part-14 (R.A : 2006)	
3	TDS	319.0	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)	
4	Temperature	24	**	°C	IS: 3025 Part-15 (R.A : 2006)	
5	Colour	<5	<5	Hazen	IS: 3025 Part-12 (R.A : 2006)	
		(	hemical Parameter			
1	pH	7.44	6.5-8.5		IS: 3025 Part-11 (R.A : 2002)	
2	E. Conductivity	445.0	N.S	µS/cm	IS: 3025 Part-14 (R.A : 2002)	
3	Total Hardness as CaCO <sub>3</sub>	179.46	<200	mg/lit	IS: 3025 Part-21 (2009)	
4		169.78	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)	
5	Chloride as Cl	18.49	250	mg/lit	IS: 3025 Part-32 (R.A : 2003)	
6	Sulphate as SO4	21.11	<200	mg/lit	APHA :22"dedition -(4500- 504 E)	
7	Residual chlorine	BDL	>0.2	mg/lit	APHA :22" edition -(4500-CI B)	
8	Nitrate as NO <sub>3</sub>	0.9	<45	mg/lit	APHA :22"dedition -(4500- NO32 B)	
9	Fluoride as F	0.03	<1.0	mg/lit	APHA :22"dedition -(4500-F F)	
10	Sulphide	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
11	Phenolic Compound as	N.D.	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)	
12	Dissolved Oxygen	3.9	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
13	Oil & Grease	BDL	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
14	Ammonical Nitrogen	0.01	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
15	Free Ammonia	N.D.	N.S.	mg/lit	15: 3025 Part-02 (2004)	
16	Total Kjeldhal Nitrogen	0.08	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
			lemental Parameter		10000	
1	Aluminium as Al	N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)	
2	Arsenic as As	N.D.	<0.01	mg/lit	IS: 3025 Part-02 (2004)	
3		N.D.	<0.5	mg/lit	15: 3025 Part-02 (2004)	
4	Calcium as Ca	32.16	<75	mg/lit	IS: 3025 Part-02 (2004)	
5	Cadmium as Cd	BDL	<0.003	mg/lit	IS: 3025 Part-02 (2004)	
6	Iron as Fe	0.05	<0.3	mg/lit	IS: 3025 Part-02 (2004)	
7	Mercury as Hg	N.D.	<0.001	mg/lit	IS: 3025 Part-02 (2004)	



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8	Lead as Pb	BDL	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
9	Selenium as Se	ND	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
10	Copper as Cu	BDL	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
11	Manganese as Mn	BDL	< 0.1	mg/lit	IS: 3025 Part-02 (2004)
12	Magnesium as Mg	12.27	<30	mg/lit	IS: 3025 Part-02 (2004)
13	Nickel	N.D.	< 0.02	mg/lit	IS: 3025 Part-02 (2004)
14	Zinc as Zn	0.01	<5.0	mg/lit	IS: 3025 Part-02 (2004)
15	Barlum	N.D.	<0.7	mg/lit	IS: 3025 Part-02 (2004)
16	Silver	N.D.	< 0.1	mg/lit	IS: 3025 Part-02 (2004)
17	Chromium as Cr	BDL	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
18	Sodium as Na	14.0	N.S.	mg/lit	IS: 3025 Part-02 (2004)
19	Potassium As K	1.3	N.S.	mg/lit	IS: 3025 Part-02 (2004)
20	Cyanide as CN	N.D.	< 0.05	mg/lit	IS: 3025 Part-02 (2004)

Verified By - Eesha Wadzirkar Quality Manager

Govt. Analyst Dr. Bikash Aich **Managing Director** ---End of Report---

Authorized By - Yadnesh Kesari Technical Manager



Page 2 of 2

Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part. MIDC Chinchwad, Pune 411019, Maharashtra, India. Tel.: 020 - 64100118 / 8308805200 • E-mail : info@aavanira.com • Web : www.aavanira.com CIN NO. U74900PN2010PTC137544



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ENalyse\*

			Test Report		REPORT NO- AB/NB5/11/2016-17/12
		Sample Code	and the second	AB/NBS	/11/2016-17/1249
Name of Client & Address:		Sample Name		Bhodani	
		Sample Colle		Aavanira	a Biotech Pvt. Ltd.
M/s.	Nira Bhima Sahakari Sakhar	Method for S		15:3025(	Part 1)
0000000	Karkhana Ltd.	Sample Type	the second s	Drinking	Water
Sh	nahajinagar, Post- Redni,	Sample Colle		03/11/2	
	al. Indapur, DistPune,	Sample Recei		04/11/2	016
	Pin-413114.	Analysis Date			016 to 10/11/2016
		Reporting Da	Colored Street S	10/11/2	016
S	ample returned /stored		for 1 week from the d	late of repo	rting
Sr.			Limits as Per IS:		
No.	Parameter	Results	10500 Standards	Units	Standard Method
0.0.1-	1		Physical Parameter		
1	Turbidity	0.8	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)
2	TSS	14	N.S.	mg/lit	IS: 3025 Part-14 (R.A : 2006)
3	TDS	679.0	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)
4	Temperature	23		°C	IS: 3025 Part-15 (R.A : 2006)
5	and a fight a first of the first for an indicated and the second s	<5	<5	Hazen	IS: 3025 Part-12 (R.A : 2006)
			Chemical Parameter		
1	pH	7.29	6.5-8.5	**	IS: 3025 Part-11 (R.A : 2002)
2		643.0	N.S	µS/cm	IS: 3025 Part-14 (R.A : 2002)
	Total Hardness as CaCO <sub>3</sub>	378.12	<200	mg/lit	15: 3025 Part-21 (2009)
4		255.71	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)
5	and the state of the second	88.46	250	mg/lit	IS: 3025 Part-32 (R.A : 2003)
6	Sulphate as SO4	47.12	<200	mg/lit	APHA :22"edition -(4500- SO42 E)
7	Residual chlorine	BDL	>0.2	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-Cl B)
8	Nitrate as NO <sub>3</sub>	26.43	<45	mg/lit	APHA :22 <sup>nd</sup> edition -(4500- NO <sub>3</sub> <sup>3</sup> B)
9	Fluoride as F	0.09	<1.0	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-F F)
10		N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
11	Phenolic Compound as	N.D.	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)
12		3.8	N.S.	mg/lit	IS: 3025 Part-02 (2004)
13		BDL	N.S.	mg/lit	IS: 3025 Part-02 (2004)
14		0.11	N.S.	mg/lit	IS: 3025 Part-02 (2004)
15	Free Ammonia	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)
16	Total Kjeldhal Nitrogen	0.62	N.S.	mg/lit	IS: 3025 Part-02 (2004)
			Elemental Parameter		
1		N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)
2		N.D.	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
3	and the set of the set	N.D.	<0.5	mg/lit	IS: 3025 Part-02 (2004)
4		91.48	<75	mg/lit	IS: 3025 Part-02 (2004)
5		BDL	<0.003	mg/lit	IS: 3025 Part-02 (2004)
6		0.13	<0.3	mg/lit	15: 3025 Part-02 (2004)
7	Mercury as Hg	N.D.	< 0.001	mg/lit	IS: 3025 Part-02 (2004)



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8	Lead as Pb	BDL	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
9	Selenium as Se	ND	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
10	Copper as Cu	BDL	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
11	Manganese as Mn	BDL	<0.1	mg/lit	IS: 3025 Part-02 (2004)
12	Magnesium as Mg	30.15	<30	mg/lit	IS: 3025 Part-02 (2004)
13	Nickel	N.D.	< 0.02	mg/lit	IS: 3025 Part-02 (2004)
14	Zinc as Zn	0.08	<5.0	mg/lit	IS: 3025 Part-02 (2004)
15	Barium	N.D.	<0.7	mg/lit	IS: 3025 Part-02 (2004)
16	Silver	N.D.	<0.1	mg/lit	IS: 3025 Part-02 (2004)
17	Chromium as Cr	BDL	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
18	Sodium as Na	7.56	N.S.	mg/lit	IS: 3025 Part-02 (2004)
19	Potassium As K	4.1	N.S.	mg/lit	IS: 3025 Part-02 (2004)
20	Cyanide as CN	N.D.	< 0.05	mg/lit	IS: 3025 Part-02 (2004)

ð Verified By - Eesha Wadzirkar **Quality Manager** 

Govt. Analyst Dr. Bikash Aich Managing Director ---End of Report---

Authorized By - Yadnesh Kesari **Technical Manager** 



Page 2 of 2

 Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part, MIDC Chinchwad, Pune 411019, Maharashtra, India.
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# ENalyse\*

		Te	st Report		REPORT NO- AB/NBS/11/2016-17/125	
		Sample Code	and a second second	AB/NBS	6/11/2016-17/1250	
N	lame of Client & Address:	Sample Name		Shahajinagar		
		Sample Collected	By		a Biotech Pvt. Ltd.	
M/s.	Nira Bhima Sahakari Sakhar	Method for Samp		15:3025		
	Karkhana Ltd.	Sample Type	0	the second se	g Water	
S	hahajinagar, Post- Redni,	Sample Collected	On	03/11/2		
	Tal. Indapur, DistPune,	Sample Received		04/11/2		
	Pin-413114.	Analysis Date	on bate		2016 to 10/11/2016	
		Reporting Date		10/11/2		
5	Sample returned /stored		1 week from the dat			
Sr.		Stored at 4°C for 1 week from the date Limits as Per IS:		e or report	ing	
No.	Parameter	Results	10500 Standards	Units	Standard Mathed	
	, anothered		and a second	Units	Standard Method	
1	Turbidity	0.6	vsical Parameter	AUTOR	15, 2025 B	
2	the second se	17.0	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)	
3	TDS	688.0	N.S.	mg/lit	IS: 3025 Part-14 (R.A : 2006)	
4	Temperature	CONTRACTOR AND A DESCRIPTION OF A DESCRI	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)	
5	Colour	23		°C	IS: 3025 Part-15 (R.A : 2006)	
6	Odour		<5	Hazen	IS: 3025 Part-12 (R.A : 2006)	
0	0000	Unobjectionable	The second se		IS: 3025 Part-11 (R.A : 2006)	
1	pH	the second	mical Parameter			
2		7.77	6.5-8.5	-+	IS: 3025 Part-11 (R.A : 2002)	
3		667.0	N.S	μS/cm	IS: 3025 Part-14 (R.A : 2002)	
4		386.12	<200	mg/lit	IS: 3025 Part-21 (2009)	
5	Total Alkalinity as CaCO <sub>3</sub> Chloride as Cl	262.34	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)	
	And the second	90.46	250	mg/lit	IS: 3025 Part-32 (R.A : 2003)	
6	Sulphate as SO <sub>4</sub>	49.93	<200	mg/lit	APHA :22 <sup>nd</sup> edition -(4500- SO <sub>4</sub> <sup>2</sup> E)	
7	Residual chlorine	BDL	>0.2	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-Cl B)	
8	Nitrate as NO <sub>3</sub>	27.11	<45	mg/lit	APHA :22"dedition -(4500- NO)2 B)	
9	Fluoride as F	0.03	<1.0	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-F F)	
10	Sulphide	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
11	Phenolic Compound as	N.D.	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)	
12	Dissolved Oxygen	3.5	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
13	Oil & Grease	BDL	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
14	Ammonical Nitrogen	0.23	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
15	Free Ammonia	N.D.	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
16	Total Kjeldhal Nitrogen	0.71	N.S.	mg/lit	IS: 3025 Part-02 (2004)	
	Alternative at		nental Parameter			
1	Aluminium as Al	N.D.	<0.03	mg/lit	IS: 3025 Part-02 (2004)	
2		N.D.	<0.01	mg/lit	IS: 3025 Part-02 (2004)	
3	and the second se	N.D.	<0.5	mg/lit	IS: 3025 Part-02 (2004)	
4	Calcium as Ca	89.73	<75	mg/lit	IS: 3025 Part-02 (2004)	
5	Cadmium as Cd	BDL	<0.003	mg/lit	IS: 3025 Part-02 (2004)	
6	Iron as Fe	0.24	< 0.3	mg/lit	IS: 3025 Part-02 (2004)	
7	Mercury as Hg	N.D.	< 0.001	mg/lit	IS: 3025 Part-02 (2004)	



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8	Lead as Pb	BDL	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
9	Selenium as Se	ND	< 0.01	mg/lit	IS: 3025 Part-02 (2004)
10	Copper as Cu	BDL	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
11	Manganese as Mn	BDL	<0.1	mg/lit	IS: 3025 Part-02 (2004)
12	Magnesium as Mg	31.59	<30	mg/lit	IS: 3025 Part-02 (2004)
13	Nickel	N.D.	<0.02	mg/lit	IS: 3025 Part-02 (2004)
14	Zinc as Zn	0.05	<5.0	mg/lit	IS: 3025 Part-02 (2004)
15	Barium	N.D.	<0.7	mg/lit	IS: 3025 Part-02 (2004)
16	Silver	N.D.	<0.1	mg/lit	IS: 3025 Part-02 (2004)
17	Chromium as Cr	BDL	< 0.05	mg/lit	IS: 3025 Part-02 (2004)
18	Sodium as Na	7.77	N.S.	mg/lit	IS: 3025 Part-02 (2004)
19	Potassium As K	5.1	N.S.	mg/lit	15: 3025 Part-02 (2004)
20	Cyanide as CN	N.D.	< 0.05	mg/lit	IS: 3025 Part-02 (2004)

Verified By - Eesha Wadzirkar **Quality Manager** 

Govt. Ahalyst Dr. Bikash Alch Managing Director ---End of Report---

Authorized By - Yadnesh Kesari Technical Manager

OTA

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ENalyse\*

	Test Report	REPORT NO- AB/NBS/11/2016-17/1251
	REPORT NO	AB/NBS/11/2016-17/1251
Name of Client & Address:	Sample Name	Project Site
NERVERSE WAS WORKNESS	Sample Collected By	Aavanira Biotech Pvt. Ltd.
M/s. Nira Bhima Sahakari Sakhar	Method for Sampling	
Karkhana Ltd.	Sample Type	Soil
Shahajinagar, Post- Redni,	Sample Collected On	03/11/2016
Tal. Indapur, DistPune,	Sample Received on	04/11/2016
Pin-413114.	Analysis Date	04/11/2016 to 10/11/2016
	Reporting Date	10/11/2016
Sample returned /stored	Stored at 4°C for 1 week	from the date of reporting

Sr. No.	Parameter	Result	Unit	Standard Method
		Physical P	arameter	
1	Moisture Content	18.0	percent	IS : 2720
2	Water Holding Capacity	54.0	percent	IS : 2720
	Sand	31.0		
3	Slit	45.0	percent	15:2720
	Clay	24.0		
4	Color	Brown	-	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
_		Chemical P	arameter	1
1	pH (1:5 Suspension)	8.48		C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
2	Conductivity	93.0	μS/cm	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
3	Organic Matter	1.1	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
4	Total Kjeldahl Nitrogen (as f	0.009	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
5	Total Nitrogen	368.67	mg/kg	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
6	Free Ammoniacal Nitrogen	BDL	%	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
		Elemental	Testing	
1	Potassium as k	0.008	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
2	Phosphorous	0.006	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
3	Calcium as Ca	2.31	%	APHA (Edition 22") 3120 B
4	Magnesium as Mg	0.26	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
5	Iron as Fe	11.0	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
6	Copper as Cu	0.37	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
7	Chromium	BDL	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B



#### Recognized by Ministry of Environment and Forest (MoEF), Govt. of India ISO 9001: 2008 and OHSAS18001: 2007 Certified Company REPORT NO- AB/NBS/11/2016-17/1251

8	Cadmium as Cd	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
9	Lead as Pb	BDL	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
10	Manganese as Mn	0.41	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
11	Zinc as Zn	0.68	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
12	Total Carbon	1.8	%	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
13	Boron	BDL	ppm	APHA (Edition 22 <sup>rd</sup> ) 3120 B
14	Molybdenum	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B

Verified By - Eesha Wadzirkar **Quality Manager** 

Govt. Analyst

Dr. Bikash Aich Managing Director ---End of Report---

Authorized By - Yadnesh Kesari **Technical Manager** 



Page 2 of 2

Aavanira Biotech (P)Ltd. Kinetic Innovation Park, D-1 Block, Plot No.-18/1 Part, MIDC Chinchwad, Pune 411019, Maharashtra, India. Tel.: 020 - 64100118 / 8308805200 
 E-mail : info@aavanira.com

 Web : www.aavanira.com CIN NO. U74900PN2010PTC137544



#### Recognized by Ministry of Environment and Forest (MoEF), Govt. of India ISO 9001: 2008 and OHSAS18001: 2007 Certified Company

ENalyse\*

	Test Report	REPORT NO- AB/NB5/11/2016-17/1252
	REPORT NO	AB/NB5/11/2016-17/1252
Name of Client & Address:	Sample Name	Devtekvasti
	Sample Collected By	Aavanira Biotech Pvt. Ltd.
M/s. Nira Bhima Sahakari Sakhar	Method for Sampling	-
Karkhana Ltd.	Sample Type	Soil
Shahajinagar, Post- Redni,	Sample Collected On	03/11/2016
Tal. Indapur, DistPune,	Sample Received on	04/11/2016
Pin-413114.	Analysis Date	04/11/2016 to 10/11/2016
	Reporting Date	10/11/2016
Sample returned /stored	Stored at 4°C for 1 week	k from the date of reporting

Sr. No.	Parameter	Result	Unit	Standard Method	
		Physical Pa	arameter		
1	Moisture Content	20.0	percent	IS: 2720	
2	Water Holding Capacity	43.0	percent	15:2720	
_	Sand	26.0			
3	Slit	51.0	percent	15:2720	
	Clay	23.0			
4	Color	Brown		C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800	
		Chemical P	arameter		
1	pH (1:5 Suspension)	7.31	-	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800	
2	Conductivity	76	μS/cm	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800	
3	Organic Matter	2.0	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800	
4	Total Kjeldahl Nitrogen (as N)	0.007	percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800	
5	Free Ammoniacal Nitrogen	BDL	%	C.A. Black, American Society of Agronomy S <sup>th</sup> Edition, 65-15800	
		Elementa	Testing		
1	Potassium as k	0.008	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B	
2	Phosphorous	0.005	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B	
3	Calcium as Ca	2.69	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B	
4	Magnesium as Mg	0.41	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B	
5	Iron as Fe	14.96	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B	
6	Copper as Cu	0.31	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B	
7	Chromium	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B	



#### Recognized by Ministry of Environment and Forest (MoEF), Govt. of India ISO 9001: 2008 and OHSAS18001: 2007 Certified Company REPORT NO- AB/NBS/11/2016-17/1252

8	Cadmium as Cd	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
9	Lead as Pb	BDL	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
10	Manganese as Mn	0.59	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
11	Zinc as Zn	0.68	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
12	Total Carbon	1.0	%	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65-15800
13	Boron	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
14	Molybdenum	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B

Verified By - Eesha Wadzirkar Quality Manager

Govt. Analyst Dr. Bikash Aich Managing Director ---End of Report---

Authorized By - Yadnesh Kesari **Technical Manager** 



Page 2 of 2



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Recognised by Ministry of Environment, Forest & Climate Change (MoEF) Govt. of India and ISO 9001 : 2008, ISO 14001: 2004 and OHSAS 18001 : 2007 Certified company.

		TEST CERTIFI	CATE	
Report No	o: GESEC/PRO/2017-18/05/311	Date of Rep	Date of Report	
Client Na	me and Address:	Date of San	npling	07/05/2017
M/s. Nira	aBhimaSahakariSakhar	Start Date of	of Analysis	08/05/2017
Karkhan	a Ltd.	End Date of	And the second sec	15/05/2017
Shahajin	agar ,Post-Redni,	Sample Det		Ambient Air
Tal-Indag	pur, Dist-Pune,	Sample Loc	a de la companya de la	Redni
Pin-4131	14.	Time of Sar	mpling	11:10
Sample C	ollected By	GESEC		
	Ал	nbient AirAnaly	sis Report	
Sr. No.	Parameter	Result	Unit(s)	NAAQ Standards
1. Am	nbient Temperature	31	°C	
2. Dry	y Bulb Temperature	31	"C	
3. We	et Bulb Temperature	26	°C	
4. Re	lative Humidity	72	% RH	
5. Sa	mpling Duration	1440	Min	
6. Sul	lphur Dioxide(SO <sub>2</sub> )	18.92	µg/M <sup>3</sup>	≤ 80
7. Ox	ides of Nitrogen(NO <sub>2</sub> )	28.42	µg/M <sup>3</sup>	≤ 80
8. Pa	articulate Matter PM <sub>10</sub> 46.58	46.58	μg/M <sup>3</sup>	≤ 100
(14) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	rticulate Matter PM2.5	21.68	μg/M <sup>3</sup>	≤ 60
9. Pa	receipte matter PM25			

Remark-

All above results are within National Ambient Air Quality standards.

BDL – Below Detectable Limit.

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Samples will be retained for a period of seven (7) days after completion of analysis, Longer retention periods can be arranged, on request of the customer, 4.

5. We strictly maintain the confidentiality of all test result of sample(s) collected by us/ supplied by customer and not revel to thrid party unless required by the statutory or legal requirement.



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		TEST CERTIFI	CATE		
Repo	rt No: GESEC/PRO/2017-18/05/312	Date of Rep	Date of Report		
Clien	t Name and Address:	Date of San	Date of Sampling		
M/s.	NiraBhimaSahakariSakhar	Start Date	of Analysis	08/05/2017	
Kark	hana Ltd.	End Date of		15/05/2017	
Shah	ajinagar ,Post-Redni,	Sample De	tails	Ambient Air	
Tal-I	ndapur, Dist-Pune,	Sample Loc	ation	Near Main Gate	
Pin-4	13114.	Time of Sar	mpling	11:30	
Samp	ole Collected By	GESEC	·····		
	Ar	nbient AirAnaly	sis Report		
Sr. No.	Parameter	Result	Unit(s)	NAAQ Standard	
1.	Ambient Temperature	32	°c		
2.	Dry Bulb Temperature	32	°C		
3.	Wet Bulb Temperature	27	°c		
4.	Relative Humidity	68	% RH		
5.	Sampling Duration	1440	Min		
6.	Sulphur Dioxide(SO <sub>2</sub> )	16.54	μg/M <sup>3</sup>	≤ 80	
7.	Oxides of Nitrogen(NO <sub>2</sub> )	21.92	μg/M <sup>1</sup>	≤ 80	
8.	Particulate Matter PM10	39.68	μg/M <sup>3</sup>	≤ 100	

µg/M<sup>3</sup>

mg/M<sup>3</sup>

10. Carbon Monoxide (CO) Remark-

9.

All above results are within National Ambient Air Quality standards.

BDL – Below Detectable Limit.

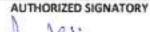
Particulate Matter PM25

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14.25

1.16



≤ 60

 $\leq 04(1 \text{ Hr})$ 

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		<b>TEST CERTIFI</b>	CATE	
Repo	rt No: GESEC/PRO/2017-18/05/313	Date of Rep	port	15/05/2017
Clier	nt Name and Address:	Date of San	npling	07/05/2017
M/s.	NiraBhimaSahakariSakhar	Start Date	of Analysis	08/05/2017
Kark	hana Ltd.	End Date of	at the base of the second s	15/05/2017
Shah	najinagar ,Post-Redni,	Sample Del		Ambient Air
Tal-I	ndapur, Dist-Pune,	Sample Loc	100000000000000000000000000000000000000	Devtekvasti
Pin-4	413114.	Time of Sar	mpling	11:43
Samp	ole Collected By	GESEC		
	Am	bient AirAnaly	sis Report	
Sr. No.	Parameter	Result	Unit(s)	NAAQ Standards
1.	Ambient Temperature	33	°C	
2.	Dry Bulb Temperature	33	°C	
3.	Wet Bulb Temperature	28	"C	
4.	Relative Humidity	68	% RH	
5.	Sampling Duration	1440	Min	
6.	Sulphur Dioxide(SO <sub>2</sub> )	16.42	µg/M <sup>3</sup>	≤ 80
7.	Oxides of Nitrogen(NO <sub>2</sub> )	23.15	μg/M <sup>3</sup>	≤ 80
8.	Particulate Matter PM <sub>10</sub>	41.28	μg/M <sup>3</sup>	≤ 100
9.	Particulate Matter PM <sub>2.5</sub>	19.92	μg/M <sup>3</sup>	≤ 60
10.	Carbon Monoxide (CO)	0.95	mg/M <sup>3</sup>	≤ 04(1 Hr)

#### Remark-

All above results are within National Ambient Air Quality standards. >

1 BDL - Below Detectable Limit.

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		TEST CERTIFI	CATE	
Repo	rt No: GESEC/PRO/2017-18/05/314	Date of Rep	port	15/05/2017
Clier	nt Name and Address:	Date of San	npling	07/05/2017
M/s.	NiraBhimaSahakariSakhar	Start Date	of Analysis	08/05/2017
Kark	hana Ltd.	End Date of	f Analysis	15/05/2017
Shah	ajinagar ,Post-Redni,	Sample Loc		Boiler House
Tal-I	ndapur, Dist-Pune,	Sample Det	tails	Work zone Air
Pin-4	413114	Time of Sar	mpling	12:20
Sam	ole Collected By	GESEC		
	Wo	ork Zone Air Anal	ysis Report	
Sr. No.	Parameter	Result	Unit(s)	The Factories Act 1948 standards
1.	Ambient Temperature	29	°c	
2.	Dry Bulb Temperature	29	°C	
з,	Wet Bulb Temperature	24	°C	
4.	Relative Humidity	51	% RH	
5,	Sampling Duration	15	Min	
6.	Sulphur Dioxide(SO <sub>2</sub> )	0.23	mg/M <sup>3</sup>	≤ 10
7.	Oxides of Nitrogen(NO <sub>2</sub> )	0.40	mg/M <sup>3</sup>	≤ 10
8.	Suspended Particulate Matter(SPM)	49.64	μg/M <sup>3</sup>	N.S.
9.	Respirable Suspended Particulate Matter(RSPM)	30.10	μg/M³	N.S.
10.	Carbon Monoxide (CO)	8.00	mg/M <sup>3</sup>	≤ 440

Remark-

All above results are well within The Factories Act, 1948 Standards.  $\mathbf{\tilde{r}}$ 

N.S.: - Not Specified

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<sup>5.</sup> We structly matrice matrice the confidentiality of all test result of sample(s) collected by usy supplied by assomer and not revel to third party unless required by the statutory or legal requirement.



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		TEST CERTIF	CATE	
Repo	rt No: GESEC/PRO/2017-18/05/315	Date of Re	port	15/05/2017
Clier	nt Name and Address:	Date of Sar	mpling	07/05/2017
M/s.	NiraBhimaSahakariSakhar	Start Date	of Analysis	08/05/2017
Kark	hana Ltd.	End Date o	f Analysis	15/05/2017
Shah	ajinagar ,Post-Redni,	Sample Loo	and and the second s	Sugar Godown
Tal-I	ndapur, Dist-Pune,	Sample De	tails	Work zone Air
Pin-4	413114	Time of Sa	mpling	1:20
Samp	ole Collected By	GESEC		
	Wo	ork Zone Air Ana	ysis Report	
Sr. No.	Parameter	Result	Unit(s)	The Factories Act 1948 standards
1.	Ambient Temperature	28	°C	
2.	Dry Bulb Temperature	28	°C	1
3.	Wet Bulb Temperature	23	°c	
4.	Relative Humidity	54	% RH	1
5.	Sampling Duration	15	Min	
6.	Sulphur Dioxide(SO <sub>2</sub> )	0.20	mg/M <sup>3</sup>	≤ 10
7.	Oxides of Nitrogen(NO <sub>2</sub> )	0.35	mg/M <sup>3</sup>	≤ 10
8.	Suspended Particulate Matter(SPM)	50.13	µg/M <sup>3</sup>	N.S.
9.	Respirable Suspended Particulate Matter(RSPM)	40.41	μg/M <sup>3</sup>	N.S.
10.	Carbon Monoxide (CO)	6.00	mg/M <sup>3</sup>	s 440

#### Remark-

All above results are well within The Factories Act, 1948 Standards. ¥

¥ N.S.: - Not Specified

ANALYZED BY-

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	TEST CERTIFICATE	
Report No: GESEC/PRO/2017-18/05/316	Date of Report	15/05/2017
Client Name and Address:	Date of Sampling	07/05/2017
M/s. NiraBhimaSahakariSakhar Karkhana Ltd. Shahajinagar ,Post-Redni, Tal-Indapur, Dist-Pune, Pin-413114	Sample Details	Ambient Noise
Sample Collected By	GESEC	

Sr. No.	Location	Result dB(A) Day	Result dB(A) Night	CPCB Standards dB(A)
1.	Redni	51.5	42.7	
2.	Devtekvasti	53.1	44.2	55/45
3.	Near Main Gate	54.6	44.8	

#### Remark-

Maharashtra Pollution control board prescribed 55 dB(A) as an upper limit of noise level during day time. and 45 dB(A) as an upper limit of noise level during at night time for residential Area.

¥ All aboveresults are within the prescribed limit by MPCB.



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		Т	EST CERTIFICAT	Έ	
Report	Report No: GESEC/PRO/2017-18/05/317		Date of Report		15/05/2017
Client Name and Address: M/s. NiraBhimaSahakariSakhar Karkhana Ltd. Shahajinagar ,Post-Redni, Tal-Indapur, Dist-Pune, Pin-413114		Date of Sampling		07/05/2017	
		Sample Details		Work Zone Noise	
Sample Collected By			GESEC		
		Work zone	Noise Monitor	ing Report	
Sr.		Result dB(A)	Result dB(A)		The Factories Act 1948,

No.	Location	Day	Night	Unit	standards
1.	Sugar Godown	68.5	61.0	dB(A)	100
2.	Boiler House	85.8	77.2	dB(A)	≤90

#### Remark-

The Factories Act, 1948, has prescribed 90 dB (A) as an upper limit of noise level for 8 hours exposure.

2

All aboveresults are within the prescribed limit by The Factories Act 1948.

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			ST CERTIFICAT	E	
Repo	rt No: GESEC/PRO/2017-18/05	/318	Date of Report		15/05/2017
2020	t Name and Address:	Date of Sampling		07/05/2017	
M/s. NiraBhimaSahakariSakhar Karkhana Ltd. Shahajinagar ,Post-Redni, Tal-Indapur, Dist-Pune, Pin-413114			Start Date of An	i pite kan pite kan in d	08/05/2017
			End Date of Ana	lysis	15/05/2017
			Sample Details		Within plant from source
			Nature of sampl	e	Liquid
Samp	ele Collected By		GESEC		
		WATER	ANALYSIS RE	PORT	
Sr. No.	Parameter	Result	Limits as per Is 10500:2012	Unit(s)	Standard Method
		P	hysical Parameter	<u>.</u>	//
1	Turbidity	0.43	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)
2	TSS	11.4	N.S.	mg/lit	IS: 3025 Part-14 (R.A : 2006)
3	TDS	354.0	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)
4	Temperature	24.2		"C	IS: 3025 Part-15 (R.A : 2006)
5	Colour	<5	<5	Hazen	IS: 3025 Part-12 (R.A : 2006)
		Ch	emical Parameter	2	
1	рН	7.0	6.5-8.5	- 22	IS: 3025 Part-11 (R.A : 2002)
2	E. Conductivity	471	N.S	μS/cm	IS: 3025 Part-14 (R.A : 2002)
З,	Total Hardness as CaCO <sub>3</sub>	166.0	<200	mg/lit	IS: 3025 Part-16 (R.A : 2006)
4	Total Alkalinity as CaCO3	156.3	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)
5	Chloride as Cl	21.45	250	mg/lit	IS: 3025 Part-32 (R.A : 2003)
6	Sulphate as SO4	26.58	<200	mg/lit	APHA :22 <sup>nd</sup> edition -(4500- SO4 <sup>2</sup>
7	Residual chlorine	BDL	>0.2	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-Cl B)
8	Nitrate as NO3	0.52	<45	mg/lit	APHA :22 <sup>nd</sup> edition -(4500- NO <sub>3</sub> <sup>2</sup> B)
9	Fluoride as F	0.04	<1.0	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-F F)
10	Sulphide	N.D	N.S.	mg/lit	IS: 3025 Part-02 (2004)
11.	Phenolic Compound as	N.D	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)
12.	Dissolved Oxygen	2.4	N.5	mg/lit	IS: 3025 Part-02 (2004)
13.	Oil & Grease	BDL	N.5	mg/lit	IS: 3025 Part-02 (2004)
14.	Ammonical Nitrogen	0.021	N.S	mg/lit	IS: 3025 Part-02 (2004)
15.	Free Ammonia	N.D	N.S	mg/lit	IS: 3025 Part-02 (2004)
16.	Total Kjeldhal Nitrogen	0.012	N.5	mg/lit	15: 3025 Part-02 (2004)

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We strictly maintain the confidentiality of all test result of sample(s) collected by us/ supplied by customer and not revel to third party unless required to the structure of legal requirement. 5.



Survey No-1405/06, Mayuri Residency, Shop No-16, 2nd Floor, Sanaswadi, Tal-Shirur, Pune-412208. GREEN ENVIROSAFE Mob-+91 9545084620 | E-mail.gesec12@gmail.com | www.greenenvirosale.com Engineers & Consultant Pvt Ltd. CIN No. : U74900PN2013PTC149666

Recognised by Ministry of Environment, Forest & Climate Change (MoEF) Govt. of India and ISO 9001 : 2008, ISO 14001: 2004 and OHSAS 18001 : 2007 Certified company.

1.	Aluminium as Al	N.D	<0.03	mg/lit	IS: 3025 Part-02 (2004)
2.	Arsenic as As	N.D	<0.01	mg/lit	IS: 3025 Part-02 (2004)
3.	Boron as B*	N.D	<0.5	mg/lit	IS: 3025 Part-02 (2004)
4.	Calcium as Ca	33.65	<75	mg/lit	IS: 3025 Part-02 (2004)
5.	Cadmium as Cd	BDL	<0.003	mg/lit	IS: 3025 Part-02 (2004)
6.	Iron as Fe	0.04	<0.3	mg/lit	IS: 3025 Part-02 (2004)
7.	Mercury as Hg	N.D	<0.001	mg/lit	IS: 3025 Part-02 (2004)
8.	Lead as Pb	BDL	<0.01	mg/lit	IS: 3025 Part-02 (2004)
9.	Selenium as Se	N.D	<0.01	mg/lit	IS: 3025 Part-02 (2004)
10.	Copper as Cu	BDL	<0.05	mg/lit	IS: 3025 Part-02 (2004)
11.	Manganese as Mn	BDL	<0.1	mg/lit	IS: 3025 Part-02 (2004)
12.	Magnesium as Mg	0.0011	<30	mg/lit	IS: 3025 Part-02 (2004)
13.	Nickel	N.D	<0.2	mg/lit	IS: 3025 Part-02 (2004)
14.	Zinc as Zn	0.01	<5.0	mg/lit	15: 3025 Part-02 (2004)
15.	Barium	N.D	<0.7	mg/lit	IS: 3025 Part-02 (2004)
16	Silver	N.D	<0.1	mg/lit	IS: 3025 Part-02 (2004)
17.	Chromium as Cr	BDL	<0.05	mg/lit	IS: 3025 Part-02 (2004)
18.	Sodium as Na	9.9	N.S	mg/lit	IS: 3025 Part-02 (2004)
19.	Potassium As K	1.2	N.5	mg/lit	IS: 3025 Part-02 (2004)
20.	Cyanide as CN	N.D	<0.05	mg/lit	IS: 3025 Part-02 (2004)

#### Remark(s): All above results OF Water Sample is chemically potable with respect to above parameters.

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#### Terms and conditions

- The report is refer only to the sample tested and not applies to the bulk. 1.
- The results shown in this test report may differ based on various factors including temperature, humidity, pressure, retention time etc. 2.
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		TE	ST CERTIFICAT	E	
Repo	rt No: GESEC/PRO/2017-18/05	/319	Date of Report		15/05/2017
Client Name and Address: M/s. NiraBhimaSahakariSakhar Karkhana Ltd.		Date of Samplin	B	07/05/2017	
		Start Date of An	and the second	08/05/2017	
		End Date of Ana	lysis	15/05/2017	
	ajinagar ,Post-Redni,		Sample Details		Bhodani
	al-Indapur, Dist-Pune, Pin-413114		Nature of sampl	e	Liquid
Samp	ole Collected By	GESEC			
		WATER	ANALYSIS RE	PORT	
Sr. Parameter Result		Limits as per ls 10500:2012	Unit(s)	Standard Method	
		P	ysical Parameter		
1	Turbidity	0.68	<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)
2	TSS	13.6	N.S.	mg/lit	IS: 3025 Part-14 (R.A : 2006)
3	TDS	448	<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)
4	Temperature	24.1		°C	IS: 3025 Part-15 (R.A : 2006)
5	Colour	<5	<5	Hazen	IS: 3025 Part-12 (R.A : 2006)
_		Ch	emical Parameter		
1	рН	7.1	6.5-8.5		IS: 3025 Part-11 (R.A : 2002)
2	E. Conductivity	552	N.S	µS/cm	IS: 3025 Part-14 (R.A : 2002)
з.	Total Hardness as CaCO3	186.0	<200	mg/lit	IS: 3025 Part-16 (R.A : 2006)
4	Total Alkalinity as CaCO3	143.6	<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)
5	Chloride as Cl	22.8	250	mg/lit	IS: 3025 Part-32 (R.A : 2003)
6	Sulphate as SO4	31.4	<200	mg/lit	APHA :22** edition -(4500- SO42 E
7	Residual chlorine	BDL	>0.2	mg/lit	APHA :22 <sup>#d</sup> edition -(4500-Cl B)
8	Nitrate as NO1	0.56	<45	mg/lit	APHA :22 <sup>1d</sup> edition -(4500- NO <sub>3</sub> <sup>2-</sup> B)
9	Fluoride as F	0.042	<1.0	mg/lit	APHA :22*dedition -(4500-F F)
10	Sulphide	N.D	N.S.	mg/lit	IS: 3025 Part-02 (2004)
11.	Phenolic Compound as	N.D	<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)
12.	Dissolved Oxygen	2.3	N.S	mg/lit	IS: 3025 Part-02 (2004)
13.	Oil & Grease	BDL	N.S	mg/lit	IS: 3025 Part-02 (2004)
14.	Ammonical Nitrogen	0.02	N.S	mg/lit	IS: 3025 Part-02 (2004)
15.	Free Ammonia	N.D	N.S	mg/lit	IS: 3025 Part-02 (2004)
16.	Total Kjeldhal Nitrogen	0.013	N.S	mg/lit	IS: 3025 Part-02 (2004)

#### Terms and conditions

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1.	Aluminium as Al	N.D	<0.03	mg/lit	IS: 3025 Part-02 (2004)
2.	Arsenic as As	N.D	<0.01	mg/lit	IS: 3025 Part-02 (2004)
З.	Boron as B*	N.D	<0.5	mg/lit	IS: 3025 Part-02 (2004)
4.	Calcium as Ca	31,6	<75	mg/lit	IS: 3025 Part-02 (2004)
S.	Cadmium as Cd	BDL	<0.003	mg/lit	15: 3025 Part-02 (2004)
6.	Iron as Fe	0.044	<0.3	mg/lit	IS: 3025 Part-02 (2004)
7.	Mercury as Hg	N.D	<0.001	mg/lit	IS: 3025 Part-02 (2004)
8.	Lead as Pb	BDL	<0.01	mg/lit	IS: 3025 Part-02 (2004)
9.	Selenium as Se	N.D	<0.01	mg/lit	IS: 3025 Part-02 (2004)
10.	Copper as Cu	BDL	<0.05	mg/lit	IS: 3025 Part-02 (2004)
11.	Manganese as Mn	BDL	<0.1	mg/lit	IS: 3025 Part-02 (2004)
12.	Magnesium as Mg	0.001	<30	mg/lit	15: 3025 Part-02 (2004)
13.	Nickel	N.D	<0.2	mg/lit	15: 3025 Part-02 (2004)
14.	Zinc as Zn	0.01	<5.0	mg/lit	IS: 3025 Part-02 (2004)
15.	Barium	N.D	<0.7	mg/lit	IS: 3025 Part-02 (2004)
16	Silver	N.D	<0.1	mg/lit	IS: 3025 Part-02 (2004)
17.	Chromium as Cr	BDL	<0.05	mg/lit	IS: 3025 Part-02 (2004)
18.	Sodium as Na	9.8	N.S	mg/lit	IS: 3025 Part-02 (2004)
19.	Potassium As K	1.3	N.S	mg/lit	IS: 3025 Part-02 (2004)
20.	Cyanide as CN	N.D	<0.05	mg/lit	15: 3025 Part-02 (2004)

Remark(s): All above resultsof Water Sample is chemically potable with respect to above parameters.

ANALYZED BY-

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#### Terms and conditions

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- e. Samples will be retained for a period of seven (7) days after completion of analysis. Longer retention periods can be arranged, on request of the customer

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		TE	EST (	CERTIFICAT	E	
Repo	rt No: GESEC/PRO/2017-18/05,	/320	Da	te of Report		15/05/2017
Clien	nt Name and Address:		Da	te of Sampling	8	07/05/2017
M/s.	NiraBhimaSahakariSakhar		Sta	rt Date of Ana	lysis	08/05/2017
Karkhana Ltd.			d Date of Anal	ysis	15/05/2017	
Shah	Shahajinagar ,Post-Redni,		Sar	mple Details		Shahajinagar
Fal-Indapur, Dist-Pune, Pin-413114		Na	ture of sample	•	Liquid	
Sample Collected By			GE	SEC		
		WATE	RAN	ALYSIS REP	PORT	
Sr.	In the Decision of the local sector of the loc			Limits as	ne or territori	
No.	Parameter	Result		per ls 10500:2012	Unit(s)	Standard Method
		P	hysic	al Parameter		
1	Turbidity	0.49		<1.0	NTU	IS: 3025 Part-10 (R.A : 2002)
2	TSS	15.6		N.S.	mg/lit	IS: 3025 Part-14 (R.A : 2006)
з	TDS	466		<500	mg/lit	IS: 3025 Part-16 (R.A : 2006)
4	Temperature	24.0		++	°C	IS: 3025 Part-15 (R.A : 2006)
5	Colour	<5		<5	Hazen	IS: 3025 Part-12 (R.A : 2006)
_		C	hemi	cal Parameter		
1	рН	7.3		6.5-8.5		IS: 3025 Part-11 (R.A : 2002)
2	E. Conductivity	582		N.S	µS/cm	IS: 3025 Part-14 (R.A : 2002)
З.	Total Hardness as CaCO3	176.0	-	<200	mg/lit	IS: 3025 Part-16 (R.A : 2006)
4	Total Alkalinity as CaCO <sub>3</sub>	133.6		<200	mg/lit	IS: 3025 Part-23 (R.A : 2003)
5	Chloride as Cl	25.8		250	mg/lit	IS: 3025 Part-32 (R.A : 2003)
6	Sulphate as SO4	32.6		<200	mg/lit	APHA :22 <sup>nd</sup> edition -(4500- SO4 <sup>2</sup> E
7	Residual chlorine	BDL		>0.2	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-CI B)
8	Nitrate as NO <sub>2</sub>	0.51		<45	mg/lit	APHA :22 <sup>nd</sup> edition -(4500- NO <sub>3</sub> <sup>2-</sup> B
9	Fluoride as F	0.042	3 - 1	<1.0	mg/lit	APHA :22 <sup>nd</sup> edition -(4500-F F)
10	Sulphide	N.D		N.S.	mg/lit	IS: 3025 Part-02 (2004)
11.	Phenolic Compound as	N.D		<0.001	mg/lit	IS: 3025 Part-43 (R.A : 2003)
12.	Dissolved Oxygen	2.1		N.S	mg/lit	IS: 3025 Part-02 (2004)
13.	Oil & Grease	BDL		N.S	mg/lit	IS: 3025 Part-02 (2004)
14.	Ammonical Nitrogen	0.021		N.S	mg/lit	IS: 3025 Part-02 (2004)
15.	Free Ammonia	N.D		N.5	mg/lit	IS: 3025 Part-02 (2004)
16.	Total Kjeldhal Nitrogen	0.011	120.030	N.S	mg/lit	IS: 3025 Part-02 (2004)
		E	leme	ntal Analysis		
1.	Aluminium as Al	N.D		<0.03	mg/lit	15: 3025 Part-02 (2004)

#### Terms and conditions

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4.

The test report cannot be reproduced wholly or in part and cannot be used for promotional or publicity purpose without the entities convect of laboratory, Gtspc. H ENVIROS Samples will be rotained for a period of seven (7) days after completion of analysis. Longer rotention periods can be arranged, on request of the customer. We strictly maintain the confidentiality of all test result of sample(s) collected by us/ supplied by outsomer and not revel to third party unless required the structury or legal requirement. 5. legal requirement.

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2.	Arsenic as As	N.D	<0.01	mg/lit	IS: 3025 Part-02 (2004)
3.	Boron as B*	N.D	<0.5	mg/lit	IS: 3025 Part-02 (2004)
4.	Calcium as Ca	32.4	<75	mg/lit	IS: 3025 Part-02 (2004)
5.	Cadmium as Cd	BDL	<0.003	mg/lit	IS: 3025 Part-02 (2004)
б.	Iron as Fe	0.041	<0.3	mg/lit	15: 3025 Part-02 (2004)
7.	Mercury as Hg	N.D	<0.001	mg/lit	IS: 3025 Part-02 (2004)
8.	Lead as Pb	BDL	<0.01	mg/lit	IS: 3025 Part-02 (2004)
9.	Selenium as Se	N.D	<0.01	mg/lit	IS: 3025 Part-02 (2004)
10.	Copper as Cu	BDL	<0.05	mg/lit	IS: 3025 Part-02 (2004)
11.	Manganese as Mn	BDL	<0.1	mg/lit	IS: 3025 Part-02 (2004)
12.	Magnesium as Mg	0.001	<30	mg/lit	IS: 3025 Part-02 (2004)
13.	Nickel	N,D	<0.2	mg/lit	IS: 3025 Part-02 (2004)
14.	Zinc as Zn	0.01	<5.0	mg/lit	15: 3025 Part-02 (2004)
15.	Barium	N.D	<0.7	mg/lit	IS: 3025 Part-02 (2004)
16	Silver	N.D	<0.1	mg/lit	IS: 3025 Part-02 (2004)
17.	Chromium as Cr	8DL	<0.05	mg/lit	IS: 3025 Part-02 (2004)
18.	Sodium as Na	10.8	N,S	mg/lit	IS: 3025 Part-02 (2004)
19.	Potassium As K	1.5	N.S	mg/lit	IS: 3025 Part-02 (2004)
20.	Cyanide as CN	N.D	<0.05	mg/lit	IS: 3025 Part-02 (2004)

Remark(s): All above results of Water Sample is chemically potable with respect to above parameters.

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AUTHORIZED SIGNATORY-

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#### Terms and conditions

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  - Samples will be retained for a period of seven (7) days after completion of an alysis. Longer retaintion periods can be arranged, on request of the nastomer

<sup>5.</sup> We strictly maintain the confidentiality of all test result of sample(s) collected by us/ supplied by customer and not revel to third party unless required by the statisticity or legal requirement.



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		TEST CERT	TIFICATE				
Repor	t No: GESEC/PRO/2017-18/05/321	Date of	Report	15/05/2017			
Client Name and Address: M/s. NiraBhimaSahakariSakhar			Sampling	07/05/2017			
		the second se	te of Analysis	08/05/2017			
	ana Ltd.	the second se	e of Analysis	15/05/2017			
	ajinagar ,Post-Redni,	Sample	Details	Project site			
	dapur, Dist-Pune, 13114	Nature	Nature of sample Solid				
Sampl	le Collected By	GESEC					
		SOIL ANALYS	IS REPORT				
Sr. No.	Parameter	Result	Unit(s)	Standard Method			
		Physical Pa	rameter				
1.	Moisture Content	15.0	percent	IS : 2720			
2.	Water Holding Capacity	52.0	percent	IS : 2720			
	Sand	25					
3.	Slit	49	percent	IS : 2720			
	Clay	26					
	Color	Brown		C.A. Black, American Society o Agronomy 5 <sup>th</sup> Edition, 65-1580			
Chemi	ical Parameter						
1.	pH (1:5 Suspension)	8.67		C.A. Black, American Society o Agronomy 5 <sup>th</sup> Edition, 65-1580			
2.	Conductivity	81.0	µS/cm	C.A. Black, American Society o Agronomy 5 <sup>th</sup> Edition, 65-1580			
з.	Organic Matter	1.5	percent	C.A. Black, American Society o Agronomy 5 <sup>th</sup> Edition, 65-1580			
4.	Total Kjeldahl Nitrogen (as N	0.008	percent	C.A. Black, American Society o Agronomy 5 <sup>th</sup> Edition, 65-1580			
5.	Total Nitrogen	350.25	mg/kg	C.A. Black, American Society o Agronomy 5 <sup>th</sup> Edition, 65-1580			
6.	Free Ammoniacal Nitrogen	BDL	%				
		Elemental	Testing				
1.	Potassium as k	0.042	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B			
2.	Phosphorous	0.082	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B			
з.	Calcium as Ca	1.63	%	APHA (Edition 22nd) 3120 B			
4.	Magnesium as Mg	0.21	%	APHA (Edition 22nd) 3120 B			
5.	Iron as Fe	BDL	Ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B			
б.	Copper as Cu	0.30	Ppm				

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ANALYZ	TED BY-			AUTHORIZED SIGNATOR
15.	Molybdenum	BDL	Ppm	APHA (Edition 22"d) 3120 B
14.	Humic Acid	0.18	%	
13.	Boron	BDL	Ppm	APHA (Edition 22") 3120 B
12,	Total Carbon	. 1.2	%	C.A. Black, American Society o Agronomy 5 <sup>th</sup> Edition, 65-1580
11.	Zinc as Zn	0.60	Ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
10.	Manganese as Mn	0.30	Ppm	APHA (Edition 22 <sup>sd</sup> ) 3120 B
9.	Lead as Pb	BDL	%	APHA (Edition 22 <sup>rd</sup> ) 3120 B
8.	Cadmium as Cd	BDL	Ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
7.	Chromium	BDL	Ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B



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		TEST CE	RTIFICAT	E		
	t No: GESEC/PRO/2017-18/05/322	Date	of Report		15/05/2017	
Client Name and Address: M/s. NiraBhimaSahakariSakhar Karkhana Ltd.			of Samplin	g	07/05/2017	
			Date of An	rel status and an annual second	08/05/2017	
100-100		and the second se	Date of Ana	lysis	15/05/2017	
Shahajinagar ,Post-Redni,			ple Details		Devtekvasti	
	idapur, Dist-Pune, 13114	Natu	re of sampl	e	Solid	
Sampl	le Collected By	GESE	c			
		SOIL ANAL	YSIS REPO	ORT		
Sr. No.	Parameter	Resul	t	Unit(s)	Standard Method	
		Physical	Parameter			
1.	Moisture Content	21.0		percent	15:2720	
2.	Water Holding Capacity	49.0		percent	IS: 2720	
	Sand					
з.	Slit	50		percent	IS : 2720	
	Clay	20			C.A. Black, American Societ	
	Color	Brown	n		C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65- 15800	
hemi	ical Parameter				and a state of the	
1.	pH (1:5 Suspension)	7.17		-	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65- 15800	
2.	Conductivity	71.0		µS/cm	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65- 15800	
3.	Organic Matter	2.5		percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65- 15800	
4.	Totai Kjeldahl Nitrogen (as N	0.015		percent	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65- 15800	
5.	Free Ammoniacal Nitrogen	BDL		%		
		Element	al Testing			
1,	Potassium as k	0.010		%	APHA (Edition 22 <sup>nd</sup> ) 3120 B	
2.	Phosphorous	0.015		%	APHA (Edition 22 <sup>nd</sup> ) 3120 B	
З,	Calcium as Ca	2.90		%	APHA (Edition 22 <sup>rd</sup> ) 3120 B	
4.	Magnesium as Mg	0.56		%	APHA (Edition 22 <sup>nd</sup> ) 3120 B	

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5. We strictly maintain the confidentiality of all test result of sample(s) collected by us/ supplied by fustomer and with tovel to tkird party unless required by the statutory or logal requirement. 100

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Survey No-1405/06, Mayun Residency, Shop No-16, 2nd Floot Sanaswadi, Tal-Shirur, Pune-412208. GREEN ENVIROSAFE Mob-+91 9545084620 | E-mail:gesec12@gmail.com | www.greenenvirosate.com Engineers & Consultant Pvt Ltd. CIN No. : U74900PN2013PTC1499666

Recognised by Ministry of Environment, Forest & Climate Change (MoEF) Govt. of India and ISO 9001 : 2006, ISO 14001: 2004 and OHSAS 18001 : 2007 Centilied company.

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15.	Molybdenum	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
14.	Humic Acid	0.10	%	
13.	Boron	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
12.	Total Carbon	1.8	%	C.A. Black, American Society of Agronomy 5 <sup>th</sup> Edition, 65- 15800
11.	Zinc as Zn	0.45	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
10.	Manganese as Mn	0.75	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
9.	Lead as Pb	BDL	%	APHA (Edition 22 <sup>nd</sup> ) 3120 B
8.	Cadmium as Cd	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
7.	Chromium	BDL	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
6.	Copper as Cu	0.15	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B
5.	Iron as Fe	21,2	ppm	APHA (Edition 22 <sup>nd</sup> ) 3120 B

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			T CERTIFICATI	E	
	ort No: GESEC/PRO/2017-18/05/3	323	Date of Report		15/05/2017
Client Name and Address:			Date of Sampling	5	07/05/2017
		Start Date of Ana		08/05/2017	
	김 양성 방송 방송 지원 호텔들이 없는 것 같아요.		End Date of Anal	the second se	15/05/2017
Shahajinagar ,Post-Redni, Tal-Indapur, Dist-Pune,			Sample Location		Sugar Stack
		1	Sample Details	4	Stack
Pin-413114 Sample Collected By			Time of Sampling GESEC	3	2:15
Joint		ourro Emi		0	
	3	ource Emi	ssion Analysis	and the second	
Sr. No.	Parameter	Result	Unit(s)	Limits As Per MPCB Consent	Standard Method
1.	Material of Stack	MS			
2.	Stack Height from G.L.	66.0	Mtr.		
3.	Type of Stack	Round	-		
4.	Sampling Duration	30	Min,		
5.	Flue Gas Temperature	412	°K		
6.	Differential Pressure	1.6	mmWG		
7.	Velocity	4.88	M/s		
8.	Dimensions of Stack	3.4	Mtr.		
9,	Stack Area	9.0746	M <sup>2</sup>		
10.	Gas Volume	115207.99	NM <sup>3</sup> /Hr		
11.	Total Particulate Matter(TPM)	98.12	mg/NM <sup>8</sup>	≤ 150	IS:11255(Part 1)-1985
12.	Sulphur Dioxide (SO2)	44.25	mg/NM <sup>3</sup>	-	15-11-255 (0+++-2) + 2005
13.	Sulphur Dioxide (SO <sub>2</sub> )	122.3	Kg/day	1	IS:11255(Part 2)-1985
14.	Oxide of Nitrogen (NO <sub>x</sub> )	183.2	mg/NM <sup>3</sup>	-	IS:11255(Part 7)-1985
15.	Carbon Monoxide (CO)	16.1	mg/NM <sup>3</sup>		Manual Instruction
	Domoskish	1	and the second sec		

#### Remark(s):

ADIAN

 $\geq$ All above results are well within MPCB Limit.

7 N.S.: - Not Specified

ANALYZED BY-

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- 2 The results shown in this test report may differ based on various factors including temperature, humidity, pressure, retention time etc.
  - The test report cannot be reproduced wholly or in part and cannot be used for promotional or publicity purpose without the written consent of laboratory, GESEC.
- Samples will be retained for a period of seven (7) days after completion of analysis. Lotger rotention periods can be emarged, on request of the customer. 4.
- 5. We strictly maintain the coefidentiality of all test result of sample(s) collected by us/ supplied by contomer and not revel to third party unless required by the statutory or legal requirement.

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		TES	T CERTIFICATE		
Repo	rt No: GESEC/PRO/2017-18/05/3	24	Date of Report		15/05/2017
Client Name and Address:			Date of Sampling	07/05/2017	
Karkhana Ltd. Shahajinagar ,Post-Redni,		Start Date of Ana	and the second s	08/05/2017	
		End Date of Analy	rsis	15/05/2017	
		Sample Location		Cogen Stack	
	ndapur, Dist-Pune,		Sample Details		Stack
	413114	Time of Sampling		3:05	
samp	ble Collected By	auna Fred	GESEC	Depart	
	50	burce Emi	ssion Analysis	and the second se	1
Sr. No.	Parameter	Result	Unit(s)	Limits As Per MPCB Consent	Standard Method
1.	Material of Stack	MS	-		
2.	Stack Height from G.L.	75.0	Mtr.		
З.	Type of Stack	Round			
4.	Sampling Duration	30	Min.		
5.	Flue Gas Temperature	425	°K		
б.	Differential Pressure	1.4	mmWG		
7.	Velocity	4.63	M/s		
8.	Dimensions of Stack	3.7	Mtr.		
9.	Stack Area	10.7467	M2		
10.	Gas Volume	125656.9	NM <sup>3</sup> /Hr		
11.	Total Particulate Matter(TPM	97.68	mg/NM <sup>3</sup>	≤ 150	IS:11255(Part 1)-1985
12.	Sulphur Dioxide (SO <sub>2</sub> )	56.6	mg/NM <sup>3</sup>	-	16:41:255(0-+-2) 1000
13.	Sulphur Dioxide (SO <sub>2</sub> )	146.20	Kg/day	-	IS:11255(Part 2)-1985
14.	Oxide of Nitrogen (NO <sub>x</sub> )	190.5	mg/NM <sup>3</sup>	-	IS:11255(Part 7)-1985
15.	Carbon Monoxide (CO)	13.2	mg/NM <sup>3</sup>	-	Manual Instruction

#### Remark(s):

Allan

- All above results are well within MPCB Limit.
- N.S.: Not Specified

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- The test report cannot be reproduced wholly or in part and cannot be used for promotional or publicity purpose without the written consent of laboratory, GESEC. 3.

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- 4.1 Samples will be ratained for a period of seven (7) days after completion of analysis. Langer retention periods can be arranged, on request of the customer.
- 5. We strictly maintain the confidentiality of all test result of sample(s) collected by usy supplied by customer and not revel to third party unless required by the statutory or logal requirement.

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ATLIG.

A Copy of EC Letter (SEAC-2012/CR-177/TC-2) For "Nira Bhima Sahakari Sakhar Karkhana Ltd" At shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune

#### Government of Maharashtra

SEAC-2012/CR-177/TC2 Environment department Room No. 217, 2<sup>nd</sup> floor, Mantralaya Annexe, Mumbai- 400 032, Dated; 21<sup>st</sup> January, 2014

To, M/s, Nira Bhima Sahakari Sakhar Karkhana Ltd Shahajinagar, Post- Redni, Tal, Indapur, Dist.-Pune- 4131114

Subject: Environmental clearance for proposed <u>18 MW</u>.Bagasse based Co-generation power plant at Nira Bhima Sabakari Sakhar Karkhana Ltd. Shahajinagar, Post-Redni, Tal. Indapur, Dist. Pune by M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd

Sir.

This has reference to your communication on the above mentioned subject. The proposal was considered as per the EIA Notification, 2006, by the State Level Expert Appraisal Committee-1. Maharashtra in its 72<sup>nd</sup> meeting and decided to recommend the project for prior environmental clearance to SEIAA. Information submitted by you has been considered by State Level Environment Impact Assessment Authority in its 63<sup>rd</sup> Meeting.

2. It is noted that the proposal is for grant of Environmental Clearance Proposed 18 MW Bagasse based Co-generation power plant at Nira Bhima Sahakari Sakhar Karkhana Ltd., Shahajinagar, Post-Redni, Tal. Indapur, Dist, Pune, SEAC considered the project under screening category I (d). B1 of EIA Notification:2006.

Brief Information of the pr Name of Project	18 MW Bagasse Based Co-generation ( St.)					
Project Proponent	M/s. Nira Bhima Sahakari Sakhar Karkhana Ltd. (NBSSKL)					
Consultant	MITCO	N Consultancy & Engineering Servic	CS 1.40.	_		
New Project	New Project					
Area Details	Total pl Built up	lot area (Acre.): 100 p area (Acre.): 11		_		
Estimated capital cost of the Project (including cost		Total Project Cost	Cogen Power (Rs. in Lakh)			
for land, building, plant and	18 10	Land & Site Development	12.00			
machinery	5 2.0	Civil works & Buildings	482,82			
separately)		Indigenous Plant and Machinery	6780.62			
	1.1.3	Preliminary & Pre-Op.Expenses	571.35	_		
	1	Contingencies	19.19	20		
State is set	1	Margin Money	40			

is a find a section of the project submitted by Project Proponent is as:

1

2 - 1991 - Prode-S	Miscellaneous Fixed Assests   120						1			
	Po	wer Evacuat	nent	740,80		1.				
	Su	pervision Cl	arges for		14.92		1.1			
	Sy	nchronizing				1				
		dal			8781.7		1			
Location details of		: 17"59"29.9								
he project :		: 74°56`42,4					- 12			
	Location : Gut No. 340.341,344.345.346.347,348 Shahajinaga									
	Post- Redni, Tal. Indapur, DistPune, Pin-4131114									
	Elevation at	ove Mean S	ea Level: 52	5 meter						
Distance from Protected		Elevation above Mean Sea Level: 525 meter There are no Protected areas / Critically polluted areas / Eco-Sensiti								
Areas	areas/ inter-s	tate boundar	ics within 1	0 Km ra	dial are	a				
Raw materials (including	List of	Physical	*Quantity	Source		Means of				
process chemicals,	raw	und	(tonnes/	af		transports				
catalysts, & additives).	materials	chemical	year) full	material	8	(Source t	0			
	be used	nature of the	production			storage				
ef. il i	- De useu	material	capacity.	1		site) with				
			5.00 B			justificati	on			
	Itagasse	Fibrous	Season (160	1			1000			
		material	days):							
	11 1		152564MT Off-season	lend and		1				
	31 1	2.54	(69 Days):	Factory 1		By conve with enc				
	1	- 14 L	32493 MT			sheet & p				
	Biogas	Gas	Season	1		Surer to 1	dormera			
· · · · ·		1.1.1.1	:1.475 TPH	E .		100				
		5 F6 *** V	Off-season			6.0				
			:1.475 TPH							
Production details	Name of Prod	uets.	Existing	Propo	cul.	Total				
and the second second	By products a		(T/Year)	activit		(T/Ye				
	Intermediate		and a second sec	(new/						
	Products	an Barro	1		nization					
			1	(Tryear)			S 13			
	Main	Season (16)	0 0	18 M						
	Products:	Days)		18 61		ISMV				
	(Power)	Off-Season	0	12 MW		12 M	W			
		(69Days)			and the second					
	By-Products Intermediate	Season (16)	0	3051	MT	3051	MT			
	Products: Ast	Days)	1	14		-				
are 1 1 2 .	1	Off- Season	0	650 MT		650 N	TT			
	1	(69 Days)				Land M				
Process details /	In power get	retion scho	me, chemie	al energy	of fire	la first es	Amagarta			
manufacturing details	into thermal	energy (dur	ne combusti	ion) whi	ch ie th	da danier	store inter			
	mechanical a	energy (through	toh n tuebies	and for	with the	in conve	al arms			
+	(through a g	enerator).	-go a carona	J and III	many mit	o electric	at cherg			
Rain Water Harvesting	In the factor		and top areas	will be a						
(RWH)	subsequently	s piennses n	on top area	will be e	etermir	ieu and				
	subsequently	allad dud	narvesting pi	otential	vill be c	alculated				
1. A.	However der	aneo design	and engined	ring of t	ne RW	H system	will be			
Total Water Requirement	undertaken e			age.			-			
som water requirement	Total water				-		× .			
	Fresh water (CMD) : Season (160 Days) :893 Off- Season (69 Days) : 1009									
		and the second se								

-2-

	8.5	Source: Bhima	River		-	÷.,
	Use of th	he water:				
* <sub>2</sub>	Particu	lars	Seaso (CMI	0) . (0	ff-Season CMD)	
(5)	Proces	5	30	2	5	
	and the second se	g water	- 464		90	
	DM W		. 398		93	
		uppression	60*	6	1*	
	Drinki		1	- 1		
	Green		86*	the second s	10	
()*	Fire so	rvice	13	A REAL PROPERTY AND A REAL	3	
	Others		2			
	*Treat	ted water reus	ed ,		the sector sheet	1.1
Storm water drainage	Proper	storm water d	rainage line wi	II be provided	to maintain the	
			manufian (CM	D):3	and the second	
Sewage generation and	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	and designed and shake 1	OUP BOAR BOARDINGS	<ul> <li>Senue amissi</li> </ul>	ollowed by Sou	k Pits
treatment	Propos	ed treatment i	(CMD) (If ann	licable): NA. a	ill sewage will b	90
514210470-0-18 R		The strengt grade				
	treated	Milliont obne	acteristic will	he prescribed a	is per MPCB, N	lorms
Effluent characteristic						
ETP details	Existin	ng ETP having	a capacity 700	m'/day, NBSS	KL has already	
ETT deuns		Sector 3 march 40 lands	- Contral -			
Disposal of the ETP	After	treatment in E	TP generated s	sludge with be t	ised for gardeni	118
sludge (If applicable)	purpo				Compositio	
Solid waste Management	Sr.	Source	Qty	Form	THE REPORT OF A DECISION OF A DECISIONO OF A DECISION OF A	99   -
Sound onnie (Comp	No	0 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	(TPM)	(Sludge / Dry	'	
		and the second		Slurry etc.)		
	1.	Raw water		-		1
	11-	treatment			1	
1 10 10 10 10		plant	0.1.17.10	Charles		-
1	2.	ETP	8 MT (18	Sludge		- 31
	1	10 - No 1	MW			
1. The second	11. 0	1. 1. 1. 1.	season	13		
1 N N N N N N N N N N N N N N N N N N N	110	in the second	operation- 160days			
1	11 .	1.19436.0	and 3MT		1	
		No. 1	(12 MW	5		- F
1		1 er 100	off season	1 -		
1. al al	1 20	1.1.401	operation)		1	
1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A		Process	Ash-	Dry	potash	12-511-5
	3.	Process	3051MT	1.2		
		1 2 3	(18 MW			
75 - 3443 S	11	1	season	1		
1	11	1:23 是"	operation-	1		
3 - P	11 .	1	160days			
		3 5 1	and 650M1			1
			(12 MW	1		
			off season			
			operation)	Se comment		
			and the second se	And in succession of the succession of the		
	14:	Spent			2	

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e. il line B

		-		e la		_				•
		5.	Oily Sludge		-	÷.,	-	-		14
	6.	Others Battery waste, e waste etc (Pl Specif)	like C				-			
l	Atmospheric Emissions (Flue gas characteristics SPM, SO <sub>2</sub> , NO <sub>X</sub> , CO, etc.)	Sr. No.	Pollu	tant	Source of Emissi		Emission rate (kg/hr)		icentration lue gas lee)	
l	1 N N	1	SPM		Stack	1	0.477	3.1		1
ł	100 II. (1	2	SO2	1. 1	Stack	-	39.73	11	1.00	
		3	NOs	1	Stack	1	Concentrat 100 mg/Nr	ion in flue n <sup>3</sup>	gas will be	
i		4	CO		Stack		NA	NA	. T.	
1			1		1 - 1		711			
1	Stack emission Details:	1	nt tion míis	Stac No.	Contraction and the second second	n und al	Internal Diameter (Top)(m)	Emission Rate (kg /hr)	Gases (°C)	at .
			PH iler TPH	1 <sup>st</sup>	in a second		3.6	0.29	150	
112		Bo	iler	1 3	17	1		1010		3
	Emission Standard	As	ner CPC	<u>В. М</u>	PCB Nor	ms				4-
	Ambient Air Quality Data			12	1	1	1	1.1		E.
		Po	Ilutant		nissible ndarđ n <sup>3</sup>	R	roposed/ lesultant concentration . in µg/m <sup>3</sup> )	Remark	s	HILL I
			110	100			7.22		proposed	
		SC	100	80	-11		1.9		there is a la pollution	an l
		N	O <sub>X</sub>	80	9 8		9.3	increase in pollution activity it will be mitigate by providing pollution control equipment such as ESP & dur suppression methor & by developing green belt around		n
2							- - 			st od
		1.1		1				1 the fac	tory and	1111

	. 4					÷
	E.,	(i -				1
Details of Fuel to be used:	Fuel	Daily Co (TPD/KL	nsumption D)	Calorific value (Kcals	% Ash	% Sulphur
	1			/kg)		
	17	Existing	Proposed			
***	Bagass		Season:95 4 Off- Season: 471	2250	2	0.05
Energy	iwoue of	of fuel: Existin transportation	g Sugar Unit 1 of fuel to site	having capa e: Conveyor	city 25( Belts	0-3500
	Proposed DG sets:	power require d power require	remient: BN	son : 6027 K -Season : 16	39 K W	
Details of Pollution	Biogas Green be	a) of the non-con will be used : 	ventional rene Season (160 Off-Season (160 Off-Season (160 Off-Season (69) 20 Existing f trees to be p	rwable energ Ddys) – 152 69 Days) – 152 0 Days) – 15 0 Days) – 15 0 Days) – 15 0 Days) – 15 10 Days – 15 1	y propo 564 M <sup>-</sup> 2493M <sup>-</sup> 75 TPI 175 TPI ed ) sed to b	Г Т Ц
Details of Pollution	Biogas Green be Number	a) of the non-con- will be used : : : : : : : : : : : : : : : : : : :	ventional rene Season (160 Off-Season (160 Season (160 Off-Season (69 ): 20 Existing f trees to be p	wable energ Ddys) – 152 69 Days) – 152 0 Days) – 1,4 9 Days) – 1,4 1,4 1,4 1,4 1,4 1,4	y propo 564 M <sup>-</sup> 2493M <sup>-</sup> 75 TPI 175 TPI ed ) sed to b	Г Т Ц
Details of Pollution	Biogas Green be Number	a) of the non-con- will be used : : : : : : : : : : : : : : : : : : :	ventional rene Season (160 Off-Season (160 Off	wable energ Ddys) – 152 69 Days) – 33 0 Days) – 1.4 9 Days) – 1.4 Da	y propo 564 M <sup>-</sup> 2493M <sup>-</sup> 75 TPI 175 TPI ed ) sed to b	Г Т Ц
Details of Pollution	Biogas Green be Number	a) of the non-con- will be used : : : : : : : : : : : : : : : : : : :	ventional rene Season (160 Off-Season (160 Off	wable energ Ddys) – 152 69 Days) – 152 0 Days) – 1,4 9 Days) – 1,4 1,4 1,4 1,4 1,4 1,4	y propo 564 M <sup>-</sup> 2493M <sup>-</sup> 75 TPI 175 TPI ed ) sed to b	Г Т Ц
Details of Pollution	Biogas Green be Number	a) of the non-con- will be used : : : : : : : : : : : : : : : : : : :	ventional rene Season (160 Off-Season (160 Off	wable energ Ddys) – 152 69 Days) – 152 0 Days) – 1,4 9 Day	y prope 564 M <sup>-</sup> 2493M 75 TPI ed ) sed to b ed	r T H H
Details of Pollution Control Systems:	Biogas Green be Number	a) of the non-con- will be used : : : : : : : : : : : : : : : : : : :	ventional rene Season (160 Off-Season (160 Off-Season (160 Off-Season (60 Off-Season (160 Off-Season (16	wable energ Ddys) – 152 69 Days) – 152 69 Days) – 152 0 Days) – 152 0 Days) – 152 10 Days) – 152	y propo 564 M 2493M 75 TPI 175 TPI ed 0 sed to b ed tie Encl be used	r T H H
Green Belt Development Details of Pollution Control Systems: Environmental Management plan Budgetary Allocation	Biogas Biogas Green be Number	a) of the non-con- will be used : : : : : : : : : : : : : : : : : : :	ventional rene Season (160 Off-Season (160 Off	wable energ Ddys) – 152 69 Days) – 152 69 Days) – 152 0 Days) – 152 0 Days) – 152 10 Days) – 152	y propo 564 M 2493M 75 TPI 175 TPI ed 0 sed to b ed tie Encl be used	r T H H losures led

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. 1

	1	Air Pollution Control System	200.00	12.00	1++
1	2	Water pollution control systems (E.T.P)	****	15	-
	5	Noise pollution control	20.00	2.00	140
		Green Belt Development/ Maintenances	25.00	2.50	-
a -	7	Environmental monitoring / Environmental Management	25,00	3.00	
	8	Occupational health & safety	10.00	5.00	1.
	707	AL +	280.00	29.0	-

3. The proposal has been considered by SEIAA in its 63<sup>rd</sup> meeting decided to accord environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to implementation of the following terms and

- No additional land shall be used /acquired for any activity of the project without th 助
- For controlling fugitive natural dust, regular sprinkling of water & wind shields atappropriate distances in vulnerable areas of the plant shall be ensured. (iii)
  - Regular monitoring of the air quality, including SPM & SO2 levels both in work zone and ambient air shall be carried out in and around the power plant and records shall be maintained. The location of monitoring stations and frequency of monitoring shall be decided in consultation with Maharashtra Pollution Control Board (MPCB) & submit

Necessary arrangement shall be made to adequate safety and ventilation arrangement Proper Housekeeping programmes shall be implemented.

In the event of the failure of any pollution control system adopted by the unit, the unit shall be immediately put out of operation and shall not be restarted until the desired

A stack of adequate height based on DG set capacity shall be provided for control and dispersion of pollutant from DG set.(If applicable)

A detailed scheme for rainwater harvesting shall be prepared and implemented to recharge ground water. Arrangement shall be made that effluent and storm water does not get mixed.

Periodic monitoring of ground water shall be undertaken and results analyzed to ascertain any change in the quality of water. Results shall be regularly submitted to the

Leq of Noise level shall be maintained as per standards. For people working in the high noise area, requisite personal protective equipment like carplugs etc. shall be

The overall noise levels in and around the plant are shall be kept wellswithin the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc. on all sources of noise generation. The ambient noise levels shall confirm to the standards prescribed under Environment (Protection) Act, 1986 Rules,

(viii) Ground water (Ix) (3)

(xi)

(iv)

(+11)

(Sii)

Green belt shall be developed & maintained around the plant periphery. Green Belt Development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Dept.

Adequate safety measures shall be provided to limit the risk zone within the plant boundary, in case of an accident. Leak detection devices shall also be installed at strategic places for early detection and warning.

Occupational health surveillance of the workers shall be done on a regular basis and record maintained as per Factories Act.

The company shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling.

(AVII)

(xix)

The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Waste (Management and Handling) Rules, 2003 (amended). Authorization from the MPCB shall be obtained for collections/treatment/storage/disposal of hazardous wastes. (xviii) The company shall undertake following Waste Minimization Measures :

Metering of quantities of active ingredients to minimize waste.

- ·Reuse of by- products from the process as raw materials or as raw material substitutes in other process.
- Maximizing Recoveries.

Use of automated material transfer system to minimize spillage.

Regular mock drills for the on-site emergency management plan shall be carried out. Implementation of changes / improvements required, if any, in the on-site management plan shall be ensured. think with a rear

A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.

Transportation of ash will be through closed containers and all measures should be (17:51) taken to prevent spilling of the ash.

Separate silos will be provided for collecting and storing bottom ash and fly ash. (XXII)

(xxiii) Separate funds shall be allocated for implementation of environmental protection measures/EMP along with item-wise breaks-up. These cost shall be included as part of the project cost. The funds carmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should reported to the MPCB & this department

The project management shall advertise at least in two local newsnapers widely circulated in the region around the project, one of which shall be in the marathi language of the local concerned within seven days of issue of this letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the Maharashtra Pollution Control Board and may also be seen at Website at http://ec.maharashtra.gov.in

(xxv) Project management should submit half yearly compliance reports in respect of the stipulated prior environment clearance terms and conditions in hard & soft copies to the MPCB & this department, on 1st June & 1st December of each calendar year.

A copy of the clearance letter shall be sent by proponent to the concerned Municipal (izzvi) Corporation and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

(xxvii) The proponent shall upload the status of compliance of the stipulated EC conditions. including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MoEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, SO2, NOx (ambient levels as well as stack emissions) or critical sectoral

(xxiv)

parameters, indicated for the project shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.

\* (xxviii)Slx monthly monitoring reports should be submitted to the Regional office MoEF, Bhopal with copy to this department and MPCB.

(Xix) The environmental statement for each financial year ending 31<sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of EC conditions and shall also be sent to the respective Regional Offices of MoEF by e-mail.

(xxx) The environmental clearance is being issued without prejudice to the court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him.

The environmental clearance is being issued without prejudice to the action initiated under EP Act or any court case pending in the court of law and it does not mean that project proponent has not violated any environmental laws in the past and whatever decision under EP Act or of the Hon'ble court will be binding on the project proponent. Hence this clearance does not give immunity to the project proponent in the case filed against him, if any or action initiated under EP Act.

The Environment department reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the department or for that matter, for any other administrative reason.

Validity of Environment Clearance: The environmental clearance accorded shall be valid for a period of 5 years to start of production operations.

In case of any deviation or alteration in the project proposed from those submitted to this department for clearance, a fresh reference should be made to the department to assess the adequacy of the condition(s) imposed and to incorporate additional environmental protection measures required, if any.

The above stipulations would be enforced among others under the Water (Prevention and Control of Pollution) Act, 1974, the Air (Prevention and Control of Pollution ) Act, 1981, the Environment (Protection) Act, 1986 and rules there under, Hazardous Wastes (Management and Handling ) Rules, 1989 and its amendments, the public Liability Insurance Act, 1991 and its amendments.

Any appeal against this environmental clearance shall lie with the National Green Tribunal, Van Vigyan Bhawan, Sec- 5, R.K. Puram, New Dehli - 110 022, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010

> (R.A. Rajeev) Principal Secretary, Environment department & MS, SEIAA

#### Copy to:

4.

5.

7.1

8.

9.

- Shri, R. C. Joshi, IAS (Retd.). Chairman. SEIAA, Flat No. 26, Belvedere, Bhulabhai desai road, Breach candy, Mumbai-400026.
- Shri, Dr. S. Devotta. Chairman, SEAC, T2/302 Sky City, Vanagaram Ambaitur Road, Chennai – 600 095

- 3. Member Secretary, Maharashtra Pollution Control Board, with request to display a copy of the clearance, and the secretary of the clearance.
- The CCF. Regional Office, Ministry of Environment and Forest (Regional Office, Western Region, Kendriya Paryavaran Bhavan, Link Road No- 3, E-5, Ravi-Shankar Nagar, Bhopal- 462 016). (MP).
- 5. Regional Office, MPCB, Punc.
- 6. Commissioner, Pune Municipal Corporation, Pune.

· · · · · ·

- 7. Collector, Pune.
- IA- Division, Monitoring Cell, MoEF, Paryavaran Bhavan, CGO Complex, Lodhi Road, New Delhi-110003.

9. Director (TC-1), Dy. Secretary (TC-2), Scientist-1, Environment department,

-0-

10. Select file (TC-3).

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Annexure-IX

# Copy of Environment Statement (Form No-V) for the year 2016-2017

For

"NiraBhimaSahakariSakharKarkhana Ltd" At shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune

# Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

#### FORM V Environmental Audit Report for the financial Year ending the 31st March 2016 Company Information

Company Name Nira Bhima Sahakari Sakhar Karkhana Limited

Address At.: Shahajinagar, PO: Redni, Tal.: Indapur, Dist.: Pune

Plot no 340, 341, 344, 345, 346, 347, 348

Capital Investment (In lakhs) 21572.59

Pincode 413114

Telephone Number 9822099110

Region SRO-Pune I

Last Environmental statement submitted online ves

Consent Valid Upto 31.07.2016

Product Information
Product Name

Application UAN number D000008086

Taluka Indapur

Scale L.S.I.

Person Name B. B. Nawale

Fax Number 02111 270555

Industry Category Red

**Consent Number** 

Format 1.0/BO/CAC-CELL/EIC No. PN-25773-15/R/CAC-4176

Village At.: Shahajinagar, PO: Redni

City Indapur

Designation Managing Director

Email nirabhima@gmail.com

Industry Type R74 Sugar (excluding Khandsari)

**Consent Issue Date** 

23-03-2016

Sugar (White Crystal Sugar)	Consent Quantity 75600	Actual Quantity 57847	UOM MT/A
Electric Power (Cogeneration)	77760000	45330639	Nos./Y
By-product Information By Product Name	Consent Quantity		
Molasses		Actual Quantity	UOM
199103565	26400	20192	MT/A
Pressmud	25800	22072	MT/A
Bagasse	270000	152063	MT/A

1) Water Consumption in m3/day Water Consumption for Process	Consent Quantity in m3/day 312	Actual Quantity in m3/day
Cooling	498	391
Domestic	40	40
All others	0	0
Total	250	9a



1) Effluent Generation in CMD / MLD			
Particulars	Consent Quantity	Actual Quantity	UOM
Trade effluent	685	490	CMD
Sewage effluent	18	10	CMD
Domestic effluent	15	8	CMD

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

be a second to be a present of the second seco			
Name of Products (Production)	During the Previous financial Year	During the current Financial year	UOM
White crystal sugar	0.02	0.02	KL/A
Molasses	0.162	0.162	KL/A
Electric power (Cogeneration)	0.0377	0.397	Nos./Y
Bagasse	0.500	0.503	KIL/A
Pressmud	D.4B4	0.496	KL/A

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

Name of Raw Materials	During the Previous financial Year	During the current Financial year	UOM
Sugarcane	9.10	9.46	MT/A

4) Fuel Consumption	6		
Fuel Name	Consent quantity	Actual Quantity	UOM
Bagasse	179640	149316	MT/A

Pollution discharged to environment/unit of output (Parameter as specified in the consent issued) [A] Water

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/Lit) Except PH,Temp,Colour	Percentage of variation from prescribed standards with reasons		
	Quantity	Concentration	%variation	Standard	Reason
COD	78.4	160	- 36	250	Within standard limit
BOD	19.6	40	- 60	100	Within standard limit
TDS	171.5	350	- 83	2100	Within standard limit
TSS	7.35	15	- 85	100	Within standard limit

[B] Air (Stack)

Pollutants Detail	Quantity of Pollutants discharged (kL/day)	Concentration of Pollutants discharged(Mg/NM3)	Percentage of variation from prescribed standards with reasons		
	Quantity	Concentration	%variation	Standard	Reason
SPM for 40 tph boiler	352	75.80	- 49	150	Within standard norms
SPM for 66 tph boiler	297	64.00	- 57	150	Within standard norms

5.1 Used /spent	oil 800	al During Pre	vious Fini	ancial year		g Current Financial	5 ( C ( C ( C ( C ( C ( C ( C ( C ( C (	иом
	- Sector Superior Superior			690			Kg/Annum	
2) From Polluti		the second se						
Hazardous Was	ste Type		Previous	Financial year	Total Du	ring Current Financi	ial year	иом
0		NA			NA			Nos./Y
SOLID WASTES	3							
1) From Proces								
Non Hazardous	Waste Type		Previous	Financial year	Total Du	ring Current Financ	ial year	UOM
NA.		NA			NA			Nos./1
2) From Pallutic		cilities						
Non Hazardous	Waste Type	Total	During P	revious Financi	al year Tota	I During Current Fi	nancial year	UOM
Fly/Boiler ash		3200	1.0		2016		indirentiti year	MT/A
3) Quantity Rec	ycled or Re-u	tilized within	the					
init Naste Type			102		1 <u>2</u> . 1955			
insie ()pe				otal During Pres ear	lous Financial	Total During Curre year	ent Financial	UOM
			N	6		NA		No. 14
lease specify t	he character	istics[in terms	of conce	otration and a	antum) of haza		lid wastes an	100375
) Hazardous Wi ype of Hazardo	aste ous Waste Ge	opica for both	i of conce h these ci	ntration and qu stegories of wa	stes.	irdous as well as so		d
Please specify t ndicate disposa ) Hazardous W <b>ype of Hazardo</b> .1 Used /spent ol	aste ous Waste Ge	opica for both	i of conce h these ci	ntration and qu stegories of wa	UOM (			d
) Hazardous Wi ype of Hazardo 1 Used /spent ol ) Solid Waste	aste ius Waste Ge I	nerated Qty 690	i of conce h these ci	ntration and qu stegories of wa	UOM (	irdous as well as so Concentration of Ha		d
) Hazardous W. ype of Hazardo .1 Used /spent ol ) Solid Waste ype of Solid Wa	aste ius Waste Ge I	nerated Qty 690	of conce h these cr of Hazard Qty	ntration and qu stegories of wa lous Waste of Solid Waste	UOM (	irdous as well as so Concentration of Ha	zardous Wast	
) Hazardous W, ype of Hazardo 1 Used /spent ol ) Solid Waste ype of Solid Wa	aste ius Waste Ge I	nerated Qty 690	of conce h these ci of Hazard	ntration and qu stegories of wa lous Waste of Solid Waste	UOM ( Kg/Annum C	rdous as well as so Concentration of Ha.	zardous Wast	d
) Hazardous W/ <b>ype of Hazardo</b> .1 Used /spent ol ) Solid Waste <b>ype of Solid Wa</b> ly/Boiler ash	aste ous Waste Ge I aste Generate	nerated Qty 690	of conce h these cr of Hazard Qty 2016	ntration and qu stegories of wa lous Waste of Solid Waste	UOM ( Kg/Annum ( UOM MT/A	ordous as well as so Concentration of Ha Dily Concentration of S	zardous Wast Solid Waste	d e
) Hazardous Wi ype of Hazardo 1 Used /spent ol ) Solid Waste ype of Solid Wa y/Boiler ash npact of the po roduction.	aste ous Waste Ge I aste Generate	nerated Qty 690 ed	of conce h these cr of Hazard Qty 2016	ntration and qu stegories of wa lous Waste of Solid Waste	UOM ( Kg/Annum C UOM MT/A	ordous as well as so Concentration of Ha Dily Concentration of Solid Solid	zardous Wast Solid Waste 'y on the cost	d e of
) Hazardous Wi ype of Hazardo 1 Used /spent ol ) Solid Waste ype of Solid Wa y/Boiler ash npact of the po roduction. escription	aste ous Waste Ge l aste Generate llution Contro Reduction i Water Consumptie (M3/day)	nerated Qty 690 ed ol measures ta in Reduct Fuel &	of conce h these co of Hazard Qty 2016 aken on c aken on c solvent nption	ntration and qu itegories of wa lous Waste of Solid Waste onservation of Reduction in Raw Material	UOM ( Kg/Annum C UOM MT/A natural resourc Reduction in Power Consumption	ordous as well as so Concentration of Ha Dily Concentration of Solid	zardous Wast Solid Waste	d e of
) Hazardous Wi ype of Hazardo .1 Used /spent ol ) Solid Waste ype of Solid Wa y/Boiler ash npact of the po	aste ous Waste Ge l aste Generate llution Contro Reduction i Water Consumptie (M3/day)	nerated Qty 690 ed ol measures ta in Reduct Fuel & on Consun	of conce h these co of Hazard Qty 2016 aken on c aken on c solvent nption	ntration and qu stegories of wa lous Waste of Solid Waste onservation of Reduction in Raw	UOM ( Kg/Annum C UOM MT/A natural resourc Reduction in Power	concentration of Ha Dily Concentration of Solid es and consequenti Capital Investment(in	zardous Wast Solid Waste y on the cost Reduction Maintenand	d e of
) Hazardous Wi ype of Hazardo .1 Used /spent ol ) Solid Waste ype of Solid Wa y/Boiler ash npact of the po roduction. escription essmud used for	aste ous Waste Ge l aste Generate llution Contro Reduction i Water Consumptie (M3/day)	nerated Qty 690 ed of measures ta in Reduct Fuel & on Consun (KL/day	of conce h these co of Hazard Qty 2016 aken on c aken on c solvent nption	ntration and qu itegories of was lous Waste of Solid Waste onservation of Reduction in Raw Material (Kg)	UOM ( Kg/Annum ( UOM MT/A natural resource Reduction in Power Consumption (KWH)	indous as well as so Concentration of Ha Dily Concentration of : Solid es and consequenti Capital Investment(in Lacs)	zardous Wast Solid Waste y on the cost Reduction ( Maintenand Lacs)	d e of

Additional measures/investment proposal for environmental protection abatement of pollution, prevention of pollution. [A] Investment made during the period of Environmental Statement

Detail of measures for Environmental Protection Environmental Protection Measures

Capital Investment (Lacks)

cems installed to check whether the waste water/effluent, stack emissions etc parameters are within the standard norms

#### [B] Investment Proposed for next Year

Detail of measures for Environmental Protection	Environmental Protection Measures	Capital Investment (Lacks)
NA	NA	NA

Any other particulars in respect of environmental protection and abatement of pollution.

#### Particulars

(1) Installed online monitoring system. (2) Developed green belt. (3) Solid wastes viz, bagasse, pressmud, molasses etc are reused as boiler fuel, making compost manure , alcohol production, respectiv

#### Name & Designation

B. B. Nawale (Managing Director)

Annexure-X

## Copy of Hazardous Waste Return (Form No-IV) for the year 2016-17 For

"Nira Bhima Sahakari Sakhar Karkhana Ltd" At shahajinagar, Post-Redni, Tal-Indapur, Dist-Pune



# Maharashtra Pollution Control Board

महाराष्ट्र प्रदूषण नियंत्रण मंडळ

#### Form 4

See rules 6(5),13(8),16(6) and 20(2) of Hazardous and other wastes 2016

#### FORM FOR FILING ANNUAL RETURNS

[ To be submitted to state pollution control board/pollution control committee by 30th June of every year for the preceeding period April to march]

<ol> <li>Name of the generator/operator of facility NIRA BHIMA SAHAKARI SAKHAR KARKHANA LTD</li> <li><i>1b. Authorization Number</i> 0000000026 (UAN No.)</li> </ol>			Address of the unit/facility AT.: SHAHAJINAGAR., PO: REDNI, TAL.: INDAPUR, DIST.: PUNE Date of issue Jun 16, 2016			
Telephone         Fax           9822099110         02111 27055			Email nirabhima@rediffmail.com			
3.Production during the year	r (product wise), when	ever applicable				
Product Type * Sugar (excluding Khandsari)		Product Name * Sugar		Quantity 159570	<b>UOM</b> Qnt/Y	
PART A: To be filled i	y hazardous w	aste generato	ors			
1. Total Quantity of waste	e generated catego	ry wise				
Type of hazardous waste 5.1 Used or spent oil		Quantity 0.350	<b>ИОМ</b> МТА			
2. Quantity dispatched categ	ory wise.					
Type of Waste	Quantity of waste	<i>UOM</i> KL/Anum	Dispatched to	Facility Name		
3. Quantity Utilised in-house,	If any					
Type of Waste 5.1 Used or spent oil	Name of Waste Oily waste	Quantity of Was 0.350	ste UOM MTA			
4. Quantity in storage at the	end of the year					
Type of Waste	Name of Waste	Quantity of Was	KL/Anum			

PART B: To be filled bt Treatment, storage, and disposal facility operators

1.Total Quantity received NA	UOM
	- KL/Anum
2. Quantity in stock at the beginning of the year NA	UOM KL/Anum
3. Quantity treated	UOM
<ol> <li>Quantity disposed in landfills as such and after treatment</li> </ol>	KL/Anum

Direct landfilling

NA	KL/Anum
Landfill after treatment	UOM
NA	KL/Anum
5. Quantity incinerated (if applicable)	UOM
NA	KL/Anum
6. Quantiry processed other than specified above	UOM
NA	KL/Anum
7. Quantity in storage at the end of the year.	UOM
NA	KL/Anum

## PART C: To be filled by recyclers or co-processors or other users

1. Quantity of waste received during the year

Waste Name/Category	Quantity of waste receiv sources	ed from domestic	Quantity	of waste imported(If any)	Units
NA	NA		NA		KL/Anum
2. Quantity in stock at the	beginning of the year				
Waste Name/Category		Quantity		UOM	
NA		NA		KL/Anum	
3. Quantity of waste recyc	ded or co-procesed or used				
Name of Waste	Type of Was	ste	Quantity	UOM	
NA	NA		NA	KL/Anum	
4. Quantity of products dis	spatched (wherever applicab	(ak			
Name of product		Quantity		UOM	
NA		NA		KL/Anum	
5. Total quantity of waste	generated				
Waste name/category		quantity		UOM	
NA		NA		KL/Anum	
6. Total quantity of waste	disposed				
Waste name/category		quantity		иом	
NA		NA		KL/Anum	
7. Total quantity of waste	re-exported (If Applicable)				
Waste name/category		quantity		UOM	
NA		NA		KL/Anum	
8. Quantity in storage at the	ne end of the year				
Waste name/category		quantity		UOM	
NA		NA		KL/Anum	
Personal Details					
Place		Date		Designation	
Shahajinagar		2017-06-05		Managing Director	