

**BEFORE THE NATIONAL GREEN TRIBUNAL SOUTHERN ZONE, CHENNAI**

**Original Application No. 256 of 2020 (SZ)**

IN THE MATTER OF

Tribunal on its own motion-SUO MOTU based on The News item in News Desk Magazine dated 11.11.2020, Air Pollution and Industries, "These Six Industries in North Chennai are polluting the air for more than half the year, the North Chennai Thermal Power station alone Ennore Port"

Union of India

Ministry of Environment, Forest and

Climate Change & 15 Others

....Respondents

**INDEX TO THE TYPESET OF DOCUMENTS FILED ON BEHALF OF THE 15th  
RESPONDENT**

<b>S. No.</b>	<b>Annexure</b>	<b>Description</b>	<b>Pages</b>
1.	I-A, I-B	Copies of Boiler Licences of Plant - 1	1-2
2.	I-C, I-D, I-E	Copies of Boiler Licences of Plant - 2	3-5
3.	II-A	Stack Emission Analysis Reports by Accredited Laboratories - Plant - 1	6-16
4.	II-B	Stack Emission Analysis Reports by Accredited Laboratories - Plant - 2	17-27
5.	III-A	CEMS Data from Care Air Centre Portal - Plant - 1	28-37
6.	III-B	CEMS Data from Care Air Centre Portal - Plant - 2	38-46

Dated at Chennai on this the 23rd day of July, 2021.

*A. W.*

**Counsel for the 15th Respondent.**

Acer-2--Job-18--370-2

No. 55/chc/2020-21 DIRECTORATE OF BOILERS, TAMILNADU  
 Certificate for use of a boiler  
 (Regulation 389)  
 FORM VI

Registry Number of Boiler : T-5158 Type of Boiler : HMT

Boiler Rating : 458 sqm Place and year of manufacture : Pune, 1989

Maximum continuous Evaporation : 18,000 kg/hr

Name of Owner : M/s Manali Petrochemicals Ltd.

Situation of Boiler : Manali, Chennai-68

Repairs : -

Remarks: -

Hydraulically tested on 6-8-20 to 30.50 kg/cm<sup>2</sup>

I hereby certify that the above described boiler is permitted by me / the Director of Boilers under the provisions of Section 7/8 of the Boilers Act 1923, (Act V of 1923) to be worked at a maximum pressure of 24.40 Kg. per Square C.M. for the period from 6.8.20 to 5.8.2021

The loading of the DSL Safety valve is not to exceed 24.40 kg/cm<sup>2</sup>

I further certify that the main steam pipe tested hydraulically to a pressure of 36.60 Kg. per Square C.M. last on 4.5.90

Fee Rs. 5800/- Paid on 7.7.20

Dated at Manali

This 6<sup>th</sup> day of August 2020

J. M. Srinivasan  
 5/8/2020  
 Deputy Director of Boilers,  
 Chennai Circle, Chennai-5.

Countersigned.

Director of Boilers

ANNEXURE-I-B

Acer-2--Job-18--370-2

No. 13/CAC/2021-22 DIRECTORATE OF BOILERS, TAMILNADU

Certificate for use of a boiler  
(Regulation 389)

FORM VI

Registry Number of Boiler : T-5159 Type of Boiler : HMT with ECO & S.H

Boiler Rating : 458 Place and year of manufacture : Pune, 1989  
sqm

Maximum continuous Evaporation : 18000 kg/hr

Name of Owner : M/s Manali Petrochemicals Ltd

Situation of Boiler : Ponneri High road, Manali, Chennai-600068

Repairs : -

Remarks: -

Hydraulically tested on 28-05-2021 to 30-5 kg/cm<sup>2</sup>

I hereby certify that the above described boiler is permitted by me / the Director of Boilers under the provisions of Section 7/8 of the Boilers Act 1923, (Act V of 1923) to be worked at a maximum pressure of 24.40 Kg. per Square C.M. for the period from 28-05-21 to 27-05-2022

The loading of the DSC Safety valve is not to exceed 24.40 kg/cm<sup>2</sup>

I further certify that the main steam pipe tested hydraulically to a pressure of 36.60 Kg. per Square C.M. last on 28-6-90

Fee Rs. 5800/- Paid on 13.5.2021

Dated at Manali

This 28 day of May 2021

J. Meegay  
28/5/21  
Deputy Director of Boilers,  
Chennai Circle, Chennai-5.

Countersigned.

Director of Boilers

ANNEXURE-I-C

Acer-2--Job-18--370-2

No. 81/chc/2020-21 DIRECTORATE OF BOILERS, TAMILNADU

Certificate for use of a boiler  
(Regulation 389)

FORM VI

Registry Number of Boiler : T-5111 Type of Boiler : HMT

Boiler Rating : 299 sqm Place and year of manufacture : Gujarat, 1989

Maximum continuous Evaporation : 10,000 Kg/hr

Name of Owner : M/s Manali Petrochemicals Ltd

Situation of Boiler : Plant-II, Sathangadu village, Manali,  
Chennai-600068

Repairs : —

Remarks: —

Hydraulically tested on 29.9.2020 to 22 kg/cm2

I hereby certify that the above described boiler is permitted by me / the Director of Boilers under the provisions of Section 7/8 of the Boilers Act 1923, (Act V of 1923) to be worked at a maximum pressure of 17.50 Kg. per Square C.M. for the period from 29.9.20 to 28.9.2021

The loading of the DSL Safety valve is not to exceed 17.50 Kg/cm2

I further certify that the main steam pipe tested hydraulically to a pressure of 26.50 Kg. per Square C.M. last on 12.01.1990

Fee Rs 5000/- Paid on 24.8.20

Dated at Manali

This 29<sup>th</sup> day of Sept 2020

J. Meegay  
29/9/2020  
Deputy Director of Boilers,  
Chennai Circle, Chennai-5.

Countersigned.

Director of Boilers

No. 63/ch.c/2020-21 DIRECTORATE OF BOILERS, TAMILNADU  
 Certificate for use of a boiler  
 (Regulation 389)  
 FORM VI

Registry Number of Boiler : T.5848 Type of Boiler : HMT

Boiler Rating : 386 sqm Place and year of manufacture : Pune, 1996

Maximum continuous Evaporation : 10,000 kg/hr

Name of Owner : M/s Manali Petrochemicals Ltd

Situation of Boiler : Plant II Manali Ch.68

Repairs : -

Remarks: -

Hydraulically tested on 25.8.2020 to 22 kg/cm<sup>2</sup>

I hereby certify that the above described boiler is permitted by me / the Director of Boilers under the provisions of Section 7/8 of the Boilers Act 1923, (Act V of 1923) to be worked at a maximum pressure of 17.50 Kg. per Square C.M. for the period from 25.8.20 to 24.8.2021

The loading of the DSL Safety valve is not to exceed 17.5 kg/cm<sup>2</sup>

I further certify that the main steam pipe tested hydraulically to a pressure of 26.80 Kg. per Square C.M. last on 12.9.96

Fee Rs. 5000/- Paid on 7.7.2020

Dated at Manali

This 25<sup>th</sup> day of August 2020

J. Meeyu  
 Deputy Director of Boilers,  
 Chennai Circle, Chennai-5.

Countersigned.

Director of Boilers

Acer-2--Job-18--370-2

No. 109/chc/2020-21 **DIRECTORATE OF BOILERS, TAMILNADU**  
 Certificate for use of a boiler  
 (Regulation 389)  
**FORM VI**

Registry Number of Boiler : T-11564 Type of Boiler : HMT

Boiler Rating : 710 sqm Place and year of manufacture : Vadodara, 2017

Maximum continuous Evaporation : 21 T/hrs

Name of Owner : M/s Marali Petrochemicals Ltd.

Situation of Boiler : Plant II Sathankadu village  
Marali, Chennai - 600068

Repairs : —

Remarks : —

Hydraulically tested on... 27-11-2020 ... to 22 ... kg/cm<sup>2</sup>

I hereby certify that the above described boiler is permitted by me / the Director of Boilers under the provisions of Section 78 of the Boilers Act 1923, (Act V of 1923) to be worked at a maximum pressure of 17.50 Kg. per Square C.M. for the period from 27-11-20 to 26-11-2021

The loading of the... DSC ... Safety valve is not to exceed 17.5 kg/cm<sup>2</sup>

I further certify that the main steam pipe tested hydraulically to a pressure of 26.25 Kg. per Square C.M. last on 2.12.2017

Fee Rs. 6300/- Paid on 4.11.20

Dated at... Marali...

This... 27<sup>th</sup> ... day of... NOV ... 2020

J. Meegay  
27/11/2020  
 Deputy Director of Boilers,  
 Chennai-5, Chennai-5.

Countersigned.

Director of Boilers



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Nº 22555

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvglabs.com | Web : www.cvglabs.com

## TEST REPORT

## ANNEXURE - II-A

Issued To :

Manali Petrochemicals Limited  
Ponneri High Road, Manali, Chennai - 600 068.

Date of report : 24/01/2019

Received on : 22/01/2019

Commenced on : 24/01/2019

Report Number : 19010141.02

Completed on : 24/01/2019

Date of Sampling : 21/01/2019

Sampled by : CVR Labs

Sample Description : Source Emission

Sampling Location : MPL Plant - 1 Boiler stack

S.No.	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	By Digital Thermocouple	K	467	-
2	Velocity of the Flue Gas	EPA Method 1-3 -1996	m/sec	11.0	-
3	Flue Gas Discharge	EPA Method 1-3 -1996 IS 11255 (Part-3) 2008	Nm3/hr	44896.58	-
4	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (Reaff:2017)	mg/Nm <sup>3</sup>	218.32	-
5	Oxides of nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/Nm <sup>3</sup>	3.33	-
6	Carbon monoxide (CO)	IS 13270 : 1992 (Reaff 2003)	ppm	2	-
7	Carbon Dioxide (CO <sub>2</sub> )	IS 13270 : 1992 (Reaff 2003)	%	8.2	-
8	Oxygen (O <sub>2</sub> )	IS 13270 : 1992 (Reaff 2003)	%	6.5	-
9	Moisture Content	EPA Method 1-3	%	6.7	-
10	Particulate Matter (PM)	IS 11255 (Part-1):1985	mg/Nm <sup>3</sup>	28.67	150

Verified By

For CVR LABS PVT. LTD.

*E. Janaki*  
Authorised Signatory  
E.JANAKI  
Asst. Quality Manager

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Recognized / Approved by : NABL, FSSAI, BIS , Ministry of Environment & Forests , ISO 9001 : 2008 , OSHAS 18001

**Terms and Conditions:**

- The test results furnished relate only to the particular sample is submitted.
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval.
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Nº 22538

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

Issued To :

Manali Petrochemicals Limited  
Ponneri High Road, Manali, Chennai - 600 068.

Date of report : 28/02/2019

Received on : 26/02/2019

Commenced on : 26/02/2019

Report Number : 19020208.01

Completed on : 28/02/2019

Date of Sampling : 26/02/2019

Sampled by : CVR Labs

Sample Description : Source Emission

Sampling Location : MPL Plant - I Boiler stack

S.No.	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	By Digital Thermocouple	K	463	-
2	Velocity of the Flue Gas	EPA Method 1-3 -1996	m/sec	8.10	-
3	Flue Gas Discharge	EPA Method 1-3 -1996 IS 11255 (Part-3) 2008	Nm3/hr	33681	-
4	sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (Reaff:2017)	mg/Nm <sup>3</sup>	306.5	-
5	Oxides of nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/Nm <sup>3</sup>	2.44	-
6	Carbon monoxide (CO)	IS 13270 : 1992 (Reaff 2003)	ppm	12	-
7	Carbon Dioxide (CO <sub>2</sub> )	IS 13270 : 1992 (Reaff 2003)	%	8.9	-
8	Oxygen (O <sub>2</sub> )	IS 13270 : 1992 (Reaff 2003)	%	5.0	-
9	Moisture Content	EPA Method 1-3	%	5.4	-
10	Particulate Matter (PM)	IS 11255 (Part-1):1985	mg/Nm <sup>3</sup>	25.93	150

For CVR LABS PVT. LTD.

Verified By

E. Janaki  
Authorised Signatory  
Assi. Quality Manager

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Recognized / Approved by : NABL, FSSAI, BIS , Ministry of Environment & Forests , ISO 9001 : 2008 , OSHAS 18001

**Terms and Conditions:**

- The test results furnished relate only to the particular sample is submitted.
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval.
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

No: 23972

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvglabs.com | Web : www.cvglabs.com

## TEST REPORT

Page: 1 of 1

Issued To :

Manali Petrochemicals Limited  
Ponneri, High Road, Manali,  
Chennai - 600 068.

Date of report : 29/04/2019

Received on : 26/04/2019

Commenced on : 27/04/2019

Report Number : 19040155.01

Completed on : 29/04/2019

Date of Sampling : 24/04/2019

Sampled by : CVR Labs

Sample Description : Source Emission

Sampling Location : Boiler Stack - MPL Plant -I

Customer Reference :-

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR /SOP/ENVII/100	K	435	-
2	Velocity of the Flue Gas	EPA Method 1-3 -1996	m/sec	11.5	-
3	Flue Gas Discharge	EPA Method 1-3 -1996 IS 11255 (Part-3) 2008	Nm <sup>3</sup> /hr	56875.03	-
4	sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)-1995	mg/Nm <sup>3</sup>	248.7	-
5	Oxides of nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005	mg/Nm <sup>3</sup>	20.58	-
6	Carbon monoxide (CO)	CVR/SOP/ENVII/100	ppm	26	-
7	Carbon Dioxide (CO <sub>2</sub> )	CVR/SOP/ENVII/100	%	8.3	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVII/100	%	6.3	-
9	Moisture Content	EPA Method 1-3 -1996	%	0.94	-
10	Particulate Matter (PM)	IS 11255 (Part-1):1985	mg/Nm <sup>3</sup>	26.89	150

Verified By

For CVR Labs (P) Limited

Authorised Signatory  
K. S. M. S. S. S.  
Senior Analyst

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Recognized / Approved by : NABL, FSSAI, BIS , Ministry of Environment & Forests , ISO 9001 : 2008 , OSHAS 18001

**Terms and Conditions:**

- The test results furnished relate only to the particular sample is submitted.
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval.
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

001440

Issued To :

M/s. Manali Petrochemicals Limited  
Ponneri High Road, Manali,  
Chennai - 600 068.

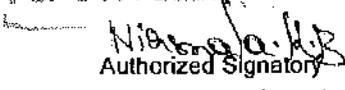
Report Number : 19050175.01  
Date of Sampling : 22/05/2019  
Sampling Description : Source Emission  
Sampling Location : Boiler Stack - Plant I

Date of Report : 23/05/2019  
Received On : 23/05/2019  
Commenced On : 23/05/2019  
Completed On : 23/05/2019  
Sampled By : CVR Labs

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR /SOP/ENVI/100	K	421	-
2	Velocity of the Flue Gas	EPA Method 1-3 -1996	m/sec	11.06	-
3	Flue Gas Discharge	EPA Method 1-3 -1996 IS 11255 (Part-3) 2008	Nm <sup>3</sup> /hr	49673	-
4	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)-1995	mg/Nm <sup>3</sup>	225	-
5	Oxides of nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005	mg/Nm <sup>3</sup>	34.55	-
6	Carbon monoxide (CO)	CVR/SOP/ENVI/100	ppm	48	-
7	Carbon Dioxide (CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	8.6	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVI/100	%	5.9	-
9	Moisture Content	EPA Method1-3 -1996	%	4.1	-
10	Particulate Matter (PM)	IS 11255 (Part-1):1985	mg/Nm <sup>3</sup>	42.15	150

Verified By 

For CVR Labs

  
Authorized Signatory

K.B.Nirmala  
Senior-Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 day
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

002373

## TEST REPORT

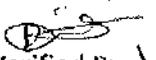
Issued To :

**Manali Petrochemicals Limited**

Ponneri High Road, Manali, Chennai - 600 068.

Report Number	: 19060066.01	Received on	: 22/06/2019
Date Of Sampling	: 21/06/2019	Commenced on	: 22/06/2019
Sample Description	: Source Emission	Completed on	: 22/06/2019
Sample Location	: Boiler Plant -1	Date of report	: 22/06/2019
Sample By	: CVR Labs		

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	440	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	11.09	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008	Nm <sup>3</sup> /hr	47657.9	-
4	suiphur Dioxide(SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (Reaff:2014)	mg/Nm <sup>3</sup>	378.58	-
5	Oxides of nitrogen(NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/Nm <sup>3</sup>	26.7	-
6	Carbon monoxide(CO)	CVR/SOP/ENVI/100	ppm	38	-
7	Carbon Dioxide(CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	7.8	-
8	Oxygen(O <sub>2</sub> )	CVR/SOP/ENVI/100	%	6.5	-
9	Moisture Content	EPA Method1-3	%	5.82	-
10	Particulate Matter (PM)	IS 11255(Part-1):1985 (Reaff:2014)	mg/Nm <sup>3</sup>	36.9	150

  
Verified By ✓

For CVR Labs (P) Limited  
  
Authorized Signatory

K.B.Nimela  
Senior Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Terms and Conditions:

The test results furnished relate only to the particular sample is submitted  
The test results reflect to the sample tested on the above mentioned date and environments condition.  
The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days  
The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,

Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85

E-mail : info@cvglabs.com | Web : www.cvglabs.com

## TEST REPORT

### 002999

### Issued To :

### Manali Petrochemicals Limited

Ponneri High Road, Manali, Chennai - 600 068.

Report Number : **19070155.01**

Date of Sampling : 30/07/2019

Sample Description : Emission

Sampling Location : Boiler Plant-I

Sampled By : CVR Labs

Received on : 31/07/2019

Commenced on : 31/07/2019

Completed on : 01/08/2019

Date of report : 01/08/2019

S.No.	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVII/100	K	437	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	10.04	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008	Nm <sup>3</sup> /hr	43441.81	-
4	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (Reaff:2014)	mg/Nm <sup>3</sup>	427.5	-
5	Oxides of Nitrogen (NOx)	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/Nm <sup>3</sup>	25.61	-
6	Carbon monoxide (CO)	CVR/SOP/ENVII/100	ppm	47	-
7	Carbon Dioxide (CO <sub>2</sub> )	CVR/SOP/ENVII/100	%	8.5	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVII/100	%	6.3	-
9	Moisture Content	EPA Method1-3	%	5.38	-
10	Particulate Matter (PM)	IS 11255(Part-1):1985 (Reaff:2014)	mg/Nm <sup>3</sup>	41.56	150

M. Raj  
Verified By

For CVR Labs (P) Limited

*Nirmala K.B*  
Authorized Signatory

K.B.Nirmala  
Senior-Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

#### Terms and Conditions:

The test results furnished relate only to the particular sample is submitted

The test results reflect to the sample tested on the above mentioned date and environments condition.

The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days

The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

003808

### Issued To :

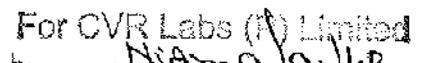
#### Manali Petrochemicals Limited

Ponneri High Road, Manali, Chennai - 600 068.

Report Number : 19080129.01  
Date of Sampling : 22/08/2019  
Sample Description : Source Emission  
Sampling Location : Boiler 01  
Sampled By : CVR Labs  
Received on : 22/08/2019  
Commenced on : 23/08/2019  
Completed on : 23/08/2019  
Date of report : 23/08/2019

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	434	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	11.7	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008	Nm <sup>3</sup> /hr	50981	-
4	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (Reaff:2014)	mg/Nm <sup>3</sup>	408.8	-
5	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/Nm <sup>3</sup>	46.41	-
6	Carbon monoxide (CO)	CVR/SOP/ENVI/100	ppm	48	-
7	Carbon Dioxide (CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	7.4	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVI/100	%	6.9	-
9	Moisture Content	EPA Method1-3	%	5.3	-
10	Particulate Matter (PM)	IS 11255(Part-1):1985 (Reaff:2014)	mg/Nm <sup>3</sup>	42.86	150

  
Verified By

For CVR Labs (P) Limited  
  
Authorized Signatory

K.B.Nirmala  
Senior-Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

#### Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

005274

## TEST REPORT

Issued To :

**Manali Petrochemicals Limited**

Ponneri High Road, Manali, Chennai - 600 068.

Report Number : 19090123.01                      Received on : 25/09/2019  
Date of Sampling : 25/09/2019                      Commenced on : 25/09/2019  
Sample Description : Source Emission                      Completed on : 26/09/2019  
Sampling Location : Boiler Stack Plant-I                      Date of report : 26/09/2019  
Sampled By : CVR Labs

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVII/100	K	435	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	12.2	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008 (RA 2013)	Nm <sup>3</sup> /hr	53031	-
4	Sulphur dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (RA 2014)	mg/Nm <sup>3</sup>	320.31	-
5	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (RA 2017)	mg/Nm <sup>3</sup>	33.44	-
6	Carbon monoxide (CO)	CVR/SOP/ENVII/100	ppm	33	-
7	Carbon dioxide (CO <sub>2</sub> )	CVR/SOP/ENVII/100	%	7.5	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVII/100	%	7.1	-
9	Moisture Content	EPA Method1-3	%	5.4	-
10	Particulate Matter (PM)	IS 11255(Part-1) 1985(RA 2014)	mg/Nm <sup>3</sup>	35.67	150

  
Verified By

For CVR Labs (P) Limited  
  
Authorized Signatory

K.B.Nirmala  
Senior-Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.

Page 1 of 1



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

006766

### Issued To :

#### **Manali Petrochemicals Limited**

Ponneri High Road, Manali, Chennai - 600 068.

Report Number	: 19100147.01	Received on	: 31/10/2019
Date of Sampling	: 31/10/2019	Commenced on	: 31/10/2019
Sample Description	: Stack Emission	Completed on	: 01/11/2019
Sampling Location	: Boiler Stack	Date of report	: 01/11/2019
Sampled By	: CVR Labs		

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	437	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	12.7	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008 (RA 2013)	Nm <sup>3</sup> /hr	54959	-
4	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (RA 2014)	mg/Nm <sup>3</sup>	306.4	-
5	Oxides of Nitrogen (NOx)	IS 11255 (Part-7) 2005 (RA 2017)	mg/Nm <sup>3</sup>	39.69	-
6	Carbon monoxide (CO)	CVR/SOP/ENVI/100	ppm	47	-
7	Carbon Dioxide (CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	8.1	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVI/100	%	6.8	-
9	Moisture Content	EPA Method1-3	%	3.2	-
10	Particulate Matter (PM)	IS 11255 (Part-1) 1985 (RA 2014)	mg/Nm <sup>3</sup>	34.88	150

*M. Jay*  
Verified By

For CVR Labs (P) Limited

*Nirmala K.R*  
Authorized Signatory  
K.B.Nirmala  
Senior-Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

#### Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvglabs.com | Web : www.cvglabs.com

007830

## TEST REPORT

### Issued To :

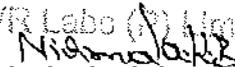
### **Manali Petrochemicals Limited**

Ponneri High Road, Manali,  
Chennai - 600 068.

Report Number : 19110119.01 Received on : 19/11/2019  
Date of Sampling : 19/11/2019 Commenced on : 19/11/2019  
Sample Description : Source Emission Completed on : 20/11/2019  
Sampling Location : Boiler Stack - Plant I Date of report : 20/11/2019  
Sampled By : CVR Labs

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	389	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	11.0	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008 (RA 2013)	Nm <sup>3</sup> /hr	53475.64	-
4	Sulphur Dioxide(SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (RA 2014)	mg/Nm <sup>3</sup>	52.03	-
5	Oxides of Nitrogen(NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (RA 2017)	mg/Nm <sup>3</sup>	12.95	-
6	Carbon monoxide(CO)	CVR/SOP/ENVI/100	ppm	18	-
7	Carbon Dioxide(CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	13.1	-
8	Oxygen(O <sub>2</sub> )	CVR/SOP/ENVI/100	%	5.2	-
9	Moisture Content	EPA Method1-3	%	3.2	-
10	Particulate Matter (PM)	IS 11255(Part-1) 1985(RA 2014)	mg/Nm <sup>3</sup>	22.43	150

  
Verified By ✓

For CVR Labs (P) Limited  
  
Authorized Signatory

K.B.Nirmala  
Senior Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

#### Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.

Page 1 of 1

Page No. 15



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

008613

## TEST REPORT

### Issued To :

### **Manali Petrochemicals Limited**

Ponneri High Road, Manali,  
Chennai - 600 068.

Report Number	: 19120039.01	Received on	: 06/12/2019
Date of Sampling	: 05/12/2019	Commenced on	: 07/12/2019
Sample Description	: Source Emission	Completed on	: 07/12/2019
Sampling Location	: Boiler Stack - Plant I	Date of report	: 07/12/2019
Sampled By	: CVR Labs		

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	410	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	12.7	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008 (RA 2013)	Nm <sup>3</sup> /hr	58570	-
4	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (RA 2014)	mg/Nm <sup>3</sup>	455.6	-
5	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (RA 2017)	mg/Nm <sup>3</sup>	117.4	-
6	Carbon monoxide ( CO)	CVR/SOP/ENVI/100	ppm	24	-
7	Carbon Dioxide (CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	8.1	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVI/100	%	10.8	-
9	Moisture Content	EPA Method1-3	%	1.8	-
10	Particulate Matter (PM)	IS 11255(Part-1) 1985 (RA 2014)	mg/Nm <sup>3</sup>	25.2	150

Verified By

For CVR Labs (P) Limited

Authorized Signatory

K.B.Nirmala  
Senior-Chemist

\*\*\*\*\*END OF REPORT\*\*\*\*\*

### Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.

Page 1 of 1

Page No. 16



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

No 21290

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

### ANNEXURE - II-B

Issued To :

Manali Petrochemicals Limited  
Ponneri High Road, Manali, Chennai - 600 068.

Date of report : 10/01/2019

Received on : 10/01/2019

Commenced on : 10/01/2019

Report Number : 19010073.01

Completed on : 10/01/2019

Date of Sampling : 10/01/2019

Sampled by : CVR Labs

Sample Description : Source Emission

Sampling Location : MPL Plant - 2 Boiler Stack

Customer Reference :-

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	By Digital Thermocouple	K	425	-
2	Velocity of the Flue Gas	EPA Method 1-3 -1996	m/sec	12.2	-
3	Flue Gas Discharge	EPA Method 1-3 -1996 IS 11255 (Part-3) 2008	Nm3/hr	54278.341	-
4	sulphur Dioxide (SO2)	IS 11255 (Part-2) 1985 (Reaff:2017)	mg/Nm3	137.4	-
5	Oxides of nitrogen (NOx)	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/Nm3	92.80	-
6	Carbon monoxide (CO)	IS 13270 : 1992 (Reaff 2003)	ppm	-	-
7	Carbon Dioxide (CO2)	IS 13270 : 1992 (Reaff 2003)	%	8.2	-
8	Oxygen (O2)	IS 13270 : 1992 (Reaff 2003)	%	6.4	-
9	Moisture Content	EPA Method 1-3	%	6.1	-
10	Particulate Matter (PM)	IS 11255 (Part-1):1985	mg/Nm3	38.55	150

Verified By

For CVR LABS PVT. LTD.

E. Janaki  
Authorised Signatory

EJANAKI  
Asst. Quality Manager

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Recognized / Approved by : NABL, FSSAI, BIS , Ministry of Environment & Forests , ISO 9001 : 2008 , OSHAS 18001

**Terms and Conditions:**

- The test results furnished relate only to the particular sample is submitted.
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval.
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

**Nº 22246**

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

Issued To :

Manali Petrochemicals Limited  
Ponneri High Road, Manali, Chennai - 600 068.

Date of report : 16/02/2019

Received on : 15/02/2019

Commenced on : 16/02/2019

Report Number : 19020125.02

Completed on : 16/02/2019

Date of Sampling : 14/02/2019

Sampled by : CVR Labs

Sample Description : Source Emission

Sampling Location : MPL Plant - II Boiler stack

S.No	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	By Digital Thermocouple	K	423	-
2	Velocity of the Flue Gas	EPA Method 1-3 -1996	m/sec	12.75	-
3	Flue Gas Discharge	EPA Method 1-3 -1996 IS 11255 (Part-3) 2008	Nm3/hr	56993	-
4	sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (Reaff:2017)	mg/Nm <sup>3</sup>	329.3	-
5	Oxides of nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/m <sup>3</sup>	1.32	-
6	Carbon monoxide (CO)	IS 13270 : 1992 (Reaff 2003)	ppm	Nil	-
7	Carbon Dioxide (CO <sub>2</sub> )	IS 13270 : 1992 (Reaff 2003)	%	8.4	-
8	Oxygen (O <sub>2</sub> )	IS 13270 : 1992 (Reaff 2003)	%	6.1	-
9	Moisture Content	EPA Method 1-3	%	5.29	-
10	Particulate Matter (PM)	IS 11255 (Part-1):1985	mg/Nm <sup>3</sup>	40.12	150

Verified By

For CVR LABS PVT. LTD.

*E. Janaki*  
Authorised Signatory

**E. JANAKI**  
Asst. Quality Manager

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Recognized / Approved by : NABL, FSSAI, BIS , Ministry of Environment & Forests , ISO 9001 : 2008 , OSHAS 18001

**Terms and Conditions:**

- The test results furnished relate only to the particular sample is submitted.
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval.
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

No: 23973

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

Page: 1 of 1

**Issued To :**

**Manali Petrochemicals Limited**  
Ponneri High Road, Manali,  
Chennai - 600 068.

**Date of report** : 29/04/2019

**Received on** : 26/04/2019

**Commenced on** : 27/04/2019

**Report Number** : 19040155.02

**Completed on** : 29/04/2019

**Date of Sampling** : 24/04/2019

**Sampled by** : CVR Labs

**Sample Description** : Source Emission

**Sampling Location** : Boiler Stack - MPL Plant-II

**Customer Reference** :-

S.No:	Parameters	Protocol	Unit	Results	Limit**
1	Stack Temperature	CVR /SOP/ENVI/100	K	418	-
2	Velocity of the Flue Gas	EPA Method 1-3 -1996	m/sec	10.2	-
3	Flue Gas Discharge	EPA Method 1-3 -1996 IS 11255 (Part-3) 2008	Nm <sup>3</sup> /hr	46140.2	-
4	Oxides of Sulphur (SO <sub>x</sub> )	IS 11255 (Part-2)-1995	mg/Nm <sup>3</sup>	253.25	-
5	Oxides of nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005	mg/Nm <sup>3</sup>	22.75	-
6	Carbon monoxide (CO)	CVR/SOP/ENVI/100	ppm	21	-
7	Carbon Dioxide (CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	8.4	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVI/100	%	4.2	-
9	Moisture Content	EPA Method 1-3 -1996	%	0.917	-
10	Particulate Matter (PM)	IS 11255 (Part-1):1985	mg/Nm <sup>3</sup>	26.51	150

\*\*Ministry of Environmental and Forests, Government of India (G.S.R.371 (E), 2016

Verified By

For CVR Labs (P) Limited

Authorized Signatory  
K. B. Srinivasan

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Recognized / Approved by : NABL, FSSAI, BIS, Ministry of Environment & Forests, ISO 9001 : 2008, OSHAS 18001

**Terms and Conditions:**

- The test results furnished relate only to the particular sample is submitted.
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval.
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

**001439**

## TEST REPORT

**Issued To :**

M/s. Manali Petrochemicals Limited  
Ponneri High Road, Manali,  
Chennai - 600 068.

Date of report : 23/05/2019

Received on : 23/05/2019

Commenced on : 23/05/2019

Report Number : 19050175.02

Completed on : 23/05/2019

Date of Sampling : 22/05/2019

Sampled by : CVR Labs

Sample Description : Source Emission

Sampling Location : Boiler Stack- Plant II

Customer Reference :-

S.No:	Parameters	Protocol	Unit	Results	CPCB Limit
1	Stack Temperature	CVR /SOP/ENVI/100	K	139	-
2	Velocity of the Flue Gas	EPA Method 1-3 -1996	m/sec	11.15	-
3	Flue Gas Discharge	EPA Method 1-3 -1996 IS 11255 (Part-3) 2008	Nm <sup>3</sup> /hr	51172	-
4	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)-1995	mg/Nm <sup>3</sup>	307.9	-
5	Oxides of nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005	mg/Nm <sup>3</sup>	32.5	-
6	Carbon monoxide (CO)	CVR/SOP/ENVI/100	ppm	35	-
7	Carbon Dioxide (CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	7.9	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVI/100	%	6.0	-
9	Moisture Content	EPA Method 1-3 -1996	%	5.84	-
10	Particulate Matter (PM)	IS 11255 (Part-1):1985	mg/Nm <sup>3</sup>	35.46	150

Verified By

For CVR Labs (P) Limited  
  
K.B. Nirmala  
Authorized Signatory  
Senior-Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Terms and Conditions:

Page 1 of 1

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

002374

### Issued To :

**Manali Petrochemicals Limited**

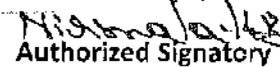
Ponneri High Road, Manali, Chennai - 600 068.

Report Number	: 19060066.02	Received on	: 22/06/2019
Date Of Sampling	: 21/06/2019	Commenced on	: 22/06/2019
Sample Description	: Source Emission	Completed on	: 22/06/2019
Sample Location	: Boiler Plant -2	Date of report	: 22/06/2019
Sample By	: CVR Labs		

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	425	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	10.55	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008	Nm <sup>3</sup> /hr	46937.41	-
4	sulphur Dioxide(SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (Reaff:2014)	mg/Nm <sup>3</sup>	272.8	-
5	Oxides of nitrogen(NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/Nm <sup>3</sup>	28.96	-
6	Carbon monoxide(CO)	CVR/SOP/ENVI/100	ppm	31	-
7	Carbon Dioxide(CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	8.1	-
8	Oxygen(O <sub>2</sub> )	CVR/SOP/ENVI/100	%	5.8	-
9	Moisture Content	EPA Method 1-3	%	5.37	-
10	Particulate Matter (PM)	IS 11255(Part-1):1985 (Reaff:2014)	mg/Nm <sup>3</sup>	41.73	150

Verified By 

For CVR Labs (P) Limited

  
Authorized Signatory

K.B.Nirmala  
Senior-Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

### Terms and Conditions:

The test results furnished relate only to the particular sample is submitted  
The test results reflect to the sample tested on the above mentioned date and environments condition.  
The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days  
The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

003000

### Issued To :

### Manali Petrochemicals Limited

Ponneri High Road, Manali, Chennai - 600 068.

Report Number : 19070155.02  
Date of Sampling : 30/07/2019  
Sample Description : Emission  
Sampling Location : Boiler Plant-II  
Sampled By : CVR Labs  
Received on : 31/07/2019  
Commenced on : 31/07/2019  
Completed on : 01/08/2019  
Date of report : 01/08/2019

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	416	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	9.63	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008	Nm <sup>3</sup> /hr	43765.45	-
4	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (Reaff:2014)	mg/Nm <sup>3</sup>	303.09	-
5	Oxides of Nitrogen (NOx)	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/Nm <sup>3</sup>	32.27	-
6	Carbon monoxide (CO)	CVR/SOP/ENVI/100	ppm	39	-
7	Carbon Dioxide (CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	9.2	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVI/100	%	5.5	-
9	Moisture Content	EPA Method1-3	%	4.51	-
10	Particulate Matter (PM)	IS 11255(Part-1):1985 (Reaff:2014)	mg/Nm <sup>3</sup>	44.07	150

M. Jay  
Verified By

For CVR Labs (P) Limited  
Nirmala K.R.  
Authorized Signatory  
K.B.Nirmala  
Senior Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

#### Terms and Conditions:

The test results furnished relate only to the particular sample is submitted  
The test results reflect to the sample tested on the above mentioned date and environments condition.  
The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days  
The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.

Page 1 of 1

Page No. 22



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

**003803**

Issued To :

**Manali Petrochemicals Limited**

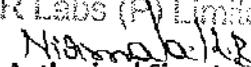
Ponneri High Road, Manali, Chennai - 600 068.

Report Number : **19080129.02**  
Date of Sampling : 22/08/2019  
Sample Description : Source Emission  
Sampling Location : Boiler 02  
Sampled By : CVR Labs

Received on : 22/08/2019  
Commenced on : 23/08/2019  
Completed on : 23/08/2019  
Date of report : 23/08/2019

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	421	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	11.6	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008	Nm <sup>3</sup> /hr	52099	-
4	Sulphur Dioxide(SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (Reaff:2014)	mg/Nm <sup>3</sup>	260.69	-
5	Oxides of Nitrogen(NOx)	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/Nm <sup>3</sup>	38.5	-
6	Carbon monoxide(CO)	CVR/SOP/ENVI/100	ppm	40	-
7	Carbon Dioxide(CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	8.0	-
8	Oxygen(O <sub>2</sub> )	CVR/SOP/ENVI/100	%	6.7	-
9	Moisture Content	EPA Method1-3	%	3.6	-
10	Particulate Matter (PM)	IS 11255(Part-1):1985 (Reaff:2014)	mg/Nm <sup>3</sup>	38.77	150

  
Verified By J

For CVR Labs (P) Limited  
  
Authorized Signatory

K.B.Nirmala  
Senior-Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by applicable regulations.



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

005275

Issued To :

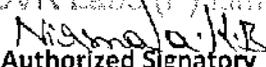
**Manali Petrochemicals Limited**

Ponneri High Road, Manali, Chennai - 600 068.

Report Number : **19090123.02** Received on : 25/09/2019  
Date of Sampling : 25/09/2019 Commenced on : 25/09/2019  
Sample Description : Source Emission Completed on : 26/09/2019  
Sampling Location : Boiler Stack Plant-II Date of report : 26/09/2019  
Sampled By : CVR Labs

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	422	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	11.7	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008 (RA 2013)	Nm <sup>3</sup> /hr	52431	-
4	Sulphur dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (RA 2014)	mg/Nm <sup>3</sup>	237.98	-
5	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (RA 2017)	mg/Nm <sup>3</sup>	29.17	-
6	Carbon monoxide (CO)	CVR/SOP/ENVI/100	ppm	44	-
7	Carbon dioxide (CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	7.9	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVI/100	%	6.7	-
9	Moisture Content	EPA Method1-3	%	3.2	-
10	Particulate Matter (PM)	IS 11255(Part-1) 1985(RA 2014)	mg/Nm <sup>3</sup>	39.89	150

  
Verified By ✓

For CVR Labs (P) Limited  
  
Authorized Signatory

K.B.Nishama  
Senior Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.

Page 1 of 1

Page No. 24



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

006585

### Issued To :

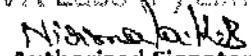
### **Manali Petrochemicals Limited**

Ponneri High Road, Manali, Chennai - 600 068.

Report Number : 19100077.02  
Date of Sampling : 16/10/2019  
Sample Description : Source Emission  
Sampling Location : Boiler Stack Plant-II  
Sampled By : CVR Labs  
Received on : 17/10/2019  
Commenced on : 17/10/2019  
Completed on : 18/10/2019  
Date of report : 18/10/2019

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	444	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	7.7	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008(Reaff.2013)	Nm <sup>3</sup> /hr	32787.34	-
4	Sulphur dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (Reaff:2014)	mg/Nm <sup>3</sup>	234.89	-
5	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (Reaff:2017)	mg/Nm <sup>3</sup>	30.24	-
6	Carbon monoxide (CO)	CVR/SOP/ENVI/100	ppm	29	-
7	Carbon dioxide (CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	8.4	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVI/100	%	5.6	-
9	Moisture Content	EPA Method1-3	%	2.27	-
10	Particulate Matter (PM)	IS 11255(Part-1):1985 (Reaff:2014)	mg/Nm <sup>3</sup>	39.85	150

  
Verified By ↓

For CVR Labs (P) Limited  
  
Authorized Signatory

\*\*\*\*\* END OF REPORT \*\*\*\*\*

K.B.Nirmala  
Senior-Chemist

#### Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.

Page 1 of 1

Page No. 25



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

## TEST REPORT

007831

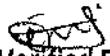
### Issued To :

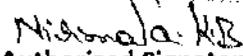
#### **Manali Petrochemicals Limited**

Ponneri High Road, Manali,  
Chennai - 600 068.

Report Number : 19110119.02  
Date of Sampling : 19/11/2019  
Sample Description : Source Emission  
Sampling Location : Boiler Stack - Plant II  
Sampled By : CVR Labs  
Received on : 19/11/2019  
Commenced on : 19/11/2019  
Completed on : 20/11/2019  
Date of report : 20/11/2019

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	412	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	11.6	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008 (RA 2013)	Nm <sup>3</sup> /hr	53244.372	-
4	Sulphur Dioxide(SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (RA 2014)	mg/Nm <sup>3</sup>	224.86	-
5	Oxides of Nitrogen(NOx)	IS 11255 (Part-7) 2005 (RA 2017)	mg/Nm <sup>3</sup>	24.45	-
6	Carbon monoxide(CO)	CVR/SOP/ENVI/100	ppm	38	-
7	Carbon Dioxide(CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	9.4	-
8	Oxygen(O <sub>2</sub> )	CVR/SOP/ENVI/100	%	6.8	-
9	Moisture Content	EPA Method1-3	%	5.4	-
10	Particulate Matter (PM)	IS 11255(Part-1) 1985(RA 2014)	mg/Nm <sup>3</sup>	34.73	150

  
Verified By

For CVR Labs (P) Limited  
  
Authorized Signatory  
K.B.Nirmala  
Senior-Chemist

\*\*\*\*\* END OF REPORT \*\*\*\*\*

#### Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.

Page 1 of 1

Page No. 26



# CVR Labs (P) Limited

CIN NO: U 74140TN1999PTC043582

Dignity Centre, 2nd Floor, New No. 2/9, Old No. 21 Abdul Razack Street,  
Saidapet, Chennai - 600 015. Phone : +91 44 2433 0382 to 85  
E-mail : info@cvrlabs.com | Web : www.cvrlabs.com

008614

## TEST REPORT

### Issued To :

### **Manali Petrochemicals Limited**

Ponneri High Road, Manali,  
Chennai - 600 068.

Report Number	: 19120039.02	Received on	: 06/12/2019
Date of Sampling	: 05/12/2019	Commenced on	: 07/12/2019
Sample Description	: Source Emission	Completed on	: 07/12/2019
Sampling Location	: Boiler Stack - Plant II	Date of report	: 07/12/2019
Sampled By	: CVR Labs		

S.No:	Parameters	Protocol	Unit	Results	CPCB Norms
1	Stack Temperature	CVR/SOP/ENVI/100	K	409	-
2	Velocity of the Flue Gas	EPA Method1-3 -1996	m/sec	12.18	-
3	Flue Gas Discharge	EPA Method1-3 -1996 IS 11255 (Part-3) 2008 (RA 2013)	Nm <sup>3</sup> /hr	56309.2	-
4	Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2) 1985 (RA 2014)	mg/Nm <sup>3</sup>	327.4	-
5	Oxides of Nitrogen (NO <sub>x</sub> )	IS 11255 (Part-7) 2005 (RA 2017)	mg/Nm <sup>3</sup>	82.1	-
6	Carbon monoxide ( CO)	CVR/SOP/ENVI/100	ppm	18	-
7	Carbon Dioxide (CO <sub>2</sub> )	CVR/SOP/ENVI/100	%	9.3	-
8	Oxygen (O <sub>2</sub> )	CVR/SOP/ENVI/100	%	9.9	-
9	Moisture Content	EPA Method1-3	%	2.3	-
10	Particulate Matter (PM)	IS 11255(Part-1) 1985 (RA 2014)	mg/Nm <sup>3</sup>	32.6	150

Verified By

For CVR Labs (P) Limited

Authorized Signatory  
K.B.Nimmla  
Senior-Chemist

\*\*\*\*\*END OF REPORT\*\*\*\*\*

#### Terms and Conditions:

- The test results furnished relate only to the particular sample is submitted
- The test results reflect to the sample tested on the above mentioned date and environments condition.
- The test report shall not be reproduced except in full without our written approval. Any complaints about this report should be communicated within 7 days
- The tested items will not be retained for more than 15 days from the date of issue of test report except in the case as required by the applicable regulations.



# Real Time Data Acquisition And Monitoring

Site Name: Manali Petrochemicals Ltd Plant 1

Report: Custom Report

From Date: 2019/01/01 00:00:00 To Date : 2019/12/16 23:29:49

Description	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
Prescribed Standards	-	-	-	-
Maximum Data	819.71	132.21	25.42	65.46
Minimum Data	0.0	0.1	0.0	0.0
Geometric Mean	188.35	83.35	8.28	40.28
Median	219.82	98.77	9.89	45.02
Standard Deviation	97.67	41.11	4.26	16.11
Maximum Value At Time	2019-01-25	2019-05-26	2019-03-02	2019-05-18
Minimum Value At Time	2019-01-08	2019-01-01	2019-01-01	2019-11-10
Valid Data Points	332	334	334	331
Total Data Points	350	350	350	350
Data Availability %	94.86%	95.43%	95.43%	94.57%

Sl No	Time	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
1	2019-01-01	2.21	0.10	0.00	0.05
2	2019-01-02	2.21	0.10	0.00	0.05
3	2019-01-03	2.21	0.10	0.00	0.05
4	2019-01-04	2.21	0.10	0.00	0.05
5	2019-01-05	2.21	0.10	0.00	0.05
6	2019-01-06	2.21	0.10	0.00	0.05
7	2019-01-07	2.51	0.10	0.00	0.05
8	2019-01-08	0.00	0.10	0.00	0.05
9	2019-01-09	0.00	0.10	0.00	0.05
10	2019-01-10	0.00	0.10	0.00	0.05
11	2019-01-11	0.00	0.10	0.00	0.05
12	2019-01-12	0.00	0.10	0.00	0.05
13	2019-01-13	0.00	0.10	0.00	0.05
14	2019-01-14	0.00	0.10	0.00	0.05
15	2019-01-15	0.00	0.10	0.00	0.05
16	2019-01-16	0.00	0.10	0.00	0.05
17	2019-01-17	0.00	0.10	0.00	0.05
18	2019-01-18	0.00	0.10	0.00	0.05
19	2019-01-19	0.00	0.10	0.00	0.05
20	2019-01-20	0.00	0.10	0.00	0.05

SI No	Time	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
21	2019-01-21	0.00	0.10	0.00	0.05
22	2019-01-22	0.00	0.10	0.00	0.05
23	2019-01-23	0.00	0.10	0.00	0.05
24	2019-01-24	0.00	0.10	0.00	0.05
25	2019-01-25	819.71	7.87	7.66	0.16
26	2019-01-26	NA	NA	NA	NA
27	2019-01-27	NA	NA	NA	NA
28	2019-01-28	0.00	1.28	0.04	0.05
29	2019-01-29	0.00	1.28	0.04	0.05
30	2019-01-30	0.00	1.28	0.00	0.05
31	2019-01-31	0.00	1.28	0.00	19.97
32	2019-02-01	0.00	1.28	0.00	50.49
33	2019-02-02	0.00	1.28	0.00	47.71
34	2019-02-03	0.00	1.28	0.00	48.05
35	2019-02-04	0.00	1.28	0.00	51.19
36	2019-02-05	0.00	1.28	0.00	44.01
37	2019-02-06	0.00	1.28	0.00	55.17
38	2019-02-07	0.00	1.28	0.00	36.39
39	2019-02-08	0.00	1.28	0.00	56.71
40	2019-02-09	0.00	1.28	0.00	59.34
41	2019-02-10	0.00	1.28	0.00	44.36
42	2019-02-11	0.00	1.28	0.00	48.88
43	2019-02-12	0.00	1.28	0.00	51.35
44	2019-02-13	0.00	1.28	0.00	51.82
45	2019-02-14	0.00	1.28	0.00	45.26
46	2019-02-15	0.00	1.28	0.00	49.55
47	2019-02-16	0.00	1.28	0.00	44.50
48	2019-02-17	0.00	1.28	0.00	43.87
49	2019-02-18	0.00	1.28	0.00	44.31
50	2019-02-19	NA	1.28	0.00	45.05
51	2019-02-20	NA	1.28	0.00	44.86
52	2019-02-21	0.00	1.28	0.00	42.96
53	2019-02-22	0.00	1.28	0.00	43.35
54	2019-02-23	0.00	1.28	0.10	41.88
55	2019-02-24	0.00	1.28	0.00	43.00
56	2019-02-25	0.00	1.28	0.00	44.13
57	2019-02-26	0.00	1.28	0.00	46.54
58	2019-02-27	0.00	1.28	0.00	46.45
59	2019-02-28	0.00	1.28	0.00	44.75
60	2019-03-01	75.76	44.02	11.18	43.80
61	2019-03-02	143.01	85.84	25.42	45.23

SI No	Time	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
62	2019-03-03	143.03	85.84	21.33	43.99
63	2019-03-04	137.81	102.94	6.52	33.38
64	2019-03-05	160.20	116.17	7.58	25.86
65	2019-03-06	213.85	99.35	10.30	44.81
66	2019-03-07	200.03	89.92	10.31	41.65
67	2019-03-08	210.39	94.77	10.52	40.01
68	2019-03-09	198.80	88.61	10.18	39.71
69	2019-03-10	202.57	89.97	10.30	38.24
70	2019-03-11	229.45	101.21	11.32	43.60
71	2019-03-12	220.40	97.63	10.77	37.11
72	2019-03-13	199.01	88.81	9.97	36.54
73	2019-03-14	190.58	84.40	9.84	36.76
74	2019-03-15	213.70	94.51	10.74	44.21
75	2019-03-16	194.99	85.97	9.93	41.79
76	2019-03-17	196.84	87.10	9.88	42.36
77	2019-03-18	194.17	90.64	10.03	44.10
78	2019-03-19	196.82	90.50	9.93	44.00
79	2019-03-20	193.85	96.90	10.37	47.26
80	2019-03-21	203.52	95.68	10.16	46.67
81	2019-03-22	187.12	90.98	9.83	44.30
82	2019-03-23	203.40	93.63	10.05	45.66
83	2019-03-24	223.12	106.78	10.53	52.10
84	2019-03-25	211.25	107.51	10.61	52.46
85	2019-03-26	215.11	103.56	10.40	50.41
86	2019-03-27	233.93	106.67	10.90	51.85
87	2019-03-28	218.47	102.65	10.35	49.72
88	2019-03-29	210.04	99.24	10.19	48.01
89	2019-03-30	210.44	96.69	9.89	47.05
90	2019-03-31	198.08	87.95	9.79	42.81
91	2019-04-01	207.68	92.38	9.57	44.74
92	2019-04-02	202.25	97.12	10.19	46.22
93	2019-04-03	224.36	109.48	11.11	53.42
94	2019-04-04	242.95	109.45	11.18	53.37
95	2019-04-05	202.61	96.22	10.30	46.85
96	2019-04-06	188.28	100.32	10.18	48.87
97	2019-04-07	226.25	107.46	10.64	52.23
98	2019-04-08	226.60	113.63	10.31	55.36
99	2019-04-09	197.52	97.36	9.14	47.38
100	2019-04-10	197.58	97.06	9.10	47.04
101	2019-04-11	215.29	98.09	10.00	47.45

SI No	Time	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
102	2019-04-12	200.77	89.29	8.77	43.48
103	2019-04-13	196.48	88.91	8.05	43.34
104	2019-04-14	198.34	87.79	8.28	42.75
105	2019-04-15	202.01	89.74	8.80	43.67
106	2019-04-16	221.82	100.13	10.23	48.67
107	2019-04-17	232.69	102.55	10.69	49.83
108	2019-04-18	236.43	104.09	9.82	50.69
109	2019-04-19	234.68	103.60	9.78	50.44
110	2019-04-20	217.59	95.94	9.23	41.45
111	2019-04-21	234.84	107.95	10.55	50.42
112	2019-04-22	240.53	109.41	10.48	51.64
113	2019-04-23	234.86	104.04	9.62	49.19
114	2019-04-24	262.05	116.93	11.05	53.99
115	2019-04-25	226.57	100.14	9.08	48.81
116	2019-04-26	236.11	104.10	8.96	50.84
117	2019-04-27	210.77	96.20	10.15	45.50
118	2019-04-28	206.82	93.36	9.70	44.30
119	2019-04-29	224.70	99.79	10.96	48.25
120	2019-04-30	263.88	116.39	12.76	56.71
121	2019-05-01	241.98	106.69	11.76	51.93
122	2019-05-02	233.63	103.17	9.80	50.16
123	2019-05-03	280.73	123.83	10.89	60.41
124	2019-05-04	267.75	118.10	12.93	57.63
125	2019-05-05	231.24	102.17	11.15	49.79
126	2019-05-06	206.07	101.88	11.20	49.63
127	2019-05-07	171.84	114.53	12.16	55.83
128	2019-05-08	249.68	110.08	10.59	53.63
129	2019-05-09	277.11	122.12	12.27	59.65
130	2019-05-10	265.56	117.21	12.63	57.19
131	2019-05-11	229.05	126.65	13.67	61.81
132	2019-05-12	256.80	113.43	12.39	55.29
133	2019-05-13	261.03	115.14	12.54	56.13
134	2019-05-14	265.63	117.35	12.72	57.25
135	2019-05-15	259.46	115.04	12.24	55.92
136	2019-05-16	287.89	126.42	13.74	62.15
137	2019-05-17	281.01	123.86	13.41	60.51
138	2019-05-18	303.42	132.03	14.49	65.46
139	2019-05-19	249.20	114.48	11.94	50.98
140	2019-05-20	210.18	115.42	11.58	45.20
141	2019-05-21	215.02	98.12	10.57	46.80
142	2019-05-22	251.85	111.38	11.95	54.25

SI No	Time	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
143	2019-05-23	269.63	119.15	12.67	58.15
144	2019-05-24	252.77	111.89	12.03	54.45
145	2019-05-25	237.35	105.21	11.26	51.17
146	2019-05-26	299.63	132.21	14.17	64.62
147	2019-05-27	247.25	109.33	11.63	53.24
148	2019-05-28	240.39	106.41	11.28	51.78
149	2019-05-29	227.94	101.71	10.86	49.11
150	2019-05-30	252.18	111.04	12.04	54.35
151	2019-05-31	216.64	95.99	10.20	46.78
152	2019-06-01	247.46	109.66	10.77	53.49
153	2019-06-02	258.87	121.43	11.92	59.26
154	2019-06-03	255.20	120.51	11.68	58.76
155	2019-06-04	188.02	85.87	8.80	41.76
156	2019-06-05	230.93	114.15	10.68	55.72
157	2019-06-06	212.38	103.98	10.17	50.72
158	2019-06-07	207.02	99.84	9.78	48.67
159	2019-06-08	239.17	117.57	10.50	57.36
160	2019-06-09	204.57	93.57	8.83	45.57
161	2019-06-10	216.26	97.06	9.94	47.28
162	2019-06-11	236.89	104.72	10.41	50.82
163	2019-06-12	246.30	113.24	11.25	52.77
164	2019-06-13	210.24	100.12	10.24	43.54
165	2019-06-14	206.27	100.20	9.74	47.89
166	2019-06-15	218.89	102.79	10.11	49.73
167	2019-06-16	233.46	113.79	10.30	54.96
168	2019-06-17	202.96	93.75	8.83	45.16
169	2019-06-18	262.92	117.75	10.47	55.97
170	2019-06-19	227.03	100.90	9.52	48.74
171	2019-06-20	223.80	99.31	9.56	48.03
172	2019-06-21	238.04	109.39	10.45	53.21
173	2019-06-22	215.68	103.08	10.07	49.58
174	2019-06-23	227.08	112.15	10.18	54.41
175	2019-06-24	238.24	111.62	10.45	52.83
176	2019-06-25	231.68	106.53	10.15	50.90
177	2019-06-26	218.88	101.84	9.85	48.41
178	2019-06-27	207.57	96.45	9.52	44.14
179	2019-06-28	193.34	86.46	9.08	39.25
180	2019-06-29	238.19	110.13	10.94	48.14
181	2019-06-30	215.80	95.60	9.14	44.98
182	2019-07-01	204.66	90.92	8.62	44.06

SI No	Time	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
183	2019-07-02	198.83	88.40	8.86	42.07
184	2019-07-03	235.47	103.89	9.87	50.61
185	2019-07-04	216.04	95.38	9.38	46.27
186	2019-07-05	252.33	111.40	10.07	54.14
187	2019-07-06	245.83	108.31	10.14	51.90
188	2019-07-07	256.15	112.93	10.28	54.35
189	2019-07-08	223.42	98.53	9.31	47.71
190	2019-07-09	260.24	114.81	10.79	55.52
191	2019-07-10	257.58	113.88	10.11	53.68
192	2019-07-11	262.68	115.68	10.68	55.80
193	2019-07-12	208.67	91.94	9.05	43.22
194	2019-07-13	220.89	97.70	9.28	46.05
195	2019-07-14	262.10	115.73	9.74	55.63
196	2019-07-15	218.00	96.25	8.66	46.79
197	2019-07-16	233.23	103.24	8.74	49.46
198	2019-07-17	253.44	111.93	10.48	53.03
199	2019-07-18	250.94	110.62	10.06	53.94
200	2019-07-19	219.99	97.04	9.54	47.29
201	2019-07-20	244.87	108.06	9.97	52.69
202	2019-07-21	259.85	114.69	10.58	55.83
203	2019-07-22	215.81	95.40	9.44	46.49
204	2019-07-23	225.95	99.33	10.37	48.21
205	2019-07-24	245.64	107.95	11.41	52.24
206	2019-07-25	234.62	103.34	10.85	50.23
207	2019-07-26	260.10	114.36	12.00	55.54
208	2019-07-27	251.74	110.81	11.17	53.89
209	2019-07-28	220.13	97.21	10.03	47.12
210	2019-07-29	275.99	121.73	11.29	59.18
211	2019-07-30	256.03	112.77	10.56	54.95
212	2019-07-31	257.22	113.51	10.22	55.38
213	2019-08-01	242.43	107.14	10.46	52.07
214	2019-08-02	242.63	107.19	10.63	52.06
215	2019-08-03	262.29	115.80	11.38	56.35
216	2019-08-04	257.72	113.86	10.77	55.56
217	2019-08-05	249.27	110.17	10.17	53.49
218	2019-08-06	253.35	111.84	10.73	49.31
219	2019-08-07	259.94	114.61	10.16	53.40
220	2019-08-08	258.16	113.95	9.89	55.02
221	2019-08-09	257.08	113.53	10.65	55.29
222	2019-08-10	204.23	90.43	9.50	44.02
223	2019-08-11	229.12	101.28	10.52	49.36

SI No	Time	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
224	2019-08-12	265.17	117.01	11.93	56.62
225	2019-08-13	261.29	115.43	11.84	55.14
226	2019-08-14	246.05	108.84	10.95	50.98
227	2019-08-15	241.67	106.90	10.33	45.02
228	2019-08-16	283.46	125.03	11.82	58.06
229	2019-08-17	253.23	111.80	10.93	52.74
230	2019-08-18	281.75	124.22	12.57	60.44
231	2019-08-19	266.69	117.68	11.80	56.74
232	2019-08-20	252.09	111.32	11.44	54.06
233	2019-08-21	271.99	119.95	11.64	57.30
234	2019-08-22	245.76	108.33	10.71	52.79
235	2019-08-23	245.88	108.29	11.28	52.85
236	2019-08-24	241.81	106.61	11.16	51.97
237	2019-08-25	223.32	98.61	10.36	48.21
238	2019-08-26	242.79	107.11	11.17	52.31
239	2019-08-27	268.29	118.23	12.09	57.57
240	2019-08-28	282.09	124.30	11.35	58.99
241	2019-08-29	252.87	111.13	10.97	53.50
242	2019-08-30	246.15	108.71	10.57	53.16
243	2019-08-31	231.36	101.47	10.59	49.37
244	2019-09-01	258.22	113.12	11.50	55.05
245	2019-09-02	264.12	115.67	11.79	46.68
246	2019-09-03	258.15	113.18	11.52	35.98
247	2019-09-04	256.68	112.64	11.39	35.86
248	2019-09-05	NA	NA	NA	NA
249	2019-09-06	NA	NA	NA	NA
250	2019-09-07	NA	NA	NA	NA
251	2019-09-08	NA	NA	NA	NA
252	2019-09-09	NA	NA	NA	NA
253	2019-09-10	NA	NA	NA	NA
254	2019-09-11	NA	NA	NA	NA
255	2019-09-12	NA	NA	NA	NA
256	2019-09-13	NA	NA	NA	NA
257	2019-09-14	NA	NA	NA	NA
258	2019-09-15	NA	NA	NA	NA
259	2019-09-16	NA	NA	NA	NA
260	2019-09-17	NA	NA	NA	NA
261	2019-09-18	NA	NA	NA	NA
262	2019-09-19	227.54	100.13	10.61	32.20
263	2019-09-20	201.80	88.54	9.40	28.28

SI No	Time	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
264	2019-09-21	236.10	103.49	10.36	32.90
265	2019-09-22	219.88	96.88	10.54	30.83
266	2019-09-23	234.72	103.03	10.21	32.86
267	2019-09-24	223.68	76.78	8.48	42.92
268	2019-09-25	266.07	83.29	7.27	54.47
269	2019-09-26	247.86	108.73	7.81	34.67
270	2019-09-27	236.43	104.18	7.81	33.29
271	2019-09-28	225.84	99.43	7.81	33.09
272	2019-09-29	257.96	112.82	7.81	37.48
273	2019-09-30	239.50	104.72	7.81	33.26
274	2019-10-01	253.04	111.14	7.81	35.47
275	2019-10-02	238.17	104.34	7.81	33.23
276	2019-10-03	197.26	86.48	7.87	27.37
277	2019-10-04	203.75	88.98	7.92	29.47
278	2019-10-05	225.21	98.45	7.81	32.14
279	2019-10-06	196.78	86.10	7.92	27.38
280	2019-10-07	193.99	89.18	7.95	27.11
281	2019-10-08	198.94	87.83	7.82	27.69
282	2019-10-09	202.08	90.91	7.82	28.09
283	2019-10-10	221.83	98.85	7.82	30.83
284	2019-10-11	219.65	97.73	7.86	30.56
285	2019-10-12	205.79	90.15	7.82	28.65
286	2019-10-13	196.79	86.92	7.81	27.37
287	2019-10-14	215.89	98.04	7.81	30.11
288	2019-10-15	238.81	106.53	7.82	33.07
289	2019-10-16	205.82	89.83	7.99	28.52
290	2019-10-17	191.19	83.87	8.31	26.39
291	2019-10-18	221.42	97.36	8.44	30.69
292	2019-10-19	221.00	98.72	8.47	30.61
293	2019-10-20	243.01	107.95	8.54	33.73
294	2019-10-21	226.75	98.87	8.53	31.35
295	2019-10-22	219.77	99.80	8.57	30.48
296	2019-10-23	238.54	104.89	8.57	33.04
297	2019-10-24	250.66	109.77	8.54	34.82
298	2019-10-25	229.51	100.08	8.43	31.77
299	2019-10-26	255.15	111.44	8.40	35.46
300	2019-10-27	295.05	130.02	8.28	40.98
301	2019-10-28	224.34	98.82	8.13	31.12
302	2019-10-29	238.37	104.17	8.16	33.10
303	2019-10-30	211.28	92.61	8.39	29.30
304	2019-10-31	224.65	98.53	8.53	31.15

SI No	Time	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
305	2019-11-01	238.53	104.54	8.44	33.13
306	2019-11-02	251.74	110.17	8.22	34.95
307	2019-11-03	220.92	96.72	8.34	30.57
308	2019-11-04	210.11	92.28	8.51	29.08
309	2019-11-05	160.20	73.49	8.30	22.08
310	2019-11-06	33.57	15.79	3.27	10.96
311	2019-11-07	0.00	1.28	0.00	NA
312	2019-11-08	0.00	1.28	0.00	NA
313	2019-11-09	0.00	1.21	0.00	NA
314	2019-11-10	0.00	1.18	0.00	0.00
315	2019-11-11	0.00	1.28	0.00	0.00
316	2019-11-12	114.04	50.36	5.39	15.91
317	2019-11-13	248.44	108.47	10.89	34.38
318	2019-11-14	215.98	95.50	9.33	29.75
319	2019-11-15	226.21	99.70	10.10	31.30
320	2019-11-16	219.67	97.10	9.91	30.35
321	2019-11-17	226.71	99.69	10.20	31.29
322	2019-11-18	229.41	100.45	10.45	31.75
323	2019-11-19	205.92	93.73	9.34	28.42
324	2019-11-20	205.18	89.60	8.39	28.30
325	2019-11-21	201.76	88.30	9.09	27.80
326	2019-11-22	217.65	95.38	10.20	30.06
327	2019-11-23	198.82	87.78	9.19	27.27
328	2019-11-24	210.46	93.11	9.88	29.01
329	2019-11-25	246.04	108.78	10.47	34.06
330	2019-11-26	201.69	88.16	9.40	27.74
331	2019-11-27	184.25	80.06	8.78	25.40
332	2019-11-28	193.51	84.70	9.20	26.66
333	2019-11-29	188.39	82.41	8.87	26.51
334	2019-11-30	165.12	72.63	7.71	23.67
335	2019-12-01	209.13	91.80	9.77	29.18
336	2019-12-02	195.25	85.58	9.21	26.95
337	2019-12-03	214.00	93.81	10.20	29.57
338	2019-12-04	214.09	93.95	10.12	29.59
339	2019-12-05	236.06	103.89	11.22	32.88
340	2019-12-06	216.37	95.67	10.29	30.17
341	2019-12-07	220.99	97.18	10.41	30.68
342	2019-12-08	225.50	98.70	10.59	31.25
343	2019-12-09	236.95	104.04	11.05	32.92
344	2019-12-10	216.65	94.86	10.21	29.95

SI No	Time	STACK_1_Boiler-SO2_U	STACK_1_Boiler-NOx_U	STACK_1_Boiler-CO_U	STACK_1_Boiler-PM_U
345	2019-12-11	223.52	99.92	10.69	31.59
346	2019-12-12	237.36	105.14	11.18	33.36
347	2019-12-13	221.15	97.07	10.21	30.85
348	2019-12-14	218.95	97.17	10.45	30.67
349	2019-12-15	210.81	91.74	9.93	28.97
350	2019-12-16	243.29	106.84	11.41	33.80

**Report Details:** MPL1 | 2021-03-08 16:06:36 | Custom Report



# Real Time Data Acquisition And Monitoring

Site Name: Manali Petrochemicals Ltd., Plant-2

Report: Custom Report

From Date: 2019/01/01 00:01:00 To Date : 2019/12/16 23:59:18

Description	STACK-SO <sub>2</sub> _U	STACK-NO <sub>x</sub> _U	STACK-CO_U	STACK-SPM_U
Prescribed Standards	-	-	-	-
Maximum Data	522.84	59.71	56.77	14.15
Minimum Data	68.3	1.34	0.56	4.02
Geometric Mean	213.2	19.0	7.5	12.32
Median	182.88	7.64	0.97	13.13
Standard Deviation	76.64	18.35	11.42	2.0
Maximum Value At Time	2019-01-12	2019-01-26	2019-04-13	2019-05-11
Minimum Value At Time	2019-11-11	2019-11-16	2019-11-17	2019-11-15
Valid Data Points	337	340	340	340
Total Data Points	350	350	350	350
Data Availability %	96.29%	97.14%	97.14%	97.14%

SI No	Time	STACK-SO <sub>2</sub> _U	STACK-NO <sub>x</sub> _U	STACK-CO_U	STACK-SPM_U
1	2019-01-01	465.12	49.63	2.27	11.91
2	2019-01-02	389.56	55.31	25.61	13.04
3	2019-01-03	465.82	55.73	14.60	13.13
4	2019-01-04	483.35	56.23	2.55	13.23
5	2019-01-05	378.80	57.11	2.02	13.40
6	2019-01-06	343.48	56.81	2.03	13.34
7	2019-01-07	346.52	58.20	2.00	13.62
8	2019-01-08	351.94	55.80	2.03	13.13
9	2019-01-09	346.41	57.64	2.01	13.52
10	2019-01-10	414.93	58.32	1.98	13.65
11	2019-01-11	519.14	55.76	5.69	13.09
12	2019-01-12	522.84	55.09	2.54	12.95
13	2019-01-13	464.65	53.65	2.61	12.67
14	2019-01-14	392.24	57.03	2.04	13.34
15	2019-01-15	313.26	59.26	2.04	13.79
16	2019-01-16	313.59	57.97	2.04	13.52
17	2019-01-17	316.96	55.43	2.08	13.01
18	2019-01-18	304.87	55.59	2.04	13.05
19	2019-01-19	288.94	54.36	2.08	12.80
20	2019-01-20	284.42	55.89	2.05	13.12
21	2019-01-21	270.38	55.74	2.82	13.10
22	2019-01-22	221.74	55.69	1.66	13.06
23	2019-01-23	349.64	53.17	5.26	12.55
24	2019-01-24	202.74	51.32	5.02	12.20
25	2019-01-25	244.76	37.96	0.82	12.26
26	2019-01-26	265.20	59.71	0.99	13.86
27	2019-01-27	229.01	58.71	1.03	13.66

SI No	Time	STACK-SO2_U	STACK-NOx_U	STACK-CO_U	STACK-SPM_U
28	2019-01-28	241.56	57.78	0.65	13.50
29	2019-01-29	227.67	55.11	0.84	12.95
30	2019-01-30	224.16	55.62	0.96	13.05
31	2019-01-31	182.28	55.17	0.93	12.95
32	2019-02-01	201.74	55.97	1.20	13.10
33	2019-02-02	177.80	57.27	0.98	13.37
34	2019-02-03	180.18	58.93	0.99	13.70
35	2019-02-04	230.60	57.95	14.48	13.50
36	2019-02-05	180.08	57.05	0.96	13.31
37	2019-02-06	184.43	55.79	0.90	13.07
38	2019-02-07	171.19	58.42	0.97	13.59
39	2019-02-08	168.58	55.78	0.95	13.06
40	2019-02-09	159.09	55.12	0.94	12.93
41	2019-02-10	151.62	58.69	0.96	13.65
42	2019-02-11	139.95	59.16	0.96	13.74
43	2019-02-12	138.11	57.68	0.92	13.46
44	2019-02-13	134.27	58.05	0.95	13.52
45	2019-02-14	127.43	57.77	0.92	13.46
46	2019-02-15	132.49	55.74	0.86	13.07
47	2019-02-16	118.02	27.75	0.80	13.19
48	2019-02-17	186.96	7.36	0.80	13.07
49	2019-02-18	127.02	7.35	0.77	13.29
50	2019-02-19	125.79	7.59	0.86	13.62
51	2019-02-20	136.12	7.66	7.90	13.70
52	2019-02-21	179.17	7.64	35.90	13.57
53	2019-02-22	180.81	7.62	36.29	13.68
54	2019-02-23	179.76	7.61	36.09	13.62
55	2019-02-24	173.97	7.47	34.90	13.32
56	2019-02-25	184.64	7.64	37.06	13.90
57	2019-02-26	178.47	7.62	35.88	13.60
58	2019-02-27	185.05	7.65	37.15	13.93
59	2019-02-28	174.41	7.42	15.15	13.36
60	2019-03-01	NA	NA	NA	NA
61	2019-03-02	NA	NA	NA	NA
62	2019-03-03	NA	NA	NA	NA
63	2019-03-04	178.26	7.56	0.88	13.59
64	2019-03-05	176.40	7.55	1.00	13.49
65	2019-03-06	187.92	7.35	0.83	13.27
66	2019-03-07	183.71	7.43	0.75	13.65
67	2019-03-08	183.63	7.52	0.74	13.42
68	2019-03-09	183.67	7.27	0.73	13.34
69	2019-03-10	183.82	6.99	0.77	12.86
70	2019-03-11	184.62	7.07	0.92	13.28
71	2019-03-12	175.71	7.55	0.90	13.39

SI No	Time	STACK-SO2_U	STACK-NOx_U	STACK-CO_U	STACK-SPM_U
72	2019-03-13	181.63	7.56	0.90	13.73
73	2019-03-14	167.15	6.95	0.83	13.00
74	2019-03-15	177.04	7.46	0.85	13.54
75	2019-03-16	NA	NA	NA	NA
76	2019-03-17	NA	NA	NA	NA
77	2019-03-18	176.18	7.74	0.96	13.49
78	2019-03-19	174.14	7.70	1.54	13.43
79	2019-03-20	172.22	7.58	1.60	13.62
80	2019-03-21	172.66	7.68	1.64	13.87
81	2019-03-22	175.89	7.72	1.65	13.81
82	2019-03-23	177.22	7.64	1.48	13.76
83	2019-03-24	175.82	7.56	1.45	13.73
84	2019-03-25	174.54	7.57	1.40	13.64
85	2019-03-26	163.55	6.63	1.36	12.34
86	2019-03-27	135.58	4.60	1.33	9.45
87	2019-03-28	97.48	2.74	1.33	6.54
88	2019-03-29	92.71	2.59	1.17	6.05
89	2019-03-30	88.62	2.21	0.75	5.30
90	2019-03-31	92.53	1.78	0.72	4.85
91	2019-04-01	110.18	3.52	0.85	7.79
92	2019-04-02	157.91	6.56	3.39	12.19
93	2019-04-03	169.41	7.04	25.88	13.22
94	2019-04-04	174.49	7.54	12.10	13.82
95	2019-04-05	176.22	7.56	15.86	13.95
96	2019-04-06	175.15	7.58	7.67	13.74
97	2019-04-07	176.30	7.49	0.66	13.99
98	2019-04-08	177.60	7.53	0.71	14.04
99	2019-04-09	173.14	7.27	0.64	13.27
100	2019-04-10	171.70	6.70	29.94	12.67
101	2019-04-11	177.20	7.97	48.48	13.33
102	2019-04-12	177.45	7.58	52.83	13.09
103	2019-04-13	178.92	7.59	56.77	13.14
104	2019-04-14	185.49	7.99	46.43	13.90
105	2019-04-15	184.68	7.83	38.26	13.79
106	2019-04-16	177.13	7.65	11.55	13.31
107	2019-04-17	172.33	7.82	11.83	13.55
108	2019-04-18	169.09	7.66	12.21	13.27
109	2019-04-19	168.26	7.32	9.27	13.08
110	2019-04-20	176.55	7.84	6.84	13.47
111	2019-04-21	183.39	7.84	1.00	13.60
112	2019-04-22	179.78	7.53	0.97	13.18
113	2019-04-23	147.86	7.81	1.03	13.81
114	2019-04-24	81.98	7.70	1.45	13.41
115	2019-04-25	179.55	7.24	6.85	13.10

SI No	Time	STACK-SO2_U	STACK-NOx_U	STACK-CO_U	STACK-SPM_U
116	2019-04-26	181.09	7.37	5.61	13.00
117	2019-04-27	185.73	7.72	0.94	13.46
118	2019-04-28	186.07	7.74	1.04	13.50
119	2019-04-29	182.79	7.63	1.26	13.41
120	2019-04-30	182.72	7.71	0.94	13.45
121	2019-05-01	184.14	7.78	0.96	13.50
122	2019-05-02	181.45	7.77	0.94	13.47
123	2019-05-03	181.96	7.73	0.88	13.64
124	2019-05-04	173.82	7.44	0.82	13.24
125	2019-05-05	180.01	7.68	0.85	13.52
126	2019-05-06	178.97	7.81	0.97	13.44
127	2019-05-07	169.77	6.64	0.94	11.90
128	2019-05-08	174.62	6.42	0.93	11.36
129	2019-05-09	171.76	7.07	0.96	12.60
130	2019-05-10	174.98	7.71	1.01	13.37
131	2019-05-11	181.07	7.89	0.96	14.15
132	2019-05-12	178.58	7.81	0.95	13.98
133	2019-05-13	176.45	7.66	0.92	13.74
134	2019-05-14	173.11	7.43	0.85	13.23
135	2019-05-15	173.33	7.53	0.89	13.21
136	2019-05-16	174.85	7.58	0.93	13.40
137	2019-05-17	170.20	7.12	0.92	12.81
138	2019-05-18	173.90	7.49	0.92	13.13
139	2019-05-19	181.33	7.99	1.12	13.90
140	2019-05-20	178.34	7.94	1.05	13.68
141	2019-05-21	176.50	7.85	1.02	13.68
142	2019-05-22	176.91	7.72	0.96	13.58
143	2019-05-23	182.34	7.65	0.88	13.70
144	2019-05-24	178.60	7.61	0.90	13.34
145	2019-05-25	180.28	7.54	0.93	13.34
146	2019-05-26	175.30	7.27	0.89	13.21
147	2019-05-27	161.92	6.56	1.00	11.91
148	2019-05-28	172.29	7.39	1.10	13.02
149	2019-05-29	170.92	7.43	1.00	13.18
150	2019-05-30	172.74	7.62	1.01	13.17
151	2019-05-31	172.27	7.37	0.98	13.01
152	2019-06-01	177.29	7.81	0.99	13.57
153	2019-06-02	178.23	7.83	1.00	13.42
154	2019-06-03	185.17	7.85	1.02	13.48
155	2019-06-04	180.55	7.61	1.02	13.40
156	2019-06-05	170.63	6.90	0.95	12.31
157	2019-06-06	180.05	7.71	0.99	13.73
158	2019-06-07	183.59	7.87	0.98	13.83
159	2019-06-08	187.70	7.95	1.00	14.02
160	2019-06-09	185.22	7.89	1.00	13.76

SI No	Time	STACK-SO2_U	STACK-NOx_U	STACK-CO_U	STACK-SPM_U
161	2019-06-10	182.92	7.82	1.00	13.93
162	2019-06-11	178.16	7.52	1.00	13.32
163	2019-06-12	178.53	7.57	0.90	13.38
164	2019-06-13	179.14	7.52	0.80	13.50
165	2019-06-14	180.97	7.50	0.78	13.37
166	2019-06-15	184.40	7.61	0.78	13.66
167	2019-06-16	180.69	6.36	0.74	12.00
168	2019-06-17	168.16	6.79	0.73	12.44
169	2019-06-18	164.59	7.01	0.77	12.83
170	2019-06-19	164.54	6.95	0.93	12.75
171	2019-06-20	167.55	7.36	0.90	13.07
172	2019-06-21	164.81	6.95	0.89	12.81
173	2019-06-22	169.84	7.53	0.85	13.22
174	2019-06-23	173.84	7.50	0.85	13.58
175	2019-06-24	178.19	7.39	0.88	13.22
176	2019-06-25	179.46	7.67	0.89	13.75
177	2019-06-26	180.27	7.70	0.84	13.93
178	2019-06-27	177.27	7.65	0.85	13.54
179	2019-06-28	117.87	3.26	0.86	7.02
180	2019-06-29	97.35	1.85	0.89	4.81
181	2019-06-30	99.48	2.45	0.89	5.54
182	2019-07-01	149.90	5.84	0.84	11.11
183	2019-07-02	175.80	7.49	0.82	13.82
184	2019-07-03	173.92	7.53	0.78	13.59
185	2019-07-04	179.76	7.64	0.83	13.68
186	2019-07-05	186.50	7.67	0.82	14.12
187	2019-07-06	187.96	7.76	0.87	14.12
188	2019-07-07	183.25	7.66	0.86	13.75
189	2019-07-08	176.88	6.99	0.82	12.76
190	2019-07-09	179.71	7.55	0.83	13.42
191	2019-07-10	175.07	6.56	0.83	12.58
192	2019-07-11	175.26	7.01	0.78	13.01
193	2019-07-12	178.15	7.14	0.83	13.10
194	2019-07-13	173.91	6.96	0.91	12.40
195	2019-07-14	180.69	7.62	0.91	13.37
196	2019-07-15	178.00	6.92	0.92	12.70
197	2019-07-16	166.03	5.80	0.93	10.99
198	2019-07-17	165.53	6.02	0.82	11.06
199	2019-07-18	178.87	6.93	0.77	12.81
200	2019-07-19	176.99	6.73	0.84	12.41
201	2019-07-20	178.50	6.87	0.96	12.52
202	2019-07-21	179.99	7.16	0.97	12.96
203	2019-07-22	177.98	6.71	0.98	12.50
204	2019-07-23	186.63	7.52	0.94	13.37
205	2019-07-24	182.74	7.27	0.98	12.92

SI No	Time	STACK-SO2_U	STACK-NOx_U	STACK-CO_U	STACK-SPM_U
206	2019-07-25	172.77	6.60	0.99	11.90
207	2019-07-26	184.72	7.21	1.00	12.82
208	2019-07-27	186.78	7.42	0.95	13.15
209	2019-07-28	187.73	7.33	0.89	13.13
210	2019-07-29	182.03	6.87	0.87	12.48
211	2019-07-30	188.70	7.36	0.89	13.14
212	2019-07-31	186.69	7.21	0.82	13.08
213	2019-08-01	186.65	6.92	0.81	12.92
214	2019-08-02	186.51	6.97	0.84	12.88
215	2019-08-03	185.18	6.78	0.85	12.68
216	2019-08-04	190.44	7.24	0.78	13.28
217	2019-08-05	191.51	7.48	0.77	13.36
218	2019-08-06	187.93	7.10	0.79	12.97
219	2019-08-07	189.54	7.18	0.79	13.07
220	2019-08-08	191.21	7.43	0.77	13.29
221	2019-08-09	184.35	6.60	0.82	12.39
222	2019-08-10	190.63	7.10	0.89	13.02
223	2019-08-11	186.02	6.79	0.88	12.69
224	2019-08-12	189.69	6.95	0.90	12.85
225	2019-08-13	193.02	6.99	0.90	12.90
226	2019-08-14	198.24	7.38	0.89	13.32
227	2019-08-15	197.70	7.38	0.91	13.32
228	2019-08-16	198.33	7.32	0.85	13.46
229	2019-08-17	198.44	7.56	0.86	13.42
230	2019-08-18	198.52	7.38	0.86	13.53
231	2019-08-19	197.06	7.46	0.81	13.47
232	2019-08-20	194.66	7.64	0.82	13.84
233	2019-08-21	198.11	7.74	0.81	13.96
234	2019-08-22	190.17	7.28	0.83	13.20
235	2019-08-23	193.75	7.65	0.87	13.63
236	2019-08-24	190.59	7.43	0.83	13.33
237	2019-08-25	190.79	7.44	0.82	13.39
238	2019-08-26	185.96	7.38	0.79	13.14
239	2019-08-27	185.97	7.51	0.75	13.40
240	2019-08-28	189.73	7.58	0.74	13.57
241	2019-08-29	184.73	7.59	0.81	13.32
242	2019-08-30	163.50	5.79	0.95	10.88
243	2019-08-31	180.06	6.82	0.85	12.66
244	2019-09-01	182.17	6.63	0.83	12.49
245	2019-09-02	188.83	7.55	0.87	13.28
246	2019-09-03	184.65	7.16	0.89	12.97
247	2019-09-04	185.12	7.12	0.93	12.98
248	2019-09-05	187.84	7.61	0.92	13.31
249	2019-09-06	189.72	7.55	0.92	13.48

SI No	Time	STACK-SO2_U	STACK-NOx_U	STACK-CO_U	STACK-SPM_U
250	2019-09-07	183.99	7.36	0.88	13.21
251	2019-09-08	183.85	7.44	0.87	13.32
252	2019-09-09	182.32	7.41	0.92	13.23
253	2019-09-10	182.17	7.63	0.90	13.31
254	2019-09-11	180.75	7.52	0.83	13.28
255	2019-09-12	182.88	7.61	0.85	13.47
256	2019-09-13	180.37	7.45	0.85	13.24
257	2019-09-14	175.27	7.03	0.85	12.62
258	2019-09-15	182.56	7.63	0.84	13.52
259	2019-09-16	179.87	7.50	0.80	13.23
260	2019-09-17	182.10	7.52	0.74	13.50
261	2019-09-18	180.45	7.48	0.82	13.26
262	2019-09-19	185.07	7.65	0.81	13.78
263	2019-09-20	178.61	7.19	0.88	13.03
264	2019-09-21	175.23	6.82	0.90	12.72
265	2019-09-22	174.26	6.78	0.92	12.67
266	2019-09-23	176.50	6.88	0.89	12.72
267	2019-09-24	288.92	15.82	11.26	11.27
268	2019-09-25	347.47	39.97	23.47	9.37
269	2019-09-26	317.05	40.32	22.53	8.87
270	2019-09-27	304.47	39.39	21.67	8.87
271	2019-09-28	307.01	39.55	21.82	8.87
272	2019-09-29	NA	NA	NA	NA
273	2019-09-30	305.42	39.48	21.78	8.87
274	2019-10-01	302.73	39.30	21.57	8.88
275	2019-10-02	314.30	40.14	22.34	8.87
276	2019-10-03	324.39	40.93	23.03	8.87
277	2019-10-04	301.88	39.18	21.40	8.87
278	2019-10-05	327.92	41.22	23.29	8.87
279	2019-10-06	324.30	40.94	23.03	8.87
280	2019-10-07	318.61	40.54	22.65	8.87
281	2019-10-08	317.31	40.37	22.55	8.87
282	2019-10-09	301.97	39.19	21.41	8.87
283	2019-10-10	298.57	38.90	21.25	8.87
284	2019-10-11	297.82	38.90	21.13	8.87
285	2019-10-12	319.51	40.62	22.76	8.87
286	2019-10-13	315.27	40.25	22.38	8.87
287	2019-10-14	313.62	40.09	22.28	9.35
288	2019-10-15	304.42	39.38	21.61	9.37
289	2019-10-16	337.94	42.01	24.04	10.09
290	2019-10-17	315.47	40.26	22.42	9.60
291	2019-10-18	451.24	38.47	16.66	9.75
292	2019-10-19	304.42	37.79	20.71	10.76
293	2019-10-20	314.54	38.44	30.13	10.94
294	2019-10-21	269.35	35.04	36.01	9.92

SI No	Time	STACK-SO2_U	STACK-NOx_U	STACK-CO_U	STACK-SPM_U
295	2019-10-22	256.03	33.96	37.00	9.60
296	2019-10-23	295.00	37.15	35.94	10.53
297	2019-10-24	311.74	38.43	35.53	10.93
298	2019-10-25	296.96	37.23	32.77	10.58
299	2019-10-26	277.23	35.57	32.65	10.10
300	2019-10-27	301.61	37.63	29.89	10.69
301	2019-10-28	294.51	37.02	30.56	10.52
302	2019-10-29	277.39	35.44	35.27	10.03
303	2019-10-30	303.97	37.73	30.86	10.73
304	2019-10-31	287.39	36.50	26.10	10.34
305	2019-11-01	301.17	37.58	26.12	10.67
306	2019-11-02	297.81	37.33	26.08	10.59
307	2019-11-03	314.14	38.65	26.09	10.98
308	2019-11-04	313.44	38.62	26.12	10.96
309	2019-11-05	310.30	38.32	26.04	10.90
310	2019-11-06	309.86	38.27	25.98	10.89
311	2019-11-07	304.50	37.80	26.01	10.76
312	2019-11-08	304.87	37.82	25.98	10.77
313	2019-11-09	316.70	38.78	25.93	11.06
314	2019-11-10	198.65	29.42	25.93	8.24
315	2019-11-11	68.30	19.00	25.96	5.16
316	2019-11-12	NA	NA	NA	NA
317	2019-11-13	NA	NA	NA	NA
318	2019-11-14	NA	NA	NA	NA
319	2019-11-15	NA	1.37	0.60	4.02
320	2019-11-16	NA	1.34	0.57	4.02
321	2019-11-17	NA	1.34	0.56	4.02
322	2019-11-18	NA	NA	NA	NA
323	2019-11-19	70.08	4.17	0.79	8.54
324	2019-11-20	70.75	3.98	0.82	8.33
325	2019-11-21	71.37	3.11	0.81	6.64
326	2019-11-22	71.38	2.88	0.84	6.04
327	2019-11-23	71.51	5.20	0.86	9.62
328	2019-11-24	71.87	5.14	0.94	9.59
329	2019-11-25	93.65	9.04	2.24	9.92
330	2019-11-26	237.58	15.99	10.70	9.87
331	2019-11-27	211.38	12.76	13.85	8.55
332	2019-11-28	322.63	23.05	16.00	12.68
333	2019-11-29	314.57	21.58	14.98	12.07
334	2019-11-30	325.82	23.25	16.18	12.74
335	2019-12-01	333.99	24.07	16.76	13.08
336	2019-12-02	313.57	21.98	15.19	12.23
337	2019-12-03	321.87	23.05	16.01	12.65
338	2019-12-04	325.82	24.04	16.79	13.03
339	2019-12-05	317.36	23.32	16.26	12.74

SI No	Time	STACK-SO2_U	STACK-NOx_U	STACK-CO_U	STACK-SPM_U
340	2019-12-06	318.30	24.82	17.41	13.37
341	2019-12-07	315.26	25.19	17.72	13.51
342	2019-12-08	300.18	23.77	16.62	12.93
343	2019-12-09	312.27	25.07	17.51	13.47
344	2019-12-10	303.22	23.99	16.79	13.03
345	2019-12-11	300.51	23.73	16.59	12.92
346	2019-12-12	311.53	24.89	17.40	13.35
347	2019-12-13	307.26	24.58	17.25	13.24
348	2019-12-14	291.66	22.94	15.95	12.57
349	2019-12-15	284.74	22.24	15.47	12.32
350	2019-12-16	284.34	21.37	18.37	11.94

**Report Details:** MPL2 | 2021-03-08 16:15:31 | Custom Report

**BEFORE THE NATIONAL GREEN TRIBUNAL  
SOUTHERN ZONE, CHENNAI**

**Original Application No. 256 of 2020 (SZ)**

IN THE MATTER OF

Tribunal on its own motion-SUO MOTU based on  
The News item in News Desk Magazine dated  
11.11.2020, Air Pollution and Industries, "These Six  
Industries in North Chennai are polluting the air for  
more than half the year, the North Chennai Thermal  
Power station alone Ennore Port"

Union of India

Ministry of Environment, Forest and  
Climate Change & 15 Others

...Respondents

**INDEX TO THE TYPESET OF DOCUMENTS FILED**  
**ON BEHALF OF THE 15th RESPONDENT**

**COUNSEL FOR 15th RESPONDENT**