



Ref No: GVKPGSL/PPCB/2019

To,
The Environmental Engineer,
Regional Office, Punjab Pollution Control Board,
Plot no-164, Focal Point, Mehta Road,
Amritsar, Punjab – 147001

Date: 05.09.2019

Sub: Environment Statement Report for FY 2018-19 for 540 MW (2 X 270 MW) Coal Based Thermal Power Plant, M/s- GVK Power (Goindwal Sahib) Limited, Goindwal Sahib, District-Tarn Taran (P.B).

Ref: Environmental Clearance Letter no- J-13011/78/2008-IA (T) Dated 9th May 2008 and amended Environmental Clearance vide letter J-13011/78/2007-IA.II (T) Dated 19th February 2014, GOI, MoEF.

Sir,

This has reference to the cited Environmental Clearance and clause no. xlvii under terms & herewith conditions issued by MoEF, New Delhi. We submit the Environment Statement Report for the Year 2018-19 of 2X270 MW Coal Based Thermal Power Plant near Goindwal Sahib by M/s. GVK Power (Goindwal Sahib) Limited, Goindwal Sahib, District-Tarn Taran, Punjab.

This is for your information and records please.

Thanking you with regards,

For M/s GVK Power (Goindwal Sahib) Limited



Bivash Chandra Ghosh

Vice President – Operation

(Factory Manager)

Encl: Environment Statement Report (2018-19)

GVK Power (Goindwal Sahib) Limited
Goindwal Sahib Kapurthala Road,
Goindwal Sahib,
Dist : Taran Taran - 143 422. Punjab - India.

Registered Office
Paigah House, 156-159, Sardar Patel Road
Secunderabad 500 003,
Telangana, India.

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CIN : U40109TG1997PLC028483

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2X270 MW GVK POWER (GOINDWAL SAHIB) THERMAL POWER PLANT

ENVIRONMENTAL STATEMENT REPORT

OF

**GVK POWER (GOINDWAL SAHIB) LIMITED
(2X270 MW COAL BASED THERMAL POWER PLANT)
NEAR GOINDWAL SAHIB DIST TARN TARAN, PUNJAB**

FOR FINANCIAL YEAR ENDING 31ST MARCH 2019

SUBMITTED

TO

**REGIONAL OFFICE,
PUNJAB POLLUTION CONTROL BOARD, AMRITSAR**

GVK Power (Goindwal Sahib) Ltd.

FORM – V
(See rule 14)

Environmental Statement for the Financial Year ending the 31st March 2019

PART – A

(i)	Name & Address of the Owner / Occupier of the Industry Operation or Process	Vikash Chandra Shukla GVK Power (Goindwal Sahib) Limited Kapurthala Road, Near Goindwal Sahib, Dist-Tarn Taran, Punjab-143 422 Telephone No.-01859-225102, Fax No.-01859-225113
Operation or Process		
(ii)	Industry Category Primary (STC CODE) Secondary (SIC CODE)	Primary Category (Large scale)
(iii)	Production Capacity	2X270 MW Thermal (Coal Based) Power
(iv)	Year of Establishment	COD is achieved for both the units. Unit-1 : 06.04.2016. Unit-2 : 16.04.2016.
(v)	Date of last Environmental Statement Submitted	26 th June, 2018

PART – B

Water & Raw Material Consumption

i. Water Consumption, m3/day:

Process	-	295.84
Cooling	-	10071
Domestic	-	72.4

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)

Name of the Product	Process Water Consumption per unit of Product Output	
	During the Previous Financial Year (2017-18)	During the Current Financial Year (2018-19)
Electricity	0.00009089 m3/KWH	0.000044176 m3/KWH

i. Raw Material Consumption (MT):

Name of the Raw Material	Name of Product	Consumption of Raw Material per Unit Product Output			
		During the Previous Financial Year (2017-18)	Consumption per unit	During the Current Financial Year (2018-19)	Consumption per unit
Coal (MT)	Electricity	1008845	0.656 KG/KWH	1680434	0.687 KG/KWH
LDO (KL)	Electricity	739	0.480 ml/KWH	633	0.259ml/KWH
HFO (KL)	Electricity	1473	0.957 ml/KWH	825	0.337 ml/KWH
Generation units		1538060000		2444370000	

PART - C

Pollutant Discharged to Environment / Unit of Output-

(Parameter as specified in the consent issued)-

Sr. No.	Pollutants	Quantity of Pollutants Discharged (Mass / day)	Concentrations of Pollutants in discharged (Mass / Volume)	Percentage of variation from prescribed standard
1	Water	Zero Liquid Discharge technology is adopted as well as maintained properly. The wastewater generated from process activity of the plant is being treated into ETP and thereafter being reused into ash handling system. Sewage generated from residential township is treated in STP and treated waste water is being used for green belt as well as Green Belt Development purpose. <i>STP test report is enclosed as Annexure-I (STP sampling and testing was carried out by PPCB approved Lab. ITC, Panchkula.)</i>		
2	Air	To monitoring the ground level concentration of PM 2.5, PM10, CO, NOx, SO2 and Hg etc., we have established ambient air quality monitoring stations (not less than four) as suggested by PPCB officials. In addition to that, we have established 4 nos of locations in surrounding villages of the plant.		

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)

	<p>High Efficiency Electrostatic Precipitators (ESPs) has installed to ensure that particulate emission does not exceed 50 mg/Nm³.</p> <p>275m height bi-flue stack is constructed with online Continuous Emission Monitoring System for monitoring of boiler flue gases to comply the norms prescribed by Board/MoEF.</p> <p>Online Continuous Emission Monitoring System is installed with well connected to the PPCB/CPCB server for supplying the data.</p> <p><i>Stack emission and Ambient Air Quality Monitoring report is attached As Annexure-II</i></p>
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PART – D

Hazardous Waste:

(as specified under Hazardous Waste Management and Handling Rules, 1989)

Hazardous Waste	Total Quantity (Kg)	
	During the Previous Financial Year	During the Current Financial Year
(a) From Process	2KL spent oil	2KL spent oil
(b) From Pollution Control Facilities.		

PART - E

Solid Wastes:

Solid Waste	Total Quantity (MT/ANNUM)	
	During the Previous Financial Year (2017-18)	During the Current Financial Year (2018-19)
(a) From Process	78721 MT (Bottom ash)	116178 MT (Bottom ash)
(b) From Pollution Control facilities	281882 MT (Fly ash)	464711 MT (Fly ash)
(c) 1. Qty. recycled or reused within the unit.	Nil	Nil
2. Sold	Nil	Nil
3. Disposed/Utilized (Ash)	264451 MT (Fly ash utilized in Cement/Bricks manufacturing units)	448262 MT (Fly ash utilized in Cement/Bricks manufacturing units)

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)

PART – F

PLEASE SPECIFY THE CHARACTERISATIONS (IN TERMS OF COMPOSITION AND QUANTUM) OF HAZARDOUS AS WELL AS SOLID WASTES AND INDICATE DISPOSAL PRACTICE ADOPTED FOR BOTH THESE CATEGORIES OF WASTES.

Hazardous Waste: We have tied up with M/S NIMBUA GREENFIELD (PUNJAB) LIMITED for lifting and disposed off Hazardous waste in appropriate manner with complying the Hazardous waste Authorization under Rule 5 of the Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules, 2008. As we have been granted HZW authorisation by Punjab Pollution Control Board, Patiala letter vide No-HWM/TRT/2014/541392, Dated 03-01-2014 with validity period of five years till 02-01-2019.

Solid Waste (Fly ash): Fly ash generated from both units stored in silos from where it has been transported in closed container/Ash Bulker to utilised in manufacturing of value added products. We have made tie up with M/s Ambuja cement and some others fly ash Bricks Manufacturing units for 100% utilization of fly ash. We achieved 100 % utilization of fly ash since inception of the plant at GVK Power Ltd. It leads to reducing the raising of limestone from mines and fossil fuel consumption and ultimately resulting less generation of environmental pollutants. Substantial quantity of electrical and thermal energy has also been saved has been utilized by cement / Brick manufacturer.

Bottom ash is being discharged into ash pond (Scientifically designed) in slurry form by HCSD (High Concentration Slurry disposal) method.

PART – G

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

Please refer to **Annexure-III.**

PART – H

ADDITONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION.

Please refer to **Annexure-IV.**

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)



PART – I

MISCELLENEOUS - Any other Particulars for Improving the Quality of the Environment.

Details of Environment Management Programs for improving the quality of environment are as under the Environment Cell.

- The Company has installed APCD's as ESP & 275 meters chimney to control the Particulate matter and Water Pollution Control Units as STP & ETP for the treatment of domestic sewage and effluent generated from the various units of industry. All these equipments conform to the emission levels within the standards laid down by the MoEF/Central Pollution Control Board.

- **Environmental Cell -**

The environment cell is equipped with competent and skilled persons guided by senior most executives along with the latest and advanced monitoring and analytical equipments.

Environment management department is equipped with Ambient Air Quality monitoring instrument along with stack monitoring kit for the monitoring of stack. All the air samples (Ambient and Stack) will be collected and analysed in our dedicated lab.

We have water testing latest equipments. The monitoring and analysis will be carried out by skilled and trained person only. All the required parameters for water and wastewater prescribed by Board/MoEF shall be considered for analysis in lab.

- Treated effluent is being reused for Horticulture purpose.
- Separate electric metering arrangement has been installed at all pollution control devices.
- Comprehensive Rural Development Programme (C.R.D.P) under Corporate Social Responsibility **(C.S.R)**-
As per consultation with State Government of Punjab 100 houses for economically weaker section are already built at Manikhera. A model Railway Station is already developed at the cost of about **Rs. 50 Crores** at Khadoor Sahib, which will be very useful for the local public of that area.

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)

ANNEXURE-I

ETP & STP Test Report



Interstellar Testing Centre Pvt. Ltd.

(Formerly International Testing Centre)

(A Government Approved Test House)

86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)

Phone : (O) 0172-2561543, 2565825

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Document QF : 2501

Page 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1804250881 Sample Reg. Date :25-04-2018 Report Date :02-05-2018 Customer Ref. No. :- Letter Dated :-
---	---

Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
---	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)) Nature of Sample	ETP Outlet Water
b) Grade / Variety / Type / Class / Size etc.	NA
c) Brand Name	NA
d) Declared Values,if any	NA
e) Code No.	
f) Batch Number	NA
g) D.O.M	NA
h) Date of Expiry	NA
i) Sample Quantity	10 Ltr
j) Batch Size/Location	NA
k) Mode of Packing	Packed in cans
l) Date of Receipt	25-04-2018
m) Date of Start	25-04-2018
n) Date of Completion	02-05-2018
o) Seal (Intact/Not Intact/Unsealed)	Unsealed
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected By lab rep., DOS: 24.04.18, Purpose: For self monitoring
r) Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s) Manufactured By	NA
t) Supplied By	NA

PART B : SUPPLIMENTARY INFORMATIONS

a	Reference to sampling procedure, whenever applicable	: N/A
b	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

This Analysis Report is Valid
For consent Purpose of the Board

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1804250881 Sample Reg. Date :25-04-2018 Report Date :02-05-2018 Customer Ref. No. :- Letter Dated :-
---	---

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	One sample of ETP Outlet Water was collected by lab rep. on 24.04.2018		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. nol		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.29
d.	Total Suspended Solids(mg/l)	IS:3025(Part 17)	Max. 100	30
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	59
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	20
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	<0.1
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ: 0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ: 0.01)
j.	Nickel(As Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ: 0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ: 0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.01)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-22nd Edition	Max. 50	0.2
n.	Total Kjeldahl Nitrogen (as NH3)(mg/l)	APHA-23rd Edition	Max. 100	1.0
o.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ: 0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ: 0.01)
r.	Cadmium(As Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ: 0.01)
s.	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA-23rd Edition	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ: 0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ: 0.01)
v.	Cyanide(As CN)(mg/l)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F)(mg/l)	IS:3025(P-60)	Max. 2.0	0.2
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.61
y.	Sulphide(As S)(mg/l)	IS:3025(P-9)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	BLQ(LOQ: 0.01)
aa.	Iron(as Fe)(mg/l)	APHA-23rd Edition	Max. 3.0	0.14
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ac.	Phenolic Compounds(as C6H5OH)(mg/l)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ: 0.01)

This Analysis Report is not Valid
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Test Report



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Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1804250881 Sample Reg. Date :25-04-2018 Report Date :02-05-2018 Customer Ref. No.:- Letter Dated :-
---	--

ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90 % Survival of Fishes were observed in 100 % Effluent Water after 96 hours
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NOTE : BLQ- Below limit of quantification, LOQ- Limit of Quantification, NA- Not Applicable
PART D : REMARKS : N/A

Gaurav Goyal
02-05-2018
Reviewer

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board

02-05-2018
Prem Kumar
[Tech Manager]

Note: 1.This report is only for the sample tested. 2.This report cannot be reproduced except in full, without the permission of authority of Testing Centre 3.Sample consumed/not consumed in testing.

Test Report

Document QF : 2501

Page 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. , Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1805210641 Sample Reg. Date :21-05-2018 Report Date :08-06-2018 Customer Ref. No.:- Letter Dated :-
Test Report as per IS:EPA Act 1986/PCLS/2010		With Amendment No.(s):
PART A : PARTICULARS OF SAMPLE SUBMITTED		
a))	Nature of Sample	ETP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	10 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	21-05-2018
m)	Date of Start	21-05-2018
n)	Date of Completion	08-06-2018
o)	Seal (Intact/Not Intact/Unsealed)	Unsealed
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample description : One sample of ETP Outlet water was collected by lab rep. on 18.05.2018
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA
PART B : SUPPLIMENTARY INFORMATIONS		
a	Reference to sampling procedure, whenever applicable	: N/A
b	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

This Analysis Report is not Valid
For consent Purpose of the Board

Test Report

Issued To	Report No. :E01-1805210641
GVK Power (Goindwal Sahib) Ltd. :	Sample Reg. Date :21-05-2018
Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil:	Report Date :08-06-2018
Khadur Sahib,	Customer Ref. No. :-
Tarn Taran	Letter Dated :-

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	One Sample of ETP Outlet Water wa collected by lab rep. on 18.05.2018		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017) and, no1		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	6.89
d.	Total Suspended Solids(mg/l)	IS:3025(Part 17)	Max. 100	28
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	55
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	18
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.4
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(As Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	0.026
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-22nd Edition	Max. 50	0.3
n.	Total Kjeldahl Nitrogen (as NH3)(mg/l)	APHA-23rd Edition	Max. 100	1.2
o.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	0.01
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA-23rd Edition	Max. 0.1	BLQ(LOQ : 0.01)
s.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
t.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
u.	Cyanide(As CN)(mg/l)	IS:3025(P-27)	Max. 0.2	Absent
v.	Fluoride(as F)(mg/l)	IS:3025(P-60)	Max. 2.0	0.2
w.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.31
x.	Sulphide(As S)(mg/l)	IS:3025(P-9)	Max. 2.0	BLQ(LOQ : 0.5)
y.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	BLQ(LOQ:0.01)
z.	Iron(as Fe)(mg/l)	APHA-23rd Edition	Max. 3.0	BLQ(LOQ : 0.01)
aa.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ab.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ac.	Vanadium(As V)(mg/l)	IS:3025(P-66)		BLQ(LOQ:0.01)

This Analysis Report is not valid
For consent Purpose of the Board



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Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. 4 Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1805210641 Sample Reg. Date :21-05-2018 Report Date :08-06-2018 Customer Ref. No.:- Letter Dated :-		
ad.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90% Survival of Fishes were observed in 100% Effluent water after 96 hours.

NOTE : NA- Not Applicable, BLQ- Below limit of Quantification, LOQ- Limit of Quantification, Requirement as per EPA Act 1986/PCLS/2010 (Applicable for discharge in to surface water), Purpose - For self monitoring

PART D : REMARKS : N/A

Saurabh

Saurabh Sharma
08-06-2018
Reviewer

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board

08-06-2018
Prem Kumar
[Tech Manager]


Test Report

Document QF : 2501
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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1806260797 Sample Reg. Date :26-06-2018 Report Date :30-06-2018 Customer Ref. No. :- Letter Dated :-
---	---

Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
---	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)) Nature of Sample	ETP Outlet Water
b) Grade / Variety / Type / Class / Size etc.	NA
c) Brand Name	NA
d) Declared Values,if any	NA
e) Code No.	
f) Batch Number	NA
g) D.O.M	NA
h) Date of Expiry	NA
i) Sample Quantity	8 Ltr
j) Batch Size/Location	NA
k) Mode of Packing	Packed in cans
l) Date of Receipt	26-06-2018
m) Date of Start	26-06-2018
n) Date of Completion	30-06-2018
o) Seal (Intact/Not Intact/Unsealed)	Unsealed
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	One sample of ETP Inlet Water was collected by lab rep. on 23.06.2018
r) Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s) Manufactured By	NA
t) Supplied By	NA

PART B : SUPPLIMENTARY INFORMATIONS

a	Reference to sampling procedure, whenever applicable	: N/A
b	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

*This Analysis Report is not Valid
For consent Purpose of the Board*

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & (4001:2015 OHSAS 18001:2007 Certified Laboratory)
(A Government Approved Test House)
86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
Phone : (O) 0172-2561543, 2565825,
Visit us: www.itclabs.com E-mail : customersupport@itclabs.com

Disclaimer:

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2. Total Liability of this Laboratory is limited to the Invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 2 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1806260797 Sample Reg. Date :26-06-2018 Report Date :30-06-2018 Customer Ref. No.:- Letter Dated :-
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PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	One sample of ETP Outlet water was collected by lab rep. on 23.06.2018		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.08
d.	Total Suspended Solids(mg/l)	IS:3025(Part 17)	Max. 100	34
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	36
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	12
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.6
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ (LOQ:0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-22nd Edition	Max. 50	BLQ (LOQ:0.1)
n.	Ammonical Nitrogen(as N)(mg/l)	APHA-23nd Edition	Max. 100	BLQ (LOQ:0.1)
o.	Free Ammonia (as NH ₃)(mg/l)	APHA-23nd Edition	Max. 5.0	NIL
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA-23rd Edition	Max. 0.1	BLQ (LOQ:0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)

This Analysis Report is not Valid
For consent Purpose of the Board

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

(A Government Approved Test House)

86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)

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Test Report

Document QF : 2501
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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1806260797 Sample Reg. Date :26-06-2018 Report Date :30-06-2018 Customer Ref. No. :- Letter Dated :-		
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide(as CN)(mg/l)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F)(mg/l)	IS:3025(P-60)	Max. 2.0	0.3
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.36
y.	Sulphide(as S)(mg/l)	IS:3025(P-9)	Max. 2.0	BLQ (LOQ:0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	0.0169
aa.	Iron(as Fe)(mg/l)	APHA-23rd Edition	Max. 3.0	0.01
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ (LOQ:1.0)
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ (LOQ:0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90% Survival of Fishes were observed in 100% Effluent water after 96 hours.

NOTE : NA- Not Applicable, BLQ- Below limit of Quantification, LOQ- Limit of Quantification, Requirement as per EPA Act 1986/PCLS/2010 (Applicable for discharge onto Surface water), Purpose: For self monitoring

PART D : REMARKS : N/A

Saurabh

Saurabh Sharma
30-06-2018
Reviewer

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board
30-06-2018
Prem Kumar
[Tech Manager]

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TEST REPORT

Document QF: 2501

Page No. 1 of 2

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd.
Goindwal Sahib-Kapurthala Road,
VPO Goindwal Sahib, Tehsil: Khadur Sahib,
Taran Taran-143422 (Punjab)

Report No. : P01-1807280165
Dated : 06.08.2018
Party Ref. : Nil
Dated : Nil

Sample description: One sample of ETP Outlet water was collected by lab rep. on 14.07.2018
Purpose: For self monitoring

TEST RESULTS

Sr. No.	Parameters	Method	*Standard	Result
1	Colour	IS: 3025 (P-4)	-	Colourless
2	Odour	IS: 3025 (P-5)	-	None
3	pH value	IS: 3025 (P-11)	6.0 - 9.0	6.71
4	Total Suspended Solids (mg/l)	IS: 3025 (P-17)	100 max.	36
5	Chemical Oxygen Demand (mg/l)	APHA- 23rd Edition	250 max.	48
6	Biochemical Oxygen Demand (3 days at 27°C) (mg/l)	IS: 3025 (P-44)	30 max.	16
7	Oil & Grease (mg/l)	IS: 3025 (P-39)	10 max.	0.6
8	Total Residual Chlorine (mg/l)	IS: 3025 (P-26)	1.0 max.	< 0.1
9	Ammonical Nitrogen as N (mg/l)	APHA- 23rd Edition	50 max.	0.4
10	Total Kjeldahl Nitrogen (TKN) as NH ₃ (mg/l)	APHA- 23rd Edition	50 max.	2.8
11	Free Ammonia (mg/l)	APHA- 23rd Edition	-	Nil
12	Arsenic as As (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
13	Mercury as Hg (mg/l)	IS: 3025 (P-65)	0.01 max.	BLQ (LOQ:0.01)
14	Lead as Pb (mg/l)	IS: 3025 (P-65)	0.1 max.	BLQ (LOQ:0.01)
15	Cadmium as Cd (mg/l)	IS: 3025 (P-65)	0.05 max.	BLQ (LOQ:0.01)
16	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA- 23rd Edition	0.1 max.	BLQ (LOQ:0.01)

DOS: 28.07.2018
DOC: 06.08.2018



Prem Kumar
Tech. Manager (Env.)

Continuation Sheet of Report No.: P01-1807280165

17	Total Chromium as Cr (mg/l)	IS: 3025 (P-65)	-	BLQ (LOQ:0.01)
18	Copper as Cu (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
19	Zinc as Zn (mg/l)	IS: 3025 (P-65)	5.0 max.	BLQ (LOQ:0.01)
20	Selenium as Se (mg/l)	IS: 3025 (P-65)	0.05 max.	BLQ (LOQ:0.01)
21	Nickel as Ni (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
22	Cyanide as CN (mg/l)	IS: 3025 (P-27)	0.2 max.	Absent
23	Fluoride as F (mg/l)	IS: 3025 (P-60)	2.0 max.	0.2
24	Dissolved Phosphate (mg/l)	APHA- 23rd Edition	5.0 max.	0.19
25	Sulphide as S (mg/l)	IS: 3025 (P-29)	2.0 max.	BLQ (LOQ:0.5)
26	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	IS: 3025 (P-43)	1.0 max.	BLQ (LOQ:0.1)
27	Manganese as Mn (mg/l)	IS: 3025 (P-65)	2 max.	BLQ (LOQ:0.01)
28	Iron as Fe (mg/l)	APHA- 23rd Edition	3.0 max.	BLQ (LOQ:0.01)
29	Nitrate Nitrogen as NO ₃ (mg/l)	IS: 3025 (P-34)	10 max.	BLQ (LOQ:1.0)
30	Vanadium as V (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
31	Bio Assay Test	IS: 6582-1971	Minium 90% survival of fish after 96 hours in 100% effluent	90% survival of fish was observed after 96 hours in 100% effluent

BLQ- Below limit of Quantification, LOQ- Limit of Quantification,
Requirement as per EPA Act 1986/PCLS/2010, S.O.4 (E), Dated 01.01.2016 (Applicable for discharge in to surface water)

- End of Report -



Prem Kumar
Tech. Manager (Env.)

TEST REPORT

Document QF: 250
Page No. 1 of

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd.
Goindwal Sahib-Kapurthala Road,
VPO Goindwal Sahib, Tehsil: Khadur Sahib,
Taran Taran-143422 (Punjab)

Report No. : P01-1808300181
Dated : 06.09.2018
Party Ref. : Nil
Dated : Nil

Sample description: One sample of ETP Outlet water was collected by lab rep. on 14.08.2018
Purpose: For self monitoring

TEST RESULTS

Sr. No.	Parameters	Method	*Standard	Result
1	Colour	IS: 3025 (P-4)	-	Colourless
2	Odour	IS: 3025 (P-5)	-	None
3	pH value	IS: 3025 (P-11)	5.5 - 9.0	6.82
4	Total Suspended Solids (mg/l)	IS: 3025 (P-17)	100 max.	32
5	Chemical Oxygen Demand (mg/l)	APHA- 23rd Edition	250 max.	45
6	Biochemical Oxygen Demand (3 days at 27°C) (mg/l)	IS: 3025 (P-44)	30 max.	16
7	Oil & Grease (mg/l)	IS: 3025 (P-39)	10 max.	0.5
8	Total Residual Chlorine (mg/l)	IS: 3025 (P-26)	1.0 max.	BLQ (LOQ:0.1)
9	Ammonical Nitrogen as N (mg/l)	APHA- 23rd Edition	50 max.	0.6
10	Total Kjeldahl Nitrogen (TKN) as NH ₃ (mg/l)	APHA- 23rd Edition	100 max.	11.8
11	Free Ammonia (mg/l)	APHA- 23rd Edition	5.0 max.	Nil
12	Arsenic as As (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
13	Mercury as Hg (mg/l)	IS: 3025 (P-65)	0.01 max.	BLQ (LOQ:0.01)
14	Lead as Pb (mg/l)	IS: 3025 (P-65)	0.1 max.	BLQ (LOQ:0.01)
15	Cadmium as Cd (mg/l)	IS: 3025 (P-65)	2.0 max.	BLQ (LOQ:0.01)
16	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA- 23rd Edition	0.1 max.	BLQ (LOQ:0.01)

IOS: 30 08 2018
DOC: 06 09 2018


 This Analysis Report is not V
 For consent Purpose of the Bo
 Prem Kumar
 Tech. Manager (Env.)

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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Continuation Sheet of Report No.: P01-1808300181

17	Total Chromium as Cr (mg/l)	IS: 3025 (P-65)	2.0 max.	BLQ (LOQ:0.01)
18	Copper as Cu (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
19	Zinc as Zn (mg/l)	IS: 3025 (P-65)	5.0 max.	BLQ (LOQ:0.01)
20	Selenium as Se (mg/l)	IS: 3025 (P-65)	0.05 max.	BLQ (LOQ:0.01)
21	Nickel as Ni (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
22	Cyanide as CN (mg/l)	IS: 3025 (P-27)	0.2 max.	Absent
23	Fluoride as F (mg/l)	IS: 3025 (P-60)	2.0 max.	0.2
24	Dissolved Phosphate (mg/l)	APHA- 23rd Edition	5.0 max.	0.32
25	Sulphide as S (mg/l)	IS: 3025 (P-29)	2.0 max.	BLQ (LOQ:0.5)
26	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	IS: 3025 (P-43)	1.0 max.	BLQ (LOQ:0.1)
27	Manganese as Mn (mg/l)	IS: 3025 (P-65)	2 max.	BLQ (LOQ:0.01)
28	Iron as Fe (mg/l)	APHA- 23rd Edition	3.0 max.	BLQ (LOQ:0.01)
29	Nitrate Nitrogen as NO ₃ (mg/l)	IS: 3025 (P-34)	10 max.	BLQ (LOQ:1.0)
30	Vanadium as V (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
31	Bio Assay Test	IS: 6582-1971	Minium 90% survival of fish after 96 hours in 100% effluent	90% survival of fish was observed after 96 hours in 100% effluent

BLQ- Below limit of Quantification, LOQ- Limit of Quantification,
Requirement as per EPA Act 1986/PCLS/2010 (Applicable for discharge in to surface water)

- End of Report -


 This Analysis Report is not Valid
 for consent Purpose of the Board
 Prem Kumar
 Tech. Manager (Env)

TEST REPORT

Document QF: 2501

Page No. 1 of 2

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Taran Taran-143422 (Punjab)	Report No. : E01-1810040227 Dated : 08.10.2018 Party Ref. : Nil Dated : Nil
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Sample description: One sample of ETP Outlet water was collected by lab rep. on 24.09.2018
Purpose: For self monitoring

TEST RESULTS

Sr. No.	Parameters	Method	*Standard	Result
1	Colour	IS: 3025 (P-4)	-	Colourless
2	Odour	IS: 3025 (P-5)	-	None
3	pH value	IS: 3025 (P-11)	5.5 - 9.0	7.19
4	Total Suspended Solids (mg/l)	IS: 3025 (P-17)	100 max.	29
5	Chemical Oxygen Demand (mg/l)	APHA- 23rd Edition	250 max.	49
6	Biochemical Oxygen Demand (3 days at 27°C) (mg/l)	IS: 3025 (P-44)	30 max.	15
7	Oil & Grease (mg/l)	IS: 3025 (P-39)	10 max.	0.8
8	Total Residual Chlorine (mg/l)	IS: 3025 (P-26)	1.0 max.	BLQ (LOQ:0.1)
9	Ammonical Nitrogen as N (mg/l)	APHA- 23rd Edition	50 max.	BLQ (LOQ:0.1)
10	Total Kjeldahl Nitrogen (TKN) as NH ₃ (mg/l)	APHA- 23rd Edition	100 max.	BLQ (LOQ:0.1)
11	Free Ammonia (mg/l)	APHA- 23rd Edition	5.0 max.	Nil
12	Arsenic as As (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
13	Mercury as Hg (mg/l)	IS: 3025 (P-65)	0.01 max.	BLQ (LOQ:0.01)
14	Lead as Pb (mg/l)	IS: 3025 (P-65)	0.1 max.	BLQ (LOQ:0.01)
15	Cadmium as Cd (mg/l)	IS: 3025 (P-65)	2.0 max.	BLQ (LOQ:0.01)
16	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA- 23rd Edition	0.1 max.	BLQ (LOQ:0.01)

DOS: 04.10.2018
DOC: 08.10.2018


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 For consent of the Board


 Prem Kumar
 Tech. Manager (Env.)

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Continuation Sheet of Report No.: E01-1810040227

17	Total Chromium as Cr (mg/l)	IS: 3025 (P-65)	2.0 max.	BLQ (LOQ:0.01)
18	Copper as Cu (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
19	Zinc as Zn (mg/l)	IS: 3025 (P-65)	5.0 max.	BLQ (LOQ:0.01)
20	Selenium as Se (mg/l)	IS: 3025 (P-65)	0.05 max.	BLQ (LOQ:0.01)
21	Nickel as Ni (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
22	Cyanide as CN (mg/l)	IS: 3025 (P-27)	0.2 max.	Absent
23	Fluoride as F (mg/l)	IS: 3025 (P-60)	2.0 max.	0.1
24	Dissolved Phosphate (mg/l)	APHA- 23rd Edition	5.0 max.	0.22
25	Sulphide as S (mg/l)	IS: 3025 (P-29)	2.0 max.	BLQ (LOQ:0.5)
26	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	IS: 3025 (P-43)	1.0 max.	BLQ (LOQ:0.1)
27	Manganese as Mn (mg/l)	IS: 3025 (P-65)	2 max.	BLQ (LOQ:0.01)
28	Iron as Fe (mg/l)	APHA- 23rd Edition	3.0 max.	BLQ (LOQ:0.01)
29	Nitrate as NO ₃ (mg/l)	IS: 3025 (P-34)	10 max.	BLQ (LOQ:1.0)
30	Vanadium as V (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
31	Bio Assay Test	IS: 6582-1971	Minium 90% survival of fish after 96 hours in 100% effluent	100% survival of fish was observed after 96 hours in 100% effluent

BLQ- Below limit of Quantification, LOQ- Limit of Quantification,
Requirement as per EPA Act 1986/PCLS/2010 (Applicable for discharge in to surface water)

- End of Report -



Prern Kumar
Tech. Manager (Env.)

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Test Report


Document QF : 2501
Page 1 of 4

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130525
	NABL ULR No. :TC592618000000663F
	Sample Reg. Date :13-10-2018
	Report Date :18-10-2018
	Customer Ref. No. :-
	Letter Dated :-

Test Report as per IS:EPA Act 1986/PCLS/2010

With Amendment No.(s):

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample	ETP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	9 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans & in bottles
l)	Date of Receipt	13-10-2018
m)	Date of Start	13-10-2018
n)	Date of Completion	18-10-2018
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	One Sample of ETP Outlet Water was collected by lab rep. on 11.10.2018
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA

PART B : SUPPLIMENTARY INFORMATIONS

a. Reference to sampling procedure, whenever applicable

: N/A

Saurabh
Saurabh Sharma
18-10-2018
Reviewer

This Analysis Report is not Valid
For consent Purpose of the Board

18-10-2018
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501
Page 2 of 4

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130525
	NABL ULR No. :TC592618000000663F
	Sample Reg. Date :13-10-2018
	Report Date :18-10-2018
	Customer Ref. No. :-
	Letter Dated :-

- b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any : N/A
- c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any : N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	One Sample of ETP Outlet Water was collected by lab rep. on 11.10.2018		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)and. no1	Not Specified	Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Not Specified	None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.32
d.	Total Suspended Solids(mg/l)	IS:3025(Part 17)	Max. 100	39
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	61
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	18
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.6
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	0.2
n.	Total Kjeldahl Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	1.4

Saurabh Sharma
18-10-2018
Reviewer

This Analysis Report is not Valid
For current Purpose of the Board
18-10-2018
Prem Kumar
[Tech Manager]

Disclaimer:

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Test Report

Document QF : 2501
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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130525 NABL ULR No. :TC592618000000663F Sample Reg. Date :13-10-2018 Report Date :18-10-2018 Customer Ref. No.:- Letter Dated :-

o.	Free Ammonia (as NH ₃)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide(as CN)(mg/l)	IS:3025(P-27)	Max. 0.2	Absent
w.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.36
x.	Sulphide(as S)(mg/l)	IS:3025(P-9)	Max. 2.0	BLQ(LOQ : 0.5)
y.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	BLQ(LOQ:0.01)
z.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	0.33
aa.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ab.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ac.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ad.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90% Survival of Fishes were observed in 100% Effluent Water after 96 hours.
3.	Heavy Metals			
a.	Fluoride(as F ⁻)(mg/L)	IS:3025(P-60)	Max. 2.0	0.3

This Analysis Report is not Valid
For Legal Purpose of the Board

Saurabh Sharma
18-10-2018
Reviewer

18-10-2018
Prem Kumar
[Tech Manager]

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2. Total liability of this laboratory is limited to the invoiced amount

Test Report

Document QF : 2501
Page 4 of 4

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No.	:E01-1810130525
	NABL ULR No.	:TC59261800000663F
	Sample Reg. Date	:13-10-2018
	Report Date	:18-10-2018
	Customer Ref. No.:-	
	Letter Dated	:-

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirements as per EPA 1986/PCLS/2010 (Applicable for discharge in to surface water), Purpose - For Self Monitoring

PART D : REMARKS :N/A

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh
Saurabh Sharma
18-10-2018
Reviewer

18-10-2018
Prem Kumar
[Tech Manager]

Disclaimer:

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2. Total Liability of this Laboratory is limited to the Invoiced amount.


Test Report

Document QF : 2501
Page 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1811280759 NABL ULR No. :TC592618000002204P Sample Reg. Date :28-11-2018 Report Date :03-12-2018 Customer Ref. No.:- Letter Dated. :-
---	--

Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
---	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)) Nature of Sample	ETP Outlet Water
b) Grade / Variety / Type / Class / Size etc.	NA
c) Brand Name	NA
d) Declared Values,if any	NA
e) Code No.	
f) Batch Number	NA
g) D.O.M	NA
h) Date of Expiry	NA
i) Sample Quantity	9 Ltr
j) Batch Size/Location	NA
k) Mode of Packing	Packed in bottles & in can
l) Date of Receipt	28-11-2018
m) Date of Start	28-11-2018
n) Date of Completion	03-12-2018
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	One Sample of ETP Outlet Water was collected by lab rep. on 27.11.2018
r) Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s) Manufactured By	NA
t) Supplied By	NA

PART B : SUPPLIMENTARY INFORMATIONS

a. Reference to sampling procedure, whenever applicable	This Analy: N/A report is not valid for the int Purpose of the Board
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Saurabh Sharma
03-12-2018
Reviewer

03-12-2018
Prem Kumar
[Tech Manager]

Test Report

Document QF : 250
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No.	:E01-1811280759
	NABL ULR No.	:TC592618000002204P
	Sample Reg. Date	:28-11-2018
	Report Date	:03-12-2018
	Customer Ref. No.:-	
	Letter Dated	:-

b.	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c.	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	One Sample of ETP Outlet Water was collected by lab rep. on 27.11.2018		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1	Not Specified	Colorless
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Not Specified	None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.26
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	22
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	41
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	13
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.6
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	0.0117
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	BLQ(LOQ : 0.1)
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	0.3

Saurabh Sharma
03-12-2018
Reviewer

This Analysis Report is not valid
For consent Purpose of the Board
03-12-2018
Prem Kumar
[Tech Manager]

Disclaimer:

1. Sample (s) not drawn by us unless otherwise stated.
> Total Liability of this Laboratory is limited to the tested amount

Test Report

Document QF : 250
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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1811280759
	NABL ULR No. :TC592618000002204P
	Sample Reg. Date :28-11-2018
	Report Date :03-12-2018
	Customer Ref. No. :- Letter Dated :-

o.	Free Ammonia (as NH ₃)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Chromium (as Cr ⁶⁺),(mg/L)	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide (as CN),(mg/L)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F),(mg/L)	IS:3025(P-60)	Max. 2.0	0.1
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.14
y.	Sulphide(as S)(mg/l)	IS:3025(P-9)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	BLQ(LOQ:0.01)
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	0.0256
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ac.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	100% Survival of Fishes were observed in 100% Effluent Water after 96 hrs.

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirements as per EPA 1986/PCLS/2010 (Applicable for discharge in to surface water), Purpose - For Self Monitoring

PART D : REMARKS :N/A

*****End Of Report*****

Saurabh Sharma
03-12-2018
Reviewer

This Analysis Report is not valid
for comment Purpose of the Board

03-12-2018
Prem Kumar
Tech Manager

Disclaimer:

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Test Report

Document QF : 2501
Page 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1812290967
	NABL ULR No. :TC592619000003408P
	Sample Reg. Date :29-12-2018
	Report Date :05-01-2019
	Customer Ref. No. :-
	Letter Dated :-

Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
---	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a))	Nature of Sample	ETP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	9 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	29-12-2018
m)	Date of Start	29-12-2018
n)	Date of Completion	05-01-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 22,12.2018
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA

PART B : SUPPLIMENTARY INFORMATIONS

a. Reference to sampling procedure, whenever applicable

Saurabh Sharma
06-01-2019
Reviewer

06-01-2019
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501

Page 2 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1812290967
	NABL ULR No. :TC592619000003408P
	Sample Reg. Date :29-12-2018
	Report Date :05-01-2019
	Customer Ref. No. :-
	Letter Dated :-

b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any : N/A

c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any : N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	ETP Outlet Water		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.39
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	36
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	55
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	20
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.8
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	0.011
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	0.6
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	2.8
o.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil

Saurabh Sharma
06-01-2019
Reviewer

06-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
(A Government Approved Test House)
86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
Phone : (0) 0172-2561543, 2565825.

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Test Report

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Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1812290967 NABL ULR No. :TC592619000003408P Sample Reg. Date :29-12-2018 Report Date :05-01-2019 Customer Ref. No.:- Letter Dated :-		
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	0.029
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Chromium (as Cr ⁶⁺),(mg/L)	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide (as CN),(mg/L)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F),(mg/L)	IS:3025(P-60)	Max. 2.0	0.3
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.58
y.	Sulphide(as S)(mg/l)	IS:3025(Part 29)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	BLQ(LOQ:0.01)
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	0.025
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90% Survival of Fishes were observed in 100% Effluent Water after 96 hrs.

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirements as per EPA Act 1986/PCLS/2010, Purpose - For Self Monitoring

PART D : REMARKS :N/A

*****End Of Report*****

Saurabh Sharma
06-01-2019
Reviewer

This Analysis Report is for
FOR DOCUMENT PURPOSE

06-01-2019
Prem Kumar
[Tech Manager]

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Test Report


Document QF : 2501

Page 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160659 NABL ULR No. : TC592619000004121P Sample Reg. Date : 16-01-2019 Report Date : 23-01-2019 Customer Ref. No.:- Letter Dated :-
---	---

Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
---	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)) Nature of Sample	ETP Outlet Water
b) Grade / Variety / Type / Class / Size etc.	NA
c) Brand Name	NA
d) Declared Values,if any	NA
e) Code No.	
f) Batch Number	NA
g) D.O.M	NA
h) Date of Expiry	NA
i) Sample Quantity	9 Ltr
j) Batch Size/Location	NA
k) Mode of Packing	Packed in cans
l) Date of Receipt	16-01-2019
m) Date of Start	16-01-2019
n) Date of Completion	23-01-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on 11.01.2019
r) Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s) Manufactured By	NA
t) Supplied By	NA

PART B : SUPPLEMENTARY INFORMATIONS

a. Reference to sampling procedure, whenever applicable	: N/A
---	-------

Report is valid for consent purposes

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
 (A Government Approved Test House)
 86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
 Phone : (O) 0172-2561543, 2565825,
 Visit us: www.itclabs.com E-mail : customersupport@itclabs.com

Disclaimer:

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2. Total Liability of this Laboratory is limited to the Invoiced amount
3. Test certificates in full or parts shall not be used for promotional or publicity purpose
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 2 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurtihala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1901160659
	NABL ULR No. :TC592619000004121P
	Sample Reg. Date :16-01-2019
	Report Date :23-01-2019
	Customer Ref. No.:-
	Letter Dated :-

b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any : N/A

c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any : N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	ETP Outlet Water		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd, no1		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.47
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	32
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	48
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	16
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.6
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	0.0113
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	0.4
n.	Total Kjeldahl Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	1.9
o.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil

Saurabh Sharma
23-01-2019
Reviewer

Report is valid for consent purposes

23-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
(A Government Approved Test House)
86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
Phone : (01) 0172-2561543, 2565825.
Visit us : www.itclabs.com E-mail : customersupport@itclabs.com

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3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kaparthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1901160659 NABL ULR No. :TC592619000004121P Sample Reg. Date :16-01-2019 Report Date :23-01-2019 Customer Ref. No.:- Letter Dated :-		
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Chromium (as Cr ⁶⁺),(mg/L)	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide (as CN),(mg/L)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F),(mg/L)	IS:3025(P-60)	Max. 2.0	0.2
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.44
y.	Sulphide(as S)(mg/l)	IS:3025(Part 29)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	0.0116
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	0.0494
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90 % Survival of Fishes were observed in 100% Effluent Water after 96 hrs.

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirements as per EPA 1986/PCLS/2010, Purpose - For consent Purpose (PPCB)

Report is valid for consent purposes

PART D : REMARKS :N/A

*****End Of Report*****

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
(A Government Approved Test House)
86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
Phone : (O) 0172-2561543, 2565825,
Visit us: www.itclabs.com E-mail: customersupport@itclabs.com


Disclaimer:

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2. Total Liability of this Laboratory is limited to the Invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadar Sahib, Tarn Taran	Report No. :E01-1902270872 NABL ULR No. :TC592619000005708P Sample Reg. Date :27-02-2019 Report Date :07-03-2019 Customer Ref. No.:- Letter Dated :-
---	---

Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
---	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample	ETP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	8 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	27-02-2019
m)	Date of Start	27-02-2019
n)	Date of Completion	07-03-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 26.02.2019
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA

PART B : SUPPLEMENTARY INFORMATIONS

a.	Reference to sampling procedure, whenever applicable	: N/A
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This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh
Saurabh Sharma
07-03-2019
Reviewer

07-03-2019
Prem Kumar
[Tech Manager]

Disclaimer:

1. Sample (s) not drawn by us unless otherwise stated
2. Total Liability of this Laboratory is limited to the invoiced amount
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management

Test Report

Document QF : 2501
Page 2 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1902270872
	NABL ULR No. :TC592619000005708P
	Sample Reg. Date :27-02-2019
	Report Date :07-03-2019
	Customer Ref. No.:-
	Letter Dated :-

b.	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c.	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	ETP Outlet Water		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.65
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	22
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	37
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	12
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.4
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	0.012
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	BLQ(LOQ : 0.1)
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	1.2
o.	Free Ammonia (as NH3)(mg/l) *	APHA-23nd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	0.018
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)

Saurabh Sharma
07-03-2019
Reviewer

07-03-2019
Prem Kumar
[Tech Manager]

Disclaimer:

1. Sample (s) not drawn by us unless otherwise stated.
2. Total Liability of this Laboratory is limited to the Invoiced amount.
3. Test certificate in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1902270872
	NABL ULR No. :TC592619000005708P
	Sample Reg. Date :27-02-2019
	Report Date :07-03-2019
	Customer Ref. No.:-
	Letter Dated :-


s.	Chromium (as Cr ⁶⁺),(mg/L) *	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	0.020
v.	Cyanide (as CN),(mg/L)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F),(mg/L)	IS:3025(P-60)	Max. 2.0	0.2
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.21
y.	Sulphide(as S)(mg/l)	IS:3025(Part 29)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	BLQ(LOQ:0.01)
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l) *	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	100% Survival of Fishes were observed in 100% Effluent Water after 96 hrs.

* represents categories/test parameters not covered under NABL | *** represents outsource sample

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirements as per EPA Act 1986/PCLS/2010, Purpose - For Self monitoring

PART D : REMARKS :N/A

*****End Of Report*****


Saurabh Sharma
07-03-2019
Reviewer

This Analysis Report is not Valid
For consent Purpose of the Board

07-03-2019
Prem Kumar
[Tech Manager]

Disclaimer:


1. Sample (s) not drawn by us unless otherwise stated.
2. Total Liability of this Laboratory is limited to the Invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1903270759
	NABL ULR No. :TC592619000006709P
	Sample Reg. Date :27-03-2019
	Report Date :02-04-2019
	Customer Ref. No. :- Letter Dated :-

Test Report as per IS:EPA Act 1986/PCLS/2010

With Amendment No.(s):

PART A : PARTICULARS OF SAMPLE SUBMITTED

a))	Nature of Sample	ETP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	10 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in a can
l)	Date of Receipt	27-03-2019
m)	Date of Start	27-03-2019
n)	Date of Completion	02-04-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 25.03.2019
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA

PART B : SUPPLIMENTARY INFORMATIONS

a.	Reference to sampling procedure, whenever applicable	: N/A
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This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
02-04-2019
Reviewer

02-04-2019
Prem Kumar
[Tech Manager]

Disclaimer:

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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 2 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1903270759
	NABL ULR No. :TC592619000006709P
	Sample Reg. Date :27-03-2019
	Report Date :02-04-2019
	Customer Ref. No. :-
	Letter Dated :-

b.	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c.	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	ETP Outlet Water		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1	Not Specified	Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Not Specified	None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.81
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	19
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	48
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	13
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.2
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	0.014
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	0.7
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	1.9
o.	Free Ammonia (as NH3)(mg/l) *	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)

Saurabh Sharma
02-04-2019
Reviewer:

**This Analysis Report is not Valid
For consent Purpose of the Board**

02-04-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory
(A Government Approved Test House)
86, Industrial Area, Phase-I, Pandeikula-134109 (Haryana)
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Test Report

Document QF : 2501

Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1903270759 NABL ULR No. :TC592619000006709P Sample Reg. Date :27-03-2019 Report Date :02-04-2019 Customer Ref. No. :- Letter Dated :-
s.	Chromium (as Cr ⁶⁺),(mg/L) *	IS:3025(Part-52) Max. 0.1 BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66) Max. 2.0 BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66) Max. 0.05 BLQ(LOQ:0.01)
v.	Cyanide (as CN),(mg/L)	IS:3025(P-27) Max. 0.2 Absent
w.	Fluoride(as F),(mg/L)	IS:3025(P-60) Max. 2.0 0.2
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition Max. 5.0 0.17
y.	Sulphide(as S)(mg/l)	IS:3025(Part 29) Max. 2.0 BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66) Max. 2 0.022
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66) Max. 3.0 BLQ(LOQ:0.01)
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34) Max. 10 BLQ(LOQ : 1.0)
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43) Max. 1.0 BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l) *	IS:3025(P-66) Max. 0.2 BLQ(LOQ:0.01)
ae.	Bio Assay Test	IS:6582-1971 Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent 100% Survival of Fishes were observed in 100% Effluent Water after 96 hrs.

* represents categories/test parameters not covered under NABL | ** represents outsource sample

NOTE : NA- Not Applicable, BLQ :- Below Limit of Quantification, LOQ :- Limit of Quantification, Requirement as per EPA 1986/PCLS/2010, Purpose - For Self Monitoring

PART D : REMARKS :N/A

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board


Saurabh Sharma
02-04-2019
Reviewer

02-04-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

(A Government Approved Test House)

86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)

Phone : (O) 0172-2561543, 2565825.

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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1804250883 Sample Reg. Date :25-04-2018 Report Date :02-05-2018 Customer Ref. No. :- Letter Dated :-
---	---

Test Report as per IS: EPA Act 1986/PCLS/2010	With Amendment No.(s):
--	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample	STP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values, if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	9 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	25-04-2018
m)	Date of Start	25-04-2018
n)	Date of Completion	02-05-2018
o)	Seal (Intact/Not Intact/Unsealed)	Unsealed
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected By lab rep., DOS: 24.04.18, Purpose: For self monitoring
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA

PART B : SUPPLIMENTARY INFORMATIONS

a	Reference to sampling procedure, whenever applicable	: N/A
b	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

This Analysis Report is not Valid
For consent Purpose of the Board

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1804250883 Sample Reg. Date :25-04-2018 Report Date :02-05-2018 Customer Ref. No. :- Letter Dated :-
---	---

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	One Sample of STP Outlet Water was collected by lab rep. on 24.04.2018		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	8.01
d.	Total Suspended Solids(mg/l)	IS:3025(Part 17)	Max. 100	32
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max 250	43
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	15
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.4
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ: 0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ: 0.01)
j.	Nickel(As Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ: 0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	0.0119
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.01)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-22nd Edition	Max 50	0.4
n.	Total Kjeldahl Nitrogen (as NH3)(mg/l)	APHA-23rd Edition	Max 100	8.6
o.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max 0.2	BLQ(LOQ: 0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ: 0.01)
r.	Cadmium(As Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ: 0.01)
s.	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA-23rd Edition	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ: 0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max 0.05	BLQ(LOQ: 0.01)
v.	Cyanide(As CN)(mg/l)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F)(mg/l)	IS:3025(P-60)	Max. 2.0	0.1
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.19
y.	Sulphide(As S)(mg/l)	IS:3025(P-9)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	0.041
aa.	Iron(as Fe)(mg/l)	APHA-23rd Edition	Max. 3.0	0.08
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max 10	BLQ(LOQ : 1.0)
ac.	Phenolic Compounds(as C6H5OH)(mg/l)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ: 0.01)

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Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1804250883 Sample Reg. Date :25-04-2018 Report Date :02-05-2018 Customer Ref. No. :- Letter Dated :-
---	---

ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90 % Survival of Fishes were observed in 100 % Effluent Water after 96 hours
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NOTE : BLQ- Below limit of quantification, LOQ- Limit of Quantification, NA- Not Applicable

PART D : REMARKS : N/A

Gaurav Goyal
02-05-2018

Reviewer

*****End Of Report*****

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02-05-2018

Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501

Page 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. [†] Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1805210643 Sample Reg. Date :21-05-2018 Report Date :08-06-2018 Customer Ref. No.:- Letter Dated :-
Test Report as per IS:EPA Act 1986/PCLS/2010		With Amendment No.(s):
PART A : PARTICULARS OF SAMPLE SUBMITTED		
a)	Nature of Sample	STP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	10 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	21-05-2018
m)	Date of Start	21-05-2018
n)	Date of Completion	08-06-2018
o)	Seal (Intact/Not Intact/Unsealed)	(Unsealed)
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample description : One sample of STP Outlet water was collected by lab rep. on 18.05.2018
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA
PART B : SUPPLEMENTARY INFORMATIONS		
a	Reference to sampling procedure, whenever applicable	: N/A
b	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

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Test Report

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Page 2 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1805210643 Sample Reg. Date :21-05-2018 Report Date :08-06-2018 Customer Ref. No.:- Letter Dated :-
---	--

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description	One Sample of STP Outlet Water was collected by lab rep. on 18.05.2018		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017) amd. no1		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.52
d.	Total Suspended Solids(mg/l)	IS:3025(Part 17)	Max. 100	26
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	39.6
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	14
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.6
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(As Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-22nd Edition	Max. 50	0.2
n.	Total Kjeldahl Nitrogen (as NH3)(mg/l)	APHA-23nd Edition	Max. 100	9.4
o.	Free Ammonia (as NH3)(mg/l)	APHA-23nd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	0.012
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(As Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA-23rd Edition	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide(As CN)(mg/l)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F)(mg/l)	IS:3025(P-60)	Max. 2.0	0.1
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.22
y.	Sulphide(As S)(mg/l)	IS:3025(P-9)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	0.032
aa.	Iron(as Fe)(mg/l)	APHA-23rd Edition	Max. 3.0	BLQ(LOQ : 0.01)
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	1.2
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ:0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)		BLQ(LOQ:0.01)

This Analysis Report is not Valid
For any other Purpose of the Sample



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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1805210643 Sample Reg. Date :21-05-2018 Report Date :08-06-2018 Customer Ref. No.:- Letter Dated :-		
ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90% Survival of Fishes were observed in 100% Effluent Water after 96 hours.

NOTE : NA- Not Applicable, BLQ- Below limit of Quantification, LOQ- Limit of Quantification, Requirement as per EPA Act 1986/PCLS/2010 (Applicable for discharge in to surface water), Purpose - For self monitoring

PART D : REMARKS : N/A

Saurabh Sharma

08-06-2018

Reviewer

*****End Of Report*****

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08-06-2018

Prem Kumar

[Tech Manager]

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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1806260799 Sample Reg. Date :26-06-2018 Report Date :30-06-2018 Customer Ref. No. :- Letter Dated :-
---	---

Test Report as per IS:EPA Act 1986/PCLS/2010

With Amendment No.(s):

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample	STP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	8 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	26-06-2018
m)	Date of Start	26-06-2018
n)	Date of Completion	30-06-2018
o)	Seal (Intact/Not Intact/Unsealed)	Unsealed
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	One sample of STP Outlet water was collected by lab rep. on 23.06.2018
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA

PART B : SUPPLIMENTARY INFORMATIONS

a	Reference to sampling procedure, whenever applicable	: N/A
b	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

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3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 2 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khudur Sahib, Tarn Taran	Report No. :E01-1806260799 Sample Reg. Date :26-06-2018 Report Date :30-06-2018 Customer Ref. No.: Letter Dated :-
---	---

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	One sample of STP Outlet water was collected by lab rep. on 23.06.2018		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no I		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.86
d.	Total Suspended Solids(mg/l)	IS:3025(Part 17)	Max. 100	29
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	44
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	15
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	1.0
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ (LOQ:0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-22nd Edition	Max. 50	0.4
n.	Ammonical Nitrogen(as N)(mg/l)	APHA-23rd Edition	Max. 100	6.8
o.	Free Ammonia (as NH ₃)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	0.0128
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA-23rd Edition	Max. 0.1	BLQ (LOQ:0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)

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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1806260799 Sample Reg. Date :26-06-2018 Report Date :30-06-2018 Customer Ref. No. :- Letter Dated :-		
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide(as CN)(mg/l)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F)(mg/l)	IS:3025(P-60)	Max. 2.0	0.2
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.33
y.	Sulphide(as S)(mg/l)	IS:3025(P-9)	Max. 2.0	BLQ (LOQ:0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	BLQ(LOQ:0.01)
aa.	Iron(as Fe)(mg/l)	APHA-23rd Edition	Max. 3.0	BLQ (LOQ:0.01)
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	1.0
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ (LOQ:0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90% Survival of Fishes were observed in 100% Effluent water after 96 hours

NOTE : NA- Not Applicable, BLQ- Below limit of Quantification, LOQ- Limit of Quantification, Requirement as per EPA Act 1986/PCLS/2010 (Applicable for discharge onto Surface water), Purpose: For self monitoring

PART D : REMARKS :N/A

Saurabh

Saurabh Sharma
30-06-2018
Reviewer

*****End Of Report*****

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30-06-2018
Prem Kumar
[Tech Manager]

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TEST REPORT

Document QF: 2501

Page No. 1 of 2

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Taran Taran-143422 (Punjab)	Report No. : P01-1807280167 Dated : 06.08.2018 Party Ref. : Nil Dated : Nil
---	--

Sample description: One sample of STP Outlet water was collected by lab rep. on 14.07.2018
Purpose: For self monitoring

TEST RESULTS

Sr. No.	Parameters	Method	*Standard	Result
1	Colour	IS: 3025 (P-4)	-	Colourless
2	Odour	IS: 3025 (P-5)	-	None
3	pH value	IS: 3025 (P-11)	6.5 - 9.0	7.40
4	Total Suspended Solids (mg/l)	IS: 3025 (P-17)	100 max.	21
5	Chemical Oxygen Demand (mg/l)	APHA- 23rd Edition	Not Specified	33
6	Biochemical Oxygen Demand (3 days at 27°C) (mg/l)	IS: 3025 (P-44)	30 max.	12
7	Oil & Grease (mg/l)	IS: 3025 (P-39)	10 max.	0.4
8	Total Residual Chlorine (mg/l)	IS: 3025 (P-26)	1.0 max.	< 0.1
9	Ammonical Nitrogen as N (mg/l)	APHA- 23rd Edition	50 max.	0.4
10	Total Kjeldahl Nitrogen (TKN) as NH ₃ (mg/l)	APHA- 23rd Edition	50 max.	8.0
11	Free Ammonia (mg/l)	APHA- 23rd Edition	Not Specified	Nil
12	Arsenic as As (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
13	Mercury as Hg (mg/l)	IS: 3025 (P-65)	0.01 max.	BLQ (LOQ:0.01)
14	Lead as Pb (mg/l)	IS: 3025 (P-65)	0.1 max.	BLQ (LOQ:0.01)
15	Cadmium as Cd (mg/l)	IS: 3025 (P-65)	0.05 max.	BLQ (LOQ:0.01)
16	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA- 23rd Edition	0.1 max.	BLQ (LOQ:0.01)

DOS: 28.07.2018
DOC: 06.08.2018



Prem Kumar
Tech. Manager (Env.)

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Page : 2 of 2
Dated : 06.08.2018

Continuation Sheet of Report No.: P01-1807280167

17	Total Chromium as Cr (mg/l)	IS: 3025 (P-65)	Not Specified	BLQ (LOQ:0.01)
18	Copper as Cu (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
19	Zinc as Zn (mg/l)	IS: 3025 (P-65)	5.0 max.	BLQ (LOQ:0.01)
20	Selenium as Se (mg/l)	IS: 3025 (P-65)	0.05 max.	BLQ (LOQ:0.01)
21	Nickel as Ni (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
22	Cyanide as CN (mg/l)	IS: 3025 (P-27)	0.2 max.	Absent
23	Fluoride as F (mg/l)	IS: 3025 (P-60)	2.0 max.	0.1
24	Dissolved Phosphate (mg/l)	APHA- 23rd Edition	5.0 max.	0.11
25	Sulphide as S (mg/l)	IS: 3025 (P-29)	2.0 max.	BLQ (LOQ:0.5)
26	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	IS: 3025 (P-43)	1.0 max.	BLQ (LOQ:0.1)
27	Manganese as Mn (mg/l)	IS: 3025 (P-65)	2 max.	BLQ (LOQ:0.01)
28	Iron as Fe (mg/l)	APHA- 23rd Edition	3.0 max.	BLQ (LOQ:0.01)
29	Nitrate Nitrogen as NO ₃ (mg/l)	IS: 3025 (P-34)	10 max.	1.1
30	Vanadium as V (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
31	Bio Assay Test	IS: 6582-1971	Minium 90% survival of fish after 96 hours in 100% effluent	90% survival of fish was observed after 96 hours in 100% effluent

BLQ- Below limit of Quantification, LOQ- Limit of Quantification,
Requirement as per EPA Act 1986/PCLS/2010 (Applicable for discharge in to surface water)

- End of Report -



Prem Kumar
Tech. Manager (Env.)

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TEST REPORT

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ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd.
Goindwal Sahib-Kapurthala Road,
VPO Goindwal Sahib, Tehsil: Khadur Sahib,
Taran Taran-143422 (Punjab)

Report No. : P01-1808300183
Dated : 06.09.2018
Party Ref. : Nil
Dated : Nil

Sample description: One sample of STP Outlet water was collected by lab rep. on 14.08.2018
Purpose: For self monitoring

TEST RESULTS

Sr. No.	Parameters	Method	*Standard	Result
1	Colour	IS: 3025 (P-4)	-	Colourless
2	Odour	IS: 3025 (P-5)	-	None
3	pH value	IS: 3025 (P-11)	5.5 - 9.0	7.61
4	Total Suspended Solids (mg/l)	IS: 3025 (P-17)	100 max.	28
5	Chemical Oxygen Demand (mg/l)	APHA- 23rd Edition	250 max.	42
6	Biochemical Oxygen Demand (3 days at 27°C) (mg/l)	IS: 3025 (P-44)	30 max.	16
7	Oil & Grease (mg/l)	IS: 3025 (P-39)	10 max.	0.6
8	Total Residual Chlorine (mg/l)	IS: 3025 (P-26)	1.0 max.	BLQ (LOQ:0.1)
9	Ammonical Nitrogen as N (mg/l)	APHA- 23rd Edition	50 max.	0.2
10	Total Kjeldahl Nitrogen (TKN) as NH ₃ (mg/l)	APHA- 23rd Edition	100 max.	10.2
11	Free Ammonia (mg/l)	APHA- 23rd Edition	5.0 max.	Nil
12	Arsenic as As (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
13	Mercury as Hg (mg/l)	IS: 3025 (P-65)	0.01 max.	BLQ (LOQ:0.01)
14	Lead as Pb (mg/l)	IS: 3025 (P-65)	0.1 max.	BLQ (LOQ:0.01)
15	Cadmium as Cd (mg/l)	IS: 3025 (P-65)	2.0 max.	BLQ (LOQ:0.01)
16	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA- 23rd Edition	0.1 max.	BLQ (LOQ:0.01)

DOS: 30.08.2018
DOC: 06.09.2018



Prem Kumar
Tech. Manager (Env)

Interstellar Testing Centre Pvt. Ltd.

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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Continuation Sheet of Report No.: P01-1808300183

17	Total Chromium as Cr (mg/l)	IS: 3025 (P-65)	2.0 max.	BLQ (LOQ:0.01)
18	Copper as Cu (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
19	Zinc as Zn (mg/l)	IS: 3025 (P-65)	5.0 max.	BLQ (LOQ:0.01)
20	Selenium as Se (mg/l)	IS: 3025 (P-65)	0.05 max.	BLQ (LOQ:0.01)
21	Nickel as Ni (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
22	Cyanide as CN (mg/l)	IS: 3025 (P-27)	0.2 max.	Absent
23	Fluoride as F (mg/l)	IS: 3025 (P-60)	2.0 max.	0.1
24	Dissolved Phosphate (mg/l)	APHA- 23rd Edition	5.0 max.	0.24
25	Sulphide as S (mg/l)	IS: 3025 (P-29)	2.0 max.	BLQ (LOQ:0.5)
26	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	IS: 3025 (P-43)	1.0 max.	BLQ (LOQ:0.1)
27	Manganese as Mn (mg/l)	IS: 3025 (P-65)	2 max.	0.043
28	Iron as Fe (mg/l)	APHA- 23rd Edition	3.0 max.	BLQ (LOQ:0.01)
29	Nitrate Nitrogen as NO ₃ (mg/l)	IS: 3025 (P-34)	10 max.	1.2
30	Vanadium as V (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
31	Bio Assay Test	IS: 6582-1971	Minium 90% survival of fish after 96 hours in 100% effluent	90% survival of fish was observed after 96 hours in 100% effluent

BLQ- Below limit of Quantification, LOQ- Limit of Quantification,
Requirement as per EPA Act 1986/PCLS/2010 (Applicable for discharge in to surface water)
- End of Report -


 This Analysis Report is not Valid
 For consent Purpose of the Board
 Prem Kumar
 Tech. Manager (Env)

Disclaimer:

1. Sample(s) not drawn by us unless otherwise stated.
2. Total Liability of this Laboratory is limited to the invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

TEST REPORT

Document QF: 2501

Page No. 1 of 2

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Taran Taran-143422 (Punjab)	Report No. : E01-1810040229 Dated : 08.10.2018 Party Ref. : Nil Dated : Nil
---	--

Sample description: One sample of STP Outlet water was collected by lab rep. on 24.09.2018
Purpose: For self monitoring

TEST RESULTS

Sr. No.	Parameters	Method	*Standard	Result
1	Colour	IS: 3025 (P-4)	-	Colourless
2	Odour	IS: 3025 (P-5)	-	None
3	pH value	IS: 3025 (P-11)	5.5 - 9.0	7.72
4	Total Suspended Solids (mg/l)	IS: 3025 (P-17)	100 max.	20
5	Chemical Oxygen Demand (mg/l)	APHA- 23rd Edition	250 max.	41
6	Biochemical Oxygen Demand (3 days at 27°C) (mg/l)	IS: 3025 (P-44)	30 max.	14
7	Oil & Grease (mg/l)	IS: 3025 (P-39)	10 max.	0.6
8	Total Residual Chlorine (mg/l)	IS: 3025 (P-26)	1.0 max.	BLQ (LOQ:0.1)
9	Ammonical Nitrogen as N (mg/l)	APHA- 23rd Edition	50 max.	0.5
10	Total Kjeldahl Nitrogen (TKN) as NH ₃ (mg/l)	APHA- 23rd Edition	100 max.	5.5
11	Free Ammonia (mg/l)	APHA- 23rd Edition	5.0 max.	Nil
12	Arsenic as As (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
13	Mercury as Hg (mg/l)	IS: 3025 (P-65)	0.01 max.	BLQ (LOQ:0.01)
14	Lead as Pb (mg/l)	IS: 3025 (P-65)	0.1 max.	BLQ (LOQ:0.01)
15	Cadmium as Cd (mg/l)	IS: 3025 (P-65)	2.0 max.	BLQ (LOQ:0.01)
16	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	APHA- 23rd Edition	0.1 max.	BLQ (LOQ:0.01)

DOS: 04.10.2018
DOC: 08.10.2018

This Analysis Report is not valid
For consent Purpose of the Board



Peem Kilmur
Tech. Manager (Env.)

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 QHSAS 18001:2007 Certified Laboratory)
(A Government Approved Test House)
86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
Phone : (O) 0172-2561543, 2565825.

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Continuation Sheet of Report No.: E01-1810040229

17	Total Chromium as Cr (mg/l)	IS: 3025 (P-65)	2.0 max.	BLQ (LOQ:0.01)
18	Copper as Cu (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
19	Zinc as Zn (mg/l)	IS: 3025 (P-65)	5.0 max.	BLQ (LOQ:0.01)
20	Selenium as Se (mg/l)	IS: 3025 (P-65)	0.05 max.	BLQ (LOQ:0.01)
21	Nickel as Ni (mg/l)	IS: 3025 (P-65)	3.0 max.	BLQ (LOQ:0.01)
22	Cyanide as CN (mg/l)	IS: 3025 (P-27)	0.2 max.	Absent
23	Fluoride as F (mg/l)	IS: 3025 (P-60)	2.0 max.	0.2
24	Dissolved Phosphate (mg/l)	APHA- 23rd Edition	5.0 max.	0.12
25	Sulphide as S (mg/l)	IS: 3025 (P-29)	2.0 max.	BLQ (LOQ:0.5)
26	Phenolic Compounds as C ₆ H ₅ OH (mg/l)	IS: 3025 (P-43)	1.0 max.	BLQ (LOQ:0.1)
27	Manganese as Mn (mg/l)	IS: 3025 (P-65)	2 max.	BLQ (LOQ:0.01)
28	Iron as Fe (mg/l)	APHA- 23rd Edition	3.0 max.	BLQ (LOQ:0.01)
29	Nitrate as NO ₃ (mg/l)	IS: 3025 (P-34)	10 max.	BLQ (LOQ:1.0)
30	Vanadium as V (mg/l)	IS: 3025 (P-65)	0.2 max.	BLQ (LOQ:0.01)
31	Bio Assay Test	IS: 6582-1971	Minium 90% survival of fish after 96 hours in 100% effluent	100% survival of fish was observed after 96 hours in 100% effluent

BLQ- Below limit of Quantification, LOQ- Limit of Quantification,
Requirement as per EPA Act 1986/PCLS/2010 (Applicable for discharge in to surface water)
- End of Report -



Prem Kumar
Tech. Manager (Env.)

Disclaimer:

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Test Report

Document QF : 2501


Page 1 of 4

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130527
	NABL ULR No. :TC592618000000662F Sample Reg. Date :13-10-2018 Report Date :18-10-2018 Customer Ref. No.:- Letter Dated :-

Test Report as per IS:EPA Act 1986/PCLS/2010

With Amendment No.(s):

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample	STP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	9 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in bottles & in cans
l)	Date of Receipt	13-10-2018
m)	Date of Start	13-10-2018
n)	Date of Completion	18-10-2018
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	One Sample of STP Outlet Water was collected by lab rep. on 11.10.2018
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA

PART B : SUPPLIMENTARY INFORMATIONS

a. Reference to sampling procedure, whenever applicable

: N/A

Saurabh Sharma
18-10-2018
Reviewer

This Analytic Report is not valid
for consent Purpose of the Board

18-10-2018
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501

Page 2 of 4

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130527
	NABL ULR No. :TC59261800000662F
	Sample Reg. Date :13-10-2018
	Report Date :18-10-2018
	Customer Ref. No.:-
	Letter Dated :-

b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any : N/A

c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any : N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1	Description			
a.	Description	One Sample of STP Outlet Water was collected by lab rep. on 11.10.2018		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd, no1	Not Specified	Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Not Specified	None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.64
d.	Total Suspended Solids(mg/l)	IS:3025(Part 17)	Max. 100	26
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	37
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	12
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.8
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	1.0
n.	Total Kjeldahl Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	5.1

Saurabh Sharma
18-10-2018
Reviewer

*This Analysis Report is not Valid
For consent Purpose of the Board*

18-10-2018
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501
Page 3 of 4

Issued To GVK Power (Goindwal Sahib) Ltd, Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1810130527 NABL ULR No. :TC592618000000662F Sample Reg. Date :13-10-2018 Report Date :18-10-2018 Customer Ref. No. :- Letter Dated :-		
o.	Free Ammonia (as NH ₃)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Hexavalent Chromium as Cr ⁶⁺ (mg/l)	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide(as CN)(mg/l)	IS:3025(P-27)	Max. 0.2	Absent
w.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.24
x.	Sulphide(as S)(mg/l)	IS:3025(P-9)	Max. 2.0	BLQ(LOQ : 0.5)
y.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	0.0126
z.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	0.0193
aa.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ab.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ac.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ad.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90% Survival of Fishes were observed in 100% Effluent Water after 96 hours.
3	Heavy Metals			
a.	Fluoride(as F),(mg/L)	IS:3025(P-60)	Max. 2.0	0.2

Saurabi Sharma
18-10-2018
Reviewer

This Analysis Report is not Valid
for consent Purpose of the Board

18-10-2018
Prem Kumar
[Tech Manager]

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3. This report shall not be used for purposes of Publicity unless

Test Report

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No.	:E01-1810130527
	NABL ULR No.	:TC59261800000662F
	Sample Reg. Date	:13-10-2018
	Report Date	:18-10-2018
	Customer Ref. No.:-	
	Letter Dated	:-

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA 1986/PCLS/2010, G.S.R. 1265(E), Dated 13.10.2017, Purpose - For Self Monitoring

PART D : REMARKS :N/A

*******End Of Report*******

Saurabh Sharma
18-10-2018
Reviewer

This Analysis Report is not Valid
For consent Purpose of the Board

18-10-2018
Prem Kumar
[Tech Manager]


Test Report

Document QF : 2501
Page 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1811280761
	NABL ULR No. :TC592618000002205P
	Sample Reg. Date :28-11-2018
	Report Date :03-12-2018
	Customer Ref. No.:-
	Letter Dated :-

Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
---	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample	STP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	9 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in bottles & in can
l)	Date of Receipt	28-11-2018
m)	Date of Start	28-11-2018
n)	Date of Completion	03-12-2018
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	One Sample of STP Outlet Water was collected by lab rep. on 27.11.2018
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA

PART B : SUPPLEMENTARY INFORMATIONS

a.	Reference to sampling procedure, whenever applicable	: N/A
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Saurabh Sharma
03-12-2018
Reviewer

This Analytical Report is not Valid
For consent Purpose of the Board

03-12-2018
Prem Kumar
(Tech Manager)

Test Report

Document QF : 2501

Page 2 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1811280761
	NABL ULR No. :TC592618000002205P
	Sample Reg. Date :28-11-2018
	Report Date :03-12-2018
	Customer Ref. No.:-
	Letter Dated :-

b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any : N/A

c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any : N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	One Sample of STP Outlet Water was collected by lab rep. on 27.11.2018		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1	Not Specified	Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Not Specified	None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-9	7.76
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	32
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	57
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	17
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	1.0
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	0.0115
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	1.7
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	3.5

Saurabh Sharma
03-12-2018
Reviewer

This Analysis Report is Not Valid
For consent Purpose of 03-12-2018
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501
Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1811280761
	NABL ULR No. :TC592618000002205P
	Sample Reg. Date :28-11-2018
	Report Date :03-12-2018
	Customer Ref. No.:- Letter Dated :-

o.	Free Ammonia (as NH ₃)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
q.	Mercury(as Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Chromium (as Cr ⁶⁺),(mg/L)	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide (as CN),(mg/L)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F),(mg/L)	IS:3025(P-60)	Max. 2.0	0.2
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.32
y.	Sulphide(as S)(mg/l)	IS:3025(P-9)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	0.0547
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	0.0306
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ 0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90% Survival of Fishes were observed in 100% Effluent Water after 96 hrs.

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA 1986/PCLS/2010,G.S.R. 1265(E), Dated 13.10.2017, Purpose - For Self Monitoring

PART D : REMARKS :N/A

*****End Of Report*****

Saurabh Sharma
03-12-2018
Reviewer

This Analysis Report is not Valid
For consent Purpose

03-12-2018
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501
Page 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1812290969
	NABL ULR No. :TC592619000003409P
	Sample Reg. Date :29-12-2018
	Report Date :06-01-2019
	Customer Ref. No. :-
	Letter Dated :-

Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
---	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample	STP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	9 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	29-12-2018
m)	Date of Start	29-12-2018
n)	Date of Completion	06-01-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 22.12.2018
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA

PART B : SUPPLEMENTARY INFORMATIONS

a.	Reference to sampling procedure, whenever applicable	: N/A
----	--	-------


 06-01-2019
 Prem Kumar
 [Tech Manager]

Disclaimer:

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3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.

Test Report

Document QF : 2501
Page 2 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1812290969
	NABL ULR No. :TC592619000003409P
	Sample Reg. Date :29-12-2018
	Report Date :06-01-2019
	Customer Ref. No.:-
	Letter Dated :-

b.	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c.	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	STP Outlet Water		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.92
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	28
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	36
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	14
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.4
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	1.2
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	4.3
o.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil

Sevabh Sharma
06-01-2019
Reviewer

06-01-2019
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501

Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1812290969
	NABL ULR No. :TC592619000003409P
	Sample Reg. Date :29-12-2018
	Report Date :06-01-2019
	Customer Ref. No. :-
	Letter Dated :-

p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Chromium (as Cr ⁶⁺),(mg/L)	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ: 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide (as CN),(mg/L)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F),(mg/L)	IS:3025(P-60)	Max. 2.0	0.2
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.36
y.	Sulphide(as S)(mg/l)	IS:3025(Part 29)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	0.034
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	0.015
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ac.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	100 % Survival of Fishes were observed in 100% Effluent Water after 96 hrs.

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA 1986/PCLS/2010, G.S.R. 1265(E), Dated 13.10.2017, Purpose - For Self Monitoring

PART D : REMARKS :N/A

*****End Of Report*****

Saurabh Sharma
06-01-2019
Reviewer


This Analysis Report is for consent Purpose

06-01-2019
Prem Kumar
[Tech Manager]

Disclaimer:

1. Sample (s) not drawn by us unless otherwise stated
2. Total Liability of this Laboratory is limited to the Invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If results are not consumed during analysis, it will be stored as per SOP of Generalized sample management.

Test Report

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. : E01-1901160661 NABL ULR No. : TC592619000004122P Sample Reg. Date : 16-01-2019 Report Date : 23-01-2019 Customer Ref. No. :- Letter Dated :-
Test Report as per IS: EPA Act 1986/PCLS/2010		With Amendment No.(s):
PART A : PARTICULARS OF SAMPLE SUBMITTED		
a)	Nature of Sample	STP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values, if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	9 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	16-01-2019
m)	Date of Start	16-01-2019
n)	Date of Completion	23-01-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 11.01.2019
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA
PART B : SUPPLIMENTARY INFORMATIONS		
a.	Reference to sampling procedure, whenever applicable	: N/A

Report is valid for consent purposes

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Disclaimer:

1. Sample (s) not drawn by us unless otherwise stated.
2. Total Liability of this Laboratory is limited to the Invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No.	:E01-1901160661
	NABL ULR No.	:TC592619000004122P
	Sample Reg. Date	:16-01-2019
	Report Date	:23-01-2019
	Customer Ref. No. :-	
	Letter Dated :-	

b.	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c.	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description	STP Outlet Water		
a.	Description			
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.96
d.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	Max. 100	21
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	63
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	19
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.4
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	0.010
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	0.12
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	1.8
n.	Total Kjeldahl Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	5.4
o.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition	Max. 5.0	Nil

Report is valid for consent purposes

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Disclaimer:

- Sample (s) not drawn by us unless otherwise stated.
- Total Liability of this Laboratory is limited to the invoiced amount.
- Test certificates in full or parts shall not be used for promotional or publicity purpose.
- If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

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Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1901160661 NABL ULR No. :TC592619000004122P Sample Reg. Date :16-01-2019 Report Date :23-01-2019 Customer Ref. No.:- Letter Dated :-		
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	0.0112
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
s.	Chromium (as Cr ⁶⁺),(mg/L.)	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	BLQ(LOQ:0.01)
v.	Cyanide (as CN),(mg/L)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F),(mg/L)	IS:3025(P-60)	Max. 2.0	0.3
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.53
y.	Sulphide(as S)(mg/l)	IS:3025(Part 29)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	0.0176
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	0.0116
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	BLQ(LOQ : 1.0)
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90 % Survival of Fishes were observed in 100% Effluent Water after 96 hrs.

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA 1986/PCLS/2010,G.S.R. 1265(E), Dated 13.10.2017, Purpose - For consent purpose (PPCB)

Report is valid for consent purposes

PART D : REMARKS :N/A

*****End Of Report*****

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]


Disclaimer:

1. Sample (s) not drawn by us unless otherwise stated.
2. Total Liability of this Laboratory is limited to the Invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

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Page 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1902270874 NABL ULR No. :TC592619000005710P Sample Reg. Date :27-02-2019 Report Date :07-03-2019 Customer Ref. No.:- Letter Dated :-
Test Report as per IS:EPA Act 1986/PCLS/2010		With Amendment No.(s):
PART A : PARTICULARS OF SAMPLE SUBMITTED		
a)	Nature of Sample	STP Outlet Water
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number	NA
g)	D.O.M	NA
h)	Date of Expiry	NA
i)	Sample Quantity	8 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	27-02-2019
m)	Date of Start	27-02-2019
n)	Date of Completion	07-03-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 26.02.2019
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s)	Manufactured By	NA
t)	Supplied By	NA
PART B : SUPPLIMENTARY INFORMATIONS		
a.	Reference to sampling procedure, whenever applicable	: N/A

Saurabh Sharma
07-03-2019
Reviewer

*This Analysis Report is not Valid
For consent Purpose of the Board*

07-03-2019
Prem Kumar
[Tech Manager]

Disclaimer:

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2. Total Liability of this Laboratory is limited to the Invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No.	:E01-1902270874
	NABL ULR No.	:TC592619000005710P
	Sample Reg. Date	:27-02-2019
	Report Date	:07-03-2019
	Customer Ref. No.:-	
	Letter Dated	:-

b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any : N/A

c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any : N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	STP Outlet Water		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1		Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)		None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	8.01
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	28
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	57
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	21
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.6
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	2.2
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	6.8
o.	Free Ammonia (as NH3)(mg/l) *	APHA-23nd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)

Saurabh Sharma
07-03-2019
Reviewer

07-03-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
(A Government Approved Test House)
86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
Phone : (O) 0172-2561543, 2565825,
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- If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1902270874 NABL ULR No. :TC592619000005710P Sample Reg. Date :27-02-2019 Report Date :07-03-2019 Customer Ref. No.:- Letter Dated :-		
s.	Chromium (as Cr ⁶⁺),(mg/L) *	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	0.028
v.	Cyanide (as CN),(mg/L)	IS:3025(P-27)	Max. 0.2	Absent
w.	Fluoride(as F),(mg/L)	IS:3025(P-60)	Max. 2.0	0.2
x.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0	0.49
y.	Sulphide(as S)(mg/l)	IS:3025(Part 29)	Max. 2.0	BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2	BLQ(LOQ:0.01)
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	Max. 10	1.1
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	Max. 1.0	BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l) *	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
ae.	Bio Assay Test	IS:6582-1971	Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent	90% Survival of Fishes were observed in 100% Effluent Water after 96 hrs.

* represents categories/test parameters not covered under NABL | ** represents outsource sample

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA 1986/PCLS/2010,G.S.R. 1265(E), Dated 13.10.2017, Purpose - For self monitoring

PART D : REMARKS :N/A

*****End Of Report*****

Saurabh Sharma
07-03-2019
Reviewer

This Analysis Report is not Valid
For consent Purpose of the Board

07-03-2019
Prem Kumar
[Tech Manager]

Disclaimer:

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2. Total Liability of this Laboratory is limited to the invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.



Interstellar Testing Centre Pvt. Ltd.


Test Report

Document QF : 2501
Page 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1903270761 NABL ULR No. :TC592619000006706P Sample Reg. Date :27-03-2019 Report Date :02-04-2019 Customer Ref. No.:- Letter Dated :-
---	---

Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
---	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)) Nature of Sample	STP Outlet Water
b) Grade / Variety / Type / Class / Size etc.	NA
c) Brand Name	NA
d) Declared Values,if any	NA
e) Code No.	
f) Batch Number	NA
g) D.O.M	NA
h) Date of Expiry	NA
i) Sample Quantity	10 Ltr
j) Batch Size/Location	NA
k) Mode of Packing	Packed in bottles & In cans
l) Date of Receipt	27-03-2019
m) Date of Start	27-03-2019
n) Date of Completion	02-04-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on 25.03.2019
r) Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran (Punjab)
s) Manufactured By	NA
t) Supplied By	NA

PART B : SUPPLEMENTARY INFORMATIONS

a. Reference to sampling procedure, whenever applicable	: N/A
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*This Analysis Report is not Valid
For consent Purpose of the Board*

Saurabh Sharma
Saurabh Sharma
02-04-2019
Reviewer

02-04-2019
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501

Page 2 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1903270761
	NABL ULR No. :TC592619000006706P
	Sample Reg. Date :27-03-2019
	Report Date :02-04-2019
	Customer Ref. No.:-
	Letter Dated :-

b.	Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	:N/A
c.	Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	:N/A

PART C : TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	Description			
a.	Description	STP Outlet Water		
2.	General Parameters			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1	Not Specified	Colourless
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Not Specified	None
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	8.06
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	36
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	60
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	18
g.	Oil & Grease(mg/l)	IS:3025(P-39)	Max. 10	0.8
h.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Max. 0.1	BLQ(LOQ:0.01)
i.	Copper(As Cu)(mg/l)	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
j.	Nickel(as Ni),mg/l	IS:3025(P-66)	Max. 3.0	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	0.011
l.	Total Residual Chlorine(mg/l)	IS:3025(P-26)	Max. 1.0	BLQ(LOQ :0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	3.5
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	8.2
o.	Free Ammonia (as NH3)(mg/l) *	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2	BLQ(LOQ:0.01)
q.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01	BLQ(LOQ:0.01)
r.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0	BLQ(LOQ:0.01)

Saurabh Sharma
02-04-2019
Reviewer

*This Analysis Report is not Valid
For consent Purpose of the Board*
02-04-2019
Prem Kumar
[Tech Manager]

Disclaimer:

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3. Test certificate in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501

Page 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report No. :E01-1903270761 NABL ULR No. :TC592619000006706P Sample Reg. Date :27-03-2019 Report Date :02-04-2019 Customer Ref. No. :- Letter Dated :-
s.	Chromium (as Cr ⁰⁺),(mg/L) *	IS:3025(Part-52) Max. 0.1 BLQ(LOQ : 0.01)
t.	Total Chromium as Cr(mg/l)	IS:3025(P-66) Max. 2.0 BLQ(LOQ:0.01)
u.	Selenium(as Se)(mg/l)	IS:3025(P-66) Max. 0.05 BLQ(LOQ:0.01)
v.	Cyanide (as CN),(mg/L)	IS:3025(P-27) Max. 0.2 Absent
w.	Fluoride(as F),(mg/L)	IS:3025(P-60) Max. 2.0 0.3
x.	Dissolved Phosphate(mg/l)	APIHA-23rd Edition Max. 5.0 0.54
y.	Sulphide(as S)(mg/l)	IS:3025(Part 29) Max. 2.0 BLQ(LOQ : 0.5)
z.	Manganese(As Mn)(mg/l)	IS:3025(P-66) Max. 2 0.036
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66) Max. 3.0 BLQ(LOQ:0.01)
ab.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34) Max. 10 1.1
ac.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43) Max. 1.0 BLQ(LOQ : 0.1)
ad.	Vanadium(As V)(mg/l) *	IS:3025(P-66) Max. 0.2 BLQ(LOQ:0.01)
ae.	Bio Assay Test	IS:6582-1971 Minimum 90 % survival of fish was observed after 96 hours in 100 % effluent 90% Survival of Fishes were observed in 100% Effluent Water after 96 hrs.

* represents categories/test parameters not covered under NABL | ** represents outsource sample

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA 1986/PCLS/2010,G.S.R. 1265(E), Dated 13.10.2017, Purpose - For self monitoring

PART D : REMARKS :N/A

*****End Of Report*****

Saurabh Sharma
Saurabh Sharma
02-04-2019
Reviewer

This Analysis Report is not Valid
For consent purpose of the Board

02-04-2019
Prem Kumar
[Tech Manager]

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ANNEXURE-II
Stack emission & Ambient Air Quality
Monitoring Report

Test Report

Issued To	Report No. :E01-1805210650
GVK Power (Goindwal Sahib) Ltd.	Sample Reg. Date :21-05-2018
Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil:	Report Date :24-05-2018
Khadur Sahib,	Customer Ref. No.:
Tarn Taran	Letter Dated :

General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 ton/hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Coal & 133 ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit-I)
3.Type of Stack/Duct	: Metal
4.Stack Height from Ground Level(m)	: 275
(5) Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 36
Purpose of Monitoring	: For Consent Purpose (PPCB)
(8) Air Pollution control measure	: ESPs
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 132
Flue Gas Velocity(m/s),Avg.	: 19.78
Volumetric Flow Rate(Nm ³ /hr.)	: 922699.51
Ambient Air Temperature, °C	: 39

Report is valid for consent purposes

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
I.	General Parameters			
a.	Particulate Matter,mg/Nm ³ (Corrected at 12 % CO ₂)	IS:11255(P-1)	Max 100	43
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Max 600	492
c.	Oxides of Nitrogen(NO ₂),mg/Nm ³	IS:11255(P-7)	Max 300	252
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA Act 1986/PCLS/2010 (S. O. 3305 CE), dated: 07.12.2015 with Corrigendum dated: 07.03.2016, Sample collected by lab rep., on DOS: 16.05.18

PART D : REMARKS : N/A





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Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1805210650 Sample Reg. Date : 21-05-2018 Report Date : 24-05-2018 Customer Ref. No. : Letter Dated :
---	--

Gaurav Goyal
24-05-2018
Reviewer

*****End Of Report*****

Report is valid for consent purposes

24-05-2018
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1805210651 Sample Reg. Date : 21-05-2018 Report Date : 24-05-2018 Customer Ref. No.: Letter Dated :
---	---

General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 365 ton/hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Coal & 133 ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit-II)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
(5) Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 35
Purpose of Monitoring	: For Consent Purpose (PPCB)
(8) Air Pollution control measure	: ESPs
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 128
Flue Gas Velocity(m/s), Avg.	: 20.70
Volumetric Flow Rate(Nm ³ /hr.)	: 975247.83
Ambient Air Temperature, °C	: 39

Report is valid for consent purposes

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
a.	Particulate Matter, mg/Nm ³ (Corrected at 12 % CO ₂)	IS:11255(P-1)	Max. 100	46
b.	Sulphur Dioxide(SO ₂), mg/Nm ³	IS:11255(P-2)	Max. 600	457
c.	Oxides of Nitrogen(NO ₂), mg/Nm ³	IS:11255(P-7)	Max. 300	215
d.	Mercury(As Hg), mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA Act 1986/PCLS/2010 (S. O. 3305 CE), dated: 07.12.2015 with Corrigendum dated: 07.03.2016, Sample collected by lab rep., on DOS: 16.05.18

PART D : REMARKS : N/A



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Test Report

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Issued To	Report No. :E01-1805210651
GVK Power (Goindwal Sahib) Ltd.	Sample Reg. Date :21-05-2018
Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil:	Report Date :24-05-2018
Khadur Sahib,	Customer Ref. No.:
Tarn Taran	Letter Dated :

Gaurav Goyal
24-05-2018
Reviewer

*****End Of Report*****

Report is valid for consent purposes

24-05-2018
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501
Page 1 of 1

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1805210652 Sample Reg. Date : 21-05-2018 Report Date : 23-05-2018 Customer Ref. No.: Letter Dated :
---	---

General Information	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 10200 m3/hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As Required
2. Stack Identification	: Stack attached to Bag Filter Bunker House (Unit-I)
3.Type of Stack/Duct	: Metal
4.Stack Height from Ground Level(m)	: 61
(5) Diameter of the Stack(cm)	: 51.4
(6) Sampling Duration(minutes)	: 47
Purpose of Monitoring	: For Consent Purpose (PPCB)
(8) Air Pollution control measure	: Cyclone Followed by Bag Filter
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 42
Flue Gas Velocity(m/s),Avg.	: 11.41
Volumetric Flow Rate(Nm ³ /hr.)	: 7847.07
Ambient Air Temperature, °C	: 38

Report is valid for consent purposes

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
a.	Particulate Matter,mg/Nm ³	IS.11255(P-1)	150 Max	62

NOTE : NA- Not Applicable, Requirement as per EPA Act 1986/PCLS/2010, Sample collected by Lab rep. on 17.05.2018

PART D : REMARKS : N/A

Gaurav Goyal
23-05-2018
Reviewer

*****End Of Report*****

23-05-2018
Prem Kumar
[Tech Manager]



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Test Report

Issued To	Report No. : E01-1805210653
GVK Power (Goindwal Sahib) Ltd. &	Sample Reg. Date : 21-05-2018
Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil:	Report Date : 23-05-2018
Khadur Sahib,	Customer Ref. No.:
Tarn Taran	Letter Dated :

General Information	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 10200 m3/hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As Required
2. Stack Identification	: Stack attached to Bag Filter Bunker House (Unit-II)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 61
(5) Diameter of the Stack(cm)	: 51.4
(6) Sampling Duration(minutes)	: 45
Purpose of Monitoring	: For Consent Purpose (PPCB)
(8) Air Pollution control measure	: Cyclone Followed by Bag Filter
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 44
Flue Gas Velocity(m/s), Avg.	: 12.32
Volumetric Flow Rate(Nm ³ /hr.)	: 8419.46
Ambient Air Temperature, °C	: 39

Report is valid for consent purposes

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
a.	Particulate Matter, mg/Nm ³	IS:11255(P-1)	150 Max	69

NOTE : NA- Not Applicable, Requirement as per EPA Act 1986/PCLS/2010, Sample collected by Lab rep. on 17.05.2018

PART D : REMARKS : N/A

Gaurav

Gaurav Goyal
23-05-2018
Reviewer

*****End Of Report*****

Prem

23-05-2018
Prem Kumar
[Tech Manager]



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Test Report

Issued To GVK Power (Goindwal Sahib) Ltd., Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1805210654 Sample Reg. Date : 21-05-2018 Report Date : 23-05-2018 Customer Ref. No.: Letter Dated :
--	---

General Information

Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 39000 m ³ /hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As Required
2. Stack Identification	: Stack attached to Dust Extraction System (Crusher House)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 40.9
(5) Diameter of the Stack(cm)	: 127.5
(6) Sampling Duration(minutes)	: 55
Purpose of Monitoring	: For Consent Purpose (PPCB)
(8) Air Pollution control measure	: Cyclone & Bag Filter
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil

Report is valid for consent purposes

Observations

Flue Gas Temperature, °C, Avg.	: 45
Flue Gas Velocity(m/s), Avg.	: 9.92
Volumetric Flow Rate(Nm ³ /hr.)	: 41582.58
Ambient Air Temperature, °C	: 39

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
a.	Particulate Matter, mg/Nm ³	IS:11255(P-1)	150 Max.	72

NOTE : NA- Not Applicable, Requirement as per EPA Act 1986/PCLS/2010, Sample collected by Lab rep. on 17.05.2018

PART D : REMARKS : N/A

Gaurav Goyal
 23-05-2018
 Reviewer

*****End Of Report*****

23-05-2018
 Prem Kumar
 [Tech Manager]



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Test Report

Issued To GVK Power (Goindwal Sahib) Ltd., Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1805210655 Sample Reg. Date : 21-05-2018 Report Date : 23-05-2018 Customer Ref. No. : Letter Dated :
--	--

General Information	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 25200 m ³ /hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As Required
2. Stack Identification	: Stack attached to Bag Filter (Junction Tower)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 66.3
(5) Diameter of the Stack(cm)	: 81.5
(6) Sampling Duration(minutes)	: 45
Purpose of Monitoring	: For Consent Purpose (PPCB)
(8) Air Pollution control measure	: Cyclone & Bag Filter
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 42
Flue Gas Velocity(m/s), Avg.	: 12.36
Volumetric Flow Rate(Nm ³ /hr.)	: 21371.24
Ambient Air Temperature, °C	: 39

Report is valid for consent purposes

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
a.	Particulate Matter, mg/Nm ³	IS:11255(P-1)	150 Max	65

NOTE : NA- Not Applicable, Requirement as per EPA Act 1986/PCLS/2010, Sample collected by Lab rep. on 17.05.2018

PART D : REMARKS : N/A

Gaurav Goyal
23-05-2018
Reviewer

*****End Of Report*****

23-05-2018
Prem Kumar
[Tech Manager]

Notes:

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Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil; Khadur Sahib, Tarn Taran	Report No. : E01-1806270912 Sample Reg. Date : 27-06-2018 Report Date : 07-07-2018 Customer Ref. No.: Letter Dated :
---	---

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 ton/hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Coal & 138 ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit-1)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
(5) Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 33
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPs
(a) Status	: Working
(b) Recovery of Material	: Fly Ash
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 110
Flue Gas Velocity(m/s), Avg.	: 20.01
Volumetric Flow Rate(Nm ³ /hr.)	: 987045.88
Ambient Air Temperature, °C	: 39

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details ;				
1.	General Parameters			
a.	Particulate Matter, mg/Nm ³ (Corrected at 12 % CO ₂)	IS: 11255(P-1)	Max. 50	44

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For consent Purpose of the Board

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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No.	:E01-1806270912
	Sample Reg. Date	:27-06-2018
	Report Date	:07-07-2018
	Customer Ref. No.:	
	Letter Dated	:

b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Max. 600	479
c.	Oxides of Nitrogen(NO ₂),mg/Nm ³	IS:11255(P-7)	Max. 300	224
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ: 0.01)

NOTE : BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA Act 1986/"CLS/2010 (S. O. 3305 CE), dated: 07.12.2015 with Conigendum dated: 07.03.2016, Sample collected by lab rep., on DOS: 23.06.2018

PART D : REMARKS :N/A

Samrat
Gaurav Goyal
07-07-2018
Reviewer
*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Beard

07-07-2018
Prem Kumar
[Tech Manager]

Disclaimer:

1. Sample (s) not drawn by us unless otherwise stated.
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TEST REPORT

Document QF: 2501

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Taran Taran-143422 (Punjab)	Report No. : P01-1807280174 Dated : 03.08.2018 Party Ref. : Nil Dated : Nil
---	--

Description of Sample: One sample of stack emission was collected by lab rep. on 13.07.2018

SAMPLE PARTICULARS

General Information (Supplied by Party)

1. Name of the emission source monitored : Stack Emission of Boiler
 - a. Rated Capacity : 865 ton/hr
 - b. Capacity on sampling day : -do-
 - c. Type of fuel used & its consumption : Coal & 138 Ton/hr
 - d. Normal operating schedule : 24 hrs
2. Stack Identification : Stack attached to Boiler (Unit-I)
3. Type of Stack / Duct : Metal
4. Stack Height from ground level (m) : 275
5. Diameter of the Stack (cm) : 480
6. Sampling Duration (minutes) : 38
7. Purpose of Monitoring : **For self monitoring**
8. Air Pollution control measure : ESPs
 - a. Status : Working
 - b. Recovery of material : Fly Ash
9. Fugitive Emission, if any : Nil

Observations:

1. Flue Gas Temperature, °C, Avg. : 119
2. Flue Gas Velocity (m/s), Avg. : 18.04
3. Volumetric Flow Rate (Nm³/hr.) : 869439.75
4. Ambient Air Temperature, °C : 36

Test Results

S. No.	Parameters	Method	*Standards	Result
1	Particulate Matter, mg/Nm ³	IS: 11255 (P-1)	50 Max.	45
2	Sulphur dioxide (SO ₂), mg/Nm ³	IS: 11255 (P-2)	600 Max.	498
3	Oxide of Nitrogen (NO ₂), mg/Nm ³	IS: 11255 (P-7)	300 Max.	258
4	Mercury as Hg, mg/Nm ³	USEPA Method	0.03 Max.	BLQ (LOQ:0.01)

BLQ- Below limit of Quantification, LOQ- Limit of Quantification

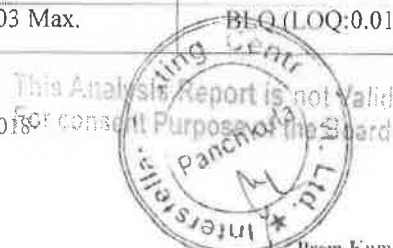
Remark: During monitoring CO₂ was found to be 8.6% v/v.

* EPA-1986, PCLS/02/2010, S.O.3305 (E), dated: 07-12-2015 with latest Corrigendum dated: 28-06-2018

DOS: 28.07.2018

DOC: 03.08.2018

- End of Report -



Prem Kumar
Tech. Manager (Env.)

TEST REPORT

Document QF: 250

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Taran Taran-143422 (Punjab)	Report No. : P01-1808300191 Dated : 03.09.2018 Party Ref. : Nil Dated : Nil
---	--

Description of Sample: One sample of stack emission was collected by lab rep. on 23.08.2018

SAMPLE PARTICULARS

General Information (Supplied by Party)

1. Name of the emission source monitored : Stack Emission of Boiler
 - a. Rated Capacity : 865 ton/hr
 - b. Capacity on sampling day : -do-
 - c. Type of fuel used & its consumption : Coal & 133 Ton/hr
 - d. Normal operating schedule : 24 hrs
2. Stack Identification : Stack attached to Boiler (Unit-II)
3. Type of Stack / Duct : Metal
4. Stack Height from ground level (m) : 275
5. Diameter of the Stack (cm) : 480
6. Sampling Duration (minutes) : 35
7. Purpose of Monitoring : **For self monitoring**
8. Air Pollution control measure : ESPs
 - a. Status : Working
 - b. Recovery of material : Fly Ash
9. Fugitive Emission, if any : Nil

Observations:

1. Flue Gas Temperature, °C, Avg. : 113
2. Flue Gas Velocity (m/s), Avg. : 20.79
3. Volumetric Flow Rate (Nm³/hr.) : 1017551.05
4. Ambient Air Temperature, °C : 35

Test Results

S. No.	Parameters	Method	*Standards	Result
1	Particulate Matter, mg/Nm ³	IS: 11255 (P-1)	50 Max.	45
2	Sulphur dioxide (SO ₂), mg/Nm ³	IS: 11255 (P-2)	600 Max.	486
3	Oxide of Nitrogen (NO ₂), mg/Nm ³	IS: 11255 (P-7)	300 Max.	263
4	Mercury as Hg, mg/Nm ³	USEPA Method	0.03 Max.	BLQ (LOQ:0.01)

BLQ- Below limit of Quantification, LOQ- Limit of Quantification

Remark: During monitoring O₂ was found to be 4.6% v/v. all monitored values of SO₂, NO₂ and PM are corrected at 6% O₂ on dry basis.

* EPA-1986, PCLS/02/2010, S.O.3305 (E), dated: 07-12-2015 with latest Corrigendum dated: 28-06-2018

DOS: 30.08.2018

DOC: 03.09.2018

– End of Report –

This Analysis Report is not Valid
For consent Purpose of the Board

Prem Kumar
Tech. Manager (Env)

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

(A Government Approved Test House)

86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)

Phone : (O) 0172-2561543, 2565825,

Visit us: www.itclabs.com E-mail: customersupport@itclabs.com

Disclaimer:

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2. Total Liability of this Laboratory is limited to the Invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

TEST REPORT

Document QF: 250

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Taran Taran-143422 (Punjab)	Report No. : P01-1808300192 Dated : 03.09.2018 Party Ref. : Nil Dated : Nil
--	--

Description of Sample: One sample of stack emission was collected by lab rep. on 23.08.2018

SAMPLE PARTICULARS

General Information (Supplied by Party)

- | | |
|--|---|
| 1. Name of the emission source monitored | : Process Stack |
| a. Rated Capacity | : 25200 m ³ /hr |
| b. Capacity on sampling day | : -do- |
| c. Type of fuel used & its consumption | : Electricity |
| d. Normal operating schedule | : As required |
| 2. Stack Identification | : Stack attached to Bag Filter (Junction Tower) |
| 3. Type of Stack / Duct | : Metal |
| 4. Stack Height from ground level (m) | : 66.3 |
| 5. Diameter of the Stack (cm) | : 81.5 |
| 6. Sampling Duration (minutes) | : 42 |
| 7. Purpose of Monitoring | : For self monitoring |
| 8. Air Pollution control measure | : Cyclone & Bag Filter |
| a. Status | : Working |
| b. Recovery of material | : - |
| 9. Fugitive Emission, if any | : Nil |

Observations:

- | | |
|--|------------|
| 1. Flue Gas Temperature, °C, Avg. | : 39 |
| 2. Flue Gas Velocity (m/s), Avg. | : 13.12 |
| 3. Volumetric Flow Rate (Nm ³ /hr.) | : 22903.46 |
| 4. Ambient Air Temperature, °C | : 34 |

Test Results

S. No.	Parameters	Method	*Standards	Result
1	Particulate Matter, mg/Nm ³	IS: 11255 (P-1)	150 Max.	67

* EPA-1986, PCLS/02/2010

DOS: 30.08.2018
DOC: 03.09.2018

– End of Report –


 This Analysis Report is not Valid
 For consent Purpose of the Board

Prem Kumar
Tech. Manager (Env.)

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

TEST REPORT

Document QF: 250

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Taran Taran-143422 (Punjab)	Report No. : P01-1808300193 Dated : 03.09.2018 Party Ref. : Nil Dated : Nil
--	--

Description of Sample: One sample of stack emission was collected by lab rep. on 23.08.2018

SAMPLE PARTICULARS

General Information (Supplied by Party)

- | | |
|--|--|
| 1. Name of the emission source monitored | : Process Stack |
| a. Rated Capacity | : 10200 m ³ /hr |
| b. Capacity on sampling day | : -do- |
| c. Type of fuel used & its consumption | : Electricity |
| d. Normal operating schedule | : As required |
| 2. Stack Identification | : Stack attached to Bag Filter (Bunker House Unit-1) |
| 3. Type of Stack / Duct | : Metal |
| 4. Stack Height from ground level (m) | : 61 |
| 5. Diameter of the Stack (cm) | : 51.4 |
| 6. Sampling Duration (minutes) | : 50 |
| 7. Purpose of Monitoring | : For self monitoring |
| 8. Air Pollution control measure | : Cyclone followed by Bag Filter |
| a. Status | : Working |
| b. Recovery of material | : - |
| 9. Fugitive Emission, if any | : Nil |

Observations:

- | | |
|--|-----------|
| 1. Flue Gas Temperature, °C, Avg. | : 43 |
| 2. Flue Gas Velocity (m/s), Avg. | : 10.91 |
| 3. Volumetric Flow Rate (Nm ³ /hr.) | : 7479.46 |
| 4. Ambient Air Temperature, °C | : 35 |

Test Results

S. No.	Parameters	Method	*Standards	Result
1	Particulate Matter, mg/Nm ³	IS: 11255 (P-1)	150 Max.	61

* EPA-1986, PCLS/02/2010

DOS: 30.09.2018

DOC: 03.09.2018

- End of Report -



Prem Kumar
Tech. Manager (Env.)

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

TEST REPORT

Document QP-250

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Taran Taran-143422 (Punjab)	Report No. : P01-1808300194 Dated : 03.09.2018 Party Ref. : Nil Dated : Nil
--	--

Description of Sample: One sample of stack emission was collected by lab rep. on 23.08.2018

SAMPLE PARTICULARS

General Information (Supplied by Party)

- | | |
|--|--|
| 1. Name of the emission source monitored | : Process Stack |
| a. Rated Capacity | : 10200 m ³ /hr |
| b. Capacity on sampling day | : -do- |
| c. Type of fuel used & its consumption | : Electricity |
| d. Normal operating schedule | : As required |
| 2. Stack Identification | : Stack attached to Bag Filter (Bunker House Unit-2) |
| 3. Type of Stack / Duct | : Metal |
| 4. Stack Height from ground level (m) | : 61 |
| 5. Diameter of the Stack (cm) | : 51.4 |
| 6. Sampling Duration (minutes) | : 55 |
| 7. Purpose of Monitoring | : For self monitoring |
| 8. Air Pollution control measure | : Cyclone followed by Bag Filter |
| a. Status | : Working |
| b. Recovery of material | : - |
| 9. Fugitive Emission, if any | : Nil |

Observations:

- | | |
|--|-----------|
| 1. Flue Gas Temperature, °C, Avg. | : 40 |
| 2. Flue Gas Velocity (m/s), Avg. | : 11.67 |
| 3. Volumetric Flow Rate (Nm ³ /hr.) | : 8077.17 |
| 4. Ambient Air Temperature, °C | : 35 |

Test Results

S. No.	Parameters	Method	*Standards	Result
1	Particulate Matter, mg/Nm ³	IS: 11255 (P-1)	150 Max.	68

* EPA-1986, PCLS/02/2010
DOS: 30.08.2018
DOC: 03.09.2018

- End of Report -


 This Analysis Report is not Valid
 For consent Purpose of the Board
 Prem Kumar
 Tech. Manager (Env.)

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

TEST REPORT

Document QF: 250

ISSUED TO: M/s GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Taran Taran-143422 (Punjab)	Report No.: P01-1808300195 Dated: 03.09.2018 Party Ref.: Nil Dated: Nil
--	--

Description of Sample: One sample of stack emission was collected by lab rep. on 23.08.2018

SAMPLE PARTICULARS

General Information (Supplied by Party)

- | | |
|--|--|
| 1. Name of the emission source monitored | : Process Stack |
| a. Rated Capacity | : 39000 m ³ /hr |
| b. Capacity on sampling day | : -do- |
| c. Type of fuel used & its consumption | : Electricity |
| d. Normal operating schedule | : As required |
| 2. Stack Identification | : Stack attached to Dust Extraction System (Crusher House) |
| 3. Type of Stack / Duct | : Metal |
| 4. Stack Height from ground level (m) | : 40.9 |
| 5. Diameter of the Stack (cm) | : 127.5 |
| 6. Sampling Duration (minutes) | : 65 |
| 7. Purpose of Monitoring | : For self monitoring |
| 8. Air Pollution control measure | : Cyclone & Bag Filter |
| a. Status | : Working |
| b. Recovery of material | : - |
| 9. Fugitive Emission, if any | : Nil |

Observations:

- | | |
|--|------------|
| 1. Flue Gas Temperature, °C, Avg. | : 42 |
| 2. Flue Gas Velocity (m/s), Avg. | : 9.06 |
| 3. Volumetric Flow Rate (Nm ³ /hr.) | : 38584.31 |
| 4. Ambient Air Temperature, °C | : 34 |

Test Results

S. No.	Parameters	Method	*Standards	Result
1	Particulate Matter, mg/Nm ³	IS: 11255 (P-1)	150 Max.	71

* EPA-1986, PCLS/02/2010
DOS: 30.08.2018
DOC: 03.09.2018

– End of Report –



Prem Kumar
Tech. Manager (Env.)

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810040152 Sample Reg. Date :04-10-2018 Report Date :07-10-2018 Customer Ref. No.: Letter Dated :
---	--

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission OF Boiler
(a) Rated Capacity	: 865 Ton /hr
(b) Capacity on sampling day	: do
(c) Type of fuel used & its consumption	: Coal & 133 Ton /hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit-I)
3.Type of Stack/Duct	: Metal
4.Stack Height from Ground Level(m)	: 275
(5) Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 35
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPs
(a) Status	: Working
(b) Recovery of Material	: Fly Ash
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 140
Flue Gas Velocity(m/s),Avg.	: 20.72
Volumetric Flow Rate(Nm ³ /hr.)	: 947826.23
Ambient Air Temperature, °C	: 36

TEST RESULTS				
S.No.	Test Parameter	Method	Requirement	Result
Test Details :				

This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
07-10-2018
Reviewer

07-10-2018
Prem Kumar
[Tech Manager]

Disclaimer:

1. Sample (s) not drawn by us unless otherwise stated
2. Total Liability of this Laboratory is limited to the Invoiced amount
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose

Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810040152 Sample Reg. Date :04-10-2018 Report Date :07-10-2018 Customer Ref. No.: Letter Dated :
---	--

1.	General Parameters			
a.	Particulate Matter,mg/Nm ³ (Corrected at 12 % CO ₂)	IS:11255(P-1)	Max. 50	42
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Not Specified	489
c.	Oxides of Nitrogen(NO ₂),mg/Nm ³	IS:11255(P-7)	Not Specified	242
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	0.03 Max.	BLQ(LOQ:1.0)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA Act 1986/PCLS/2010, S.O. 3305 (E), dated: 07.12.2015 with Corrigendum dated: 07.03.2016, Sample collected by lab rep. on 27.09.18

REMARKS :N/A

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
07-10-2018
Reviewer

07-10-2018
Prem Kumar
[Tech Manager]

Disclaimer:

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Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1810040153 Sample Reg. Date : 04-10-2018 Report Date : 07-10-2018 Customer Ref. No.: Letter Dated :
---	---

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission OF Boiler
(a) Rated Capacity	: 865 Ton / hr
(b) Capacity on sampling day	: do
(c) Type of fuel used & its consumption	: Coal & 133 Ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit-II)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
(5) Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 37
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPs
(a) Status	: Working
(b) Recovery of Material	: Fly Ash
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg	: 124
Flue Gas Velocity(m/s), Avg.	: 148.83
Volumetric Flow Rate(Nm ³ /hr.)	: 896084.24
Ambient Air Temperature, °C	: 36

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
-------	----------------	--------	-------------	--------

Test Details :

This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
07-10-2018
Reviewer

07-10-2018
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810040153 Sample Reg. Date :04-10-2018 Report Date :07-10-2018 Customer Ref. No. : Letter Dated :
--	---

1.	General Parameters			
a.	Particulate Matter,mg/Nm ³ (Corrected at 12 % CO ₂)	IS:11255(P-1)	Max. 50	44
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Not Specified	479
c.	Oxides of Nitrogen(NO ₂),mg/Nm ³	IS:11255(P-7)	Not Specified	238
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	0.03 Max.	BLQ(LOQ:1.0)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, Requirement as per EPA Act 1986/PCLS/2010,S. O. 3305 (E), dated: 07.12.2015 with Corrigendum dated: 07.03.2016, Sample collected by lab rep., on 27.09.2018

REMARKS :N/A

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
07-10-2018
Reviewer

07-10-2018
Prem Kumar
[Tech Manager]

Disclaimer:

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2. Total Liability of this Laboratory is limited to the invoiced amount.
3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.

Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1810130534 Sample Reg. Date : 13-10-2018 Report Date : 18-10-2018 Customer Ref. No. : Letter Dated :
---	--

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton/hr
(b) Capacity on sampling day	:
(c) Type of fuel used & its consumption	: Coal & 133 Ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit-I)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 34
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPs
(a) Status	: Working
(b) Recovery of Material	:
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 128
Flue Gas Velocity(m/s), Avg.	: 20.79
Volumetric Flow Rate(Nm ³ /hr.)	: 979488.04
Ambient Air Temperature, °C	: 34

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
-------	----------------	--------	-------------	--------

Test Details :

Saurabh Sharma
Saurabh Sharma
18-10-2018
Reviewer

This Analysis Report is not Valid
For consent Purpose of the Board

18-10-2018
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130534 Sample Reg. Date :13-10-2018 Report Date :18-10-2018 Customer Ref. No.: Letter Dated :
---	--

1.	General Parameters			
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	Max. 50	41
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Max. 600	493
c.	Oxides of Nitrogen(NO ₂),mg/Nm ³	IS:11255(P-7)	Max. 300	253
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 4.6% v/v. All monitored values of SO₂, NO₂ and PM are corrected at 6% O₂ On dry basis. Requirement as per BPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018. Sample collected by lab rep. on 11.10.2018

REMARKS : N/A

*****End Of Report*****

This Analysis Report is not Valid
For any other Purpose of the Board

Saurabh Sharma
18-10-2018
Reviewer

18-10-2018
Prem Kumar
[Tech Manager]

Disclaimer:

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2. Total Liability of this Laboratory is limited to the invoiced amount.

Test Report

Document QF : 2501
 Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130535 Sample Reg. Date :13-10-2018 Report Date :18-10-2018 Customer Ref. No.: Letter Dated :
---	--

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton/hr
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Coal & 133 Ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit-II)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 35
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPs
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 130
Flue Gas Velocity(m/s), Avg.	: 20.53
Volumetric Flow Rate(Nm ³ /hr.)	: 962438.36
Ambient Air Temperature, °C	: 34

TEST RESULTS				
S.No.	Test Parameter	Method	Requirement	Result
Test Details :				

Saurabh
 Saurabh Sharma
 18-10-2018
 Reviewer

This Analysis Report is not Valid

18-10-2018
 Prem Kumar
 [Tech Manager]

Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130535 Sample Reg. Date :13-10-2018 Report Date :18-10-2018 Customer Ref. No.: Letter Dated :
---	--

I.	General Parameters			
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	Max. 50	45
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Max. 600	469
c.	Oxides of Nitrogen(NO ₂),mg/Nm ³	IS:11255(P-7)	Max. 300	241
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 4.6% v/v. All monitored values of SO₂, NO₂ and PM are corrected at 6% O₂ On dry basis. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018, Sample collected by lab rep. on 11.10.2018

REMARKS :N/A

*****End Of Report*****

This Analysis Report is not Valid

Saurabh Sharma
18-10-2018
Reviewer

18-10-2018
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130536
	NABL ULR No. :TC592618000000617F
	Sample Reg. Date :13-10-2018
	Report Date :17-10-2018
	Customer Ref. No.:
	Letter Dated :

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 10200 m3/hr
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As Required
2. Stack Identification	: Stack attached to Process Stack (Bunker House Unit-I)
3.Type of Stack/Duct	: Metal
4.Stack Height from Ground Level(m)	: 61
Diameter of the Stack(cm)	: 51.4
(6) Sampling Duration(minutes)	: 51
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: Cyclone Followed by Bag Filter
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 44
Flue Gas Velocity(m/s),Avg.	: 10.94
Volumetric Flow Rate(Nm ³ /hr.)	: 7476.37
Ambient Air Temperature, °C	: 35

TEST RESULTS				
S.No.	Test Parameter	Method	Requirement	Result

Saurabh Sharma
17-10-2018
Reviewer

17-10-2018
Prem Kumar
[Tech Manager]

This Analysis Report is not Valid
Without the Signature of the Board



Interstellar Testing Centre Pvt. Ltd.

Test Report

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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130536 NABL ULR No. :TC59261800000617F Sample Reg. Date :13-10-2018 Report Date :17-10-2018 Customer Ref. No.: Letter Dated :
---	--

Test Details :

1.	General Parameters			
a.	Particulate Matter,mg/Nm3	IS:11255(P-1)	150 Max.	65

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by Lab rep. on 11.10.2018

REMARKS :N/A

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
17-10-2018
Reviewer

17-10-2018
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130537
	NABL ULR No. :TC592618000000618F
	Sample Reg. Date :13-10-2018
	Report Date :17-10-2018
	Customer Ref. No.:
	Letter Dated :

Test Report as per IS	: EPA Act 1986/PCLS/2010
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General Information	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 10200 m3/hr
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As Required
2. Stack Identification	: Stack attached to Process Stack (Bunker House Unit-II)
3.Type of Stack/Duct	: Metal
4.Stack Height from Ground Level(m)	: 61
Diameter of the Stack(cm)	: 51.4
(6) Sampling Duration(minutes)	: 53
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: Cyclone Followed by Bag Filter
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 41
Flue Gas Velocity(m/s),Avg.	: 10.49
Volumetric Flow Rate(Nm ³ /hr.)	: 7237.33
Ambient Air Temperature, °C	: 35

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result

Saurabh Sharma
17-10-2018
Reviewer

This Analysis Report is not Valid
For consent Purpose of the Board

17-10-2018
Prem Kumar
[Tech Manager]

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Test Report

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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130537
	NABL ULR No. :TC592618000000618F
	Sample Reg. Date :13-10-2018
	Report Date :17-10-2018
	Customer Ref. No.:
Letter Dated :	

Test Details :

I.	General Parameters		
a.	Particulate Matter,mg/Nm3	IS:11255(P-1)	150 Max. 63

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by Lab rep. on 11.10.2018

REMARKS : N/A

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
17-10-2018
Reviewer

17-10-2018
Prem Kumar
[Tech Manager]

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Document QF : 2501
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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130538
	NABL ULR No. :TC592618000000621F
	Sample Reg. Date :13-10-2018
	Report Date :17-10-2018
	Customer Ref. No.:
	Letter Dated :

Test Report as per IS : EPA Act 1986/PCLS/2010

General Information

Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 39000 m3/hr
(b) Capacity on sampling day	:
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As Required
2. Stack Identification	: Stack attached to Process Stack (Dust Extraction System Crusher House)
3.Type of Stack/Duct	: Metal
4.Stack Height from Ground Level(m)	: 40.9
Diameter of the Stack(cm)	: 127.5
(6) Sampling Duration(minutes)	: 48
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: Cyclone & Bag Filter
(a) Status	: Working
(b) Recovery of Material	:
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 43
Flue Gas Velocity(m/s),Avg.	: 11.53
Volumetric Flow Rate(Nm ³ /hr.)	: 48637.26
Ambient Air Temperature, °C	: 35

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
		Saurabh Sharma 17-10-2018 Reviewer		17-10-2018 Prem Kumar [Tech Manager]

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Test Report

Document QF : 2501
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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130538
	NABL ULR No. :TC59261800000621F
	Sample Reg. Date :13-10-2018
	Report Date :17-10-2018
	Customer Ref. No. :
Letter Dated :	

Test Details :

1.	General Parameters		
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	150 Max. 74

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by Lab rep. on 11.10.2018

REMARKS :N/A

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
17-10-2018
Reviewer

17-10-2018
Prem Kumar
[Tech Manager]

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Test Report

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Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadir Sahib, Tarn Taran	Report No. : E01-1810130539
	NABL ULR No. : TC592618000000634F
	Sample Reg. Date : 13-10-2018
	Report Date : 17-10-2018
	Customer Ref. No.:
	Letter Dated :

Test Report as per IS : EPA Act 1986/PCLS/2010

General Information

Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 25200 m ³ /hr
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As Required
2. Stack Identification	: Stack attached to Process Stack (Junction Tower)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 66.3
Diameter of the Stack(cm)	: 81.5
(6) Sampling Duration(minutes)	: 49
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: Cyclone & Bag Filter
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 40
Flue Gas Velocity(m/s), Avg.	: 11.38
Volumetric Flow Rate(Nm ³ /hr.)	: 19802.48
Ambient Air Temperature, °C	: 34

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Saurabh Sharma
17-10-2018
Reviewer

This Analysis Report is not Valid
For constant Purpose of the Board

17-10-2018
Prem Kumar
[Tech Manager]

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Interstellar Testing Centre Pvt. Ltd.

Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1810130539
	NABL ULR No. :TC59261800000634F
	Sample Reg. Date :13-10-2018
	Report Date :17-10-2018
	Customer Ref. No.1
	Letter Dated :

Test Details :

1. General Parameters			
a. Particulate Matter,mg/Nm ³	IS:11255(P-1)	150 Max.	71

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by Lab rep. on 11.10.2018

REMARKS :N/A

*****End Of Report*****

Saurabh Sharma
Saurabh Sharma
17-10-2018
Reviewer

This Analysis Report is not Valid
For consent Purpose of the Board

17-10-2018
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501
Page 1 of 2


Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1811280768 Sample Reg. Date :28-11-2018 Report Date :03-12-2018 Customer Ref. No.: Letter Dated :
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Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Coal & 133 ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit- 1)
3.Type of Stack/Duct	: Metal
4.Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 34
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPS
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 120
Flue Gas Velocity(m/s),Avg.	: 20.20
Volumetric Flow Rate(Nm ³ /hr.)	: 971063.98
Ambient Air Temperature, °C	: 30

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Test Details :


Saurabh Sharma
03-12-2018
Reviewer

This Analysis Report is Not Valid
For consent Purpose of the Board
03-12-2018
Prem Kumar
[Tech Manager]

Disclaimer:

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2. Total Liability of this Laboratory is limited to the Invoiced amount.
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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1811280768
	Sample Reg. Date :28-11-2018
	Report Date :03-12-2018
	Customer Ref. No.:
	Letter Dated :

1.	General Parameters			
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	Max. 50	44
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Not Specified	618
c.	Oxides of Nitrogen(NO ₂),mg/Nm ³	IS:11255(P-7)	Not Specified	284
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 5.4 % v/v. All monitored values of SO₂, NO₂ and PM are corrected at 6% O₂ On dry basis. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018. Sample collected by lab rep. on 26.11.2018

REMARKS : N/A

*****End Of Report*****

Saurabh Sharma
03-12-2018
Reviewer

03-12-2018
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1811280769
	Sample Reg. Date : 28-11-2018
	Report Date : 03-12-2018
	Customer Ref. No.:
	Letter Dated :

Test Report as per IS : EPA Act 1986/PCT.S/2010

General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Coal & 133 ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit-2)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 34
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPS
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 117
Flue Gas Velocity(m/s), Avg.	: 19.89
Volumetric Flow Rate(Nm ³ /hr.)	: 963516.59
Ambient Air Temperature, °C	: 30

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Test Details :

Saurabh Sharma
03-12-2018
Reviewer

This Analysis Report is not Valid
For consent Purpose of the Board
03-12-2018
Prem Kumar
[Tech Manager]

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3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1811280769
	Sample Reg. Date :28-11-2018
	Report Date :03-12-2018
	Customer Ref. No.:
	Letter Dated :

L.	General Parameters			
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	Max. 50	46
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Not Specified	585
c.	Oxides of Nitrogen(NO ₂),mg/Nm ³	IS:11255(P-7)	Not Specified	292
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.1)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 5.8 % v/v. All monitored values of SO₂, NO₂ and PM are corrected at 6% O₂ On dry basis. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018. Sample collected by lab rep. on 26.11.2018

REMARKS : N/A

*****End Of Report*****

ITC Labs

This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
03-12-2018
Reviewer

03-12-2018
Prem Kumar
[Tech Manager]

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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil Khadur Sahib, Tarn Taran	Report No. : E01-1812290976 Sample Reg. Date : 29-12-2018 Report Date : 04-01-2019 Customer Ref. No. : Letter Dated :
--	--

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Coal & 133 ton/hr
(d) Normal operating schedule	: 24 hrs.
2. Stack Identification	: Stack attached to Boiler Unit-1 (865 Ton)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 33
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPS
(a) Status	: Working
(b) Recovery of Material	:
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 116
Flue Gas Velocity(m/s), Avg.	: 20.61
Volumetric Flow Rate(Nm ³ /hr.)	: 1000961.59
Ambient Air Temperature, °C	: 18

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Test Details :

Saurabh Sharma
04-01-2019
Reviewer

This Analysis Report is valid for
04-01-2019
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501

Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1812290976 Sample Reg. Date : 29-12-2018 Report Date : 04-01-2019 Customer Ref. No.: Letter Dated :
---	---

1.	General Parameters			
a.	Particulate Matter, mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-1)	Max. 50	40
b.	Sulphur Dioxide (SO ₂), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-2)	Max. 600	570
c.	Oxides of Nitrogen (NO _x), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	296
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 4.8% v/v. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018, Sample collected by lab rep. on 28.12.2018

REMARKS : N/A

*******End Of Report*******

Saurabh Sharma
Saurabh Sharma
04-01-2019
Reviewer

Prem Kumar
04-01-2019
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501

Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib, Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1812290977
	Sample Reg. Date : 29-12-2018
	Report Date : 04-01-2019
	Customer Ref. No. :
	Letter Dated :

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Coal & 133 ton/hr
(d) Normal operating schedule	: 24 hrs.
2. Stack Identification	: Stack attached to Boiler Unit-2 (865 Ton)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 33
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPS
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 122
Flue Gas Velocity(m/s), Avg.	: 20.77
Volumetric Flow Rate(Nm ³ /hr.)	: 993409.76
Ambient Air Temperature, °C	: 18

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Test Details :

Saurabh Sharma
 04-01-2019
 Reviewer

04-01-2019
 Prem Kumar
 [Tech Manager]

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Test Report

Document QF : 2501
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Issued To	Report No. :E01-1812290977
GVK Power (Goindwal Sahib) Ltd.	Sample Reg. Date :29-12-2018
Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil:	Report Date :04-01-2019
Khadur Sahib,	Customer Ref. No.:
Tarn Taran	Letter Dated :

1.	General Parameters			
a.	Particulate Matter, mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-1)	Max. 50	47
b.	Sulphur Dioxide (SO ₂), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-2)	Max. 600	523
c.	Oxides of Nitrogen (NO _x), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	226
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 5.0% v/v. Requirement as per EPA 1986, PCLIS/02/2010, S.O. 3305(E), Dated : 28.06.2018, Sample collected by lab rep. on 28.12.2018

REMARKS : N/A

*****End Of Report*****

Saurabh Sharma
04-01-2019
Reviewer

This Analysis Report is not valid
For consultant Purpose
04-01-2019
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501

Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160668 Sample Reg. Date : 16-01-2019 Report Date : 23-01-2019 Customer Ref. No.: Letter Dated :
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Test Report as per IS : EPA Act 1986/PCLS/2010

General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton/hr
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Coal & 133 ton/hr
(d) Normal operating schedule	: As required
2. Stack Identification	: Stack attached to Boiler (Unit-1)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 35
Purpose of Monitoring	: For consent purpose (PPCB)
(8) Air Pollution control measure	: ESPs
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 122
Flue Gas Velocity(m/s), Avg.	: 19.83
Volumetric Flow Rate(Nm ³ /hr.)	: 948450.44
Ambient Air Temperature, °C	: 18

Report is valid for consent purposes

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)

(A Government Approved Test House)

86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)

Phone : (U) 0172-2561343, 2563825.

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Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1901160668
	Sample Reg. Date :16-01-2019
	Report Date :23-01-2019
	Customer Ref. No.:
	Letter Dated :

I.	General Parameters			
a.	Particulate Matter, mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-1)	Max. 50	43
b.	Sulphur Dioxide (SO ₂), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-2)	Max. 600	512
c.	Oxides of Nitrogen (NO _x), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	278
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 4.6% v/v. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018, Sample collected by lab rep. on 11.01.2019

Report is valid for consent purposes

REMARKS : N/A

*******End Of Report*******

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
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Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160669 Sample Reg. Date : 16-01-2019 Report Date : 23-01-2019 Customer Ref. No.: Letter Dated :
--	--

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton/hr
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Coal & 133 ton/hr
(d) Normal operating schedule	: As required
2. Stack Identification	: Stack attached to Boiler (Unit-2)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 41
Purpose of Monitoring	: For consent purpose (PPCB)
(8) Air Pollution control measure	: ESPs
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C.Avg.	: 125
Flue Gas Velocity(m/s), Avg.	: 17.34
Volumetric Flow Rate(Nm ³ /hr.)	: 823104.63
Ambient Air Temperature, °C	: 18

Report is valid for consent purposes

TEST RESULTS				
S.No.	Test Parameter	Method	Requirement	Result
Test Details :				

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160669 Sample Reg. Date : 16-01-2019 Report Date : 23-01-2019 Customer Ref. No.: Letter Dated :
---	---

1. General Parameters				
a.	Particulate Matter, mg/Nm ³ (Corrected at 12 % CO ₂)	IS:11255(P-1)	Max. 50	45
b.	Sulphur Dioxide (SO ₂), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-2)	Max. 600	549
c.	Oxides of Nitrogen (NO _x), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	248
d.	Mercury(As Hg), mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 4.8% v/v. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018, Sample collected by lab rep. on 11.01.2019

Report is valid for consent purposes

REMARKS : N/A

*****End Of Report*****

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

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Interstellar Testing Centre Pvt. Ltd.

Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160674 NABL ULR No. : TC592619000004108F Sample Reg. Date : 16-01-2019 Report Date : 23-01-2019 Customer Ref. No.: Letter Dated :
---	---

Test Report as per IS : EPA Act 1986/PCIS/2010,G.S.R 281(E),Dated- 07.03.2016

General Information	
Name of the emission source monitored	: Stack Emission of DG Set
(a) Rated Capacity	: 750 kVA
(b) Capacity on sampling day	: 90%
(c) Type of fuel used & its consumption	: HSD & 60 ltr/hr
(d) Normal operating schedule	: As required
2. Stack Identification	: Stack attached to DG Set- I (750 kVA)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 12
Diameter of the Stack(cm)	: 20.32
(6) Sampling Duration(minutes)	: 66
Purpose of Monitoring	: For consent purpose (PPCB)
(8) Air Pollution control measure	: Not Exist Report is valid for consent purposes
(a) Status	: -
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C.Avg.	: 267
Flue Gas Velocity(m/s).Avg.	: 14.25
Volumetric Flow Rate(Nm ³ /hr.)	: 230.45
Ambient Air Temperature, °C	: 16

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
-------	----------------	--------	-------------	--------

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
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Test Report

Document QF : 2501

Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1901160674
	NABL ULR No. :TC592619000004108F
	Sample Reg. Date :16-01-2019
	Report Date :23-01-2019
	Customer Ref. No.:
Letter Dated :	

Test Details :				
I.	General Parameters			
a.	Particulate Matter,g/kw-hr	IS:11255(P-1)	Max. 0.2	0.11
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Not Specified	20
c.	Oxides of Nitrogen(NO ₂),g/kw-hr + hydrocarbon,g/kw-hr	IS:11255(P-7)	Max. 4.0	2.7
d.	Carbon Monoxide(CO),g/kw-hr	IS:13270	Max. 3.5	1.8

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010,G.S.R 281(E),Dated- 07.03.2016, Sample collected by lab rep. on dated 12.01.2019

REMARKS :N/A

Report is valid for consent purposes

*****End Of Report*****

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

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Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160675
	NABL ULR No. : TC59261900004109F
	Sample Reg. Date : 16-01-2019
	Report Date : 23-01-2019
	Customer Ref. No.:
Letter Dated :	

Test Report as per IS : EPA Act 1986/PCLS/2010,G.S.R.281(E),Dated-07.03.2016

General Information	
Name of the emission source monitored	: Stack Emission of DG Set
(a) Rated Capacity	: 750 kVA
(b) Capacity on sampling day	: 92%
(c) Type of fuel used & its consumption	: HSD & 60 ltr/hr
(d) Normal operating schedule	: As required
2. Stack Identification	: Stack attached to DG Set-2 (750 kVA)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 12
Diameter of the Stack(cm)	: 20.32
(6) Sampling Duration(minutes)	: 69
Purpose of Monitoring	: For consent purpose (PPCB)
(8) Air Pollution control measure	: Not Exist
(a) Status	: -
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C.Avg.	: 305
Flue Gas Velocity(m/s),Avg.	: 14.74
Volumetric Flow Rate(Nm ³ /hr.)	: 222.70
Ambient Air Temperature, °C	: 16

Report is valid for consent purposes

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
-------	----------------	--------	-------------	--------

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

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Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160675
	NABL ULR No. : TC592619000004109F
	Sample Reg. Date : 16-01-2019
	Report Date : 23-01-2019
	Customer Ref. No.:
Letter Dated :	

Test Details :

1.	General Parameters			
a.	Particulate Matter, g/kw-hr	IS:11255(P-1)	Max. 0.2	0.09
b.	Sulphur Dioxide(SO ₂), mg/Nm ³	IS:11255(P-2)	Not Specified	14
c.	Oxides of Nitrogen(NO ₂), g/kw-hr + hydrocarbon, g/kw-hr	IS:11255(P-7)	Max. 4.0	2.4
d.	Carbon Monoxide(CO), g/kw-hr	IS:13270	Max. 3.5	1.7

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, G.S.R 281(E), Dated- 07.03.2016, Sample collected by lab rep. on dated 11.01.2019

Report is valid for consent purposes

REMARKS : N/A

*******End Of Report*******

Saurabh Sharma
23-01-2019
Reviewer

23-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

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Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160673
	NABL ULR No. : TC592619000004038F
	Sample Reg. Date : 16-01-2019
	Report Date : 18-01-2019
	Customer Ref. No.:
Letter Dated :	

Test Report as per IS	: EPA Act 1986/PCLS/2010
------------------------------	--------------------------

General Information	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 25200 m ³ /hr
(b) Capacity on sampling day	:
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As required
2. Stack Identification	: Stack attached to Bag Filter (Junction Tower)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 66.3
Diameter of the Stack(cm)	: 81.5
(6) Sampling Duration(minutes)	: 47
Purpose of Monitoring	: For Consent Purpose (PPCB)
(8) Air Pollution control measure	: Cyclone & Bag Filter
(a) Status	: Working Report is valid for consent purposes
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 27
Flue Gas Velocity(m/s), Avg.	: 11.02
Volumetric Flow Rate(Nm ³ /hr.)	: 20007.00
Ambient Air Temperature, °C	: 17

TEST RESULTS				
S.No.	Test Parameter	Method	Requirement	Result

Saurabh Sharma
18-01-2019
Reviewer

18-01-2019
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1901160673
	NABL ULR No. :TC592619000004038F
	Sample Reg. Date :16-01-2019
	Report Date :18-01-2019
	Customer Ref. No.:
Letter Dated :	

Test Details :			
1.	General Parameters		
a.	Particulate Matter,mg/Nm3	IS:11255(P-1)	150 Max. 53

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on 12.01.2019

REMARKS :N/A

report is valid for consent purpose

*****End Of Report*****

Saurabh Sharma
18-01-2019
Reviewer

18-01-2019
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501

Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160672 NABL ULR No. : TC592619000004131F Sample Reg. Date : 16-01-2019 Report Date : 22-01-2019 Customer Ref. No.: Letter Dated :
---	---

Test Report as per IS	: EPA Act 1986/TCLS/2010
General Information	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 39000 m ³ /hr
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As required
2. Stack Identification	: Stack attached to Dust Extraction System (Crusher House)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 40.9
Diameter of the Stack(cm)	: 127.5
(6) Sampling Duration(minutes)	: 47
Purpose of Monitoring	: For consent purpose
(8) Air Pollution control measure	: Cyclone & Bag Filter
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 24
Flue Gas Velocity(m/s), Avg.	: 11.06
Volumetric Flow Rate(Nm ³ /hr.)	: 49639.29
Ambient Air Temperature, °C	: 16

Report is valid for consent purposes

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
-------	----------------	--------	-------------	--------

Saurabh Sharma
24-01-2019
Reviewer

24-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

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Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No.	:E01-1901160672
	NABL ULR No.	:TC592619000004131F
	Sample Reg. Date	:16-01-2019
	Report Date	:22-01-2019
	Customer Ref. No.:	
	Letter Dated	:

Test Details :			
1.	General Parameters		
a.	Particulate Matter,mg/Nm3	IS:11255(P-1)	150 Max. 79

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 12.01.2019

REMARKS :N/A

Report is valid for consent purposes

*****End Of Report*****

Saurabh Sharma
24-01-2019
Reviewer

24-01-2019
Prem Kumar
[Tech Manager]

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Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160671 NABL ULR No. : TC592619000004035F Sample Reg. Date : 16-01-2019 Report Date : 18-01-2019 Customer Ref. No.: Letter Dated :
---	---

Test Report as per IS	: EPA Act 1986/PCLS/2010
------------------------------	--------------------------

General Information	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 10200 m ³ /hr
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As required
2. Stack Identification	: Stack attached to Bag Filter Bunkar House (Unit-2)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 61
Diameter of the Stack(cm)	: 51.4
(6) Sampling Duration(minutes)	: 50
Purpose of Monitoring	: For Consent Purpose (PPCB)
(8) Air Pollution control measure	: Cyclone followed by Bag Filter
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 25
Flue Gas Velocity(m/s), Avg.	: 10.60
Volumetric Flow Rate(Nm ³ /hr.)	: 7705.88
Ambient Air Temperature, °C	: 18

Report is valid for consent purposes

TEST RESULTS				
S.No.	Test Parameter	Method	Requirement	Result

Saurabh Sharma
18-01-2019
Reviewer

18-01-2019
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160671 NABL ULR No. : TC592619000004035F Sample Reg. Date : 16-01-2019 Report Date : 18-01-2019 Customer Ref. No.: Letter Dated :
---	---

Test Details :			
1.	General Parameters		
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	150 Max. 60

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on 12.01.2019

REMARKS : N/A

Report is valid for consent purpose

*****End Of Report*****


 Saurabh Sharma
 18-01-2019
 Reviewer


 18-01-2019
 Prem Kumar
 [Tech Manager]

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Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160670 NABL ULR No. : TC59261900004033F Sample Reg. Date : 16-01-2019 Report Date : 18-01-2019 Customer Ref. No.: Letter Dated :
---	--

Test Report as per IS	: EPA Act 1986/PCLS/2010
------------------------------	--------------------------

General Information	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 10200 m ³ /hr
(b) Capacity on sampling day	:
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As required
2. Stack Identification	: Stack attached to Bag Filter Bunkar House (Unit-1)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 61
Diameter of the Stack(cm)	: 51.4
(6) Sampling Duration(minutes)	: 48
Purpose of Monitoring	: For Consent Purpose (PPCB)
(8) Air Pollution control measure	: Cyclone followed by Bag Filter
(a) Status	: Working <i>Report is valid for consent purpose</i>
(b) Recovery of Material	:
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 26
Flue Gas Velocity(m/s), Avg.	: 10.88
Volumetric Flow Rate(Nm ³ /hr.)	: 7882.98
Ambient Air Temperature, °C	: 16

TEST RESULTS				
S.No.	Test Parameter	Method	Requirement	Result

Saurabh Sharma
18-01-2019
Reviewer

18-01-2019
Prem Kumar
[Tech Manager]

Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1901160670 NABL ULR No. : TC592619000004033F Sample Reg. Date : 16-01-2019 Report Date : 18-01-2019 Customer Ref. No.: Letter Dated :
---	---

Test Details :

1.	General Parameters			
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	150 Max.	53

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on 12.01.2019

Report is valid for consent purposes

REMARKS : N/A

*****End Of Report*****

Saurabh Sharma
18-01-2019
Reviewer

18-01-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2008 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
 (A Government Approved Test House)
 86, Industrial Area, Phase-3, Panchkula-134109 (Haryana)
 Phone : (0172) 2561543, 2565825,
 Visit us: www.itclabs.com E-mail : customersupport@itclabs.com

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2. Total Liability of this Laboratory is limited to the Invoiced amount
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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management

Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1902270879 Sample Reg. Date : 27-02-2019 Report Date : 11-03-2019 Customer Ref. No.: Letter Dated :
---	---

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton/hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Coal & 133 Ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit-1)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 38
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESP's
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 103
Flue Gas Velocity(m/s), Avg.	: 21.63
Volumetric Flow Rate(Nm ³ /hr.)	: 1086820.19
Ambient Air Temperature, °C	: 18

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
-------	----------------	--------	-------------	--------

Test Details :

Saurabh Sharma
11-03-2019
Reviewer

This Analysis Report is not Valid
For consent

11-03-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory
(A Government Approved Test House)
86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
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Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1902270879 Sample Reg. Date :27-02-2019 Report Date :11-03-2019 Customer Ref. No.: Letter Dated :
---	--

1.	General Parameters			
a.	Particulate Matter, mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-1)	Max. 50	46
b.	Sulphur Dioxide (SO ₂), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-2)	Max. 600	640
c.	Oxides of Nitrogen (NO _x), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	283
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 4.8% v/v. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018, Sample collected by lab rep. on 25.02.2019

REMARKS : N/A

*****End Of Report*****


 Saurabh Sharma
 11-03-2019
 Reviewer

**This Analysis Report is not Valid
 For consent Purpose of the Board**

11-03-2019
 Prem Kumar
 [Tech Manager]

Disclaimer:

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Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1902270880 Sample Reg. Date : 27-02-2019 Report Date : 11-03-2019 Customer Ref. No.: Letter Dated :
---	---

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton/hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Coal & 133 Ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler (Unit-II)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 34
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESP's
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 120
Flue Gas Velocity(m/s), Avg.	: 20.20
Volumetric Flow Rate(Nm ³ /hr.)	: 971063.97
Ambient Air Temperature, °C	: 18

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Test Details :

Saurabh Sharma
Saurabh Sharma
11-03-2019
Reviewer

*This Analysis Report is not valid
For consent Purpose of the Board*

11-03-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
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86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1902270880 Sample Reg. Date :27-02-2019 Report Date :11-03-2019 Customer Ref. No.: Letter Dated :
---	--

I.	General Parameters			
a.	Particulate Matter, mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-1)	Max. 50	44
b.	Sulphur Dioxide (SO ₂), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-2)	Max. 600	657
c.	Oxides of Nitrogen (NO _x), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	291
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 4.8% v/v. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018, Sample collected by lab rep. on 25.02.2019

REMARKS : N/A

*****End Of Report*****



This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
11-03-2019
Reviewer

11-03-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1903270766 Sample Reg. Date :27-03-2019 Report Date :01-04-2019 Customer Ref. No.: Letter Dated :
---	--

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton/hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Coal& 133 Ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler of Unit-1 (865 Ton/hr)
3.Type of Stack/Duct	: Metal
4.Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 34
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPS
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 112
Flue Gas Velocity(m/s),Avg.	: 19.61
Volumetric Flow Rate(Nm ³ /hr.)	: 962289.81
Ambient Air Temperature, °C	: 24

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Test Details :

~~This Analysis Report is not Valid
For consent Purpose of the Board~~

Saurabh Sharma
01-04-2019
Reviewer

01-04-2019
Prem Kumar
[Tech Manager]

Disclaimer:

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3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1903270766 Sample Reg. Date :27-03-2019 Report Date :01-04-2019 Customer Ref. No.: Letter Dated :
---	--

Sl.	General Parameters			
a.	Particulate Matter, mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-1)	Max. 50	43
b.	Sulphur Dioxide (SO ₂), mg/Nm ³ .(Corrected at 6% O ₂)	IS:11255(P-2)	Max. 600	626
c.	Oxides of Nitrogen (NO _x), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	288
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 5.6% v/v. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018, Sample collected by lab rep. on 26.03.2019

REMARKS : See Note

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board

Saurabh Sharma
01-04-2019
Reviewer

01-04-2019
Prem Kumar
[Tech Manager]

Disclaimer:

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Test Report

Document QF : 2501
Page 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. : E01-1903270767 Sample Reg. Date : 27-03-2019 Report Date : 01-04-2019 Customer Ref. No. : Letter Dated :
---	--

Test Report as per IS	: EPA Act 1986/PCLS/2010
General Information	
Name of the emission source monitored	: Stack Emission of Boiler
(a) Rated Capacity	: 865 Ton/hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Coal & 133 Ton/hr
(d) Normal operating schedule	: 24 hrs
2. Stack Identification	: Stack attached to Boiler of Unit-2 (865 Ton/hr)
3. Type of Stack/Duct	: Metal
4. Stack Height from Ground Level(m)	: 275
Diameter of the Stack(cm)	: 480
(6) Sampling Duration(minutes)	: 35
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: ESPs
(a) Status	: Working
(b) Recovery of Material	: -
(9) Fugitive Emission, if any	: Nil
Observations	
Flue Gas Temperature, °C, Avg.	: 118
Flue Gas Velocity(m/s), Avg.	: 19.50
Volumetric Flow Rate(Nm ³ /hr.)	: 942208.19
Ambient Air Temperature, °C	: 24

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Test Details :

Saurabh
Saurabh Sharma
01-04-2019
Reviewer

This Analysis Report is not Valid
For consent Purpose of the Board
01-04-2019
Prem Kumar
[Tech Manager]

Disclaimer:

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4. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

Test Report

Document QF : 2501
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1903270767 Sample Reg. Date :27-03-2019 Report Date :01-04-2019 Customer Ref. No.: Letter Dated :
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
1.	General Parameters			
a.	Particulate Matter, mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-1)	Max. 50	41
b.	Sulphur Dioxide (SO ₂), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-2)	Max. 600	662
c.	Oxides of Nitrogen (NO ₂), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	295
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ:0.01)

NOTE.: NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O₂ was found to be 5.4% v/v. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018, Sample collected by lab rep. on 26.03.2019

REMARKS :N/A

*****End Of Report*****

This Analysis Report is not Valid
For consent Purpose of the Board


Saurabh Sharma
01-04-2019
Reviewer

01-04-2019
Prem Kumar
[Tech Manager]

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Environmental Monitoring Report									
Ambient Air Air Quality Location wise									
Inside the Plant Premises									
Location 1 - Near Railway Over Bridge (ROB)									
Sr. No.	Month	Date of Monitoring	*PM-2.5 (µg/m3)	*PM-10 (µg/m3)	*SO2 (µg/m3)	*NOX (µg/m3)	*CO (µg/m3)	*O3 (µg/m3)	*Hg (µg/m3)
1	April, 2018	02.04.2018	39	67	9	11	1.2	ND	ND
2		03.04.2018	40	69	10	12	1.3	ND	ND
3		09.04.2018	49	79	19	24	1.4	ND	ND
4		10.04.2018	58	87	23	27	1.2	ND	ND
5		16.04.2018	47	85	24	27	1.2	ND	ND
6		17.04.2018	45	90	27	32	1.2	ND	ND
7		26.04.2018	40	88	26	31	1.2	ND	ND
8		27.04.2018	46	92	28	33	1.4	ND	ND
1	May, 2018	03.05.2018	46	84	25	29	1.4	ND	ND
2		04.05.2018	49	87	27	31	1.2	ND	ND
3		08.05.2018	35	66	26	29	1.6	ND	ND
4		09.05.2018	48	86	25	27	1.3	ND	ND
5		15.05.2018	44	74	28	33	1.4	ND	ND
6		16.05.2018	49	88	27	29	1.2	ND	ND
7		22.05.2018	48	79	24	27	1.3	ND	ND
8		23.05.2018	44	84	26	29	1.4	ND	ND
1	June, 2018	07.06.2018	49	79	27	31	1.2	ND	ND
2		08.06.2018	46	84	25	29	1.4	ND	ND
4		*14.06.2018	184	408	33	46	1.5	ND	ND
5		*15.06.2018	198	422	32	41	1.4	ND	ND
6		21.06.2018	39	67	23	28	1.3	ND	ND
7		22.06.2018	49	79	27	32	1.4	ND	ND
		25.06.2018	51	81	25	29	1.5	ND	ND
1	July, 2018	02.07.2018	39	67	9	11	1.2	ND	ND
2		03.07.2018	40	69	10	12	1.3	ND	ND
3		09.07.2018	49	79	19	24	1.4	ND	ND
4		10.07.2018	58	87	23	27	1.2	ND	ND
5		16.07.2018	47	85	24	27	1.2	ND	ND
6		17.07.2018	49	89	27	32	1.2	ND	ND
7		23.07.2018	52	88	26	31	1.2	ND	ND
8		24.07.2018	54	86	28	33	1.4	ND	ND
1	August, 2018	02.08.2018	36	62	8	14	1.3	ND	ND
2		03.08.2018	42	66	11	15	1.2	ND	ND
3		09.08.2018	59	82	15	27	1.3	ND	ND
4		10.08.2018	51	82	19	26	1.3	ND	ND
5		16.08.2018	40	84	20	23	1.4	ND	ND
6		17.08.2018	43	78	22	28	1.3	ND	ND
7		23.08.2018	51	76	18	28	1.4	ND	ND
8		24.08.2018	53	85	22	36	1.5	ND	ND
1	Sept, 2018	03.09.2018	38	65	8	10	1.4	ND	ND
2		06.09.2018	42	70	11	13	1.4	ND	ND
3		10.09.2018	47	78	18	22	1.3	ND	ND
4		13.09.2018	54	86	21	24	1.2	ND	ND
5		17.09.2018	44	82	22	26	1.2	ND	ND
6		20.09.2018	46	87	25	30	1.4	ND	ND
7		24.09.2018	53	89	24	33	1.2	ND	ND
8		27.09.2018	53	84	27	31	1.4	ND	ND
Minimum			35	62	8	10	1.2	0	0
Maximum			198	422	33	46	1.6	0	0
Mean			52.83	94.28	21.77	26.60	1.32	0	0
Standard Deviation			30.0	68.8	6.6	7.8	0.1	0	0
98 Percentile			185.12	409.12	32.08	41.4	1.508	0	0

*Results are on higher side due to hazy weather.

Location 2 - PLL Colony									
Sr. No.	Month	Date of Monitoring	*PM-2.5 (µg/m ³)	*PM-10 (µg/m ³)	*SO ₂ (µg/m ³)	*NO _X (µg/m ³)	*CO (µg/m ³)	*O ₃ (µg/m ³)	*Hg (µg/m ³)
1	April., 2018	02.04.2018	42	67	10	12	1.2	ND	ND
2		03.04.2018	44	69	8	11	1.3	ND	ND
3		09.04.2018	48	78	18	23	1.4	ND	ND
4		10.04.2018	59	88	22	26	1.3	ND	ND
5		16.04.2018	57	87	23	27	1.4	ND	ND
6		17.04.2018	39	89	25	29	1.3	ND	ND
7		26.04.2018	41	89	27	30	1.3	ND	ND
8		27.04.2018	47	92	28	31	1.3	ND	ND
1	May., 2018	03.05.2018	48	86	24	27	1.2	ND	ND
2		04.05.2018	51	89	27	29	1.3	ND	ND
3		08.05.2018	34	64	24	27	1.2	ND	ND
4		09.05.2018	44	84	26	29	1.6	ND	ND
5		15.05.2018	50	78	22	26	1.5	ND	ND
6		16.05.2018	48	79	24	27	1.4	ND	ND
7		22.05.2018	49	88	27	29	1.4	ND	ND
8		23.05.2018	48	85	29	31	1.2	ND	ND
1	June., 2018	07.06.2018	41	82	24	27	1.2	ND	ND
2		08.06.2018	44	84	26	29	1.4	ND	ND
4		*14.06.2018	197	413	30	43	1.6	ND	ND
5		*15.06.2018	212	426	32	45	1.5	ND	ND
6		21.06.2018	36	68	24	27	1.4	ND	ND
7		22.06.2018	53	82	26	28	1.5	ND	ND
		25.06.2018	55	84	24	27	1.6	ND	ND
1	July., 2018	02.07.2018	42	67	10	12	1.2	ND	ND
2		03.07.2018	44	69	8	11	1.3	ND	ND
3		09.07.2018	48	78	18	23	1.4	ND	ND
4		10.07.2018	54	88	22	26	1.3	ND	ND
5		16.07.2018	56	87	23	27	1.4	ND	ND
6		17.07.2018	53	89	25	29	1.3	ND	ND
7		23.07.2018	54	88	27	30	1.3	ND	ND
8		24.07.2018	56	87	28	31	1.3	ND	ND
1	August., 2018	02.08.2018	44	69	11	15	1.3	ND	ND
2		03.08.2018	40	67	9	13	1.3	ND	ND
3		09.08.2018	47	76	19	28	1.2	ND	ND
4		10.08.2018	51	85	20	27	1.2	ND	ND
5		16.08.2018	52	85	24	29	1.3	ND	ND
6		17.08.2018	51	80	21	26	1.2	ND	ND
7		23.08.2018	51	89	26	34	1.2	ND	ND
8		24.08.2018	54	86	29	31	1.3	ND	ND
1	Sept, 2018	03.09.2018	40	65	8	10	1.2	ND	ND
2		06.09.2018	46	68	9	12	1.3	ND	ND
3		10.09.2018	46	76	16	21	1.3	ND	ND
4		13.09.2018	51	87	20	24	1.3	ND	ND
5		17.09.2018	52	88	22	27	1.3	ND	ND
6		20.09.2018	54	87	23	27	1.3	ND	ND
7		24.09.2018	50	88	26	32	1.3	ND	ND
8		27.09.2018	52	85	30	32	1.3	ND	ND
Minimum			34	64	8	10	1.2	0	0
Maximum			212	426	32	45	1.6	0	0
Mean			54.79	95.43	21.79	27.17	1.33	0	0
Standard Deviation			32.4	69.6	6.7	11.7	0.1	0	0
98 Percentile			198.2	414.04	30.16	48.36	1.6	0	0
*Results are on higher side due to hazy weather.									

Location 3 - DM Plant									
Sr. No.	Month	Date of Monitoring	*PM-2.5 (µg/m3)	*PM-10 (µg/m3)	*SO2 (µg/m3)	*NOX (µg/m3)	*CO (µg/m3)	*O3 (µg/m3)	*Hg (µg/m3)
1	April., 2018	02.04.2018	39	67	8	11	1.2	ND	ND
2		03.04.2018	38	68	12	14	1.4	ND	ND
3		09.04.2018	48	75	17	22	1.3	ND	ND
4		10.04.2018	57	85	20	24	1.2	ND	ND
5		16.04.2018	58	87	24	28	1.4	ND	ND
6		17.04.2018	42	89	26	31	1.2	ND	ND
7		26.04.2018	46	91	28	31	1.3	ND	ND
8		27.04.2018	39	89	29	32	1.3	ND	ND
1	May., 2018	03.05.2018	39	78	19	22	1.3	ND	ND
2		04.05.2018	42	81	23	26	1.2	ND	ND
3		08.05.2018	37	68	25	27	1.3	ND	ND
4		09.05.2018	49	88	27	29	1.4	ND	ND
5		15.05.2018	46	75	29	31	1.4	ND	ND
6		16.05.2018	42	81	23	26	1.2	ND	ND
7		22.05.2018	48	86	25	27	1.2	ND	ND
8		23.05.2018	44	74	28	32	1.3	ND	ND
1	June., 2018	07.06.2018	41	68	25	27	1.3	ND	ND
2		08.06.2018	45	72	26	28	1.2	ND	ND
4		*14.06.2018	215	434	34	45	1.5	ND	ND
5		*15.06.2018	208	428	31	44	1.4	ND	ND
6		21.06.2018	34	67	19	22	1.5	ND	ND
7		22.06.2018	44	76	25	28	1.6	ND	ND
		25.06.2018	49	78	22	26	1.2	ND	ND
1	July., 2018	02.07.2018	43	67	8	11	1.2	ND	ND
2		03.07.2018	38	68	12	14	1.4	ND	ND
3		09.07.2018	48	75	17	22	1.3	ND	ND
4		10.07.2018	57	85	20	24	1.2	ND	ND
5		16.07.2018	56	87	24	28	1.4	ND	ND
6		17.07.2018	58	89	26	31	1.2	ND	ND
7		23.07.2018	57	88	28	31	1.3	ND	ND
8		24.07.2018	55	89	25	32	1.3	ND	ND
1	August., 2018	02.08.2018	35	64	9	13	1.3	ND	ND
2		03.08.2018	37	62	14	17	1.5	ND	ND
3		09.08.2018	47	72	15	23	1.3	ND	ND
4		10.08.2018	56	83	21	27	1.3	ND	ND
5		16.08.2018	53	88	25	29	1.3	ND	ND
6		17.08.2018	52	86	24	33	1.3	ND	ND
7		23.08.2018	53	81	26	38	1.4	ND	ND
8		24.08.2018	56	84	23	37	1.4	ND	ND
1	Sept, 2018	03.09.2018	41	65	7	10	1.3	ND	ND
2		06.09.2018	37	66	10	12	1.2	ND	ND
3		10.09.2018	56	83	15	21	1.3	ND	ND
4		13.09.2018	54	86	18	26	1.4	ND	ND
5		17.09.2018	57	85	22	26	1.4	ND	ND
6		20.09.2018	54	87	24	33	1.2	ND	ND
7		24.09.2018	53	87	23	29	1.3	ND	ND
8		27.09.2018	53	87	24	30	1.3	ND	ND
Minimum			34	62	7	10	1.2	0	0
Maximum			215	434	34	45	1.6	0	0
Mean			54.38	94.02	21.38	26.17	1.31	0	0
Standard Deviation			34.3	72.3	6.5	7.9	0.1	0	0
98 Percentile			208.56	428.48	31.24	44.08	1.508	0	0
*Results are on higher side due to hazy weather.									

Location 4 - Residential Colony									
Sr. No.	Month	Date of Monitoring	*PM-2.5 (µg/m3)	*PM-10 (µg/m3)	*SO2 (µg/m3)	*NOX (µg/m3)	*CO (µg/m3)	*O3 (µg/m3)	*Hg (µg/m3)
1	April., 2018	02.04.2018	42	69	9	11	1.3	ND	ND
2		03.04.2018	41	68	10	12	1.2	ND	ND
3		09.04.2018	47	78	16	19	1.3	ND	ND
4		10.04.2018	55	82	21	25	1.4	ND	ND
5		16.04.2018	57	85	23	27	1.3	ND	ND
6		17.04.2018	40	87	25	29	1.3	ND	ND
7		26.04.2018	43	89	27	30	1.3	ND	ND
8		27.04.2018	44	91	29	32	1.2	ND	ND
1	May., 2018	03.05.2018	35	73	18	21	1.2	ND	ND
2		04.05.2018	37	75	20	23	1.4	ND	ND
3		08.05.2018	36	69	22	24	1.3	ND	ND
4		09.05.2018	46	79	24	27	1.5	ND	ND
5		15.05.2018	45	72	26	28	1.2	ND	ND
6		16.05.2018	47	86	23	26	1.4	ND	ND
7		22.05.2018	48	79	23	27	1.3	ND	ND
8		23.05.2018	49	88	27	29	1.3	ND	ND
1	June., 2018	07.06.2018	46	84	25	29	1.4	ND	ND
2		08.06.2018	48	79	24	27	1.3	ND	ND
4		*14.06.2018	193	412	31	42	1.6	ND	ND
5		*15.06.2018	212	454	32	43	1.4	ND	ND
6		21.06.2018	38	69	22	26	1.5	ND	ND
7		22.06.2018	41	74	23	28	1.2	ND	ND
		25.06.2018	44	77	26	29	1.4	ND	ND
1	July., 2018	02.07.2018	42	71	9	12	1.3	ND	ND
2		03.07.2018	41	69	10	13	1.2	ND	ND
3		09.07.2018	48	78	18	23	1.3	ND	ND
4		10.07.2018	55	83	23	26	1.4	ND	ND
5		16.07.2018	57	85	23	27	1.3	ND	ND
6		17.07.2018	56	87	25	29	1.3	ND	ND
7		23.07.2018	56	89	27	30	1.3	ND	ND
8		24.07.2018	52	88	29	32	1.2	ND	ND
1	August., 2018	02.08.2018	43	69	7	10	1.4	ND	ND
2		03.08.2018	43	72	11	14	1.3	ND	ND
3		09.08.2018	49	73	16	25	1.5	ND	ND
4		10.08.2018	48	81	21	27	1.3	ND	ND
5		16.08.2018	43	83	20	29	1.4	ND	ND
6		17.08.2018	54	89	22	26	1.3	ND	ND
7		23.08.2018	55	85	28	32	1.2	ND	ND
8		24.08.2018	51	86	28	30	1.3	ND	ND
1	Sept, 2018	03.09.2018	44	72	7	10	1.4	ND	ND
2		06.09.2018	40	67	8	14	1.3	ND	ND
3		10.09.2018	46	77	16	21	1.4	ND	ND
4		13.09.2018	50	80	20	22	1.3	ND	ND
5		17.09.2018	53	82	22	26	1.4	ND	ND
6		20.09.2018	54	84	24	27	1.4	ND	ND
7		24.09.2018	53	82	25	27	1.4	ND	ND
8		27.09.2018	43	70	9	13	1.4	ND	ND
Minimum			35	67	7	10	1.2	0	0
Maximum			212	454	32	43	1.6	0	0
Mean			53.40	94.06	20.72	24.66	1.33	0	0
Standard Deviation			32.4	72.7	6.8	7.5	0.1	0	0
98 Percentile			194.52	415.36	31.08	42.08	1.508	0	0
*Results are on higher side due to hazy weather.									

In surrounding villages									
Location 5 - Goindwal Sahib									
Sr. No.	Month	Date of Monitoring	*PM-2.5 (µg/m ³)	*PM-10 (µg/m ³)	*SO ₂ (µg/m ³)	*NO _X (µg/m ³)	*CO (µg/m ³)	*O ₃ (µg/m ³)	*Hg (µg/m ³)
1	April., 2018	05.04.2018	47	78	17	23	1.2	ND	ND
2		06.04.2018	49	77	19	25	1.2	ND	ND
3		12.04.2018	52	81	21	27	1.3	ND	ND
4		13.04.2018	56	85	24	27	1.2	ND	ND
5		19.04.2018	58	87	26	28	1.3	ND	ND
6		20.04.2018	40	89	28	30	1.4	ND	ND
7		23.04.2018	47	91	29	31	1.2	ND	ND
8		24.04.2018	47	92	29	34	1.4	ND	ND
1	May., 2018	05.05.2018	39	78	19	22	1.3	ND	ND
2		06.05.2018	42	77	22	24	1.3	ND	ND
3		11.05.2018	47	86	23	26	1.4	ND	ND
4		12.05.2018	49	88	27	29	1.2	ND	ND
5		18.05.2018	51	89	29	31	1.4	ND	ND
6		19.05.2018	48	87	28	32	1.2	ND	ND
7		25.05.2018	46	86	27	29	1.3	ND	ND
8		26.05.2018	53	89	29	31	1.3	ND	ND
1	June., 2018	04.06.2018	41	74	24	27	1.2	ND	ND
2		05.06.2018	48	86	25	28	1.3	ND	ND
4		11.06.2018	49	89	29	31	1.4	ND	ND
5		12.06.2018	58	96	27	29	1.2	ND	ND
6		18.06.2018	37	63	20	23	1.4	ND	ND
7		19.06.2018	35	65	22	26	1.6	ND	ND
8		27.07.2018	57	88	31	34	1.4	ND	ND
1	July., 2018	05.07.2018	47	78	17	23	1.2	ND	ND
2		06.07.2018	49	77	19	25	1.2	ND	ND
3		12.07.2018	52	81	21	27	1.3	ND	ND
4		13.07.2018	56	85	24	27	1.2	ND	ND
5		19.07.2018	56	87	26	28	1.3	ND	ND
6		20.07.2018	57	89	28	30	1.4	ND	ND
7		26.07.2018	57	87	29	31	1.2	ND	ND
8		27.07.2018	57	88	31	34	1.4	ND	ND
1	August., 2018	06.08.2018	43	75	18	23	1.3	ND	ND
2		07.08.2018	53	78	14	19	1.3	ND	ND
3		13.08.2018	54	82	24	29	1.4	ND	ND
4		14.08.2018	55	84	23	26	1.3	ND	ND
5		20.08.2018	52	86	25	27	1.2	ND	ND
6		21.08.2018	56	88	29	31	1.2	ND	ND
7		27.08.2018	56	80	28	31	1.3	ND	ND
8		28.08.2018	53	85	32	36	1.3	ND	ND
1	Sept, 2018	03.09.2018	46	74	15	21	1.3	ND	ND
2		06.09.2018	51	79	17	23	1.4	ND	ND
3		10.09.2018	50	80	23	29	1.5	ND	ND
4		13.09.2018	53	82	22	25	1.3	ND	ND
5		17.09.2018	54	89	27	29	1.2	ND	ND
6		20.09.2018	56	88	26	33	1.3	ND	ND
7		24.09.2018	50	85	30	32	1.3	ND	ND
8		27.09.2018	55	89	28	30	1.4	ND	ND
Minimum			35	63	14	19	1.2	0	0
Maximum			58	96	32	36	1.6	0	0
Mean			50.15	83.24	24.35	27.87	1.30	0	0
Standard Deviation			5.8	6.6	4.6	3.7	0.1	0	0
98 Percentile			58	92.4	31.1	34.2	1.51	0	0

Location 6 - Hansawala									
Sr. No.	Month	Date of Monitoring	*PM-2.5 (µg/m3)	*PM-10 (µg/m3)	*SO2 (µg/m3)	*NOX (µg/m3)	*CO (µg/m3)	*O3 (µg/m3)	*Hg (µg/m3)
1	April., 2018	05.04.2018	49	71	12	16	1.3	ND	ND
2		06.04.2018	52	74	14	20	1.4	ND	ND
3		12.04.2018	54	79	17	24	1.3	ND	ND
4		13.04.2018	57	83	23	28	1.2	ND	ND
5		19.04.2018	56	85	25	27	1.2	ND	ND
6		20.04.2018	58	87	27	29	1.4	ND	ND
7		23.04.2018	45	89	29	31	1.4	ND	ND
8		24.04.2018	46	91	28	32	1.2	ND	ND
1	May., 2018	05.05.2018	37	75	20	23	1.4	ND	ND
2		06.05.2018	42	81	23	26	1.2	ND	ND
3		11.05.2018	48	79	24	27	1.5	ND	ND
4		12.05.2018	43	86	27	29	1.2	ND	ND
5		18.05.2018	52	88	29	32	1.3	ND	ND
6		19.05.2018	48	86	23	26	1.4	ND	ND
7		25.05.2018	48	88	25	28	1.2	ND	ND
8		26.05.2018	48	87	28	32	1.3	ND	ND
1	June., 2018	04.06.2018	43	75	23	27	1.3	ND	ND
2		05.06.2018	45	88	26	29	1.2	ND	ND
4		11.06.2018	49	91	28	30	1.2	ND	ND
5		12.06.2018	57	94	31	34	1.4	ND	ND
6		18.06.2018	38	68	24	26	1.5	ND	ND
7		19.06.2018	35	66	22	24	1.3	ND	ND
8		27.06.2018	52	85	28	32	1.2	ND	ND
1	July., 2018	05.07.2018	49	71	12	16	1.3	ND	ND
2		06.07.2018	49	74	14	20	1.3	ND	ND
3		12.07.2018	54	79	17	24	1.3	ND	ND
4		13.07.2018	57	83	23	28	1.2	ND	ND
5		19.07.2018	56	85	25	27	1.2	ND	ND
6		20.07.2018	58	87	27	29	1.4	ND	ND
7		26.07.2018	55	85	26	28	1.4	ND	ND
8		27.07.2018	52	85	28	32	1.2	ND	ND
1	August., 2018	06.08.2018	50	78	15	21	1.2	ND	ND
2		07.08.2018	46	72	10	14	1.4	ND	ND
3		13.08.2018	52	76	15	23	1.3	ND	ND
4		14.08.2018	56	85	24	27	1.4	ND	ND
5		20.08.2018	52	87	24	29	1.2	ND	ND
6		21.08.2018	54	88	28	30	1.2	ND	ND
7		27.08.2018	50	74	26	33	1.3	ND	ND
8		28.08.2018	51	83	26	31	1.2	ND	ND
1	Sept, 2018	03.09.2018	50	72	13	17	1.4	ND	ND
2		06.09.2018	48	72	13	18	1.5	ND	ND
3		10.09.2018	52	78	15	22	1.3	ND	ND
4		13.09.2018	53	80	20	25	1.4	ND	ND
5		17.09.2018	52	83	21	26	1.4	ND	ND
6		20.09.2018	52	85	23	27	1.2	ND	ND
7		24.09.2018	48	74	27	32	1.2	ND	ND
8		27.09.2018	51	84	24	30	1.3	ND	ND
Minimum			35	66	10	14	1.2	0	0
Maximum			58	94	31	34	1.5	0	0
Mean			49.93	81.11	22.26	26.28	1.30	0	0
Standard Deviation			5.4	6.8	5.6	4.9	0.1	0	0
98 Percentile			58	91.3	29.2	33.1	1.5	0	0

Location 7 - Vairawal									
Sr. No.	Month	Date of Monitoring	*PM-2.5 (µg/m3)	*PM-10 (µg/m3)	*SO2 (µg/m3)	*NOX (µg/m3)	*CO (µg/m3)	*O3 (µg/m3)	*Hg (µg/m3)
1	April., 2018	05.04.2018	48	71	13	17	1.2	ND	ND
2		06.04.2018	51	73	15	21	1.3	ND	ND
3		12.04.2018	56	84	21	24	1.4	ND	ND
4		13.04.2018	58	89	25	29	1.2	ND	ND
5		19.04.2018	47	91	27	31	1.4	ND	ND
6		20.04.2018	58	88	29	33	1.2	ND	ND
7		23.04.2018	57	86	26	28	1.3	ND	ND
8		24.04.2018	42	89	28	31	1.2	ND	ND
1	May., 2018	05.05.2018	47	86	23	26	1.4	ND	ND
2		06.05.2018	48	86	25	27	1.3	ND	ND
3		11.05.2018	49	88	27	29	1.2	ND	ND
4		12.05.2018	47	87	29	31	1.4	ND	ND
5		18.05.2018	49	89	28	33	1.2	ND	ND
6		19.05.2018	49	88	27	29	1.3	ND	ND
7		25.05.2018	52	89	26	32	1.2	ND	ND
8		26.05.2018	45	86	28	32	1.4	ND	ND
1	June., 2018	04.06.2018	44	77	22	26	1.2	ND	ND
2		05.06.2018	47	79	24	27	1.4	ND	ND
4		11.06.2018	49	88	23	28	1.3	ND	ND
5		12.06.2018	56	93	25	29	1.6	ND	ND
6		18.06.2018	32	61	18	21	1.4	ND	ND
7		19.06.2018	36	63	19	22	1.4	ND	ND
8		27.06.2018	57	86	28	31	1.2	ND	ND
1	July., 2018	05.07.2018	48	71	13	17	1.2	ND	ND
2		06.07.2018	51	73	15	21	1.3	ND	ND
3		12.07.2018	56	84	21	24	1.4	ND	ND
4		13.07.2018	58	89	25	29	1.7	ND	ND
5		19.07.2018	48	72	27	31	1.4	ND	ND
6		20.07.2018	56	88	29	33	1.2	ND	ND
7		26.07.2018	55	85	26	28	1.3	ND	ND
8		27.07.2018	57	86	28	31	1.2	ND	ND
1	August., 2018	06.08.2018	46	73	11	19	1.2	ND	ND
2		07.08.2018	48	77	16	24	1.3	ND	ND
3		13.08.2018	53	81	22	27	1.2	ND	ND
4		14.08.2018	56	86	27	30	1.5	ND	ND
5		20.08.2018	45	74	24	33	1.3	ND	ND
6		21.08.2018	56	87	26	34	1.2	ND	ND
7		27.08.2018	52	86	23	29	1.4	ND	ND
8		28.08.2018	58	89	29	35	1.4	ND	ND
1	Sept, 2018	03.09.2018	46	69	11	14	1.4	ND	ND
2		06.09.2018	41	68	8	11	1.3	ND	ND
3		10.09.2018	47	77	17	22	1.2	ND	ND
4		13.09.2018	52	83	22	26	1.2	ND	ND
5		17.09.2018	45	84	22	26	1.3	ND	ND
6		20.09.2018	46	84	25	30	1.5	ND	ND
7		24.09.2018	51	82	24	32	1.2	ND	ND
8		27.09.2018	50	81	26	33	1.4	ND	ND
Minimum			32	61	8	11	1.2	0	0
Maximum			58	93	29	35	1.7	0	0
Mean			49.74	81.74	22.72	27.07	1.32	0	0
Standard Deviation			5.8	7.8	5.5	5.5	0.1	0	0
98 Percentile			58	91.2	29	34.1	1.61	0	0

Location 8 - Mundi Village									
Sr. No.	Month	Date of Monitoring	*PM-2.5 (µg/m3)	*PM-10 (µg/m3)	*SO2 (µg/m3)	*NOX (µg/m3)	*CO (µg/m3)	*O3 (µg/m3)	*Hg (µg/m3)
1	April., 2018	05.04.2018	47	68	10	13	1.2	ND	ND
2		06.04.2018	49	71	12	16	1.3	ND	ND
3		12.04.2018	56	81	22	26	1.2	ND	ND
4		13.04.2018	59	88	24	28	1.4	ND	ND
5		19.04.2018	57	89	25	29	1.2	ND	ND
6		20.04.2018	46	91	27	31	1.3	ND	ND
7		23.04.2018	43	89	28	30	1.3	ND	ND
8		24.04.2018	48	93	32	35	1.4	ND	ND
1	May., 2018	05.05.2018	42	77	22	25	1.2	ND	ND
2		06.05.2018	41	74	24	27	1.2	ND	ND
3		11.05.2018	47	86	23	26	1.4	ND	ND
4		12.05.2018	52	89	26	32	1.6	ND	ND
5		18.05.2018	49	88	27	29	1.4	ND	ND
6		19.05.2018	51	89	29	31	1.4	ND	ND
7		25.05.2018	48	86	25	27	1.4	ND	ND
8		26.05.2018	43	85	27	31	1.4	ND	ND
1	June., 2018	04.06.2018	47	86	22	27	1.4	ND	ND
2		05.06.2018	48	88	25	28	1.3	ND	ND
4		11.06.2018	49	89	29	31	1.4	ND	ND
4		12.06.2018	58	97	28	30	1.2	ND	ND
6		18.06.2018	37	68	19	23	1.5	ND	ND
7		19.06.2018	32	64	17	21	1.3	ND	ND
8		27.06.2018	49	84	32	35	1.4	ND	ND
1	July., 2018	05.07.2018	42	68	10	13	1.2	ND	ND
2		06.07.2018	47	68	12	16	1.2	ND	ND
3		12.07.2018	56	81	22	26	1.2	ND	ND
4		13.07.2018	57	88	24	28	1.4	ND	ND
5		19.07.2018	57	89	25	29	1.2	ND	ND
6		20.07.2018	54	86	27	31	1.3	ND	ND
7		26.07.2018	56	83	28	30	1.3	ND	ND
8		27.07.2018	49	84	32	35	1.4	ND	ND
1	August., 2018	06.08.2018	42	70	13	15	1.4	ND	ND
2		07.08.2018	45	69	9	14	1.3	ND	ND
3		13.08.2018	53	80	19	27	1.3	ND	ND
4		14.08.2018	50	87	22	29	1.2	ND	ND
5		20.08.2018	49	86	26	31	1.3	ND	ND
6		21.08.2018	56	89	28	33	1.4	ND	ND
7		27.08.2018	54	78	29	32	1.4	ND	ND
8		28.08.2018	51	86	31	36	1.2	ND	ND
1	Sept, 2018	03.09.2018	45	70	8	11	1.3	ND	ND
2		06.09.2018	50	74	12	18	1.3	ND	ND
3		10.09.2018	56	83	20	24	1.4	ND	ND
4		13.09.2018	54	90	23	27	1.2	ND	ND
5		17.09.2018	56	91	23	32	1.3	ND	ND
6		20.09.2018	53	88	25	30	1.4	ND	ND
7		24.09.2018	50	80	29	33	1.2	ND	ND
8		27.09.2018	51	85	30	33	1.3	ND	ND
Minimum			32	64	8	11	1.2	0	0
Maximum			59	97	32	36	1.6	0	0
Mean			49.61	82.37	22.83	26.72	1.32	0	0
Standard Deviation			5.9	8.3	6.5	6.5	0.1	0	0
98 Percentile			58.1	93.4	32	35.1	1.51	0	0

* Above tabulated data taken from monitoring report generated by outsource agency (Interstellar Testing Center), Panchikula, Registration No. PPCB/AIR LAB/32/27910, approved by PPCB/CPCB) engaged by company.



Environmental Monitoring Report																
Ambient Air Quality Location wise																
Inside the Plant Premises																
Location 1 - Near Railway Over Bridge (ROB)																
Sr. No.	Month	Date of Monitoring	PM-2.5 (µg/m3)	PM-10 (µg/m3)	SO2 (µg/m3)	NOX (µg/m3)	CO (mg/m3)	O3 (µg/m3)	Hg (µg/m3)	Pb (µg/m3)	NH3 (µg/m3)	C6H6 (µg/m3)	BaP (ng/m3)	As (ng/m3)	Ni (ng/m3)	
1	Oct., 2018	02.10.2018	45	87	18	21	1.4	ND	ND	---	---	---	---	---	---	---
2		05.10.2018	46	88	20	24	1.7	ND	ND	---	---	---	---	---	---	---
3		09.10.2018	47	89	21	26	1.4	ND	ND	---	---	---	---	---	---	---
4		12.10.2018	43	81	18	22	1.6	ND	ND	---	---	---	---	---	---	---
5		16.10.2018	46	83	19	26	1.4	ND	ND	---	---	---	---	---	---	---
6		19.10.2018	47	87	22	31	1.3	ND	ND	---	---	---	---	---	---	---
7		23.10.2018	48	89	16	25	1.6	ND	ND	---	---	---	---	---	---	---
8		26.10.2018	44	88	21	28	1.7	ND	ND	---	---	---	---	---	---	---
1	Nov., 2018	02.11.2018	43	86	21	26	1.5	ND	ND	---	---	---	---	---	---	---
2		05.11.2018	46	87	21	27	1.8	ND	ND	---	---	---	---	---	---	---
3		09.11.2018	49	92	31	37	1.7	ND	ND	---	---	---	---	---	---	---
4		12.11.2018	47	88	28	33	1.8	ND	ND	---	---	---	---	---	---	---
5		16.11.2018	40	85	7	13	1.5	ND	ND	---	---	---	---	---	---	---
6		19.11.2018	43	83	12	17	1.4	ND	ND	---	---	---	---	---	---	---
7		23.11.2018	48	85	14	19	1.7	ND	ND	---	---	---	---	---	---	---
8		27.11.2018	53	91	13	18	1.6	ND	ND	---	---	---	---	---	---	---
1	Dec., 2018	03.12.2018	42	83	10	15	1.3	ND	ND	ND	ND	ND	NC	ND	ND	ND
2		6.12.2018	36	84	9	14	1.6	ND	ND	ND	ND	ND	NC	ND	ND	ND
4		10.12.2018	44	71	9	16	1.4	ND	ND	ND	ND	ND	NC	ND	ND	ND
5		13.12.2018	45	74	12	18	1.5	ND	ND	ND	ND	ND	NC	ND	ND	ND

2X270 MW GVK THERMAL POWER PROJECT, GOINDWAL SAHIB, TARNTARAN, PUNJAB



	53	92	31	37	1.9	0	0	0	0	0	0	0	0
Maximum													
Mean	43.21	78.48	15.50	20.38	1.49	0	0	0	0	0	0	0	0
Standard Deviation	3.6	7.3	5.2	5.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98 Percentile	49.24	91.06	28.18	33.24	1.9	0	0	0	0	0	0	0	0

Location 2 - PLL Colony

Sr. No.	Month	Date of Monitoring	PM-2.5 (µg/m3)	PM-10 (µg/m3)	SO2 (µg/m3)	NOX (µg/m3)	CO (mg/m3)	O3 (µg/m3)	Hg (µg/m3)	Pb (µg/m3)	NH3 (µg/m3)	C6H6 (µg/m3)	BaP (ng/m3)	As (ng/m3)	Ni (ng/m3)
1	Oct., 2018	02.10.2018	42	81	19	22	1.4	ND	ND	---	---	---	---	---	---
2		05.10.2018	43	83	22	24	1.3	ND	ND	---	---	---	---	---	---
3		09.10.2018	46	84	23	25	1.5	ND	ND	---	---	---	---	---	---
4		12.10.2018	41	79	10	14	1.6	ND	ND	---	---	---	---	---	---
5		16.10.2018	43	81	11	15	1.7	ND	ND	---	---	---	---	---	---
6		19.10.2018	44	83	13	27	1.4	ND	ND	---	---	---	---	---	---
7		23.10.2018	45	84	15	26	1.4	ND	ND	---	---	---	---	---	---
8		26.10.2018	47	85	14	25	1.5	ND	ND	---	---	---	---	---	---
1	Nov., 2018	02.11.2018	41	82	19	23	1.3	ND	ND	---	---	---	---	---	---
2		05.11.2018	46	85	25	28	1.5	ND	ND	---	---	---	---	---	---
3		09.11.2018	52	91	32	36	1.3	ND	ND	---	---	---	---	---	---
4		12.11.2018	46	86	28	34	1.4	ND	ND	---	---	---	---	---	---
5		16.11.2018	43	86	8	11	1.5	ND	ND	---	---	---	---	---	---
6		19.11.2018	33	76	8	16	1.2	ND	ND	---	---	---	---	---	---
7		23.11.2018	53	92	16	20	1.3	ND	ND	---	---	---	---	---	---
8		27.11.2018	50	89	8	18	1.4	ND	ND	---	---	---	---	---	---
1	Dec., 2018	03.12.2018	43	78	9	12	1.4	ND	ND	ND	ND	ND	ND	ND	ND
2		6.12.2018	39	69	12	16	1.3	ND	ND	ND	ND	ND	ND	ND	ND
4		10.12.2018	42	70	9	18	1.5	ND	ND	ND	ND	ND	ND	ND	ND
5		13.12.2018	42	70	15	19	1.2	ND	ND	ND	ND	ND	ND	ND	ND
6		17.12.2018	44	72	11	14	1.3	ND	ND	ND	ND	ND	ND	ND	ND



Mean	42.00	76.00	13.52	18.71	1.35	0	0	0	0	0	0	0	0	0	
Standard Deviation	4.0	7.4	5.2	5.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
98 Percentile	52.06	91.06	28.24	34.12	1.61	0	0	0	0	0	0	0	0	0	
Location 3 - DM Plant															
Sr. No.	Month	Date of Monitoring	PM-2.5 (µg/m3)	PM-10 (µg/m3)	SO2 (µg/m3)	NOX (µg/m3)	CO (mg/m3)	O3 (µg/m3)	Hg (µg/m3)	Pb (µg/m3)	NH3 (µg/m3)	C6H6 (µg/m3)	BaP (ng/m3)	As (ng/m3)	Ni (ng/m3)
1	Oct., 2018	02.10.2018	43	82	20	23	1.5	ND	ND	---	---	---	---	---	---
2		05.10.2018	46	84	22	26	1.6	ND	ND	---	---	---	---	---	---
3		09.10.2018	49	86	24	28	1.5	ND	ND	---	---	---	---	---	---
4		12.10.2018	40	78	8	11	1.4	ND	ND	---	---	---	---	---	---
5		16.10.2018	42	81	9	13	1.2	ND	ND	---	---	---	---	---	---
6		19.10.2018	43	83	16	21	1.5	ND	ND	---	---	---	---	---	---
7		23.10.2018	42	84	18	27	1.2	ND	ND	---	---	---	---	---	---
8	26.10.2018	44	88	21	28	1.7	ND	ND	---	---	---	---	---	---	
1	Nov., 2018	02.11.2018	42	84	21	24	1.2	ND	ND	---	---	---	---	---	---
2		05.11.2018	43	85	26	33	1.5	ND	ND	---	---	---	---	---	---
3		09.11.2018	47	91	32	36	1.4	ND	ND	---	---	---	---	---	---
4		12.11.2018	46	90	28	31	1.5	ND	ND	---	---	---	---	---	---
5		16.11.2018	38	89	13	19	1.4	ND	ND	---	---	---	---	---	---
6		19.11.2018	40	79	8	13	1.5	ND	ND	---	---	---	---	---	---
7		23.11.2018	43	84	7	13	1.3	ND	ND	---	---	---	---	---	---
8	27.11.2018	46	88	10	16	1.3	ND	ND	---	---	---	---	---	---	
1	Dec., 2018	03.12.2018	42	87	7	16	1.5	ND	ND	ND	ND	ND	ND	ND	ND
2		6.12.2018	49	82	8	16	1.2	ND	ND	ND	ND	ND	ND	ND	ND
4		10.12.2018	37	68	8	15	1.3	ND	ND	ND	ND	ND	ND	ND	ND
5		13.12.2018	39	69	14	19	1.3	ND	ND	ND	ND	ND	ND	ND	ND
6		17.12.2018	42	71	10	17	1.2	ND	ND	ND	ND	ND	ND	ND	ND
7		20.12.2018	37	68	10	14	1.4	ND	ND	ND	ND	ND	ND	ND	ND

Location 4 - Residential Colony

Sr. No.	Month	Date of Monitoring	PM-2.5 (µg/m3)	PM-10 (µg/m3)	SO2 (µg/m3)	NOX (µg/m3)	CO (mg/m3)	O3 (µg/m3)	Hg (µg/m3)	Pb (µg/m3)	NH3 (µg/m3)	C6H6 (µg/m3)	BaP (ng/m3)	As (ng/m3)	Ni (ng/m3)		
1		02.10.2018	42	86	24	28	1.5	ND	ND	---	---	---	---	---	---	---	
2		05.10.2018	44	87	25	29	1.2	ND	ND	---	---	---	---	---	---	---	
3		09.10.2018	42	81	23	26	1.2	ND	ND	---	---	---	---	---	---	---	
4	Oct., 2018	12.10.2018	42	81	11	16	1.5	ND	ND	---	---	---	---	---	---	---	
5		16.10.2018	43	82	13	18	1.4	ND	ND	---	---	---	---	---	---	---	
6		19.10.2018	44	84	15	26	1.6	ND	ND	---	---	---	---	---	---	---	
7		23.10.2018	45	85	17	29	1.4	ND	ND	---	---	---	---	---	---	---	
8		26.10.2018	41	83	16	25	1.3	ND	ND	---	---	---	---	---	---	---	
1			02.11.2018	41	83	17	21	1.4	ND	ND	---	---	---	---	---	---	---
2			05.11.2018	41	82	18	23	1.6	ND	ND	---	---	---	---	---	---	---
3			09.11.2018	53	92	32	37	1.8	ND	ND	---	---	---	---	---	---	---
4	Nov., 2018	12.11.2018	49	88	29	33	1.7	ND	ND	---	---	---	---	---	---	---	
5		16.11.2018	34	80	10	16	1.3	ND	ND	---	---	---	---	---	---	---	
6		19.11.2018	39	85	9	13	1.2	ND	ND	---	---	---	---	---	---	---	
7		23.11.2018	48	80	8	13	1.4	ND	ND	---	---	---	---	---	---	---	
8		27.11.2018	41	82	8	12	1.5	ND	ND	---	---	---	---	---	---	---	
1			03.12.2018	39	80	14	19	1.4	ND	ND	ND	ND	ND	ND	ND	ND	
2			6.12.2018	48	86	17	23	1.5	ND	ND	ND	ND	ND	ND	ND	ND	
4			10.12.2018	35	66	11	16	1.5	ND	ND	ND	ND	ND	ND	ND	ND	
5	Dec., 2018	13.12.2018	44	69	13	18	1.4	ND	ND	ND	ND	ND	ND	ND	ND		
6		17.12.2018	40	69	10	18	1.6	ND	ND	ND	ND	ND	ND	ND	ND		
7		20.12.2018	38	68	11	14	1.3	ND	ND	ND	ND	ND	ND	ND	ND		
8		24.12.2018	37	69	12	15	1.6	ND	ND	ND	ND	ND	ND	ND	ND		
1			27.12.2018	36	67	10	14	1.5	ND	ND	ND	ND	ND	ND	ND		
2			02.01.2019	39	76	10	18	1.3	ND	ND	ND	ND	ND	ND	ND		
1		Jan., 2019	05.01.2019	32	75	7	10	1.2	ND	ND	ND	ND	ND	ND	ND		
2																	



In surrounding villages Location 5 - Goindwal Sahib																
Sr. No.	Month	Date of Monitoring	PM-2.5 (µg/m3)	PM-10 (µg/m3)	SO2 (µg/m3)	NOX (µg/m3)	CO (mg/m3)	O3 (µg/m3)	Hg (µg/m3)	Pb (µg/m3)	NH3 (µg/m3)	C6H6 (µg/m3)	BaP (ng/m3)	As (ng/m3)	Ni (ng/m3)	
1		02.10.2018	46	83	19	23	1.1	ND	ND	---	---	---	---	---	---	
2		05.10.2018	43	82	17	22	1.1	ND	ND	---	---	---	---	---	---	
3		09.10.2018	47	86	21	27	1.5	ND	ND	---	---	---	---	---	---	
4	Oct., 2018	12.10.2018	42	81	10	16	1.5	ND	ND	---	---	---	---	---	---	
5		16.10.2018	45	83	11	18	1.5	ND	ND	---	---	---	---	---	---	
6		19.10.2018	48	87	21	29	1.4	ND	ND	---	---	---	---	---	---	
7		23.10.2018	47	84	16	24	1.4	ND	ND	---	---	---	---	---	---	
8		26.10.2018	47	83	17	23	1.4	ND	ND	---	---	---	---	---	---	
1			02.11.2018	44	87	24	27	1.2	ND	ND	---	---	---	---	---	---
2			05.11.2018	46	87	22	26	1.7	ND	ND	---	---	---	---	---	---
3			09.11.2018	52	92	34	39	1.5	ND	ND	---	---	---	---	---	---
4	Nov., 2018	12.11.2018	49	89	30	34	1.7	ND	ND	---	---	---	---	---	---	
5		16.11.2018	42	83	14	16	1.3	ND	ND	---	---	---	---	---	---	
6		19.11.2018	46	83	13	20	1.6	ND	ND	---	---	---	---	---	---	
7		23.11.2018	43	81	10	17	1.4	ND	ND	---	---	---	---	---	---	
8		27.11.2018	54	87	18	22	1.3	ND	ND	---	---	---	---	---	---	
1			04.12.2018	48	89	20	28	1.3	ND	ND	ND	ND	ND	ND	ND	ND
2			07.12.2018	37	68	13	15	1.4	ND	ND	ND	ND	ND	ND	ND	ND
4			11.12.2018	39	71	14	17	1.3	ND	ND	ND	ND	ND	ND	ND	ND
5	Dec., 2018	14.12.2018	36	66	11	17	1.6	ND	ND	ND	ND	ND	ND	ND	ND	
6		18.12.2018	36	67	16	19	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
7		21.12.2018	43	72	12	16	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
			24.12.2018	41	69	13	18	1.5	ND	ND	ND	ND	ND	ND	ND	ND
			28.12.2018	40	68	14	20	1.3	ND	ND	ND	ND	ND	ND	ND	ND
1		Jan., 2019	03.01.2019	34	77	12	23	1.4	ND	ND	ND	ND	ND	ND	ND	ND
2			07.01.2019	36	78	9	19	1.3	ND	ND	ND	ND	ND	ND	ND	ND



Location 6 - Hansawala

Sr. No.	Month	Date of Monitoring	PM-2.5 (µg/m3)	PM-10 (µg/m3)	SO2 (µg/m3)	NOX (µg/m3)	CO (mg/m3)	O3 (µg/m3)	Hg (µg/m3)	Pb (µg/m3)	NH3 (µg/m3)	C6H6 (µg/m3)	BaP (ng/m3)	As (ng/m3)	Ni (ng/m3)		
1		02.10.2018	44	85	26	31	1.7	ND	ND	---	---	---	---	---	---	---	
2		05.10.2018	46	87	22	28	1.5	ND	ND	---	---	---	---	---	---	---	
3		09.10.2018	43	84	21	26	1.3	ND	ND	---	---	---	---	---	---	---	
4	Oct., 2018	12.10.2018	47	86	18	22	1.4	ND	ND	---	---	---	---	---	---	---	
5		16.10.2018	46	87	19	21	1.5	ND	ND	---	---	---	---	---	---	---	
6		19.10.2018	49	91	22	32	1.5	ND	ND	---	---	---	---	---	---	---	
7		23.10.2018	45	89	21	26	1.2	ND	ND	---	---	---	---	---	---	---	
8		26.10.2018	46	88	17	25	1.3	ND	ND	---	---	---	---	---	---	---	
1			02.11.2018	45	89	23	28	1.4	ND	ND	---	---	---	---	---	---	---
2			05.11.2018	44	78	18	23	1.5	ND	ND	---	---	---	---	---	---	---
3			09.11.2018	51	91	30	35	1.4	ND	ND	---	---	---	---	---	---	---
4	Nov., 2018	12.11.2018	49	88	29	33	1.5	ND	ND	---	---	---	---	---	---	---	
5		16.11.2018	31	75	11	17	1.2	ND	ND	---	---	---	---	---	---	---	
6		19.11.2018	35	89	13	17	1.3	ND	ND	---	---	---	---	---	---	---	
7		23.11.2018	42	86	13	19	1.3	ND	ND	---	---	---	---	---	---	---	
8		27.11.2018	50	89	10	15	1.2	ND	ND	---	---	---	---	---	---	---	
1			04.12.2018	42	84	10	19	1.5	ND	ND	ND	ND	ND	ND	ND	ND	
2			07.12.2018	41	67	10	15	1.3	ND	ND	ND	ND	ND	ND	ND	ND	
4			11.12.2018	43	69	12	18	1.4	ND	ND	ND	ND	ND	ND	ND	ND	
5	Dec., 2018	14.12.2018	43	72	18	22	1.4	ND	ND	ND	ND	ND	ND	ND	ND		
6		18.12.2018	39	69	12	18	1.4	ND	ND	ND	ND	ND	ND	ND	ND		
7		21.12.2018	39	69	9	12	1.4	ND	ND	ND	ND	ND	ND	ND	ND		
8		24.12.2018	42	71	11	16	1.4	ND	ND	ND	ND	ND	ND	ND	ND		
1			28.12.2018	43	72	13	18	1.3	ND	ND	ND	ND	ND	ND	ND		
1		Jan., 2019	03.01.2019	39	82	15	22	1.4	ND	ND	ND	ND	ND	ND	ND		
2																	



Location 7 - Vairawal

Sr. No.	Month	Date of Monitoring	PM-2.5 (µg/m3)	PM-10 (µg/m3)	SO2 (µg/m3)	NOX (µg/m3)	CO (µg/m3)	O3 (µg/m3)	Hg (µg/m3)	Pb (µg/m3)	NH3 (µg/m3)	C6H6 (µg/m3)	BaP (ng/m3)	As (ng/m3)	Ni (ng/m3)	
1		02.10.2018	45	87	21	26	1.4	ND	ND	---	---	---	---	---	---	---
2		05.10.2018	47	89	23	29	1.3	ND	ND	---	---	---	---	---	---	---
3		09.10.2018	46	88	27	32	1.1	ND	ND	---	---	---	---	---	---	---
4	Oct., 2018	12.10.2018	40	85	10	14	1.3	ND	ND	---	---	---	---	---	---	---
5		16.10.2018	42	86	11	17	1.4	ND	ND	---	---	---	---	---	---	---
6		19.10.2018	49	92	22	33	1.6	ND	ND	---	---	---	---	---	---	---
7		23.10.2018	46	87	21	29	1.4	ND	ND	---	---	---	---	---	---	---
8		26.10.2018	43	85	19	23	1.4	ND	ND	---	---	---	---	---	---	---
1		02.11.2018	43	86	22	28	1.5	ND	ND	---	---	---	---	---	---	---
2		05.11.2018	42	79	18	21	1.6	ND	ND	---	---	---	---	---	---	---
3		09.11.2018	47	89	25	33	1.7	ND	ND	---	---	---	---	---	---	---
4	Nov., 2018	12.11.2018	46	88	26	34	1.4	ND	ND	---	---	---	---	---	---	---
5		16.11.2018	36	80	15	19	1.4	ND	ND	---	---	---	---	---	---	---
6		19.11.2018	38	85	10	18	1.2	ND	ND	---	---	---	---	---	---	---
7		23.11.2018	39	84	8	13	1.4	ND	ND	---	---	---	---	---	---	---
8		27.11.2018	55	92	8	18	1.4	ND	ND	---	---	---	---	---	---	---
1		04.12.2018	42	84	16	23	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
2		07.12.2018	38	68	13	17	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
4		11.12.2018	43	73	17	22	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
5	Dec., 2018	14.12.2018	41	72	15	19	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
6		18.12.2018	41	70	11	19	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
7		21.12.2018	42	73	19	22	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
		24.12.2018	40	70	16	21	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
8		28.12.2018	39	69	15	19	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
1	Jan., 2019	03.01.2019	33	74	10	23	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
2		07.01.2019	46	80	13	19	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND



Location 8 - Mundi Village

Sr. No.	Month	Date of Monitoring	PM-2.5 (µg/m3)	PM-10 (µg/m3)	SO2 (µg/m3)	NOX (µg/m3)	CO (µg/m3)	O3 (µg/m3)	Hg (µg/m3)	Pb (µg/m3)	NH3 (µg/m3)	C6H6 (µg/m3)	BaP (ng/m3)	As (ng/m3)	Ni (ng/m3)	
1		02.10.2018	42	84	18	22	1.7	ND	ND	---	---	---	---	---	---	---
2		05.10.2018	46	87	21	25	1.4	ND	ND	---	---	---	---	---	---	---
3		09.10.2018	47	88	22	27	1.7	ND	ND	---	---	---	---	---	---	---
4	Oct., 2018	12.10.2018	41	83	12	16	1.6	ND	ND	---	---	---	---	---	---	---
5		16.10.2018	42	84	13	17	1.2	ND	ND	---	---	---	---	---	---	---
6		19.10.2018	47	87	21	28	1.3	ND	ND	---	---	---	---	---	---	---
7		23.10.2018	46	86	19	25	1.3	ND	ND	---	---	---	---	---	---	---
8		26.10.2018	44	85	21	24	1.2	ND	ND	---	---	---	---	---	---	---
1		02.11.2018	47	88	25	28	1.4	ND	ND	---	---	---	---	---	---	---
2		05.11.2018	45	81	16	22	1.6	ND	ND	---	---	---	---	---	---	---
3		09.11.2018	52	92	32	38	1.6	ND	ND	---	---	---	---	---	---	---
4	Nov., 2018	12.11.2018	48	88	29	34	1.6	ND	ND	---	---	---	---	---	---	---
5		16.11.2018	35	78	9	12	1.4	ND	ND	---	---	---	---	---	---	---
6		19.11.2018	39	78	7	16	1.4	ND	ND	---	---	---	---	---	---	---
7		23.11.2018	40	88	14	20	1.2	ND	ND	---	---	---	---	---	---	---
8		27.11.2018	43	83	13	19	1.5	ND	ND	---	---	---	---	---	---	---
2		07.12.2018	41	70	15	19	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
3		11.12.2018	43	72	17	21	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
4		14.12.2018	37	68	12	18	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND
5	Dec., 2018	18.12.2018	39	68	12	18	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
6		21.12.2018	43	71	15	19	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
7		24.12.2018	40	69	17	21	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
8		28.12.2018	41	68	16	20	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
1			03.01.2019	39	82	15	24	1.2	ND	ND	ND	ND	ND	ND	ND	ND
2	Jan., 2019	07.01.2019	43	79	16	26	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
3		09.01.2019	39	68	10	12	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND

IMPACT OF THE POLLUTION ABATEMENT MEASURES TAKEN ON CONSERVATION OF NATURAL RESOURCES AND ON THE COST OF PRODUCTION.

Keeping in the mind as pollution abatement measures towards conservation of natural resources, we have installed or under the installation process of some units/systems to minimize the impact on natural resources that mentioned below and the same shall be implemented as and when plant is operational.

Following measures have been adopted for abatement of pollution, conservation of natural resources:-

1. Utilization of fly ash:

Fly ash generated from both units stored in silos from where it has been transported in closed container/Ash Bulker to utilised in cement manufacturing a tie up made with Ambuja cement and some others fly ash Bricks Manufacturing units. It leads to reducing the raising of limestone from mines and fossil fuel consumption and ultimately resulting less generation of environmental pollutants. Substantial quantity of electrical and thermal energy has also been saved.

2. Use of STP treated water for the plantation purpose:

We have latest and advance technology based Sewage Treatment Plant and adopted **Zero Liquid Discharge (ZLD)**. The STP comprises of:

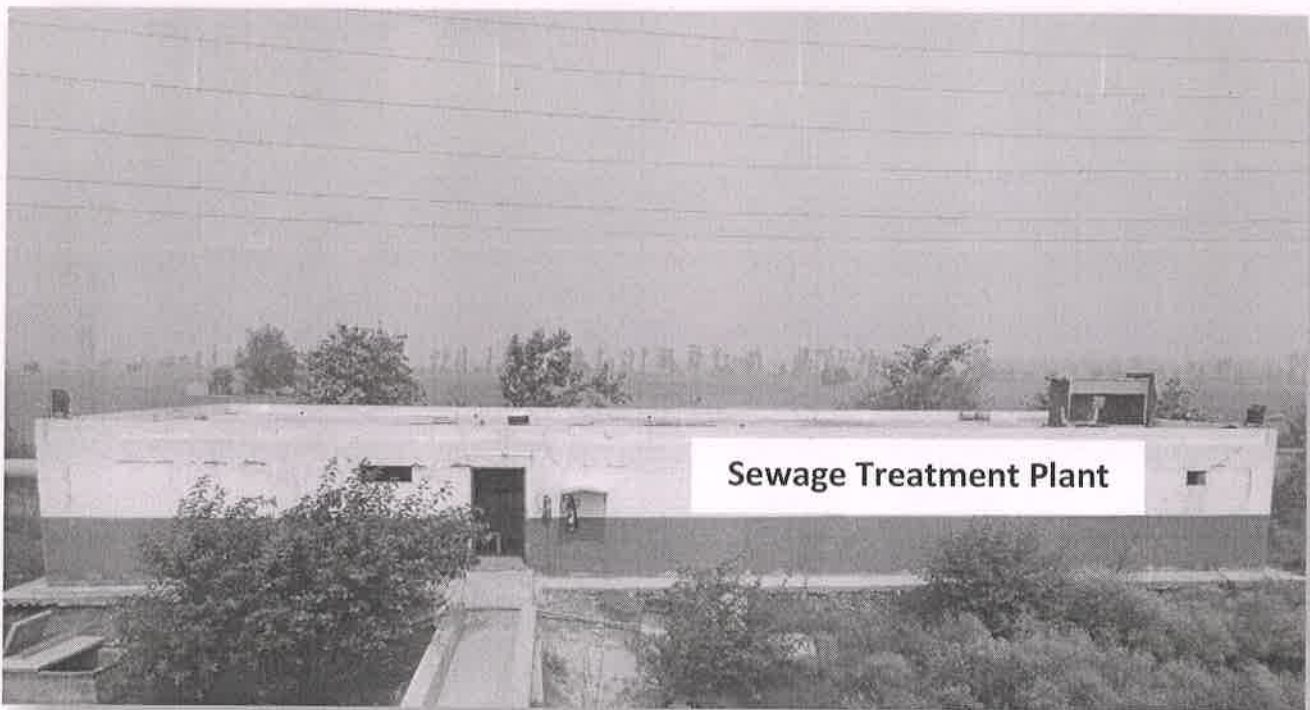
1. Primary collection tank
2. Aeration Tanks
3. Settling tank
4. Chlorine Contact Tank
5. Pressure Sand Filter and
6. Activated Carbon Filter
7. Treated water holding tank
8. UV system

The sewage collected from the different part of colony is being collected in raw sewage tank for homogenization of raw sewage water. Then this homogenized sewage water

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)

comes to Aeration tank for sufficient aeration of sewage and then conveyed to settling tank where the suspended particle is being settled down through natural gravity. After this clarified water collected in intermediate holding tank and sludge settled at the bottom of clarifier is transported to sludge drying beds. Now the water from the intermediate tank is passed through chlorine contact tank and then pressure sand filter and then activated carbon filter ultimately collected in the treated water holding tank and bring down the treated water quality within permissible limit. The treated water is being reused in horticulture, green belt development & STP sludge is being used as manure for Green Belt Development.



3. Use of ETP treated water for dust suppression and ash disposal

The Effluent treatment plant has installed to treat the effluent generated from 2 X 270 MW coal base Thermal Power Plant of M/s. GVK Power (Goindwal Sahib) Ltd. at Goindwal Sahib Punjab and adopted **Zero Liquid Discharge (ZLD)**. Treated water will be reused for dust suppression and Ash handling System, thus reducing the requirement of fresh water.

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)





Effluent Treatment Plant

4. **Ash water recovery system** has installed for Ash handling system reducing the requirement of fresh water for ash disposal.
5. Implementation of Rainwater harvesting system is under progress.

Total cost towards the installation of ETP & STP is approx. Rs. 19.00 Crores.

The treated effluent is being recycled resulting into conservation of Natural Resources (Fresh Water).

6. Extensive plantation in and around the plant:

Tree plantation is an integral part to the environment management plan of the industry. The plantation drive is being carried out throughout the year. We have dedicated team of skilled horticultural worker for plantation work and arboriculture with special reference to high density plantation (HDP) and green belt development program at our plant under the supervision of experienced person (Horticulture Officer).

We have the green belt coverage area of more than 33% inside the plant and colony premises. The species planted/ to be planted being preferred for the plantation having following characteristics-

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)

- 1- Fast growing with thick canopy cover.
- 2- Adequate height with longer duration of foliage.
- 3- Perennial and evergreen.
4. Dust tolerance
5. Low water requirement

As 100% of green belt development work has been completed with different varieties of plants within and around the plant premises with maintaining of tree density not less than 2500 per hectare with survival rate not less than 80%.

We have planted some fruit bearing tree varieties like Mango (*Mangifera Indica*), Plum (*Prunus*), Pear (*Pyrus*), Peach (*Prunus Persica*) & Pomegranate (*Punica granatum*) etc.

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)



PHOTOGRAPHS OF EXISTING GREENBELT



East side of the plant



For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)



West side of the plant



North side of the plant



South side of the plant

For GVK Power (Goindwal Sahib) Ltd.


(Authorized Signatory)



SW side of the plant



SE side of the plant

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)



7. Scheduled maintenance and monitoring of Pollution Control Devices

Scheduled maintenance and monitoring of all Air Pollution Control Device's (APCD'S) like Bag Filters and ESP as well as water pollution control units are being regularly undertaken to ensure their efficient operations in order to keep emissions level within the prescribed limit.

8. Good House keeping

Following measures have been taken for good housekeeping in around the Plant:-

- All the raw materials are stored in yard in proper manner to avoid fugitive emission.
- The conveyor belts are fully covered.
- Fly ash is being stored in silos.
- Water sprinkling for dust suppression on the road and other dust generation points in the plant is being done.
- All the roads of colony have been concreted as well as plantation has been done by the road side.
- Only covered trucks/Bulker is allowed to carry fly ash.
- Development of extensive green belt in the plant.

For GVK Power (Goindwal Sahib) Ltd.

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ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION

Additional measures being taken for prevention of Pollution are as under:

- I. 100% of green belt development work has been completed with different varieties of plants within and around the plant premises with maintaining of tree density not less than 2500 per hectare with survival rate not less than 80% as prescribed in Environmental Clearance granted by MoEF, New Delhi
- II. Scheduled maintenance and monitoring of all Air Pollution Control Device's (APCD'S) as well as Water Pollution Control Units are being regularly undertaken to ensure their efficient operations in order to keep emissions level within the prescribed limit.
- III. Regular sprinkling and spraying of water is being done through dedicated water tankers for control of any type of fugitive dust arises from roads. Repairing of internal road inside the plant to reduce fugitive dust emission.
- IV. The STP & ETP treated water is being reused in horticulture, green belt development and dust suppression & ash disposal system respectively and STP sludge is being used as manure for Green Belt Development.
- V. Good housekeeping practices are being followed to avoid dust deposition on roads
- VI. As awareness program, slogans on Pollution control, environmental protection, tree plantation and energy conservation to be displayed at the prominent location in green background and white printing.
- VII. Awareness programs like plantation activities, Slogan competition, Drawing /Painting completion, Power Point Presentation was organized for children as well as Employees for awareness on environment protection/ Natural resources conservation at our residential Colony on **5th June (World Environment Day)**. An report on Celebration of World Environment Day 5th June, 2018 enclosed.
Emphasis is given for devising concrete; action-oriented activities that serve as worthwhile solutions to the issue/ problem related to the environment. The awareness was organized for employees/families

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)

VIII. Mass plantation drive was carried out to save the environment and ecological balance has created an ECO-Club which carries out tree plantation every year except green belt development. With an impetus to carry forward its services for the betterment of the society, GVK celebrated WORLD ENVIRONMENT DAY, 5TH JUNE , 2018 as well as "THE FESTIVAL OF TREES" VAN MAHOTSAV WEEK from 07.07.2018 to 13.07.2018 with organizing Tree Plantation Drive with 3000 samplings with multiple varieties of Reberia arjuna (Arjun), Cassia fistula (Amaltash), Dalbergia sisso (Sisson) & Pingomia Pinnata (Sukh Chain) where the employees, families, kids, childrens and contract work man planted trees to keep the environment clean and maintain the life-support systems of the planet Earth. This event witnessed an enthusiastic response from the GVK family & contract work man. Moreover, fruit bearing plants with variety of Magnifera Indica (Mango) were also planted in GVK Township to decorate it as well as to maintain the flora & fauna in view of ecological balance. As responsible citizens we owe a duty towards Mother Nature. It is commendable to mark that GVK has not just set a benchmark in their business but has taken enormous steps towards social services.

A full report hard copy on each programme with photographs is enclosed.

For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)

**BEAT
PLASTIC
POLLUTION**



**WORLD
ENVIRONMENT
DAY**



**INDIA
2018**

**UN
environment**

GVK

**GVK POWER (GOINDWAL SAHIB) LIMITED.,
GOINDWAL SAHIB, TARN TARAN, PUNJAB**

Beat Plastic Pollution

If you can't reuse it, refuse it



**करेंगे संग
प्लास्टिक
प्रदूषण से जंग**



Tree Planting Campaign at GVKPGSL

GVK



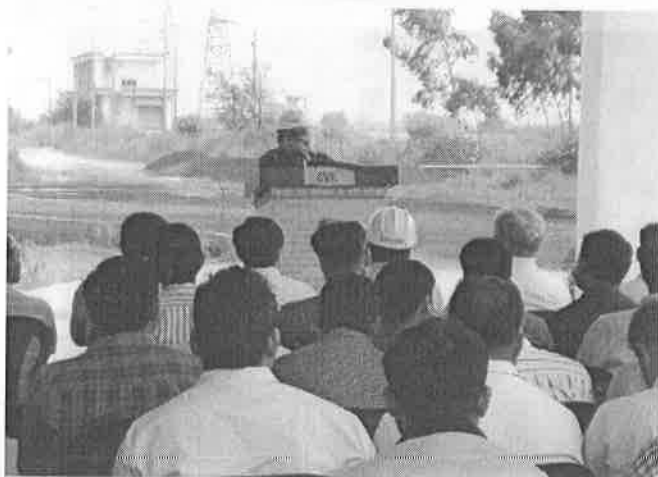
*Lets Environment Pledge
together for planting tree*



XIVO

Tree Planting Campaign at GVKPGSL Speech by GVK Executives

GVK





Tree Planting Campaign at GVKPGSI



Planting a
tree will give
you a lot free



GVK

Tree Planting Campaign at GVKPGSL

GVK



GVK

Tree Planting Campaign at GVKPGSL

GVK



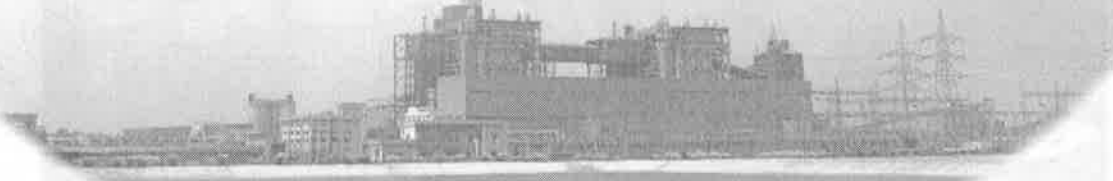
GVK

GVK POWER (GOINDWAL SAHIB) LIMITED, GOINDWAL SAHIB

पर्यावरण के प्रति समर्पण और भावनाओं की अभिव्यक्ति

विश्व
पर्यावरण
दिवस
5 जून

Drawing Competition
among
GVK Employee's Children



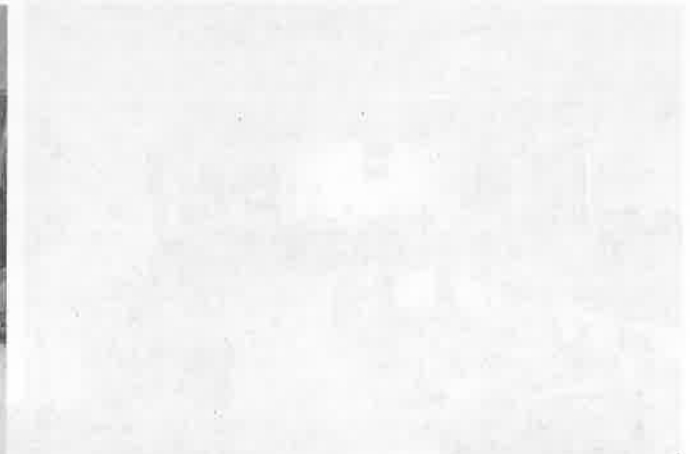
Conducted Environment awareness programme through Drawing Competition among GVK Employee's children at GVKPGSL



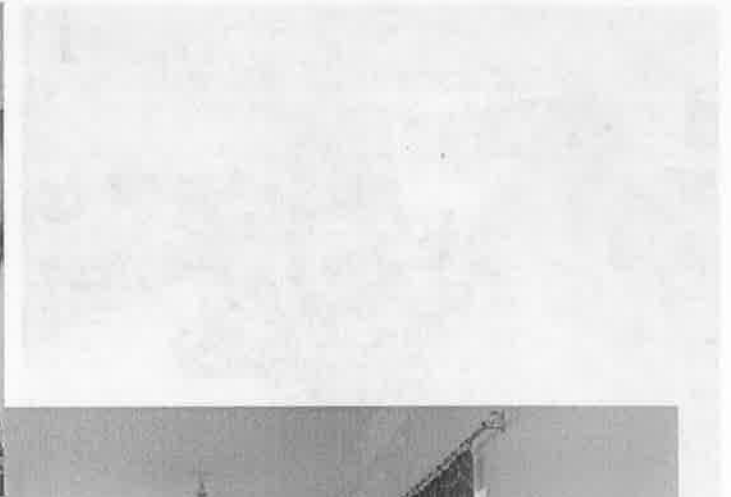
Inaugurated By Chief Guest, Smt. Sheema Shukla



**Conducted Environment awareness programme through
Drawing Competition among GVK Employee's children at GVKPGSL**



**Conducted Environment awareness programme through
Drawing Competition among GVK Employee's children at GVKPGSL**



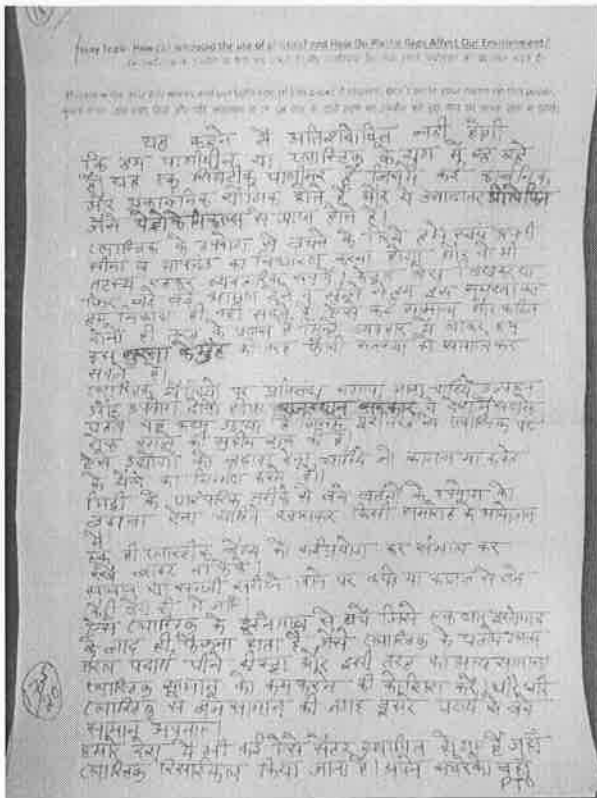
**Conducted Environment awareness programme through
Drawing Competition among GVK Employee's children at GVKPGSL**



**Conducted Environment awareness programme through
Drawing Competition among GVK Employee's children at GVKPGSL**



Conducted Environment awareness programme through Essay Competition among GVK Employee's Families at GVKPGSL



**Smt. Vijeta Shukla W/o- Mr. Ashish Shukla,
Secured 1st Position**

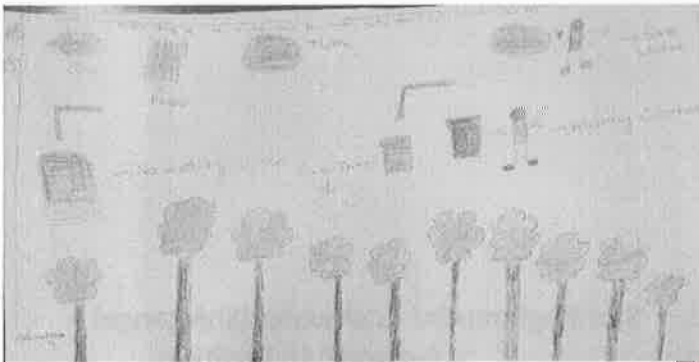
Conducted Environment awareness programme through
Slogan Writing Competition among Contract Workmen at
GVKPGSL

Topic- Save Environment



Shri Raghuendra Kushwaha (Shivganga)
Secured 1st Position

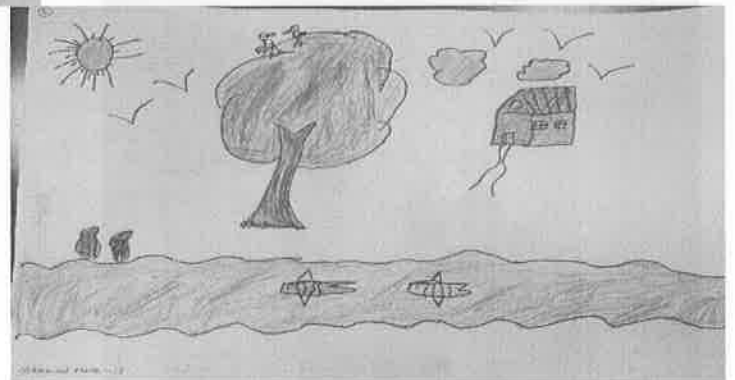
**Conducted Environment awareness programme through
Drawing competition among GVK Employee's Children at
GVKPGSL**



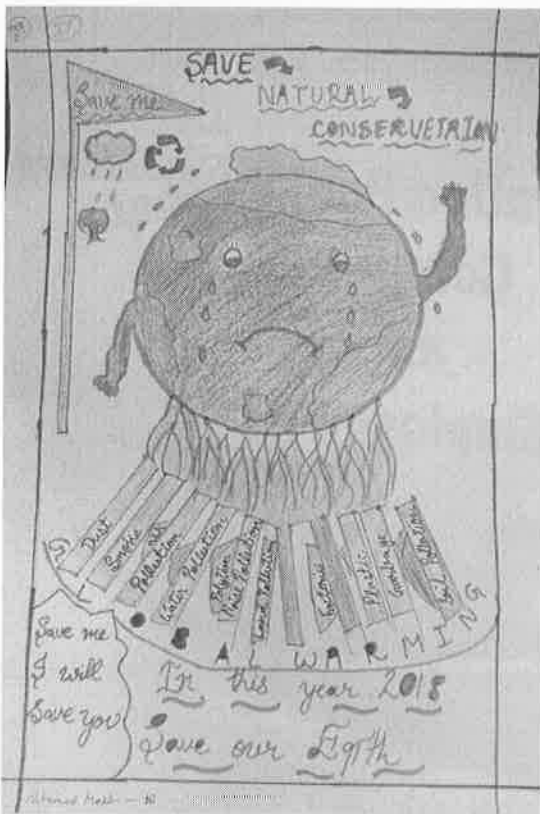
Topic- Water is life

**Aditya D/o Awdhesh Tiwari (1st Prize winner)
Class- 2nd to 4th**

Topic- Birds Sitting on the tree
Saanvi D/o Sudhir Gayakwad (1st Prize winner)
(Class- Nursery to 1st)



Conducted Environment awareness programme through Drawing competition among GVK Employee's Children at GVKPGSL



Topic- Save Environment

**Arya Shukla D/o Ashish Shukla (1st Prize winner)
Class- 5th to 8th**

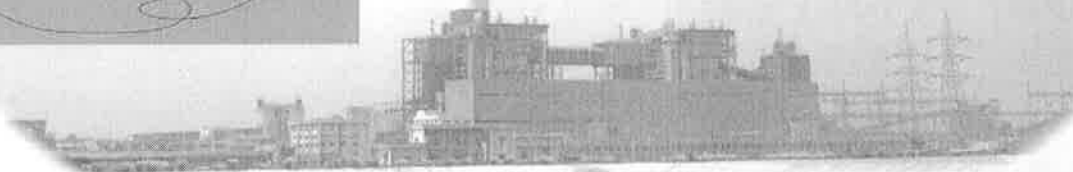


GVK POWER (GOINDWAL SAHIB) LIMITED, GOINDWAL SAHIB

World Environment Day , 5th June 2018



**Recitation/Poem/Speech
Competition
among
GVK Employee's Children**



SVD

GVK

**Conducted Environment awareness programme through
Recitation/Poem/Speech among GVK Employee's Children at
GVKPGSL**



Welcome to judges by Participants

**Conducted Environment awareness programme through
Recitation/Poem/Speech among GVK Employee's Children at GVKPGSL**



Welcome Speech by HOD - HSE



**Conducted Environment awareness programme through
Recitation/Poem/Speech among GVK Employee's Children at GVKPGSL**





**Conducted Environment awareness programme through
Recitation/Poem/Speech among GVK Employee's Children at GVKPGSL**





**Conducted Environment awareness programme through
Recitation/Poem/Speech among GVK Employee's Children at GVKPGSL**





**Conducted Environment awareness programme through
Recitation/Poem/Speech among GVK Employee's Children at GVKPGSL**

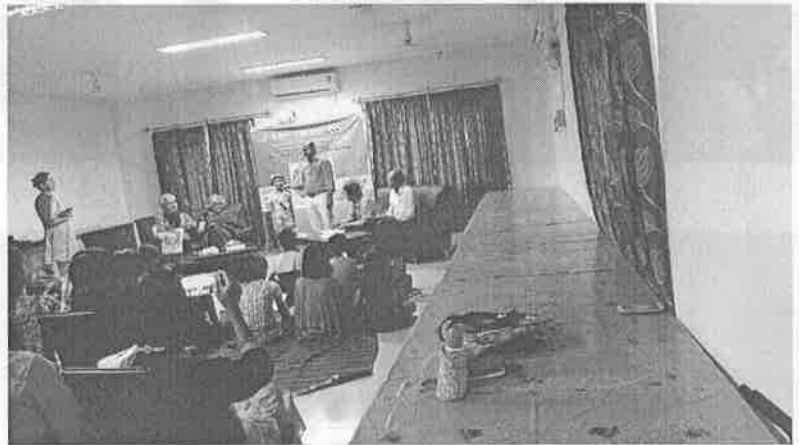


**Conducted Environment awareness programme through
Recitation/Poem/Speech among GVK Employee's Children at GVKPGSL**





**Conducted Environment awareness programme through
Recitation/Poem/Speech among GVK Employee's Children at GVKPGSL**



**Conducted Environment awareness programme through
Recitation/Poem/Speech among GVK Employee's Children at
GVKPGSL**



Speech by special guest

**Conducted Environment awareness programme through
On Spot Quiz among GVK Employees/ Families/Children and recognized by GVK
Executives GVKPGSL**





**Conducted Environment awareness programme through
On Spot Quiz among GVK Employees/ Families/Children and recognized by GVK
Executives GVKPGSL**





**Conducted Environment awareness programme through
On Spot Quiz among GVK Employees/ Families/Children and recognized by GVK
Executives GVKPGSL**



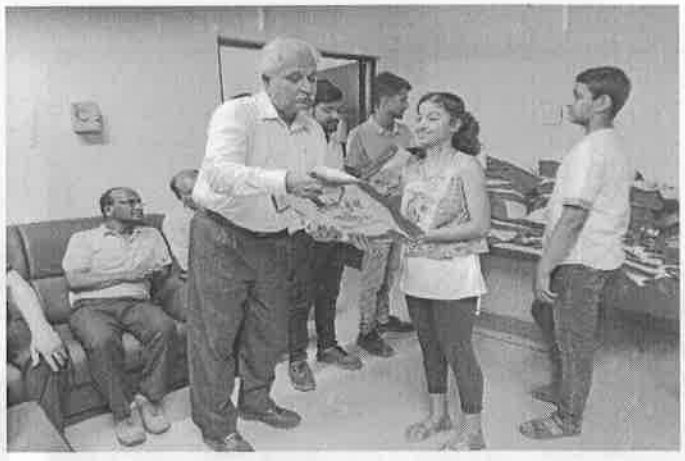
Prize distributions by Sr. Executives
to the Drawing/Recitation/Essay writing Competition Winner

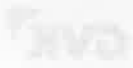


GVK

GVK

**Prize distributions by Sr. Executives
to the Drawing/Recitation/Essay writing Competition Winner**





Prize distributions by Sr. Executives
to the Drawing/Recitation/Essay writing Competition Winner



Prize distributions by Sr. Executives
to the Drawing/Recitation/Essay writing Competition Winner



50

GVK

Prize distributions by Sr. Executives
to the Drawing/Recitation/Essay writing Competition Winner



500

GVK

Prize distributions by Sr. Executives
to the Contracts Workmen for slogan writing Competition Winner





GVK
Sahel, Dear Kham

**Prize distributions by Sr. Executives
to the devotee workmen**



Consolation Prize distributions by Smt. Sheema Shukla, President, Saheli Beas Kiran Club at GVKPGSL



Consolation Prize distributions by Smt. Sheema Shukla, President, Saheli Beas Kiran Club at GVKPGSL

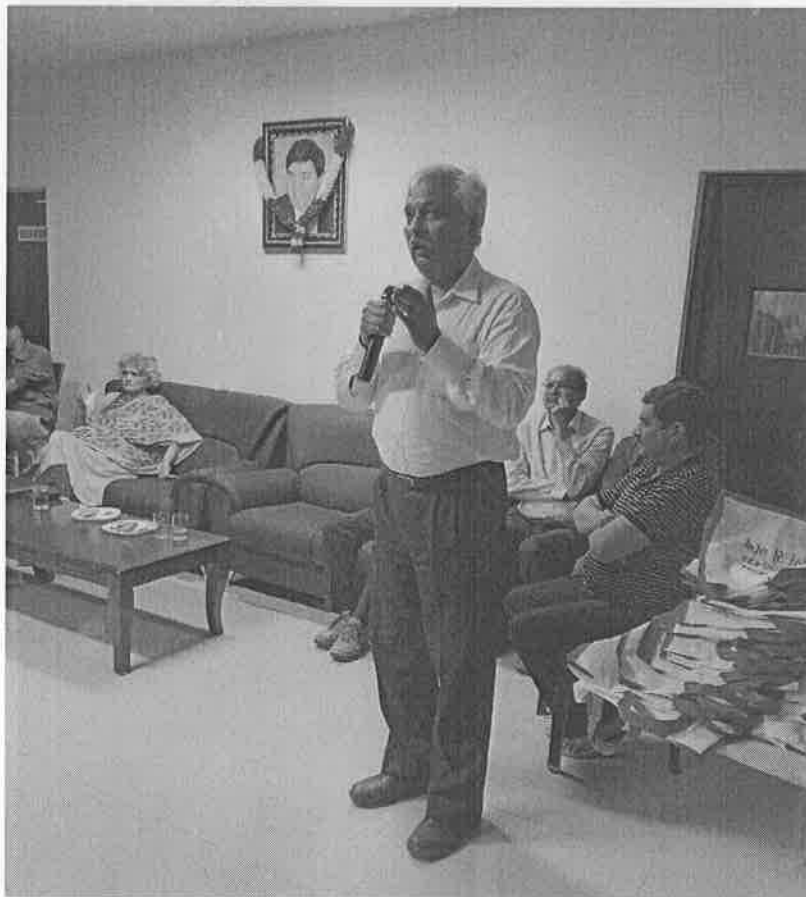


Consolation Prize distributions by Sr. Executives



Concluding speech by Chief Guest
Shri Vikas Chandra Shukla – Plant Head

GVK



500

Vote of thanks by Shri R.N. Mishra HOD - HSE

GVK



GVK



GVK POWER (GOINDWAL SAHIB) LIMITED., GVK
2X270 MW THERMAL POWER PROJECT, GOINDWALSAHIB, TARN TARAN, PUNJAB

वन
महोत्सव
सप्ताह
Van Mahotsav Week

“EVERY ELEMENT IN THE
ENVIRONMENT IS BALANCED
AND MAINTAINING THIS
BALANCE IS OUR
RESPONSIBILITY,

THEME

पर्यावरण में हर तत्व
संतुलित है और इस
संतुलन को बनाए रखना
हमारी ज़िम्मेदारी है”

Dt. 07.07.2018 TO 13.07.2018

Tree Planting Drive at GVKPGSL
By GVK Employees



Tree Planting Drive at GVKPGSL
By GVK Employees



SVD

Tree Planting Drive at GVKPGSL

GVK

By GVK Employees





Tree Planting Drive at GVKPGSL



By GVK Employees





Tree Planting Drive at GVKPGSL



By GVK Employees



Tree Planting Drive at GVKPGSL



By GVK employees





Tree Planting Drive at GVKPGSL



By GVK employees



Tree Planting Drive at GVKPGSL



By GVK employees



Tree Planting Drive at GVKPGSL
By Security & Fire Team

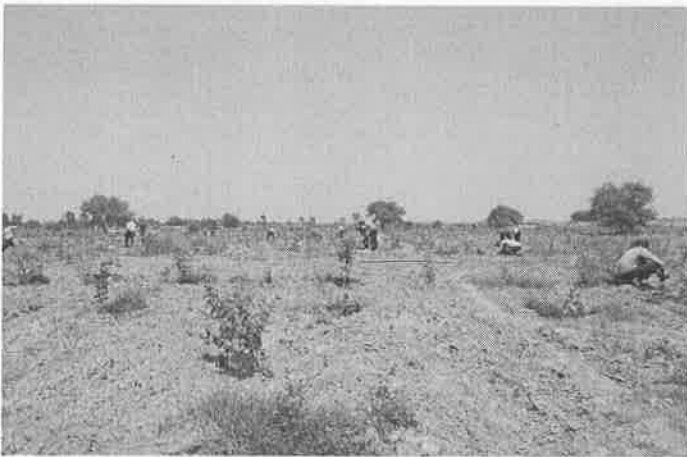




Tree Planting Drive at GVKPGSL



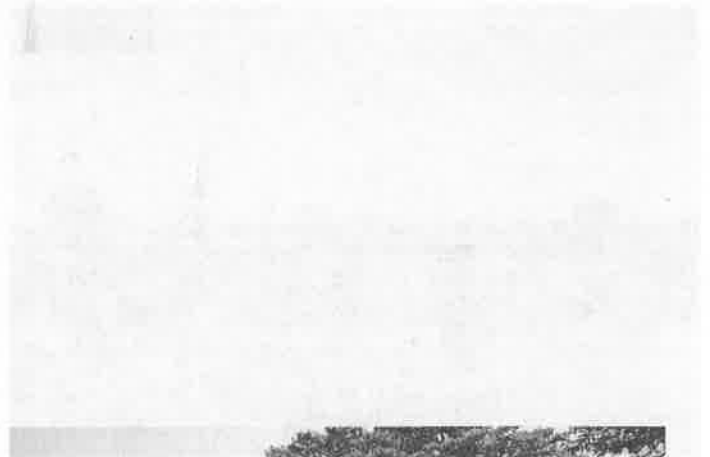
By Security & Fire Team



Tree Planting Drive at GVKPGSL



By Security & Fire Team





Tree Planting Drive at GVKPGSL



By GVK employees/families/children



Tree Planting Drive at GVKPGSL
By GVK employees/families/children



Tree Planting Drive at GVKPGSL
By GVK employees/families/children



GVK

Tree Planting Drive at GVKPGSL

GVK

By GVK employees/families/children



Tree Planting Drive at GVKPGSL
By GVK employees/families/children



Concluding function of VAN MAHOTSAV at GVKPGSL



By GVK employees/families/children



Guests on the Dais

Concluding function of VAN MAHOTSAV at GVKPGSL **GVK**



Concluding function of VAN MAHOTSAV at GVKPGSL **GVK**



Children performing Poem/ Speech in the event of VAN MAHOTSAV
at GVKPGSL





On Spot Quiz Competition among audience and recognition by GVK Officers
VAN MAHOTSAV at GVKPGSL



On Spot Quiz Competition among audience and recognition by GVK Officers
VAN MAHOTSAV at GVKPGSL



On Spot Quiz Competition among audience and recognition by GVK Officers
VAN MAHOTSAV at GVKPGSL



Skit Program Performed by Children

GVK



Skit Program Performed by Children

GVK



Group Song performed by Saheli Beas kiran club
VANMAHOTSAV at GVKPGSL

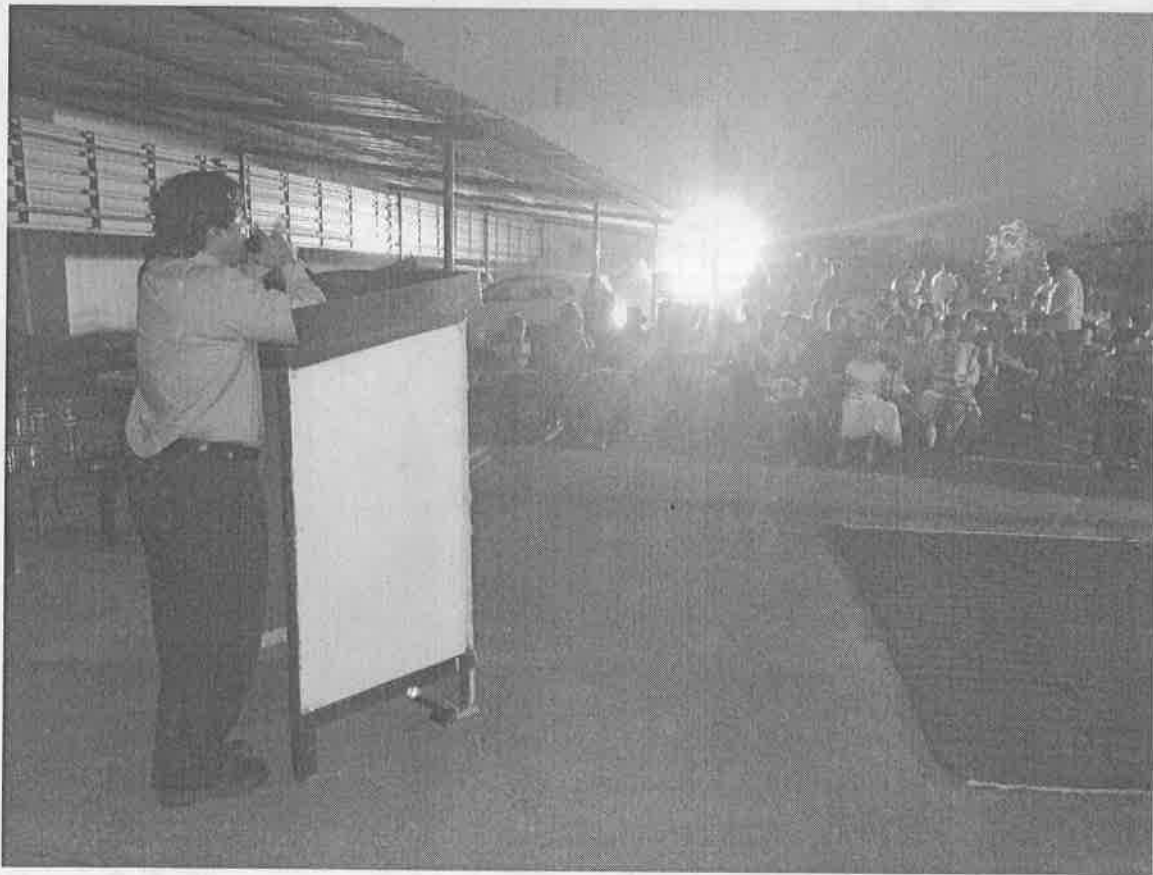


Prize Distribution to devotee workmen by GVK Officers
VAN MAHOTSAV at GVKPGSL



Concluding Speech by Chief Guest
Shri Bivash Chandra Ghosh - VP (Operation)

GVK



Vote of Thanks by Shri Kamal Mehta - DGM (HR & Admin.)



GVK

GVK



GVK

GVK



Thank you