

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 2020

SUBMITTED

TO

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

GVK Power (Goindwal Sahib) Ltd.

Ref No: GVKPGSL/PPCB/2020**Date: 08.05.2020**

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

Sub: Environmental Statement Report (FORM-V) for FY 2019-20 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 2019-20 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

Vikas Chandra Shukla
Plant Head- (O&M)



Encl: Environmental Statement Report (2019-20)

FORM – V
(See rule 14)

Environmental Statement for the Financial Year ending the 31st March 2020

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	7 th September, 2019

PART – B

Water & Raw Material Consumption

i. Water Consumption, m³/day:

Process	-	924
Cooling	-	21456
Domestic	-	81.54



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 (2019-20)	During the Current Financial Year (2020-21)
Electricity	0.000113984 m3/KWH	NIL

Remarks: Remarks: Plant has been operational only for 162 days in FY '19-'20.

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 (2019-20)	Consumption per unit	During the Current Financial Year (2020-21)	Consumption per unit
Coal (MT)	Electricity	902264 MT	0.687 KG/KWH	Plant has been shut down since 14.01.2020.	
LDO (KL)	Electricity	674.369 KL	0.513 ml/KWH		
HFO (KL)	Electricity	453.780 KL	0.345 ml/KWH		
Generation units		1312750 MWH			

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>ETP & STP test report is enclosed as Annexure-I (ETP & 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		



For GVK Power (Goindwal Sahib) Ltd.

(Handwritten Signature)

(Authorized Signatory)

	<p>(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.</p> <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	7.586KL spent oil	NIL
(b) From Pollution Control Facilities.		

PART - E

Solid Wastes:

Solid Waste	Total Quantity (MT/ANNUM)	
	During the Previous Financial Year (2019-20)	During the Current Financial Year (2020-21)
(a) From Process	61121 MT (Bottom ash)	NIL
(b) From Pollution Control facilities	244483 MT (Fly ash)	NIL



For GVK Power (Goindwal Sahib) Ltd.

(Handwritten Signature)

(Authorized Signatory)

(c)	1. Qty. recycled or reused within the unit.	Nil	Nil
	2. Sold	Nil	Nil
	3. Disposed/Utilized (Ash)	243428 MT (Fly ash utilized in Cement/Bricks manufacturing units)	NIL (Fly ash utilized in Cement/Bricks manufacturing units)

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/renew/TRT/2019/8973004, Dated 21-02-2019 with validity period of five years till 30-09-2023.

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.



For GVK Power (Goindwal Sahib) Ltd.

reika P.

(Authorized Signatory)

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

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

Please refer to **Annexure-IV.**

PART – I

MISCELLANEOUS - 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.



For GVK Power (Goindwal Sahib) Ltd.

(Handwritten Signature)

(Authorized Signatory)

- 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.

PART - I

MISCELLANEOUS - All other matters for improving the Quality of the Environment.

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

The Company has installed APCD at ESP & ETP meters chimney to control the particulate matter and Water Pollution Control Unit at STP & TTP for the treatment of domestic sewage and effluent generated from the various units of industry. All these equipments conform to the emission limit within the standards laid down by the Metropolitan Pollution Control Board.

Environment Cell -

The Environment Cell is equipped with necessary and skilled person having the degree and experience along with the latest and advanced monitoring and analytical facilities.

Environment Management Program is prepared with the help of Environment Department along with their guidance for the monitoring of air, water and noise.

We have been working hard to improve the environment. The treatment and control will be carried out by skilled and trained person only. All the treatment equipments are working and water is recycled by the plant and is used for various purposes.



For GVK Power (Goindwal Sahib) Ltd.

Teika

(Authorized Signatory)

ANNEXURE-I

ETP & STP Test Report


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. :E01-1904290990
	NABL ULR No. :TC592619000007866P
	Sample Reg. Date :29-04-2019
	Report Date :13-05-2019
	Customer Ref. No.:-
	Letter Dated :-

Test Report as per IS: NA	With Amendment No.(s):
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PART A : PARTICULARS OF SAMPLE SUBMITTED

a)) Nature of Sample	ETP Inlet 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	4 Ltr
j) Batch Size/Location	NA
k) Mode of Packing	Packed in cans
l) Date of Receipt	29-04-2019
m) Date of Start	29-04-2019
n) Date of Completion	13-05-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on 25.04.2019
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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Saurabh Sharma
13-05-2019
Reviewer

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

13-05-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
(A Government Approved Test House)
66, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
Phone : (O) 0172-2561343, 2565825.
Visit us: www.itclabs.com E-mail : customersupport@itclabs.com

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, Tam Taran	Report No. :E01-1904290990
	NABL ULR No. :TC592619000007866P
	Sample Reg. Date :29-04-2019
	Report Date :13-05-2019
	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 Inlet Water		
2.	Organoleptic & Physical Parameter			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1		Light Greyish
b.	Odour	IS:3025(Part 5):1983(RA:2017)		Mild
3.	General Parameters			
a.	pH Value	IS:3025 (Part - 11):1983(RA:2017)		7.08
b.	Total Suspended Solids,(mg/l.)	IS:3025(Part 17)		152
c.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition		275
d.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)		94
e.	Oil & Grease(mg/l)	IS:3025(P-39)		11.2
f.	Lead(as Pb)(mg/l)	IS:3025(P-66)		BLQ(LOQ:0.01)
g.	Copper(As Cu)(mg/l)	IS:3025(P-66)		BLQ(LOQ:0.01)
h.	Nickel(as Ni),mg/l	IS:3025(P-66)		BLQ(LOQ:0.01)
i.	Zinc(As Zn)(mg/l)	IS:3025(P-66)		0.011
j.	Total Residual Chlorine(mg/l)	IS:3025(P-26)		BLQ(LOQ:0.1)
k.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines		5.9
l.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines		17.8
m.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition		Nil
n.	Arsenic(as As)(mg/l)	IS:3025(P-66)		BLQ(LOQ:0.01)
o.	Mercury(As Hg)(mg/l)	IS:3025(P-66)		BLQ(LOQ:0.01)

Saurabh Sharma
13-05-2019
Reviewer

For consent Purpose of the Board

13-05-2019
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. :E01-1904290990 NABL ULR No. :TC592619000007866P Sample Reg. Date :29-04-2019 Report Date :13-05-2019 Customer Ref. No.:- Letter Dated :-	
p.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
q.	Chromium (as Cr ⁰⁺), (mg/L) *	IS:3025(Part-52)	BLQ(LOQ:0.01)
r.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
s.	Selenium(as Se)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
t.	Cyanide (as CN), (mg/L)	IS:3025(P-27)	Absent
u.	Fluoride(as F), (mg/L)	IS:3025(P-60)	0.2
v.	Dissolved Phosphate(mg/l)	APIIA-23rd Edition	1.56
w.	Sulphide(as S)(mg/l)	IS:3025(P-9)	2.4
x.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
y.	Iron(as Fe)(mg/l)	IS:3025(P-66)	0.029
z.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	2.9
aa.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	BLQ(LOQ:0.1)
ab.	Vanadium(As V)(mg/l) *	IS:3025(P-66)	BLQ(LOQ:0.01)


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

NOTE : NA- Not Applicable, BLQ :- Below Limit of Quantification, LOQ :- Limit of Quantification, Purpose - For Self Monitoring

PART D : REMARKS : N/A

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

This Analytical Report is not valid
For current Purpose of the Board


Saurabh Sharma
13-05-2019
Reviewer

13-05-2019
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. :E01-1904290991
	NABL ULR No. :TC592619000007867P
	Sample Reg. Date :29-04-2019
	Report Date :13-05-2019
	Customer Ref. No.:-
	Letter Dated :-

Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
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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	29-04-2019
m)	Date of Start	29-04-2019
n)	Date of Completion	13-05-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 25.04.2019
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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Saurabh
Saurabh Sharma
 13-05-2019
 Reviewer

This Analytical Report is not Valid For consent Purpose of the Board
 13-05-2019
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. :E01-1904290991
	NABL ULR No. :TC592619000007867P
	Sample Reg. Date :29-04-2019
	Report Date :13-05-2019
	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	7.58
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	16
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	14
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	BLQ(LOQ: 0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	0.014
l.	Total Residual Chlorine(ug/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	1.8
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	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
13-05-2019
Reviewer

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

13-05-2019
Prem Kumar
[Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015) CERTIFIED LABORATORY
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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. :E01-1904290991 NABL ULR No. :TC592619000007867P Sample Reg. Date :29-04-2019 Report Date :13-05-2019 Customer Ref. No.:- Letter Dated :-		
s.	Chromium (as Cr ⁶⁺),(mg/L) *	IS:3025(Part-52)	Max. 0.1	BLQ(LOQ:0.01)
l.	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	0.16
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	0.052
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 After 96 hrs in 100% Effluent Water

*' 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*****

Saujath Sharma
13-05-2019
Reviewer

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

13-05-2019
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 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadar Sahib, Tarn Taran	Report No. :E01-1904290988
	NABL ULR No. :TC592619000007864P
	Sample Reg. Date :29-04-2019
	Report Date :13-05-2019
	Customer Ref. No.:-
	Letter Dated :-

Test Report as per IS:NA	With Amendment No.(s):
---------------------------------	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a))	Nature of Sample	STP Inlet 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	4 Ltr
j)	Batch Size/Location	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	29-04-2019
m)	Date of Start	29-04-2019
n)	Date of Completion	13-05-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by by lab rep. on 25.04.2019
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
Saurabh Sharma
13-05-2019
Reviewer

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

13-05-2019
Prem Kumar
[Tech Manager]

Disclaimer:

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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. :E01-1904290988
	NABL ULR No. :TC592619000007864P
	Sample Reg. Date :29-04-2019
	Report Date :13-05-2019
	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 Inlet Water		
2.	Organoleptic & Physical Parameter			
a.	Colour	IS:3025(Part4):1983(RA:2017)amd. no1		Greyish
b.	Odour	IS:3025(Part 5):1983(RA:2017)		Musty
3.	General Parameters			
a.	pH Value	IS:3025 (Part - 11):1983(RA:2017)		7.11
b.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)		220
c.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition		485
d.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)		168
e.	Oil & Grease(mg/l)	IS:3025(P-39)		16.2
f.	Lead(as Pb)(mg/l)	IS:3025(P-66)		BLQ(LOQ:0.01)
g.	Copper(As Cu)(mg/l)	IS:3025(P-66)		BLQ(LOQ:0.01)
h.	Nickel(as Ni),mg/l	IS:3025(P-66)		BLQ(LOQ:0.01)
i.	Zinc(As Zn)(mg/l)	IS:3025(P-66)		0.03
j.	Total Residual Chlorine(mg/l)	IS:3025(P-26)		BLQ(LOQ:0.1)
k.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines		14.6
l.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines		34.6
m.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition		Nil
n.	Arsenic(as As)(mg/l)	IS:3025(P-66)		BLQ(LOQ:0.01)
o.	Mercury(As Hg)(mg/l)	IS:3025(P-66)		BLQ(LOQ:0.01)

Saurabh Sharma
13-05-2019
Reviewer

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

13-05-2019
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 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1904290988
	NABL ULR No. :TC592619000007864P
	Sample Reg. Date :29-04-2019
	Report Date :13-05-2019
	Customer Ref. No.:-
	Letter Dated :-

p.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
q.	Chromium (as Cr ⁶⁺),(mg/L) *	IS:3025(Part-52)	BLQ(LOQ:0.01)
r.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	0.047
s.	Selenium(as Se)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
t.	Cyanide (as CN),(mg/L)	IS:3025(P-27)	Absent
u.	Fluoride(as F),(mg/L)	IS:3025(P-60)	0.6
v.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	2.68
w.	Sulphide(as S)(mg/l)	IS:3025(P-9)	3.9
x.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
y.	Iron(as Fe)(mg/l)	IS:3025(P-66)	0.04
z.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	3.3
aa.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	BLQ(LOQ:0.1)
ab.	Vanadium(As V)(mg/l) *	IS:3025(P-66)	0.011

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

NOTE : NA- Not Applicable, BLQ :- Below Limit of Quantification, LOQ :- Limit of Quantification, 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
13-05-2019
Reviewer

13-05-2019
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 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1904290989
	NABL ULR No. :TC592619000007865P
	Sample Reg. Date :29-04-2019
	Report Date :13-05-2019
	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	29-04-2019
m)	Date of Start	29-04-2019
n)	Date of Completion	13-05-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 25.04.2019
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
Saurabh Sharma
13-05-2019
Reviewer

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

13-05-2019
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. :E01-1904290989
	NABL ULR No. :TC592619000007865P
	Sample Reg. Date :29-04-2019
	Report Date :13-05-2019
	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	7.25
d.	Total Suspended Solids,(mg/L)	IS:3025(Part 17)	Max. 100	40
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	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	3.2
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	7.8
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	0.012
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)

Saurabh Sharma
13-05-2019
Reviewer

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

13-05-2019
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,
Visit us: www.itclabs.com E-mail : customer.support@itclabs.com

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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. :E01-1904290989 NABL ULR No. :TC592619000007865P Sample Reg. Date :29-04-2019 Report Date :13-05-2019 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	0.013
u.	Seelenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05	0.022
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	0.56
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	0.16
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	0.29
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 After 96 hrs in 100% Effluent Water

* 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/PCL.S/2010,G.S.R. 1265(E), Dated 13.10.2017, Purpose - For self monitoring

PART D : REMARKS :N/A

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

Saurabh Sharma
13-05-2019
Reviewer

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

13-05-2019
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	Sample Reg. No. :E01-1907270914
	Sample Reg. Date :27-07-2019
	Report Date :01-08-2019
	Report No. :ICE-1908010068
	NABL ULR No. :TC592619000011456P
	Customer Ref. No.:- Letter Dated :-


Test Report as per IS:NA	With Amendment No.(s):
---------------------------------	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample #	ETP Inlet 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 #	5 Ltr
j)	Batch Size/Location #	NA
k)	Mode of Packing	Packed in cans
l)	Date of Receipt	27-07-2019
m)	Date of Start	27-07-2019
n)	Date of Completion	01-08-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 24.07.2019
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
 01-08-2019
 Reviewer

This Analysis Report is not valid
 For consent Purpose of the Board
 01-08-2019
Prem Kumar
 [Authorized Signatory]

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.

Disclaimer:

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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	Sample Reg. No. :E01-1907270914
	Sample Reg. Date :27-07-2019
	Report Date :01-08-2019
	Report No. :ICE-1908010068
	NABL ULR No. :TC592619000011456P
	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

Description

Description	ETP Inlet Water
-------------	-----------------

S.No.	Test Parameter	Method	Result
Test Details :			
1.	Organoleptic & Physical Parameter		
a.	Colour	IS:3025(Part4):1983(RA:2017)amd no1	Greyish
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Musty
2.	General Parameters		
a.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.80
b.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	161
c.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	250
d.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	88
e.	Oil & Grease(mg/l)	IS:3025(P-39)	11.4
f.	Lead(as Pb)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
g.	Copper(As Cu)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
h.	Nickel(as Ni),mg/l	IS:3025(P-66)	BLQ(LOQ : 0.01)
i.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
j.	Total Residual Chlorine(mg/l)	IS:3025(Part 26):1986(RA:2014)amd no 1	BLQ (LOQ:0.1)
k.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	7.8
l.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	27
m.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition	Nil
n.	Arsenic(as As)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)

Saurabh
Saurabh Sharma
 01-08-2019
 Reviewer

This Analysis Report is not Valid
 For Consent Purpose of the Board
 01-08-2019
Prem Kumar
 [Authorized Signatory]

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.

Disclaimer:

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- Total Liability of this Laboratory is limited to the invoiced amount.
- These certificates in full or parts shall not be used for promotional or publicity purpose.
- If results in our subsequent analysis are found to be incorrect, we shall not be held responsible for any consequential loss or damage.

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	Sample Reg. No. :E01-1907270914
	Sample Reg. Date :27-07-2019
	Report Date :01-08-2019
	Report No. :ICE-1908010068
	NABL ULR No. :TC592619000011456P
	Customer Ref. No.:- Letter Dated :-


o.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
p.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
q.	Chromium (as Cr ^{DT}),(mg/l) *	IS:3025(Part-52)	BLQ (LOQ:0.01)
r.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
s.	Selenium(as Se)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
t.	Cyanide (as CN),(mg/l)	IS:3025(P-27)	Absent
u.	Fluoride(as F),(mg/L)	IS:3025(P-60)	BLQ (LOQ:0.1)
v.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	2.8
w.	Sulphide(as S)(mg/l)	IS:3025(P-9)	BLQ (LOQ:0.5)
x.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
y.	Iron(as Fe)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
z.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	2.1
aa.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	BLQ (LOQ:0.01)
ab.	Vanadium(As V)(mg/l) *	IS:3025(P-66)	BLQ(LOQ : 0.01)

*# represents categories/test parameters not covered under NABL | *** represents outsource sample | # represents Customer Defined Fields

NOTE : NA- Not Applicable, BLQ :- Below Limit of Quantification, LOQ :- Limit of Quantification,
Purpose- For Self Monitoring

PART D : REMARKS :N/A

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


Saurabh Sharma
01-08-2019
Reviewer

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

01-08-2019
Prem Kumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
(A Government Approved Test House)
Rd, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
Phone : (O) 0172-2561543, 2565825.
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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	Sample Reg. No. :E01-1907270915 Sample Reg. Date :27-07-2019 Report Date :02-08-2019 Report No. :ICE-1908020131 NABL ULR No. :TC592619000011504P Customer Ref. No. :- Letter Dated :-
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
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	27-07-2019
m)	Date of Start	27-07-2019
n)	Date of Completion	02-08-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 24.07.2019
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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 Saurabh Sharma
 02-08-2019
 Reviewer

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

02-08-2019
 Prem Kumar
 [Authorized Signatory]

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 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. No. :E01-1907270915
	Sample Reg. Date :27-07-2019
	Report Date :02-08-2019
	Report No. :ICE-1908020131
	NABL ULR No. :TC592619000011504P
	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

Description

Description ETP Outlet Water

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	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	Odourless
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	5.5-9	7.56
d.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	Max. 100	18
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	42
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	0.2
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	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(Part 26):1986(RA:2014)amd no 1	Max. 1.0	BLQ (LOQ:0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	1.4
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	2.6

Saurabh
Saurabh Sharma
02-08-2019
Reviewer

This Analysis Report is Not Valid
For consent Purpose of the Board
02-08-2019
Prem Kumar
Authorized Signatory

Disclaimer:

1. Sample is not owned 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 re-measured, the results shall be stated as per ISO 17025:2005 clause 7.6.2.

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	Sample Reg. No. :E01-1907270915 Sample Reg. Date :27-07-2019 Report Date :02-08-2019 Report No. :ICE-1908020131 NABL ULR No. :TC592619000011504P 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	0.12
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 hours

* represents categories/test parameters not covered under NABL | ** represents outsource sample | # represents Customer Defined Fields

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*******

Saurabh Sharma
02-08-2019
Reviewer

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

02-08-2019
Prem Kumar
[Authorized Signatory]

Disclaimer:

1. Sample (s) not drawn by us unless otherwise stated
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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 1 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. No. :E01-1907270916 Sample Reg. Date :27-07-2019 Report Date :01-08-2019 Report No. :ICE-1908010069 NABL ULR No. :TC592619000011457P Customer Ref. No. :- Letter Dated :-
---	--


Test Report as per IS:NA	With Amendment No.(s):
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PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample #	STP Inlet 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 #	5 Ltr
j) Batch Size/Location #	NA
k) Mode of Packing	Packed in cans
l) Date of Receipt	27-07-2019
m) Date of Start	27-07-2019
n) Date of Completion	01-08-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on 24.07.2019
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
 01-08-2019
 Reviewer

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

01-08-2019
 Prem Kumar
 [Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 CHSAS 18001:2007 Certified Laboratory)
 (A Government Approved Test House)
 86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
 Phone : (O) 0172-2561543, 2565825,
 Visit our website to lab news, E-mail : interstellartestingcentre@gmail.com

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	Sample Reg. No. :E01-1907270916
	Sample Reg. Date :27-07-2019
	Report Date :01-08-2019
	Report No. :ICE-1908010069
	NABL ULR No. :TC592619000011457P
	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

Description

Description STP Inlet Water

S.No.	Test Parameter	Method	Result
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Test Details :

1.	Organoleptic & Physical Parameter		
a.	Colour	IS:3025(Part4):1983(RA:2017)amd no I	yellowish
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Musty
2.	General Parameters		
a.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	7.10
b.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	250
c.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	428
d.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	150
e.	Oil & Grease(mg/l)	IS:3025(P-39)	12.8
f.	Lead(as Pb)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
g.	Copper(As Cu)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
h.	Nickel(as Ni),mg/l	IS:3025(P-66)	BLQ(LOQ : 0.01)
i.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
j.	Total Residual Chlorine(mg/l)	IS:3025(Part 26):1986(RA:2014)amd no I	BLQ (LOQ:0.1)
k.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	16
l.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	38
m.	Free Ammonia (as NH ₃)(mg/l)	APHA-23rd Edition	Nil
n.	Arsenic(as As)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)

Saurabh Sharma
01-08-2019
Reviewer

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

01-08-2019
Prem Kumar
[Authorized Signatory]

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.

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 3 of 3

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. No. :E01-1907270916
	Sample Reg. Date :27-07-2019
	Report Date :01-08-2019
	Report No. :ICE-1908010069
	NABL ULR No. :TC592619000011457P
	Customer Ref. No. :-
	Letter Dated :-


o.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
p.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
q.	Chromium (as Cr ⁶⁺),(mg/l) *	IS:3025(Part-52)	BLQ LOQ:0.01)
r.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
s.	Selenium(as Se)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
t.	Cyanide (as CN),(mg/l)	IS:3025(P-27)	Absent
u.	Fluoride(as F),(mg/L)	IS:3025(P-60)	BLQ (LOQ:)0.01)
v.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	4.1
w.	Sulphide(as S)(mg/l)	IS:3025(P-9)	BLQ (LOQ:0.5)
x.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	0.12
y.	Iron(as Fe)(mg/l)	IS:3025(P-66)	0.05
z.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	3.1
aa.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	BLQ (LOQ:0.01)
ab.	Vanadium(As V)(mg/l) *	IS:3025(P-66)	BLQ(LOQ : 0.01)

*# represents categories/test parameters not covered under NABL | **# represents outsource sample | ## represents Customer Defined Fields

NOTE : NA- Not Applicable, BLQ :- Below Limit of Quantification, LOQ :- Limit of Quantification,
Purpose- For Self Monitoring

PART D : REMARKS :N/A

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


Saurabh Sharma
01-08-2019
Reviewer

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

01-08-2019
Prem Kumar
[Authorized Signatory]

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,

Website : www.interstellartestingcentre.com

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 accompanied with proper information, the report will be issued on the basis of provided details only.


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	Sample Reg. No. :E01-1907270917
	Sample Reg. Date :27-07-2019
	Report Date :02-08-2019
	Report No. :ICE-1908020132
	NABL ULR No. :TC592619000011506P
	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	27-07-2019
m)	Date of Start	27-07-2019
n)	Date of Completion	02-08-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 24.07.2019
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
Saurabh Sharma
02-08-2019
Reviewer

This Analysis Report is not valid
For consent Purpose of the Board
02-08-2019
Prem Kumar
[Authorized Signatory]

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	Sample Reg. No. :E01-1907270917
	Sample Reg. Date :27-07-2019
	Report Date :02-08-2019
	Report No. :ICE-1908020132
	NABL ULR No. :TCS92619000011506P
	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

Description

Description STP Outlet Water

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

Test Details :

1.	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	7.61
d.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	Max. 100	42
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	40
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	10
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	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(Part 26):1986(RA:2014)amd no 1	Max. 1.0	BLQ (LOQ:0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	3.6
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	8.2

Saurabh Sharma
 02-08-2019
 Reviewer

This Analysis Report is not valid
 For consent Purpose of the Board.
 02-08-2019
 Prem Kumar
 [Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

Disclaimer:

ISO 9001:2015 & 14001:2015 QMS&S 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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3. Test certificates in full or parts shall not be used for promotional or publicity purpose.

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	Sample Reg. No. :E01-1907270917
	Sample Reg. Date :27-07-2019
	Report Date :02-08-2019
	Report No. :ICE-1908020132
	NABL ULR No. :TC592619000011506P
	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	0.26
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	90% survival of fishes were observed in 100% effluent water after 96 hours.

* represents categories/test parameters not covered under NABL | ** represents outsource sample | # represents Customer Defined Fields

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
Saurabh Sharma
02-08-2019
Reviewer

02-08-2019
Prem Kumar
[Authorized Signatory]

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

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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	Sample Reg. No. :E01-1910180531 Sample Reg. Date :18-10-2019 Report Date :08-11-2019 Report No. :ICE-1911080568 NABL ULR No. :TC592619000015354P Customer Ref. No.:- Letter Dated :-
---	---


Test Report as per IS:NA	With Amendment No.(s):
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PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample#	ETP Inlet 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#	5 Ltr
j) Batch Size/Location#	NA
k) Mode of Packing	Packed in cans
l) Date of Receipt	18-10-2019
m) Date of Start	18-10-2019
n) Date of Completion	08-11-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on 17.10.2019
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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Saurabh Sharma
08-11-2019
Reviewer


08-11-2019
PremKumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

ISO 9001:2015 & ISO 17025:2005 OHSAS 18001:2007 Certified Laboratory
(A Government Approved Test House)
86, Industrial Area, Phase-I, Panchkula-134100 (Haryana)
Phone : (T) 0172-2561543, 2565825.
Visit us at www.itc-labs.com

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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	Sample Reg. No. :E01-1910180531
	Sample Reg. Date :18-10-2019
	Report Date :08-11-2019
	Report No. :ICE-1911080568
	NABL ULR No. :TC592619000015354P
	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

Description

Description

ETP Inlet Water

S.No.	Test Parameter	Method	Result
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Test Details :

1.	Organoleptic & Physical Parameter		
a.	Colour	IS:3025(Part4):1983(RA:2017)am d. no I	Greyish
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Mild
2.	General Parameters		
a.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	7.74
b.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	184
c.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	257
d.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	89
e.	Oil & Grease(mg/l)	IS:3025(P-39)	10.8
f.	Lead(as Pb)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
g.	Copper(As Cu)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
h.	Nickel(as Ni),mg/l	IS:3025(P-66)	BLQ(LOQ:0.01)
i.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	0.02
j.	Total Residual Chlorine(mg/l)	IS:3025(Part 26):1986(RA:2014)am no 1	BLQ (LOQ: 0.1)
k.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	7.8
l.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	18.4
m.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition	Nil
n.	Arsenic(as As)(mg/l)	IS:3025(P-66)	0.16

Saurabh
Saurabh Sharma
08-11-2019
Reviewer

This Analysis Report is prepared
For consent Purposes of the Board
08-11-2019
PremKumar
(Authorized Signatory)

Interstellar Testing Centre Pvt. Ltd.

ISO 9001:2015 & ISO 14001:2015 Certified Laboratory

(A Government Approved Top House)

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

Phone : (0172-2561543, 2565825)

Website: www.itc-labs.com

Disclaimer:

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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	Sample Reg. No. :E01-1910180531
	Sample Reg. Date :18-10-2019
	Report Date :08-11-2019
	Report No. :ICE-1911080568
	NABL ULR No. :TC592619000015354P
	Customer Ref. No. :- Letter Dated :-

o.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
p.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
q.	Chromium (as Cr ⁶⁺),(mg/l) *	IS:3025(Part-52)	BLQ (LOQ: 0.01)
r.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
s.	Selenium(as Se)(mg/l)	IS:3025(P-66)	0.01
t.	Cyanide (as CN),(mg/l)	IS:3025(P-27)	Absent
u.	Fluoride(as F),(mg/L)	IS:3025(P-60)	0.8
v.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	2.1
w.	Sulphide(as S)(mg/l)	IS:3025(P-9)	4.2
x.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
y.	Iron(as Fe)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
z.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	1.7
aa.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	BLQ (LOQ: 0.01)
ab.	Vanadium(As V)(mg/l) *	IS:3025(P-66)	BLQ(LOQ:0.01)

* represents categories/test parameters not covered under NABL | *** represents outsource sample | # represents Customer Defined Fields

NOTE : NA- Not Applicable, BLQ :- Below Limit of Quantification, LOQ :- Limit of Quantification,
 Purpose - For Self Monitoring

PART D : REMARKS :N/A

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

Saurabh Sharma
08-11-2019
Reviewer

08-11-2019
PremKumar
[Authorized Signatory]

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	Sample Reg. No. :E01-1910180532
	Sample Reg. Date :18-10-2019
	Report Date :07-11-2019
	Report No. :ICE-1911070551
	NABL ULR No. :TC592619000015347P
	Customer Ref. No.:- Letter Dated :-

Test Report as per IS:EPA Act 1986/PC1.S/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	18-10-2019
m)	Date of Start	18-10-2019
n)	Date of Completion	07-11-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 17.10.2019
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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Saurabh
 Saurabh Sharma
 07-11-2019
 Reviewer

This Analysis Report is valid
 For corroboration Purpose of the test only

07-11-2019
 Prem Kumar
 [Authorized Signatory]

Disclaimer:

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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	Sample Reg. No. :E01-1910180532
	Sample Reg. Date :18-10-2019
	Report Date :07-11-2019
	Report No. :ICE-1911070551
	NABL ULR No. :TC592619000015347P
	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

Description

Description

ETP Outlet Water

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	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	32
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	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	BLQ(LOQ:0.01)
l.	Total Residual Chlorine(mg/l)	IS:3025(Part 26):1986(RA:2014)amd no 1	Max. 1.0	BLQ (LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	BLQ (LOQ : 1.0)
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	4.8

Saurabh
Saurabh Sharma
 07-11-2019
 Reviewer

This Analytical Report is not valid
 For consent Purpose of the Client

07-11-2019
Prem Kumar
 [Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

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

Disclaimer:

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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	Sample Reg. No. :E01-1910180532
	Sample Reg. Date :18-10-2019
	Report Date :07-11-2019
	Report No. :ICE-1911070551
	NABL ULR No. :TC592619000015347P
	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	0.17
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	0.8
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	0.02
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 : 0.01)
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 in 100% effluent water after 96 hours

*# represents categories/test parameters not covered under NABL / **# represents outsource sample / ## represents Customer Defined Fields


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*******


Saurabh Sharma
 07-11-2019
 Reviewer

This Analysis Report is not Valid
 For consent P... of the Board


 07-11-2019
PremKumar
 [Authorized Signatory]

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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	Sample Reg. No. :E01-1910180533
	Sample Reg. Date :18-10-2019
	Report Date :07-11-2019
	Report No. :ICE-1911070552
	NABL ULR No. :TC592619000015348P
	Customer Ref. No.:- Letter Dated :-

Test Report as per IS:NA	With Amendment No.(s):
---------------------------------	-------------------------------

PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample#	STP Inlet 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#	5 Ltr
j) Batch Size/Location#	NA
k) Mode of Packing	Packed in cans
l) Date of Receipt	18-10-2019
m) Date of Start	18-10-2019
n) Date of Completion	07-11-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on 17.10.2019
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
---	-----

Saurabh
Saurabh Sharma
 07-11-2019
 Reviewer

07-11-2019
Prem Kumar
 [Authorized Signatory]

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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, Tam Taran	Sample Reg. No. :E01-1910180533
	Sample Reg. Date :18-10-2019
	Report Date :07-11-2019
	Report No. :ICE-1911070552
	NABL ULR No. :TC592619000015348P
	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

Description

Description: STP Inlet Water

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

Test Details :

1.	Organoleptic & Physical Parameter		
a.	Colour	IS:3025(Part4):1983(RA:2017)am d. no1	Greyish
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Mild
2.	General Parameters		
a.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	7.56
b.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	212
c.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	387
d.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	125
e.	Oil & Grease(mg/l)	IS:3025(P-39)	16.2
f.	Lead(as Pb)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
g.	Copper(As Cu)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
h.	Nickel(as Ni),mg/l	IS:3025(P-66)	BLQ(LOQ:0.01)
i.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	0.01
j.	Total Residual Chlorine(mg/l)	IS:3025(Part 26):1986(RA:2014)amd no 1	BLQ (LOQ: 0.1)
k.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	10.8
l.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	26.4
m.	Free Ammonia (as NH3)(mg/l)	APHA-23rd Edition	Nil
n.	Arsenic(as As)(mg/l)	IS:3025(P-66)	0.12

Saurabh Sharma
Saurabh Sharma
07-11-2019
Reviewer

07-11-2019
PremKumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

ISO 9001:2015 & ISO 14001:2015 OHSAS 18001:2007 Certified Laboratory
(A Government Approved Test House)
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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	Sample Reg. No. :E01-1910180533
	Sample Reg. Date :18-10-2019
	Report Date :07-11-2019
	Report No. :ICE-1911070552
	NABL ULR No. :TC592619000015348P
	Customer Ref. No. :- Letter Dated :-

o.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
p.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
q.	Chromium (as Cr ⁶⁺),(mg/l) *	IS:3025(Part-52)	BLQ (LOQ: 0.01)
r.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
s.	Selenium(as Se)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
t.	Cyanide (as CN),(mg/l)	IS:3025(P-27)	Absent
u.	Fluoride(as F),(mg/L)	IS:3025(P-60)	0.6
v.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	2.2
w.	Sulphide(as S)(mg/l)	IS:3025(P-9)	1.8
x.	Manganese(As Mn)(mg/l)	IS:3025(P-66)	0.06
y.	Iron(as Fe)(mg/l)	IS:3025(P-66)	0.04
z.	Nitrate as NO ₃ (mg/l)	IS:3025(P-34)	3.8
aa.	Phenolic Compounds (as C ₆ H ₅ OH) (mg/L)	IS:3025(P-43)	BLQ (LOQ : 0.01)
ab.	Vanadium(As V)(mg/l) *	IS:3025(P-66)	BLQ(LOQ:0.01)

* represents categories/test parameters not covered under NABL | *** represents outsource sample | # represents Customer Defined Fields

NOTE : NA- Not Applicable, BLQ :- Below Limit of Quantification, LOQ :- Limit of Quantification, Purpose - For Self Monitoring

PART D : REMARKS :N/A

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

Saurabh
Saurabh Sharma
07-11-2019
Reviewer

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

07-11-2019
PremKumar
[Authorized Signatory]

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, Tam Taran	Sample Reg. No. : E01-1910180534
	Sample Reg. Date : 18-10-2019
	Report Date : 07-11-2019
	Report No. : ICE-1911070553
	NABL ULR No. : TC592619000015349P
	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	18-10-2019
m)	Date of Start	18-10-2019
n)	Date of Completion	07-11-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 17.10.2019
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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Saurabh
Saurabh Sharma
 07-11-2019
 Reviewer

Prem
PremKumar
 07-11-2019
 [Authorized Signatory]

Disclaimer:

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

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, Tam Taran	Sample Reg. No. :E01-1910180534
	Sample Reg. Date :18-10-2019
	Report Date :07-11-2019
	Report No. :ICE-1911070553
	NABL ULR No. :TC592619000015349P
	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

Description

Description | STP Outlet Water

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	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	32
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	16
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	BLQ(LOQ:0.01)
k.	Zinc(As Zn)(mg/l)	IS:3025(P-66)	Max. 5.0	0.01
l.	Total Residual Chlorine(mg/l)	IS:3025(Part 26):1986(RA:2014)amd no 1	Max. 1.0	BLQ (LOQ : 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	1.8
n.	Total Kjeldahi Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	4.6

Saurabh
Saurabh Sharma
 07-11-2019
 Reviewer

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

07-11-2019
PremKumar
 [Authorized Signatory]

Disclaimer:

- Sample (s) not drawn by us unless otherwise stated.
- Total Liability of this Laboratory is limited to the Invoiced amount.
- Test certificate to fill in notes shall not be used for promotional or publicity purpose.

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	Sample Reg. No. : E01-1910180534
	Sample Reg. Date : 18-10-2019
	Report Date : 07-11-2019
	Report No. : ICE-1911070553
	NABL ULR No. : TC592619000015349P
	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	0.09
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	0.2
y.	Sulphide(as S)(mg/l)	IS:3025(Part 29)	Max. 2.0	BLQ (LOQ : 0.5)
z.	Manganesec(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	0.01
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 : 0.01)
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 in 100% effluent water after 96 hours

*' represents categories/test parameters not covered under NABL | '**' represents outsource sample | '#' represents Customer Defined Fields

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
Saurabh Sharma
07-11-2019
Reviewer

07-11-2019
PremKumar
[Authorized Signatory]

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

Disclaimer:

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

ANNEXURE-II
Stack emission & Ambient Air Quality
Monitoring Report

Environmental Status Report

Ambient Air Quality Location wise

Inside the Plant Premises

Location 1 - Near Railway Over Bridge (ROB)

Sr. No.	Month	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	April, 2019	40	80	14	22	1.5	ND	ND	ND	ND	ND	ND	ND	ND
2	May-19	42	77	12	17	1.4	ND	ND	ND	ND	ND	ND	ND	ND
3	Jun-19	44	78	15	20	1.4	ND	ND	ND	ND	ND	ND	ND	ND
4	Jul-19	42	80	11	17	1.5	ND	ND	ND	ND	ND	ND	ND	ND
5	Aug-19	33	72	9	15	1.1	ND	ND	ND	ND	ND	ND	ND	ND
6	Sep-19	34	77	9	16	1.4	ND	ND	ND	ND	ND	ND	ND	ND
7	Oct-19	36	80	10	19	1.3	ND	ND	ND	ND	ND	ND	ND	ND
8	Nov-19	32	71	12	20	1.3	ND	ND	ND	ND	ND	ND	ND	ND
9	Dec-19	43.25	71.87	13.25	21	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Jan-20	36	69.5	14.12	19	ND	22.95	ND	ND	15.22	ND	ND	ND	ND
11	Feb-20	32.15	55.81	12.88	18.8	ND	23.15	ND	ND	15.23	ND	ND	ND	ND
12	Mar-20	31	53.2	10.86	20.41	ND	22.83	ND	ND	13.98	ND	ND	ND	ND
	Minimum	31	53.2	9	15	1.1	22.83	0	0	13.98	0	0	0	0
	Maximum	44	80	15	22	1.5	23.15	0	0	15.23	0	0	0	0
	Mean	37.12	72.12	11.93	18.77	1.36	22.98	#DIV/0!	#DIV/0!	14.81	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Standard Deviation	4.8	9.0	2.0	2.1	0.7	10.4	0.0	0.0	6.7	0.0	0.0	0.0	0.0
	98 Percentile	43.835	80	14.8064	21.78	1.5	23.142	#NUM!	#NUM!	15.2296	#NUM!	#NUM!	#NUM!	#NUM!

Location 2 - PLL Colony

Sr. No.	Month	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	April, 2019	42	81	12	20	1.2	ND	ND	ND	ND	ND	ND	ND	ND
2	May-19	36	74	10	13	0.6	ND	ND	ND	ND	ND	ND	ND	ND
3	Jun-19	37	69	9	13	0.9	ND	ND	ND	ND	ND	ND	ND	ND
4	Jul-19	41	76	10	15	1.2	ND	ND	ND	ND	ND	ND	ND	ND
5	Aug-19	32	71	10	15	1.1	ND	ND	ND	ND	ND	ND	ND	ND
6	Sep-19	33	75	8	13	1.3	ND	ND	ND	ND	ND	ND	ND	ND
7	Oct-19	34	75	12	19	1.2	ND	ND	ND	ND	ND	ND	ND	ND
8	Nov-19	29	67	10	17	1.3	ND	ND	ND	ND	ND	ND	ND	ND
9	Dec-19	42	71.12	12.12	18.5	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Jan-20	38.37	69.25	14.25	19.12	ND	22.09	ND	ND	15.27	ND	ND	ND	ND
11	Feb-20	32.87	52.46	12.67	18.52	ND	23.43	ND	ND	15.32	ND	ND	ND	ND
12	Mar-20	31.5	52.2	11.21	18.61	ND	22.66	ND	ND	14.83	ND	ND	ND	ND
Minimum		29	52.2	8	13	0.6	22.09	0	0	14.83	0	0	0	0
Maximum		42	81	14.25	20	1.3	23.43	0	0	15.32	0	0	0	0
Mean		35.73	69.42	10.94	16.65	1.10	22.73	#DIV/0!	#DIV/0!	15.14	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Standard Deviation		4.4	8.8	1.7	2.7	0.6	10.3	0.0	0.0	6.8	0.0	0.0	0.0	0.0
98 Percentile		42	79.9	13.9024	19.8064	1.3	23.3992	#NUM!	#NUM!	15.318	#NUM!	#NUM!	#NUM!	#NUM!

Location 3 - DM Plant

Sr. No.	Month	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	April, 2019	43	82	14	22	1.2	ND	ND	ND	ND	ND	ND	ND	ND
2	May-19	40	76	9	13	1.1	ND	ND	ND	ND	ND	ND	ND	ND
3	Jun-19	37	69	10	15	1.05	ND	ND	ND	ND	ND	ND	ND	ND
4	Jul-19	39	78	11	15	1.2	ND	ND	ND	ND	ND	ND	ND	ND
5	Aug-19	34	74	9	15	1.2	ND	ND	ND	ND	ND	ND	ND	ND
6	Sep-19	33	75	9	16	1.4	ND	ND	ND	ND	ND	ND	ND	ND
7	Oct-19	37	79	12	19	1.2	ND	ND	ND	ND	ND	ND	ND	ND
8	Nov-19	31	70	11	20	1.2	ND	ND	ND	ND	ND	ND	ND	ND
9	Dec-19	42.12	65.75	13.62	22.12	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Jan-20	40.5	70.25	14.25	20.37	ND	22.29	ND	ND	15.54	ND	ND	ND	ND
11	Feb-20	32.1	55.78	12.012	18.83	ND	23.13	ND	ND	15	ND	ND	ND	ND
12	Mar-20	31.16	55.33	10.36	19.01	ND	21.93	ND	ND	14.83	ND	ND	ND	ND
	Minimum	31	55.33	9	13	1.05	21.93	0	0	14.83	0	0	0	0
	Maximum	43	82	14.25	22.12	1.4	23.13	0	0	15.54	0	0	0	0
	Mean	36.66	70.84	11.27	17.94	1.19	22.45	#DIV/0!	#DIV/0!	15.12	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Standard Deviation	4.3	8.5	1.9	3.0	0.6	10.2	0.0	0.0	6.8	0.0	0.0	0.0	0.0
	98 Percentile	42.8064	81.34	14.195	22.0936	1.372	23.0964	#NUM!	#NUM!	15.5184	#NUM!	#NUM!	#NUM!	#NUM!

Location 4 - Residential Colony

Sr. No.	Month	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	April, 2019	34	74	10	17	1.2	ND	ND	ND	ND	ND	ND	ND	ND
2	May-19	35	73	9	12	0.42	ND	ND	ND	ND	ND	ND	ND	ND
3	Jun-19	39	70	9	14	1	ND	ND	ND	ND	ND	ND	ND	ND
4	Jul-19	34	76	9	14	1.25	ND	ND	ND	ND	ND	ND	ND	ND
5	Aug-19	32	70	9	15	1.2	ND	ND	ND	ND	ND	ND	ND	ND
6	Sep-19	31	72	8	12	1.5	ND	ND	ND	ND	ND	ND	ND	ND
7	Oct-19	36	76	9	17	1.3	ND	ND	ND	ND	ND	ND	ND	ND
8	Nov-19	31	69	11	18	1.2	ND	ND	ND	ND	ND	ND	ND	ND
9	Dec-19	40.87	70.87	12.88	19.25	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Jan-20	38.75	66.12	12.87	18.87	ND	21.77	ND	ND	15.43	ND	ND	ND	ND
11	Feb-20	33.1	56.27	11.78	17.88	ND	22.5	ND	ND	14.58	ND	ND	ND	ND
12	Mar-20	31.51	55.33	10.98	19.18	ND	22.1	ND	ND	14.56	ND	ND	ND	ND
	Minimum	31	55.33	8	12	0.42	21.77	0	0	14.56	0	0	0	0
	Maximum	40.87	76	12.88	19.25	1.5	22.5	0	0	15.43	0	0	0	0
	Mean	34.69	69.05	10.21	16.18	1.13	22.12	#DIV/0!	#DIV/0!	14.86	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Standard Deviation	3.3	6.8	1.7	2.7	0.6	10.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0
	98 Percentile	40.4586	76	12.8778	19.2346	1.472	22.484	#NUM!	#NUM!	15.396	#NUM!	#NUM!	#NUM!	#NUM!

Report 3 - District

Location 5 - Goindwal Sahib

Sr. No.	Month	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	April, 2019	40	79	12	19	1.5	ND	ND	ND	ND	ND	ND	ND	ND
2	May-19	39	74	11	15	0.56	ND	ND	ND	ND	ND	ND	ND	ND
3	Jun-19	43	76	14	19	0	ND	ND	ND	ND	ND	ND	ND	ND
4	Jul-19	43	80	12	20	0.31	ND	ND	ND	ND	ND	ND	ND	ND
5	Aug-19	32	72	8.5	13	ND	ND	ND	ND	ND	ND	ND	ND	ND
6	Sep-19	29	66	7	11	ND	ND	ND	ND	ND	ND	ND	ND	ND
7	Oct-19	32	68	11	17	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	Nov-19	29	67	9	18	ND	ND	ND	ND	ND	ND	ND	ND	ND
9	Dec-19	33.5	64.25	9.5	14.12	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Jan-20	38.5	69.1	13.63	19.66	ND	21.85	ND	ND	15.96	ND	ND	ND	ND
11	Feb-20	31.87	53.99	13.22	19.21	ND	22.58	ND	ND	15.53	ND	ND	ND	ND
12	Mar-20	31.5	53.86	11.35	20.31	ND	22.05	ND	ND	15.42	ND	ND	ND	ND
	Minimum	29	53.86	7	11	0	21.85	0	0	15.42	0	0	0	0
	Maximum	43	80	14	20.31	1.5	22.58	0	0	15.96	0	0	0	0
	Mean	35.20	68.60	11.02	17.11	0.59	22.16	#DIV/0!	#DIV/0!	15.64	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Standard Deviation	5.2	8.5	2.2	3.1	0.4	10.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0
	98 Percentile	43	79.78	13.9186	20.2418	1.4436	22.5588	#NUM!	#NUM!	15.9428	#NUM!	#NUM!	#NUM!	#NUM!

Location 6 - Hansawala

Sr. No.	Month	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	April, 2019	42	80	12	19	1.56	ND	ND	ND	ND	ND	ND	ND	ND
2	May-19	40	75	13	17	1.4	ND	ND	ND	ND	ND	ND	ND	ND
3	Jun-19	45	78	17	21	ND	ND	ND	ND	ND	ND	ND	ND	ND
4	Jul-19	41	80	12	17	ND	ND	ND	ND	ND	ND	ND	ND	ND
5	Aug-19	31	70	9	14	ND	ND	ND	ND	ND	ND	ND	ND	ND
6	Sep-19	30	67	7	12	ND	ND	ND	ND	ND	ND	ND	ND	ND
7	Oct-19	31	72	10	17	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	Nov-19	30	69	11	18	ND	ND	ND	ND	ND	ND	ND	ND	ND
9	Dec-19	36.12	65	10.25	16.12	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Jan-20	38.5	70	13.75	20	ND	21.88	ND	ND	15.12	ND	ND	ND	ND
11	Feb-20	32.42	51.76	12.86	18.73	ND	22.61	ND	ND	14.96	ND	ND	ND	ND
12	Mar-20	32.18	55.16	11.03	19.8	ND	21.9	ND	ND	14.65	ND	ND	ND	ND
	Minimum	30	51.76	7	12	1.4	21.88	0	0	14.65	0	0	0	0
	Maximum	45	80	17	21	1.56	22.61	0	0	15.12	0	0	0	0
	Mean	35.77	69.41	11.57	17.47	1.48	22.13	#DIV/0!	#DIV/0!	14.91	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Standard Deviation	5.3	8.9	2.5	2.6	0.6	10.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0
	98 Percentile	44.34	80	16.285	20.78	1.5568	22.5816	#NUM!	#NUM!	15.1136	#NUM!	#NUM!	#NUM!	#NUM!

Location 7 - Vairawal

Sr. No.	Month	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	April,2019	39	81	12	22	1.5	ND	ND	ND	ND	ND	ND	ND	ND
2	May-19	42	78	14	19	1.5	ND	ND	ND	ND	ND	ND	ND	ND
3	Jun-19	45	78	17	21	ND	ND	ND	ND	ND	ND	ND	ND	ND
4	Jul-19	41	79	12	25	1.2	ND	ND	ND	ND	ND	ND	ND	ND
5	Aug-19	31	70	9	15	ND	ND	ND	ND	ND	ND	ND	ND	ND
6	Sep-19	30	67	7	12	ND	ND	ND	ND	ND	ND	ND	ND	ND
7	Oct-19	33	68	11	17	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	Nov-19	28	68	9	17	ND	ND	ND	ND	ND	ND	ND	ND	ND
9	Dec-19	34.75	65.12	9.62	16.12	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Jan-20	42.3	68.93	13.3	20.08	ND	22.07	ND	ND	15.4	ND	ND	ND	ND
11	Feb-20	32.87	55.32	12.71	18.72	ND	22.38	ND	ND	15.15	ND	ND	ND	ND
12	Mar-20	31.16	53.66	11.71	20.01	ND	22.18	ND	ND	14.96	ND	ND	ND	ND
Minimum		28	53.66	7	12	1.2	22.07	0	0	14.96	0	0	0	0
Maximum		45	81	17	25	1.5	22.38	0	0	15.4	0	0	0	0
Mean		35.84	69.34	11.53	18.58	1.40	22.21	#DIV/0!	#DIV/0!	15.17	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Standard Deviation		5.7	8.8	2.7	3.4	0.6	10.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0
98 Percentile		44.406	80.56	16.34	24.34	1.5	22.372	#NUM!	#NUM!	15.39	#NUM!	#NUM!	#NUM!	#NUM!

Location 8 - Mundi Village

Sr. No.	Month	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	April, 2019	40	78	12	20	1.5	ND	ND	ND	ND	ND	ND	ND	ND
2	May-19	39	75	11	15	1.3	ND	ND	ND	ND	ND	ND	ND	ND
3	Jun-19	42	75	14	19	ND	ND	ND	ND	ND	ND	ND	ND	ND
4	Jul-19	43	80	13	18	1.2	ND	ND	ND	ND	ND	ND	ND	ND
5	Aug-19	31	65	8	12	ND	ND	ND	ND	ND	ND	ND	ND	ND
6	Sep-19	29	65	7	12	ND	ND	ND	ND	ND	ND	ND	ND	ND
7	Oct-19	32	70	12	17	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	Nov-19	29	69	10	18	ND	ND	ND	ND	ND	ND	ND	ND	ND
9	Dec-19	29.75	66.62	7	11.62	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	Jan-20	39.75	70.25	13.75	20.12	ND	21.7	ND	ND	15.46	ND	ND	ND	ND
11	Feb-20	33.12	55.38	12.57	18.85	ND	23.22	ND	ND	15.05	ND	ND	ND	ND
12	Mar-20	31.33	54.05	11	20.16	ND	22.18	ND	ND	14.58	ND	ND	ND	ND
	Minimum	29	54.05	7	11.62	1.2	21.7	0	0	14.58	0	0	0	0
	Maximum	43	80	14	20.16	1.5	23.22	0	0	15.46	0	0	0	0
	Mean	34.91	68.61	10.94	16.81	1.33	22.37	#DIV/0!	#DIV/0!	15.03	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Standard Deviation	5.4	8.1	2.5	3.3	0.6	10.1	0.0	0.0	6.8	0.0	0.0	0.0	0.0
	98 Percentile	42.78	79.56	13.945	20.1512	1.492	23.1784	#NUM!	#NUM!	15.4436	#NUM!	#NUM!	#NUM!	#NUM!

(Note: Above data represent the avg. data of each month that taken from monthly monitoring report generated by outsource agencies. ITC, Panchkula vide Registration No. PPCB/AIR LAB/32/27910 did monitoring for two months Oct, & Nov, 2019 and Dec, 2019 onwards the monitoring was carried out by Envirochem Testing Lab & Research Centre, Panipat, vide Registration No. PPCB/AIR LAB/32/47705, both labs are approved by PPCB/CPCB.)

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. : E01-1904291000 Sample Reg. Date : 29-04-2019 Report Date : 07-05-2019 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-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)	: 40
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.	: 17.10
Volumetric Flow Rate(Nm ³ /hr.)	: 826244.11
Ambient Air Temperature, °C	: 40

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

Saurabh
Saurabh Sharma
07-05-2019
Reviewer

*This Analysis Report is not valid
For consent Purpose of the Board*
07-05-2019
Prem Kumar
[Tech Manager]

Disclaimer:

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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. :E01-1904291000 Sample Reg. Date :29-04-2019 Report Date :07-05-2019 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	594
c.	Oxides of Nitrogen (NO _x), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	219
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 27.04.2019

REMARKS : N/A

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

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

Saurabh Sharma
07-05-2019
Reviewer

07-05-2019
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. : E01-1904291001 Sample Reg. Date : 29-04-2019 Report Date : 07-05-2019 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 (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)	: 36
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.	: 123
Flue Gas Velocity(m/s), Avg.	: 19.15
Volumetric Flow Rate(Nm ³ /hr.)	: 913613.73
Ambient Air Temperature, °C	: 40

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

Saurabh
Saurabh Sharma
07-05-2019
Reviewer

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For consent Purpose of the Board*

07-05-2019
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. :E01-1904291001 Sample Reg. Date :29-04-2019 Report Date :07-05-2019 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	621
c.	Oxides of Nitrogen (NO _x), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	254
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 5.2% v/v. Requirement as per EPA 1986, PCLS/02/2010, S.O. 3305(E), Dated : 28.06.2018, Sample collected by lab rep. on 27.04.2019

REMARKS : N/A

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

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

Saurabh Sharma
 07-05-2019
 Reviewer

07-05-2019
 Prem Kumar
 [Tech Manager]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
 (A Government Approved Test House)
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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.	:E01-1904291002
	NABL ULR No.	:TC592619000007697F
	Sample Reg. Date	:29-04-2019
	Report Date	:07-05-2019
	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	: 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)	: 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.	: 62
Flue Gas Velocity(m/s),Avg.	: 12.00
Volumetric Flow Rate(Nm ³ /hr.)	: 47748.89
Ambient Air Temperature, °C	: 41

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Saurabh Sharma
07-05-2019
Reviewer

This Analysis Report is not Valid
For consent Purpose of the Board
07-05-2019
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 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :	E01-1904291002
	NABL ULR No. :	TCS92619000007697F
	Sample Reg. Date :	29-04-2019
	Report Date :	07-05-2019
	Customer Ref. No. :	
	Letter Dated :	

Test Details :			
1.	General Parameters		
a.	Particulate Matter,mg/Nm3	IS:11255(P-1)	150 Max. 70

NOTE : NA- Not Applicable, Requirement as per EPA 1986/PCLS/2010, Sample collected by lab rep. on dated 26.04.2019

REMARKS : N/A

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

Saurabh
 Saurabh Sharma
 07-05-2019
 Reviewer

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

07-05-2019
 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.	:E01-1904291003
	NABL ULR No.	:TC592619000007698F
	Sample Reg. Date	:29-04-2019
	Report Date	:07-05-2019
	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)	: 52
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.	: 66
Flue Gas Velocity(m/s),Avg.	: 11.39
Volumetric Flow Rate(Nm ³ /hr.)	: 18299.77
Ambient Air Temperature, °C	: 41

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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*This Analysis Report is not valid
For consent Purpose of the State*

Saurabh
Saurabh Sharma
07-05-2019
Reviewer

07-05-2019
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.	:E01-1904291003
	NABL ULR No.	:TC592619000007698F
	Sample Reg. Date	:29-04-2019
	Report Date	:07-05-2019
	Customer Ref. No.:	
	Letter Dated	:

Test Details :

1.	General Parameters		
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	150 Max. 48

NOTE : NA- Not Applicable, Requirement as per EPA 1986/PCLS/2010, Sample collected by lab rep. on dated 25.04.2019

REMARKS :N/A

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

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

Saurabh Sharma
07-05-2019
Reviewer

07-05-2019
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.	:E01-1904291004
	NABL ULR No.	:TC592619000007700F
	Sample Reg. Date	:29-04-2019
	Report Date	:07-05-2019
	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 Bunker 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)	: 44
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.	: 60
Flue Gas Velocity(m/s),Avg.	: 13.37
Volumetric Flow Rate(Nm ³ /hr.)	: 8698.01
Ambient Air Temperature, °C	: 41

TEST RESULTS

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

Saurabh Sharma
07-05-2019
Reviewer

This Analysis Report is not valid
For constant Purpose of the Board-05-2019
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.	:E01-1904291004
	NABL ULR No.	:TC592619000007700F
	Sample Reg. Date	:29-04-2019
	Report Date	:07-05-2019
	Customer Ref. No.:	
	Letter Dated	:

Test Details :

1.	General Parameters		
a.	Particulate Matter,mg/Nm3	IS:11255(P-1)	150 Max. 62

NOTE : NA- Not Applicable, Requirement as per EPA 1986/PCLS/2010, Sample collected by lab rep. on dated 25.04.2019

REMARKS : N/A

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

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

Saurabh Sharma
07-05-2019
Reviewer

07-05-2019
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, Tam Taran	Report No.	:E01-1904291005
	NABL ULR No.	:TC592619000007702F
	Sample Reg. Date	:29-04-2019
	Report Date	:07-05-2019
	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 Bunker 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)	: 48
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.	: 58
Flue Gas Velocity(m/s),Avg.	: 12.50
Volumetric Flow Rate(Nm ³ /hr.)	: 8181.15
Ambient Air Temperature, °C	: 41

TEST RESULTS

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

Saurabh Sharma
Saurabh Sharma
07-05-2019
Reviewer

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

07-05-2019
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. :E01-1904291005
	NABL ULR No. :TC592619000007702F
	Sample Reg. Date :29-04-2019
	Report Date :07-05-2019
	Customer Ref. No.:
	Letter Dated :

Test Details :

1.	General Parameters		
a.	Particulate Matter,mg/Nm3	IS:11255(P-1)	150 Max. 54

NOTE : NA- Not Applicable, Requirement as per EPA 1986/PCLS/2010, Sample collected by lab rep. on dated 25.04.2019

REMARKS :N/A

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

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

Saurabh Sharma
07-05-2019
Reviewer

07-05-2019
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.	:E01-1904291006
	NABL ULR No.	:TC592619000007577F
	Sample Reg. Date	:29-04-2019
	Report Date	:04-05-2019
	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	: 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-1 (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)	: 70
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: Not applicable
(a) Status	: -
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 320
Flue Gas Velocity(m/s),Avg.	: 14.94
Volumetric Flow Rate(Nm ³ /hr.)	: 853.00
Ambient Air Temperature, °C	: 41

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Saurabh Sharma
04-05-2019
Reviewer

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

04-05-2019
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,
Visit us: www.itclabs.com E-mail : customersupport@itclabs.com

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 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Report No. :E01-1904291006
	NABL ULR No. :TC592619000007577F
	Sample Reg. Date :29-04-2019
	Report Date :04-05-2019
	Customer Ref. No. :
	Letter Dated :

Test Details :

1.	General Parameters			
a.	Particulate Matter,g/kw-hr	IS:11255(P-1)	Max. 0.2	0.12
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	2.5
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 25.04.2019

REMARKS : N/A

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

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

Saurabh Sharma
 04-05-2019
 Reviewer

04-05-2019
 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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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.	:E01-1904291007
	NABL ULR No.	:TC592619000007579F
	Sample Reg. Date	:29-04-2019
	Report Date	:04-05-2019
	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)	: 65
Purpose of Monitoring	: For Self Monitoring
(8) Air Pollution control measure	: Not applicable
(a) Status	: -
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 350
Flue Gas Velocity(m/s),Avg.	: 16.73
Volumetric Flow Rate(Nm³/hr.)	: 909.20
Ambient Air Temperature, °C	: 41

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Saurabh Sharma
04-05-2019
Reviewer

*This Analysis Report is not Valid
For content Purpose of the Report*

04-05-2019
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 : 2591
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.	:E01-1904291007
	NABL ULR No.	:TC592619000007579F
	Sample Reg. Date	:29-04-2019
	Report Date	:04-05-2019
	Customer Ref. No. :	
	Letter Dated	:

Test Details :

1.	General Parameters			
a.	Particulate Matter,g/kw-hr	IS:11255(P-1)	Max. 0.2	0.08
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	2.6
d.	Carbon Monoxide(CO),g/kw-hr	IS:13270	Max. 3.5	1.6

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 26.04.2019

REMARKS : N/A

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

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

Saurabh Sharma
04-05-2019
Reviewer

04-05-2019
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

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	Sample Reg. No. :E01-1907270926 Sample Reg. Date :27-07-2019 Report Date :31-07-2019 Report No. :ICE-1907311157 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 TPH
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Coal & 133 TPH
(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 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.	: 19.74
Volumetric Flow Rate(Nm ³ /hr.)	: 919964.69
Ambient Air Temperature, °C	: 43

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Saurabh Sharma
31-07-2019
Reviewer

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

31-07-2019
Prem Kumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2013 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)
(A Government Approved Test House)
86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
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4. If standard 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	Sample Reg. No. :E01-1907270926 Sample Reg. Date :27-07-2019 Report Date :31-07-2019 Report No. :ICE-1907311157 Customer Ref. No.:- Letter Dated :-
---	--

Test Details :

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	546
c.	Oxides of Nitrogen (NO _x), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	233
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ : 0.01)

represents Customer Defined Fields

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 25.07.2019, During monitoring Boliler (Unit - 1) is operated at half load,

REMARKS : N/A

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

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

Saurabh
Saurabh Sharma
 31-07-2019
 Reviewer

31-07-2019
Prem Kumar
 [Authorized Signatory]

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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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	Sample Reg. No. :E01-1907270927 Sample Reg. Date :27-07-2019 Report Date :31-07-2019 Report No. :ICE-1907311158 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 TPH
(b) Capacity on sampling day	: -
(c) Type of fuel used & its consumption	: Coal & 133 TPH
(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)	: 38
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.	: 132
Flue Gas Velocity(m/s),Avg.	: 18.83
Volumetric Flow Rate(Nm ³ /hr.)	: 868887.76
Ambient Air Temperature, °C	: 43

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
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Saurabh
Saurabh Sharma
31-07-2019
Reviewer

This Analysis Report is not valid
For consent Purpose of the Environment
31-07-2019
Prem Kumar
{Authorized Signatory}

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 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. No. :E01-1907270927 Sample Reg. Date :27-07-2019 Report Date :31-07-2019 Report No. :ICE-1907311158 Customer Ref. No.:- Letter Dated :-
---	--

Test Details :				
1.	General Parameters			
a.	Particulate Matter, mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-1)	Max. 50	48
b.	Sulphur Dioxide (SO ₂), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-2)	Max. 600	525
c.	Oxides of Nitrogen (NO ₂), mg/Nm ³ (Corrected at 6% O ₂)	IS:11255(P-7)	Max. 300	213
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ : 0.01)

represents Customer Defined Fields

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 25.07.2019, During monitoring Boliler (Unit - 2) is operated at half load,

REMARKS : N/A

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

This Analysis Report is not Valid
For consent Purpose of the

Saurabh Sharma
31-07-2019
Reviewer

31-07-2019
Prem Kumar
[Authorized Signatory]

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 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. No. :E01-1907270928
	Sample Reg. Date :27-07-2019
	Report Date :31-07-2019
	Report No. :ICE-1907311152
	NABL ULR No. :TC592619000011439F
	Customer Ref. No.:- Letter Dated :-

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

General Information

Name of the emission source monitored	: Process Satch
(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)	: 67
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.	: 47
Flue Gas Velocity(m/s),Avg.	: 8.41
Volumetric Flow Rate(Nm ³ /hr.)	: 34843.27
Ambient Air Temperature, °C	: 42

TEST RESULTS

Saurabh Sharma
31-07-2019
Reviewer

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

31-07-2019
Prem Kumar
[Authorized Signatory]

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 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. No. :E01-1907270928 Sample Reg. Date :27-07-2019 Report Date :31-07-2019 Report No. :ICE-1907311152 NABL ULR No. :TC592619000011439F Customer Ref. No.:- Letter Dated :-
---	---


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

represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 24.07.2019

REMARKS :N/A

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


Saurabh Sharma
 31-07-2019
 Reviewer

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

31-07-2019
Prem Kumar
 [Authorized Signatory]

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 consultant's compliance.

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	Sample Reg. No. :E01-1907270929
	Sample Reg. Date :27-07-2019
	Report Date :31-07-2019
	Report No. :ICE-1907311150
	NABL ULR No. :TC592619000011442F
	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 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.	: 68
Flue Gas Velocity(m/s),Avg.	: 12.60
Volumetric Flow Rate(Nm ³ /hr.)	: 20016.31
Ambient Air Temperature, °C	: 41

TEST RESULTS

Saurabh
Saurabh Sharma
31-07-2019
Reviewer

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

31-07-2019
Prem Kumar
[Authorized Signatory]

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. The results are not to be used for any other purpose without the prior written consent of the Laboratory.

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	Sample Reg. No. :E01-1907270929
	Sample Reg. Date :27-07-2019
	Report Date :31-07-2019
	Report No. :ICE-1907311150
	NABL ULR No. :TC592619000011442F
	Customer Ref. No.:- Letter Dated :-

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	150 Max.	44

*# represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 24.07.2019

REMARKS : N/A

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

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

Saurabh Sharma
Saurabh Sharma
31-07-2019
Reviewer

31-07-2019
Prem Kumar
[Authorized Signatory]

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, Tam Taran	Sample Reg. No. :E01-1907270930
	Sample Reg. Date :27-07-2019
	Report Date :31-07-2019
	Report No. :ICE-1907311148
	NABL ULR No. :TC592619000011437F
	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 Bunker 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)	: 42
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.	: 62
Flue Gas Velocity(m/s),Avg.	: 13.92
Volumetric Flow Rate(Nm ³ /hr.)	: 8953.09
Ambient Air Temperature, °C	: 40

TEST RESULTS

Saurabh
Saurabh Sharma
 31-07-2019
 Reviewer

This Analysis Report is not Valid
 For consent Purpose of the Board
 31-07-2019
Prem Kumar
 [Authorized Signatory]

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	Sample Reg. No. :E01-1907270930
	Sample Reg. Date :27-07-2019
	Report Date :31-07-2019
	Report No. :ICE-1907311148
	NABL ULR No. :TC592619000011437F
	Customer Ref. No.:- Letter Dated :-

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
a.	Particulate Matter,mg/Nm ³	IS:11255(P-1)	150 Max.	54

represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 24.07.2019

REMARKS :N/A

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

Saurabh
Saurabh Sharma
 31-07-2019
 Reviewer

This Analysis Report is not Valid
 For consent Purpose of the Govt.
 31-07-2019
Prem Kumar
 [Authorized Signatory]

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	Sample Reg. No. :E01-1907270931
	Sample Reg. Date :27-07-2019
	Report Date :31-07-2019
	Report No. :ICE-1907311149
	NABL ULR No. :TC592619000011438F
	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 Bunker 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)	: 43
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.	: 60
Flue Gas Velocity(m/s),Avg.	: 13.45
Volumetric Flow Rate(Nm ³ /hr.)	: 8702.75
Ambient Air Temperature, °C	: 40

TEST RESULTS

Saurabh Sharma
31-07-2019
Reviewer

This Analysis Report is not Valid
For consent Purpose of the State
31-07-2019
Prem Kumar
[Authorized Signatory]

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.

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,
Visit us: www.itclabs.com E-mail: info@itclabs.com

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	Sample Reg. No. : E01-1907270931 Sample Reg. Date : 27-07-2019 Report Date : 31-07-2019 Report No. : ICE-1907311149 NABL ULR No. : TC592619000011438F Customer Ref. No.:- Letter Dated :-
---	--

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
1.	Particulate Matter,mg/Nm3	IS:11255(P-1)	150 Max.	49

*# represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 24.07.2019

REMARKS :N/A

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

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

Saurabh Sharma
31-07-2019
Reviewer

31-07-2019
Prem Kumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

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S6, Industrial Area, Phase-1, Panolokula-134109 (Haryana)
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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	Sample Reg. No. :E01-1907270932 Sample Reg. Date :27-07-2019 Report Date :31-07-2019 Report No. :ICE-1907311143 NABL ULR No. :TC592619000011433F 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	: 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-1 (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 Self Monitoring
(8) Air Pollution control measure	: Not applicable
(a) Status	: -
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil

Observations

Flue Gas Temperature, °C,Avg.	: 372
Flue Gas Velocity(m/s),Avg.	: 16.35
Volumetric Flow Rate(Nm³/hr.)	: 854.77
Ambient Air Temperature, °C	: 42

TEST RESULTS

Saurabh
Saurabh Sharma
 31-07-2019
 Reviewer

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

31-07-2019
Prem Kumar
 [Authorized Signatory]

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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	Sample Reg. No. :E01-1907270932
	Sample Reg. Date :27-07-2019
	Report Date :31-07-2019
	Report No. :ICE-1907311143
	NABL ULR No. :TC592619000011433F
	Customer Ref. No.:- Letter Dated :-

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	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	15
c.	Oxides of Nitrogen(NO ₂),g/kw-hr + hydrocarbon,g/kw-hr	IS:11255(P-7)	Max. 4.0	1.7
d.	Carbon Monoxide(CO),g/kw-hr	IS:13270	Max. 3.5	1.5

represents Customer Defined Fields

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 23.07.2019

REMARKS : N/A

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

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

Saurabh Sharma
31-07-2019
Reviewer

31-07-2019
Prena Kumar
[Authorized Signatory]

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	Sample Reg. No. :E01-1907270933 Sample Reg. Date :27-07-2019 Report Date :31-07-2019 Report No. :ICE-1907311144 NABL ULR No. :TC592619000011434F 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 Self Monitoring
(8) Air Pollution control measure	: Not applicable
(a) Status	:-
(b) Recovery of Material	:-
(9) Fugitive Emission,if any	: Nil

Observations

Flue Gas Temperature, °C,Avg.	: 335
Flue Gas Velocity(m/s),Avg.	: 15.41
Volumetric Flow Rate(Nm ³ /hr.)	: 854.65
Ambient Air Temperature, °C	: 41

TEST RESULTS

Saurabh
Saurabh Sharma
 31-07-2019
 Reviewer

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

31-07-2019
Prem Kumar
 [Authorized Signatory]

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)

Phone : (O) 0172-2561543, 2565825,

Web : www.itclabs.com, E-mail : customer@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
Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. No. :E01-1907270933
	Sample Reg. Date :27-07-2019
	Report Date :31-07-2019
	Report No. :ICE-1907311144
	NABL ULR No. :TC592619000011434F
	Customer Ref. No. :- Letter Dated :-

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
a.	Particulate Matter,g/kw-hr	IS:11255(P-1)	Max. 0.2	0.12
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	1.9
d.	Carbon Monoxide(CO),g/kw-hr	IS:13270	Max. 3.5	1.5

represents Customer Defined Fields

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 23.07.2019

REMARKS :N/A

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

Saurabh
Saurabh Sharma
31-07-2019
Reviewer

This Analysis Report is not
For consent Purpose of the Board

31-07-2019
Prem Kumar
[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

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3. Test certificates in full or parts shall not be used for promotional or Publicity purpose.
4. Results are not valid if any of the following conditions are not met:

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	Sample Reg. No. :E01-1910180543 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICE-1911020047 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	: As required
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)	: 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.	: 124
Flue Gas Velocity(m/s),Avg.	: 20.97
Volumetric Flow Rate(Nm ³ /hr.)	: 989831.54
Ambient Air Temperature, °C	: 34

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
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% Dry O ₂)	IS:11255(P-2)	Max. 600	659

Saurabh
Saurabh Sharma
02-11-2019
Reviewer

This Analysis is valid for consent Purpose of the Consent
02-11-2019
PremKumar
[Authorized Signatory]

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. It is hereby declared that the results of the test are not to be used for any other 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		Sample Reg. No. :E01-1910180543 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICE-1911020047 Customer Ref. No.:- Letter Dated :-		
c.	Oxides of Nitrogen (NO ₂), mg/Nm ³ (Corrected at 6% Dry O ₂)	IS:11255(P-7)	Max. 300	316
d.	Mercury(As Hg),mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ : 0.01)

*# represents Customer Defined Fields

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 16.10.2019

REMARKS :N/A

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

Saurabh
Saurabh Sharma
02-11-2019
Reviewer

02-11-2019
Prem Kumar
[Authorized Signatory]

Disclaimer:

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3. Test certificate or 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, Tam Taran	Sample Reg. No. :E01-1910180544 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICE-1911020046 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	: As required
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)	: 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.	: 120
Flue Gas Velocity(m/s), Avg.	: 20.50
Volumetric Flow Rate(Nm ³ /hr.)	: 977495.29
Ambient Air Temperature, °C	: 34

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
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% Dry O ₂)	IS:11255(P-2)	Max. 600	619

Saurabh
 Saurabh Sharma
 02-11-2019
 Reviewer

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

02-11-2019
 Prem Kumar
 [Authorized Signatory]

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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		Sample Reg. No. : E01-1910180544 Sample Reg. Date : 18-10-2019 Report Date : 02-11-2019 Report No. : ICE-1911020046 Customer Ref. No. :- Letter Dated :-		
c.	Oxides of Nitrogen (NO ₂), mg/Nm ³ (Corrected at 6% Dry O ₂)	IS:11255(P-7)	Max. 300	300
d.	Mercury (As Hg), mg/Nm ³	USEPA Method	Max. 0.03	BLQ(LOQ: 0.01)

*# represents Customer Defined Fields

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 16.10.2018

REMARKS :N/A

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

Saurabh
Saurabh Sharma
 02-11-2019
 Reviewer

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

02-11-2019
Prem Kumar
 [Authorized Signatory]

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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	Sample Reg. No. :E01-1910180549 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICE-1911020065 NABL ULR No. :TC592619000014796F 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 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
Diameter of the Stack(cm)	: 127.5
(6) Sampling Duration(minutes)	: 52
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.	: 10.54
Volumetric Flow Rate(Nm ³ /hr.)	: 44502.46
Ambient Air Temperature, °C	: 35

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.	64

Saurabh
Saurabh Sharma
 02-11-2019
 Reviewer

*This Analyser Report is not Valid
 For consent Purpose of the EPMI*

02-11-2019
PremKumar
 [Authorized Signatory]

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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 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadar Sahib, Tarn Taran	Sample Reg. No. : E01-1910180549
	Sample Reg. Date : 18-10-2019
	Report Date : 02-11-2019
	Report No. : ICE-1911020065
	NABL ULR No. : TC592619000014796F
	Customer Ref. No.:- Letter Dated :-

*# represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 15.10.2019

REMARKS :N/A

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

Saurabh
Saurabh Sharma
 02-11-2019
 Reviewer

The Analysis Report is not Valid for consent Purpose of the client

02-11-2019
PremKumar
 [Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

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

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4. If outside is not mentioned in the report, it shall be assumed to be as per the standard.

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	Sample Reg. No. :E01-1910180550
	Sample Reg. Date :18-10-2019
	Report Date :02-11-2019
	Report No. :ICE-1911020045
	NABL ULR No. :TC592619000014795F
	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	: -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
Diameter of the Stack(cm)	: 81.5
(6) Sampling Duration(minutes)	: 40
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.	: 45
Flue Gas Velocity(m/s),Avg.	: 14.03
Volumetric Flow Rate(Nm ³ /hr.)	: 23900.03
Ambient Air Temperature, °C	: 34

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.	58

Saurabh
Saurabh Sharma
 02-11-2019
 Reviewer

This Report is not Valid
 For consent Purpose of the Board

02-11-2019
Prem Kumar
 [Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(NABL Approved & ISO 9001:2015 Certified Laboratory)
 (A Government Approved Test House)
 36, Industrial Area, Phase-I, Parbhikula-134109 (Haryana)
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3. Test certificates in full or part shall not be used for promotional or publicity purpose.
4. If sample is not consented before analysis, it will be returned to you within 7 days.



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	Sample Reg. No. :E01-1910180550
	Sample Reg. Date :18-10-2019
	Report Date :02-11-2019
	Report No. :ICE-1911020045
	NABL ULR No. :TC592619000014795F
	Customer Ref. No.:-
	Letter Dated :-

*# represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 15.10.2019

REMARKS :N/A

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

This Analysis Report is not Valid
For consent Purpose of the

Saurabh Sharma
02-11-2019
Reviewer

02-11-2019
PremKumar
[Authorized Signatory]

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 1 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tam Taran	Sample Reg. No. :E01-1910180547
	Sample Reg. Date :18-10-2019
	Report Date :02-11-2019
	Report No. :ICE-1911020128
	NABL ULR No. :TC592619000014851F
	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	: -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
Diameter of the Stack(cm)	: 51.4
(6) Sampling Duration(minutes)	: 44
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.	: 45
Flue Gas Velocity(m/s),Avg.	: 12.70
Volumetric Flow Rate(Nm ³ /hr.)	: 8605.09
Ambient Air Temperature, °C	: 34

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.	45

Saurabh
Saurabh Sharma
 02-11-2019
 Reviewer

This Analytical Report is not valid
 For consent Purpose of the Board
 02-11-2019
PremKumar
 [Authorized Signatory]

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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 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. No. :E01-1910180547 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICE-1911020128 NABL ULR No. :TC592619000014851F Customer Ref. No.:- Letter Dated :
---	--

represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 15.10.2019

REMARKS :N/A

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

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

Saurabh Sharma
Saurabh Sharma
02-11-2019
Reviewer

02-11-2019
Prem Kumar

[Authorized Signatory]

Interstellar Testing Centre Pvt. Ltd.

(ISO 9001:2015 & 14001:2015) (IAS 18001:2017) Certified Laboratory
(A Government Approved Test House)
86, Industrial Area, Phase-I, Panchkula-134109 (Haryana)
Phone : (01) 0172-2561543, 2565825
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3. Test certificates in full or parts shall not be used for promotional or publicity purpose
4. It is hereby declared that the results of the test are not to be used for any other 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	Sample Reg. No. :E01-1910180548 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICE-1911020044 NABL ULR No. :TC592619000014794F 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	: -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
Diameter of the Stack(cm)	: 51.4
(6) Sampling Duration(minutes)	: 44
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.	: 42
Flue Gas Velocity(m/s),Avg.	: 12.4
Volumetric Flow Rate(Nm ³ /hr.)	: 8522.88
Ambient Air Temperature, °C	: 35

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.	55

Saurabh
Saurabh Sharma
 02-11-2019
 Reviewer

This Analysis Report is not Valid
 For consent Purpose of the Board
 02-11-2019
PremKumar
 [Authorized Signatory]



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	Sample Reg. No. :E01-1910180548 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICE-1911020044 NABL ULR No. :TC592619000014794F Customer Ref. No.:- Letter Dated :-
---	---

*# represents Customer Defined Fields

NOTE : NA- Not Applicable, Requirements as per EPA Act 1986/PCLS/2010, Sample collected by lab rep. on dated 15.10.2019

REMARKS :N/A

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

Saurabh
Saurabh Sharma
02-11-2019
Reviewer

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For consent Purpose of the State

02-11-2019
PremKumar

[Authorized Signatory]

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4. If sample is not consumed during analysis, it will be returned to the client.

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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	Sample Reg. No. :E01-1910180545
	Sample Reg. Date :18-10-2019
	Report Date :02-11-2019
	Report No. :ICE-1911020064
	NABL ULR No. :TC592619000014792F
	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	: 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)	: 68
Purpose of Monitoring	: For Self monitoring
(8) Air Pollution control measure	: Not Applicable
(a) Status	: -
(b) Recovery of Material	: -
(9) Fugitive Emission,if any	: Nil

Observations

Flue Gas Temperature, °C,Avg.	: 370
Flue Gas Velocity(m/s),Avg.	: 16.58
Volumetric Flow Rate(Nm ³ /hr.)	: 868.31
Ambient Air Temperature, °C	: 34

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
a.	Particulate Matter,g/kw-hr	IS:11255(P-1)	Max. 0.2	0.13
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Not Specified	18

Saurabh
Saurabh Sharma
02-11-2019
Reviewer

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For personal Purpose of the board

02-11-2019
Prem Kumar
[Authorized Signatory]

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Page 2 of 2

Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. No. :E01-1910180545 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICE-1911020064 NABL ULR No. :TC592619000014792F Customer Ref. No.:- Letter Dated :-		
c.	Oxides of Nitrogen(NO ₂),g/kw-hr + hydrocarbon,g/kw-hr	IS:11255(P-7)	Max. 4.0	2.1
d.	Carbon Monoxide(CO),g/kw-hr	IS:13270	Max. 3.5	1.1

*# represents Customer Defined Fields

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 17.10.2019

REMARKS :N/A

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

Saurabh
Saurabh Sharma
 02-11-2019
 Reviewer

02-11-2019
PremKumar
 [Authorized Signatory]

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Issued To GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. No. :E01-1910180546 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICE-1911020048 NABL ULR No. :TC592619000014793F 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-II (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)	: 61
Purpose of Monitoring	: For Self monitoring
(8) Air Pollution control measure	: Not Applicable
(a) Status	:-
(b) Recovery of Material	:-
(9) Fugitive Emission,if any	: Nil
Observations	
Flue Gas Temperature, °C,Avg.	: 380
Flue Gas Velocity(m/s),Avg.	: 18.38
Volumetric Flow Rate(Nm ³ /hr.)	: 973.62
Ambient Air Temperature, °C	: 35

TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
Test Details :				
1.	General Parameters			
a.	Particulate Matter,g/kw-hr	IS:11255(P-1)	Max. 0.2	0.10
b.	Sulphur Dioxide(SO ₂),mg/Nm ³	IS:11255(P-2)	Not Specified	22

Saurabh Sharma
02-11-2019
Reviewer

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02-11-2019
PremKumar
[Authorized Signatory]

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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	Sample Reg. No. :E01-1910180546
	Sample Reg. Date :18-10-2019
	Report Date :02-11-2019
	Report No. :ICE-1911020048
	NABL ULR No. :TC592619000014793F
	Customer Ref. No. :-
	Letter Dated :-

c.	Oxides of Nitrogen(NO ₂),g/kw-hr + hydrocarbon,g/kw-hr	IS:11255(P-7)	Max. 4.0	2.3
d.	Carbon Monoxide(CO),g/kw-hr	IS:13270	Max. 3.5	1.3

represents Customer Defined Fields

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 17.10.2019

REMARKS :N/A

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

Saurabh

Saurabh Sharma
02-11-2019
Reviewer

02-11-2019

Prem Kumar

[Authorized Signatory]

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4. If you have any queries...



Envirochem Testing Lab & Research Centre

Govt. Approved Lab

An ISO 9001 : 2008 & OSHAS 18001 : 2007 certified
Plot No: 165, 1st Floor Sector - 25 Part-II, HUDA, Panipat
M.+91-90348-91129, Ph. 0180-4022388
Email : envirochemtestinglab@gmail.com

TEST REPORT

Report No	ETL/ PNP/2084	Report Date	07.02.2020	Doc No.	ETL/QF/7.8/01
Issue to: M/s GVK Power (Goindwal Sahib) Ltd. Kapurthala Road, Goindwal Sahib, Distt. Tarn Taran - 143422		Party's Ref No: Nil Work Order No: 2084 Period of Testing: 01.02.2020 – 07.02.2020			

SAMPLE PARTICULARS

1	Name of the Unit	: GVK Power (Goindwal Sahib) Ltd.
2	Type of Industry	: Thermal Power Plant
3	Type of Sample	: DG stack (750 KVA- II)
4	Sampling Point	: From Porthole
5	Date & Time of Sampling	: 30.01.2020
6	Purpose of Analysis	: Self Monitoring
7	Sample Collected by / Supplied by	: By Lab Representative
8	Method of sampling	: IS 11255 (P – 1 & 3)

OBSERVATIONS

1.	Metering Temperature (°C)	: 20
2.	Stack Temperature (°C)	: 270
3.	Velocity (m/sec)	: 12.36
4.	Source of Emission & capacity	: DG stack (750 KVA -II)
5.	Diameter of Stack	: 20.32 cm
6.	Height of Stack from Ground Level	: 12 m
7.	Type of Fuel Used	: HSD
8.	Duration of sampling	: 45 min
9.	Emission Control (if any)	: Nil
10.	Fugitive Emission	: Nil
11.	General sensory observation	: Normal
12.	Recovery of material	: Nil
13.	Volumetric flow rate VFR (NM ³ /Hr)	: 761

TEST RESULTS

Sr. No.	Parameters	Results	Standard Limits CPCB	Protocol Used
1.	Particulate Matter (PM), (gm/Kwh)	0.12	0.2	IS 11255 (Part 1) 1985
2.	Oxides of Nitrogen (NO ₂), (gm/Kwh)	1.09	-	IS 11255 (Part 7) 200
3.	Carbon Monoxide (CO), (gm/Kwh)	0.48	3.5	ETL/SOP/S – 06
4.	Hydrocarbons (CH ₄), (gm/KWh)	0.12	-	IS: 13270 1992
5.	Total Hydrocarbons + NO ₂	1.21	4.0	-

Remarks: Analysed Parameters meet the Standards Limits.

*****End Report*****

P. Winder
Manager Lab./ Sr. Chemist

REPORT IS VALID
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NOT FOR CONSENT PURPOSES.



FACILITIES : Drinking Water, Waste Water, Air Quality, Ambient Air, Stack Emission, Soil, Sludge & Environment Consultancy Etc.

NOTE

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2. Results listed above related to the only tested samples. Endorsement of the same is neither inferred nor implemented.
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Govt. Approved Lab

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Plot No. 165, 1st Floor Sector - 25 Part-II, HUDA, Panipat
M. 011-90346-01129, Ph. 0180-4021388
Email : envirochemtestinglab@gmail.com

TEST REPORT

Report No	ETL/ PNP/2085	Report Date	07.02.2020	Doc No.	ETL/QF/7.8/01
Issue to: M/s GVK Power (Goindwal Sahib) Ltd. Kapurthala Road, Goindwal Sahib, Distt. Tarn Taran - 143422		Party's Ref No: Nil Work Order No: 2085 Period of Testing: 01.02.2020 – 07.02.2020			

SAMPLE PARTICULARS

1	Name of the Unit	:	GVK Power (Goindwal Sahib) Ltd.
2	Type of Industry	:	Thermal Power Plant
3	Type of Sample	:	DG stack (750 KVA- I)
4	Sampling Point	:	From Porthole
5	Date & Time of Sampling	:	30.01.2020
6	Purpose of Analysis	:	Self Monitoring
7	Sample Collected by / Supplied by	:	By Lab Representative
8	Method of sampling	:	IS 11255 (P – 1 & 3)

OBSERVATIONS

1.	Metering Temperature (°C)	:	20
2.	Stack Temperature (°C)	:	275
3.	Velocity (m/sec)	:	12.11
4.	Source of Emission & capacity	:	DG stack (750 KVA -I)
5.	Diameter of Stack	:	20.32 cm
6.	Height of Stack from Ground Level	:	12 m
7.	Type of Fuel Used	:	HSD
8.	Duration of sampling	:	45 min
9.	Emission Control (if any)	:	Nil
10.	Fugitive Emission	:	Nil
11.	General sensory observation	:	Normal
12.	Recovery of material	:	Nil
13.	Volumetric flow rate VFR (NM ³ /Hr)	:	739

TEST RESULTS

Sr. No.	Parameters	Results	Standard Limits CPCB	Protocol Used
1.	Particulate Matter (PM), (gm/Kwh)	0.15	0.2	IS 11255 (Part 1) 1995
2.	Oxides of Nitrogen (NO ₂), (gm/Kwh)	1.11	-	IS 11255 (Part 7) 2005
3.	Carbon Monoxide (CO), (gm/Kwh)	0.45	3.5	ETL/SOP/S – 06
4.	Hydrocarbons (CH ₄), (gm/KWh)	0.11	-	IS: 13270 1992
5.	Total Hydrocarbons + NO ₂	1.22	4.0	-

Remarks: Analysed Parameters meet the Standards Limits.

*****End Report*****

P. K. Singh
Manager Lab./ Sr. Chemist

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NOT FOR CONSENT PURPOSES.

(Dr. Rajender Kumar)
MD
Rajender Kumar

Facilities: Drinking Water, Waste Water, Air Quality, Ambient Air, Stack Emission, Soil, Sludge & Environment Consultancy Etc.

NOTE

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2. Results listed above related to the only tested samples. Enforcement of the same is neither inferred nor implied.
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Email : envirochemtestinglab@gmail.com

TEST REPORT

Report No	ETL/ PNP/2086	Report Date	07.02.2020	Doc No.	ETL/QF/7.8/01
Issue to: M/s GVK Power (Goindwal Sahib) Ltd. Kapurthala Road, Goindwal Sahib, Distt. Tam Taran - 143422		Party's Ref No: Nil Work Order No: 2086 Period of Testing: 01.02.2020 - 07.02.2020			

SAMPLE PARTICULARS

1	Type of sample	:	SEWAGE WATER
2	Point of Sample Collection	:	STP Inlet and Outlet
3	Date of sample collection/ received	:	31.01.2020
4	Purpose of analysis	:	Self Monitoring
5	Sample collected/ supplied by	:	By Lab Representative
6	Quantity of Sample	:	5 Litre
7	Method of Sampling	:	IS 3025 (P - 1) 1987

TEST RESULTS

Sr. No.	Parameters	Inlet	Outlet	General Std. Limits For Discharge			Protocol used
				Inland Surface Water	Sewerage Water	Irrigation	
1.	Appearance	Blackish	Colourless	--	-	-	IS 3025 (P-4) 1987
2.	Odour	Foul	Odourless	--	-	-	IS 3025 (P-5) 1987
3.	pH	7.29	7.01	5.5-9.0	5.5-9.0	5.5-9.0	IS 3025 (P-11) 1983
4.	COD, mg/L	515	17.39	250	-	-	IS 3025 (P-58) 2006
5.	BOD at 27°C for 3 Days, mg/L	160.20	8.25	30	350	100	IS 3025 (P-44) 1983
6.	Total Suspended Solids, mg/L	220	13	100	600	200	IS 3025 (P-17) 1984
7.	Oil & Grease, mg/L	2.0	< 2.0	10	20	10	IS 3025 (P-39) 1981

P. K. K.
Manager Lab./ Sr. Chemist

(Dr. Rajender Kumar)



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NOT FOR CONSENT PURPOSES.

Facilities : Drinking Water, Waste Water, Air Quality, Ambient Air, Stack Emission, Soil, Sludge & Environment Casueffancy Etc.

NOTE

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2. Results listed above related to the only tested samples. Endorsement of the same is neither inferred nor implemented.
3. The test report shall not be reproduced full or in part and cannot be used as proof in the court of law.
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Govt. Approved Lab

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Email : envirochemtestinglab@gmail.com

TEST REPORT

Report No	ETL/ PNP/2087	Report Date	07.02.2020	Doc No.	ETL/QF/7.8/01
Issue to: M/s GVK Power (Goindwal Sahib) Ltd. Kapurthala Road, Goindwal Sahib, Distt. Tarn Taran - 143422		Party's Ref No: Nil Work Order No: 2087 Period of Testing: 01.02.2020 – 07.02.2020			

SAMPLE PARTICULARS

1	Type of sample	:	ASH POND EFFLUENT
2	Point of Sample Collection	:	Settling Pond
3	Date of sample collection/ received	:	31.01.2020
4	Purpose of analysis	:	Self Monitoring
5	Sample collected/ supplied by	:	By Lab Representative
6	Quantity of Sample	:	5 Litre
7	Method of Sampling	:	IS 3025 (P - 1) 1987

TEST RESULTS

Sr. No.	Parameters	Results	Standard Limits	Protocol used
1.	pH	7.01	6.5 – 8.5	IS 3025 (P-11) 1983
2.	Total Suspended Solids, mg/L	16	100	IS 3025 (P-17) 1984
3.	Aluminium (as Al), mg/L	ND (DL-0.03)	Not Specified	IS 3025 (P-55) : 2003
4.	Oil & Grease, mg/L	2.0	20	IS 3025(P-39) 1991
5.	Arsenic (as As), mg/L	ND (DL-0.01)	Not Specified	IS 3025 (P-37) : 1988
6.	Copper (as Cu), mg/L	0.12	Not Specified	IS 3025 (P-42) : 1992
7.	Lead (as Pb), mg/L	ND (DL-0.05)	Not Specified	IS 3025 (P-47) : 1994
8.	Nickel as Ni, mg/L	ND (DL-0.01)	Not Specified	IS 3025 (P-54) : 2003
9.	Total Chromium as Cr, mg/L	ND (DL-0.01)	Not Specified	IS 3025 (P-52) : 2003
10.	Cadmium (as Cd), mg/L	ND (DL-0.003)	Not Specified	IS 3025 (P-41) : 1998
11.	Mercury as Hg, mg/l.	ND (DL-0.001)	Not Specified	IS 3025 (P-48)
12.	Zinc as Zn, mg/L	0.11	Not Specified	IS 3025 (P-49) : 1994

Remarks: Standard Limits as per CPCB guidelines for Thermal Power Plants.

[Signature]
Manager Lab./ Sr. Chemist

REPORT IS VALID
ONLY FOR SELF MONITORING PURPOSES &
NOT FOR CONSENT PURPOSES.

[Signature]
(Dr. Rajender Kumar)
MD
Date: 07.02.20
PIMPAL

Facilities : Drinking Water, Waste Water, Air Quality, Ambient Air, Stack Emission, Soil, Sludge & Environment Consultancy Etc.

NOTE

1. Samples shall be disposed off after 21 days issue of test report unless specified.
2. Results infered above related to the only tested samples. Enforcement of the same is neither inferred nor implemented.
3. The test report shall not be reproduced full or in part and cannot be used as proof in the court of law.
4. The test report should not be used as any advertising agency/media without the written approval of laboratory.

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

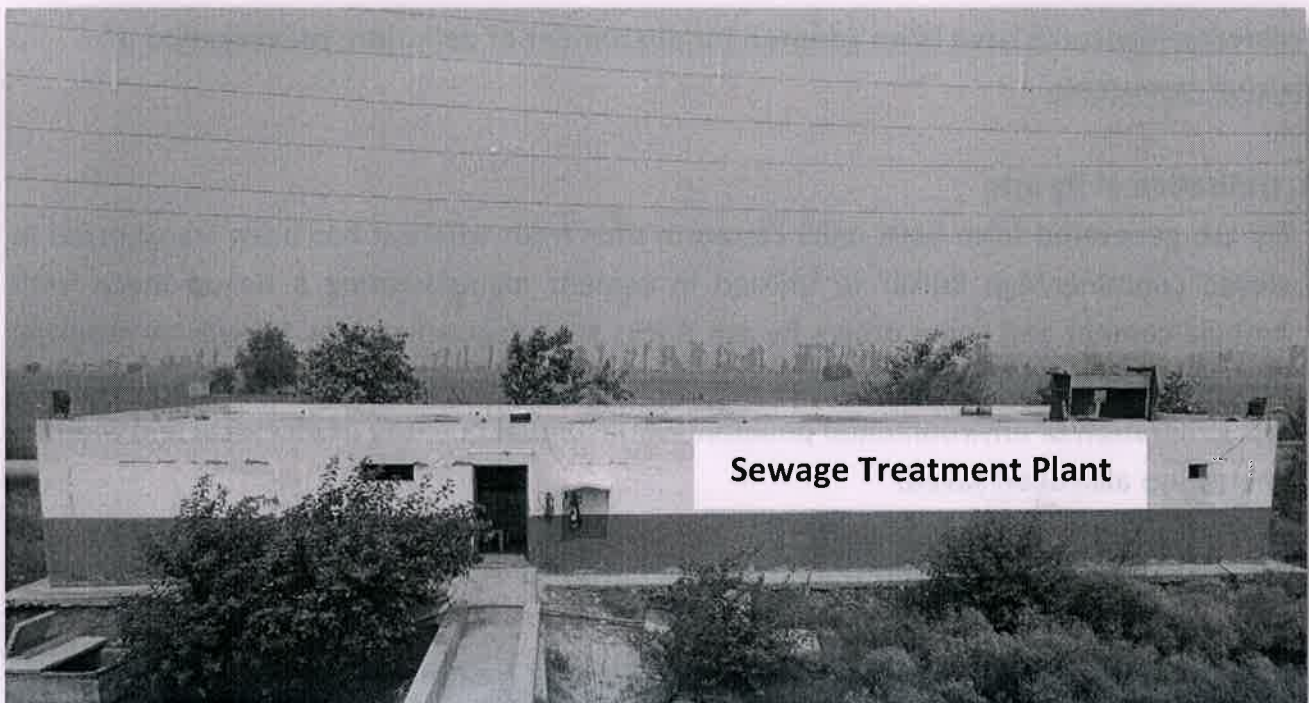
The sewage collected from the different part of colony is being collected in raw sewage tank for homogenization of raw sewage water. Then this homogenized sewage water



For GVK Power (Goindwal Sahib) Ltd.

Reika
(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

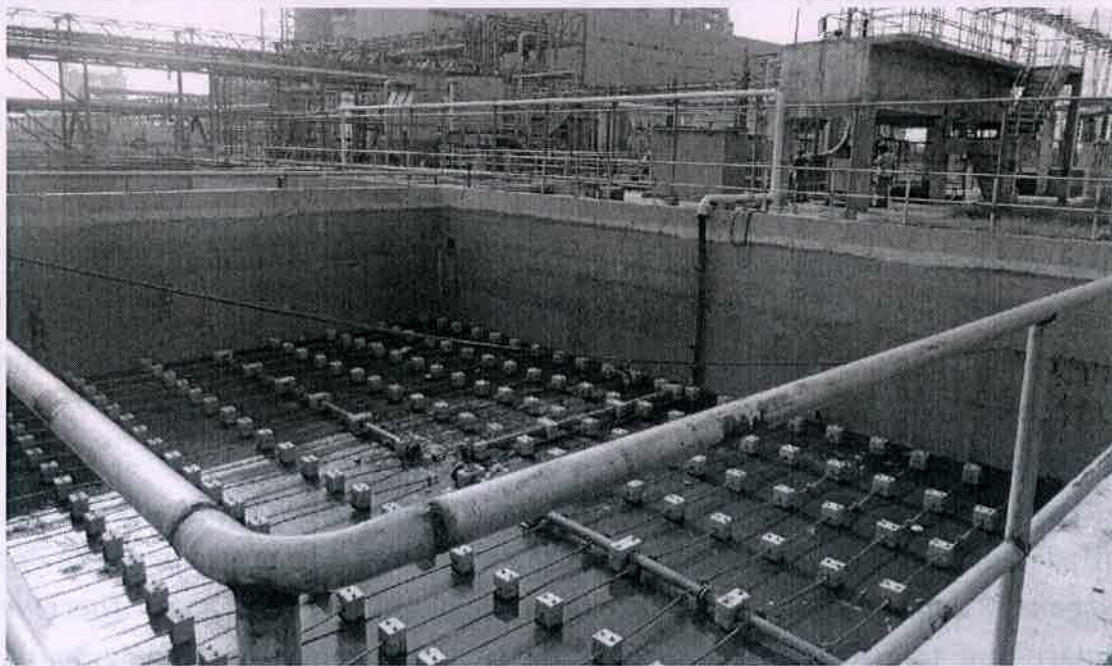
The Effluent treatment plant has installed to treat the effluent generated from 2 X 270 MW coal base Thermal Power Plant of M/s. GVK Power (Goindwal Sahib) Ltd. at Goindwal Sahib Punjab and adopted **Zero Liquid Discharge (ZLD)**. Treated water will be reused for dust suppression and Ash handling System,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



For GVK Power (Goindwal Sahib) Ltd.

Tejinder

(Authorized Signatory)



Effluent Treatment Plant

We are not lettering out the treated effluent out of plant premises and Treated effluent is being reused for dust suppression and Ash handling system at plant site only, thus reducing the requirement of fresh water.

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



For GVK Power (Goindwal Sahib) Ltd.

Neelam P.
(Authorized Signatory)

Online /offline effluent monitoring system-

I- **Online Continuous effluent Monitoring System (OCEMS)** is installed at both ETP & STP to conform the discharge standards of parameters (pH, TSS, BOD, COD and Oil & Grease) prescribed by CPCB/PPCB/MoEF. In addition to that, **one CCTV camera is installed at discharge point of treated effluent** for monitoring purpose and both OCEMS/CCTV Camera are well connected with CPCB/PPCB web portal to transmit the real time monitoring data for the same as directed by Board.

II- **Offline monitoring-**

We have engaged PPCB approved Laboratories namely ITC Lab, Panchkula for sampling and testing of treated effluent on monthly basis.

Additionally, we are testing the effluent on daily basis at our own laboratories which is certified by NABL for taking corrective action on time if any deviation.

4. Air Pollution Control Measures-

In order to regulate the air pollution at our industry all necessary equipment's has been installed adequately as and where it is required as per Clearances granted by MoEF and PPCB (Punjab Pollution Control Board) as mentioned under

- To control the air emission after combustion of coal, one twin flue RCC chimney of 275m height bi-flue stack is constructed to ensure effective dispersion of emission into the atmosphere.
- Air pollution control system as High Efficiency Electrostatic Precipitators (ESPs) have installed in 2 nos i.e one for each boiler to ensure that particulate emission does not exceed 50 mg/Nm³ from each unit as norms specified by MoEF. Therefore the impact due to particulate emission due to burning of coal leading to raise of suspended particulate concentration in the ambient air is found to be negligible.
- From ESP hoppers, the dry fly ash is conveyed into closed vessels i.e ash silos. Two nos. of ash silos is constructed for each unit as per qty. generated from plant. From there, ash disposed through closed container (ash bulkers) to the end users as Cement manufacturing units.
- For processing emission control, adequate dust controlling devices as bag filters is installed as and where required.
- Fugitive dust control-



For GVK Power (Goindwal Sahib) Ltd.

Tejinder

(Authorized Signatory)

For control of fugitive dust, water spray arrangement has been provided to spray water all around the coal stock piles to suppress the dust and wet the coal pile compacting to minimizing the dust nuisance.

To control the fugitive emission from roads at plant, Regular sprinkling and spraying of water is being done through dedicated water tankers for control of any type of fugitive dust arises from roads.

Online/Offline air emission monitoring system.

I- **Online Continuous Emission Monitoring System** is installed to each boiler for monitoring of boiler flue gases parameters namely SOX, NOX, CO & PM (Particulate Matter) and Temperature, Pressure & Flow to conform the norms prescribed by Board/MoEF.

In addition to that, **one CCTV camera is installed** for stack monitoring purpose and both OCEMS/CCTV Camera are well connected with CPCB/PPCB web portal to transmit the real time monitoring data for the same as directed by Board

II- **Offline monitoring system-** Additionally, we have installed 8 nos. of Monitoring stations out of that **4 nos inside the plant premises** and **4 nos in nearby villages namely hansawal, mundi , Goindwalsahib and Verowal with consultation of PPCB**. We have engaged PPCB authorized Laboratories for continuous monitoring of ambient air quality at all locations. *This proactive approach is for taking corrective action if any deviation found in the results.* In addition to that, Mercury (Hg) parameter is also being monitored in ambient air in the core as well as buffer zone and records maintained for the same at site.

5. **Ash water recovery system** has installed for Ash handling system reducing the requirement of fresh water for ash disposal.

6. Implementation of Rainwater harvesting system is under progress.

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



For GVK Power (Goindwal Sahib) Ltd.

(Authorized Signatory)

8. 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 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 preferred for the plantation having following characteristics-

- 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 species 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 also planted some fruit bearing species like Mango (*Mangifera Indica*), Plum (*Prunus*), Pear (*Pyrus*), Peach (*Prunus Persica*) & Pomegranate (*Punica granatum*) etc to maintain the Bio diversity and ecological balance.

We have developed green belt in scientific manner as per CPCB guidelines. A curtain of trees covering a width of 80-100 m along periphery of plant is planted. The green belt is designed as

A- Primary Zone

This zone is the nearest one to the emission sources. Where the ambient pollutant concentration is higher. The trees planted here have dense spreading canopy. The trees is closed set with a spacing of 2-3 m between trees and width of this zone is 20-30m.



For GVK Power (Goindwal Sahib) Ltd.

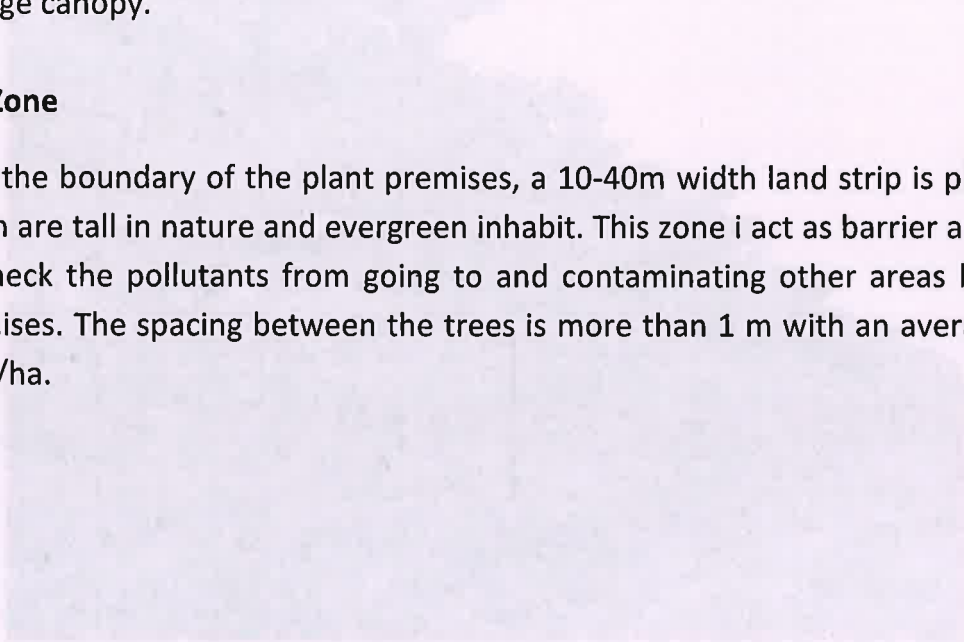
Veikal P.
(Authorized Signatory)

B- Secondary Zone

Outer to the above primary zone , 20-30 m width wide strip of land is planted with trees which are moderately tolerant to the pollutants but are endowed with first growing, dense foliage canopy.

C-Curtain Zone

All along the boundary of the plant premises, a 10-40m width land strip is planted with trees which are tall in nature and evergreen inhabit. This zone i act as barrier and as far as possible check the pollutants from going to and contaminating other areas beyond the plant premises. The spacing between the trees is more than 1 m with an average density 2500 trees/ha.



For GVK Power (Goindwal Sahib) Ltd.

Neelam D.

(Authorized Signatory)

PHOTOGRAPHS OF EXISTING GREENBELT



East side of the plant



West side of the plant



For GVK Power (Goindwal Sahib) Ltd.

Veikal

(Authorized Signatory)



North side of the plant



South side of the plant



For GVK Power (Goindwal Sahib) Ltd.

Nikhil D.

(Authorized Signatory)



SW side of the plant



SE side of the plant



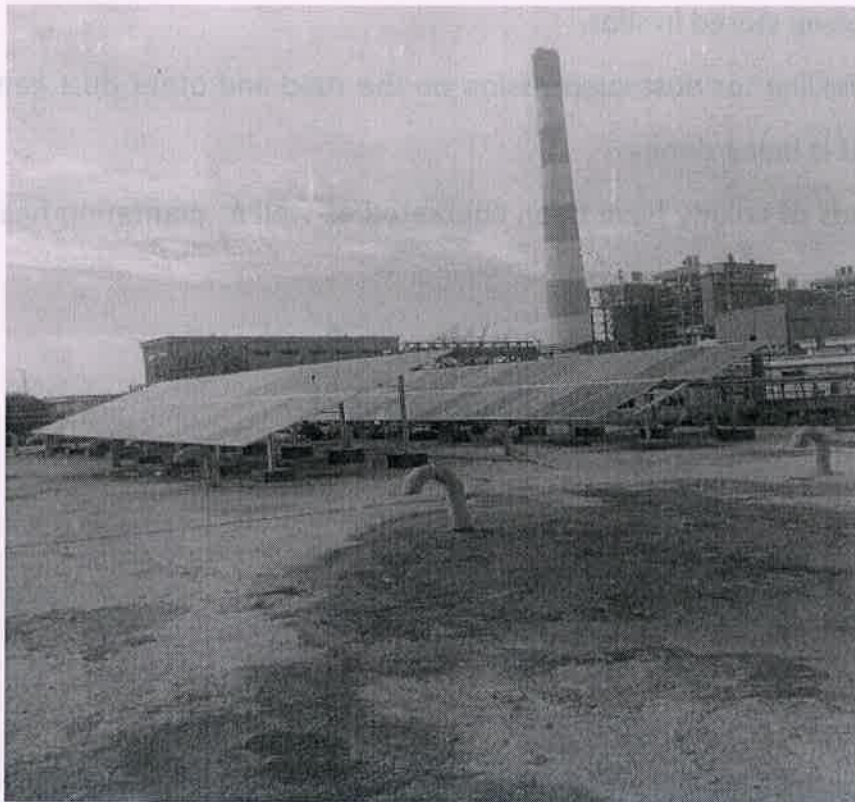
For GVK Power (Goindwal Sahib) Ltd.

Heikal S.

(Authorized Signatory)

9. Installed Solar Power Plant-

GVKPGSL is producing electricity by using fossil fuel as coal. In addition to that, GVKPGSL has initiated producing green energy from non-conventional resources of energy as Solar energy. We have installed more than 20 kw Solar Power Plant at our plant site to reduce the air emission and to save the natural resources. We have a plan to expand the existing capacity next year onwards. Some pics of Solar Power Plant is depicted below.

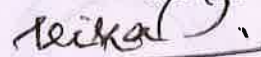


10. Scheduled maintenance and monitoring of Pollution Control Devices

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.



For GVK Power (Goindwal Sahib) Ltd.



(Authorized Signatory)

11. 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.

A handwritten signature in black ink, appearing to be 'Nikar', written over a horizontal line.

(Authorized Signatory)

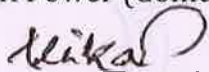
ADDITIONAL MEASURES / INVESTMENT PROPOSALS FOR ENVIRONMENTAL PROTECTION INCLUDING ABATEMENT POLLUTION, PREVENTION OF POLLUTION

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, 2019 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 , 2019 as well as "THE FESTIVAL OF TREES" VAN MAHOTSAV WEEK from 19.07.2019 to 25.07.2019 with organizing Tree Plantation Drive with 10,000 samplings with multiple varieties of Rebelia 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 Air
Pollution**



**WORLD
ENVIRONMENT
DAY**

**CHINA
2019**

UN 
environment

GVK 



BEAT AIR POLLUTION

**WORLD ENVIRONMENT DAY 5th JUNE, 2019
GVK POWER GOINDWAL SAHIB LTD.**

Tree Planting Campaign at GVKPGSL

GVK



*Lets Environment Pledge
together for planting tree*



gva

Tree Planting Campaign at GVKPGSL
Speech by GVK Executives

GVK



Tree Planting Campaign at GVKPGSI

GVK



FIND

Tree Planting Campaign at GVKPGSL



TRVD

Tree Planting Campaign at GVKPGSL

GVK



Tree Planting Campaign at GVKPGSL



Tree Planting Campaign at GVKPGSL, Initiated By
Globus Engineering Pvt. Ltd.



Tree Planting Campaign at GVKPGSL, Initiated By
Globus Engineering Pvt. Ltd.



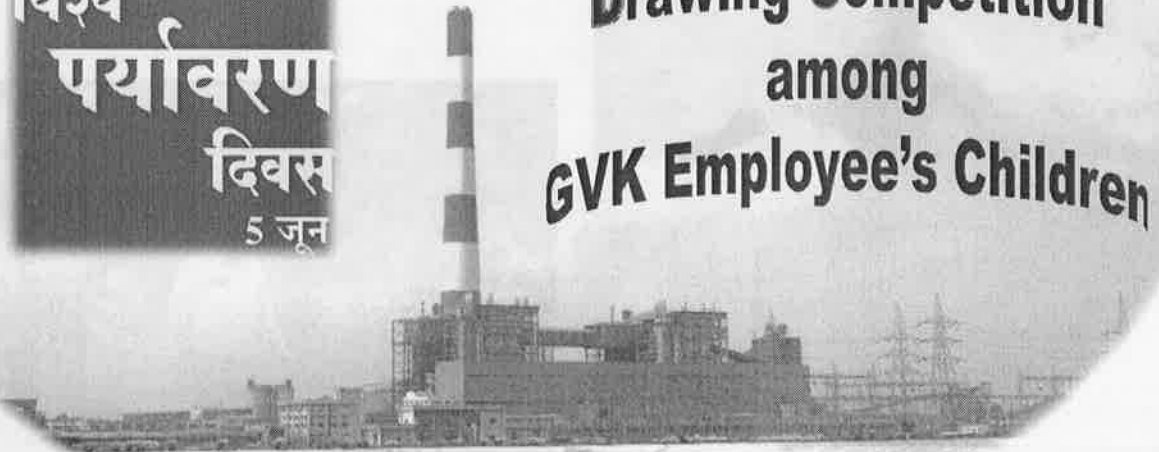
GVK

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**



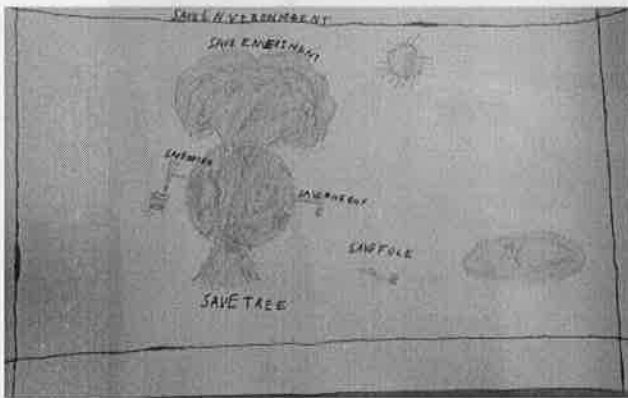
**Conducted Environment awareness programme through
Drawing Competition among GVK Employee's children at GVKPGSL**



**Conducted Environment awareness programme through
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GVKPGSL**

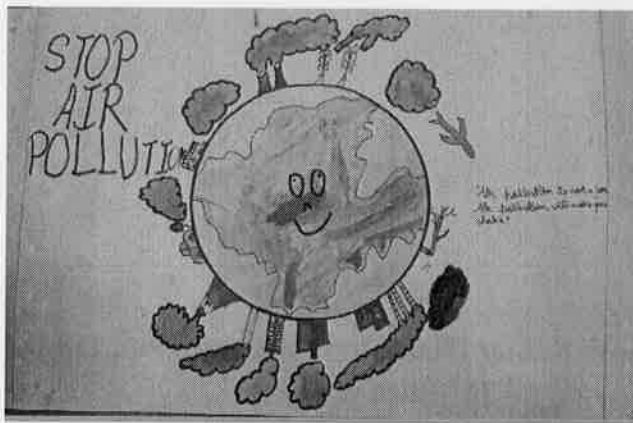


Topic- Save Environment
Amrita Padhy D/o Chintamani Padhy
(1st Prize winner) Class- 1st to 2nd

Topic- Green environment
Soham Gabhane S/o yogesh Gabhane (1st Prize winner)
Class – Nursery to UKG



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



Topic- Air Pollution Sources

**Abhinav Verma S/o Parveen verma
(1st Prize winner) Class- 3rd to 5th**

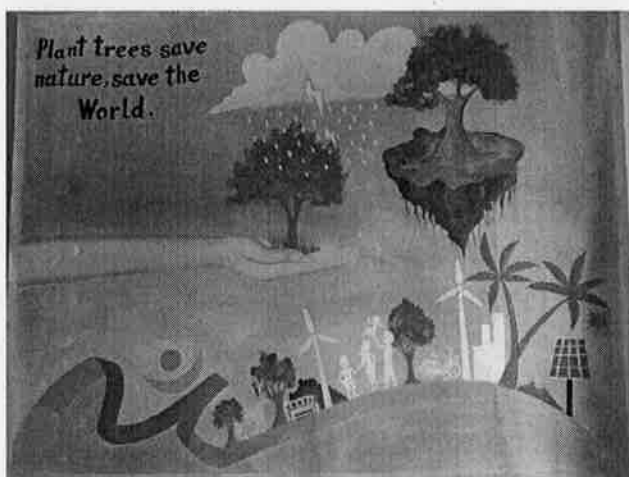
Topic- Beat Air Pollution

**Adhar Bhattacharya S/o Biplav
(1st Prize winner) Class – 6th to 10th**





**Conducted Environment awareness programme through
Drawing competition among Contractors workmen at GVKPGSL**



**Umesh Kumar (Simar Infrastructure Pvt. Ltd.)
(1st Prize winner)**



GVK POWER (GOINDWAL SAHIB) LIMITED, GOINDWAL SAHIB

World Environment Day , 5th June 2019

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



Conducted Environment awareness programme through Recitation/Speech among GVK Employees at GVKPGSL





Conducted Environment awareness programme through Recitation/Speech among GVK Employees at GVKPGSL



**Conducted Environment awareness programme through
a Play by Contractor's Workmen at GVKPGSL**

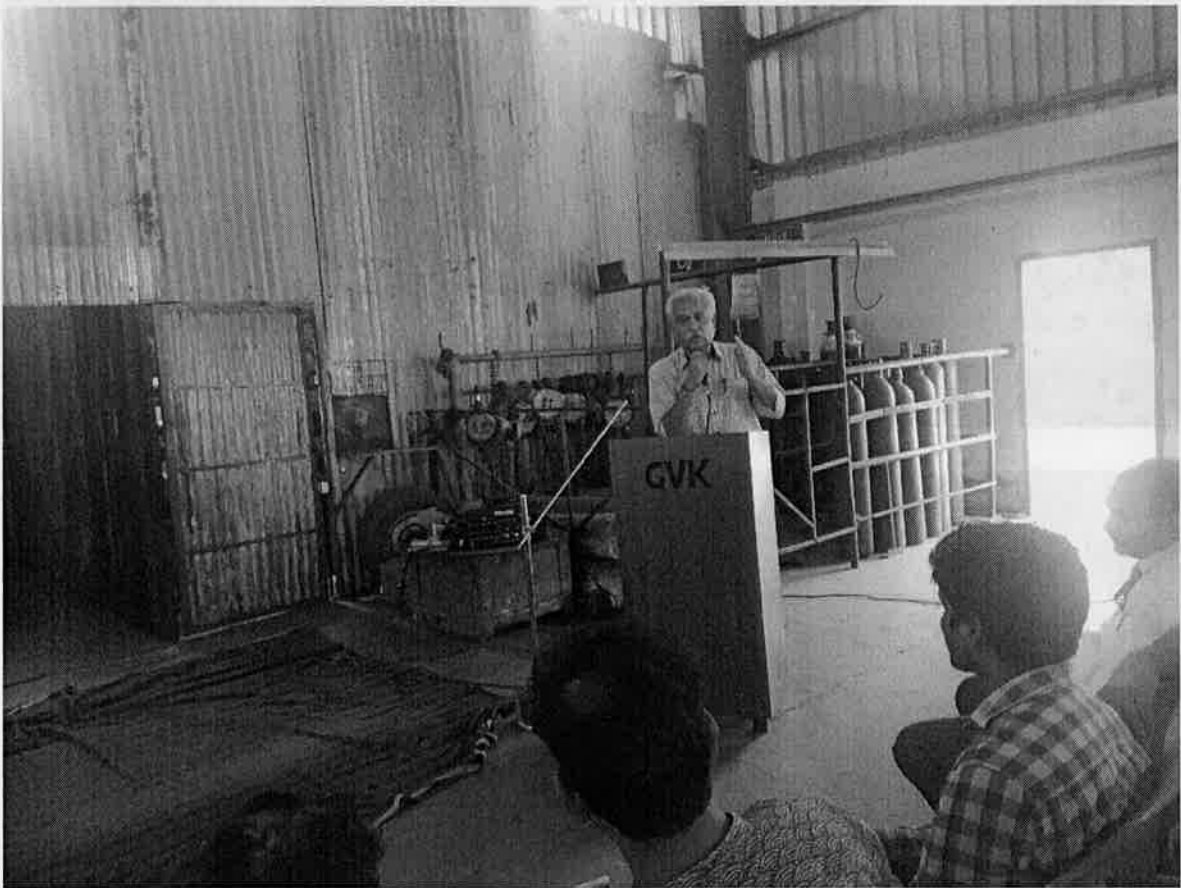




Valuable thoughts shared by GVK Executives During the Event



Valuable thoughts shared by Plant Head (Mr. V.C. Shukla) During the Event



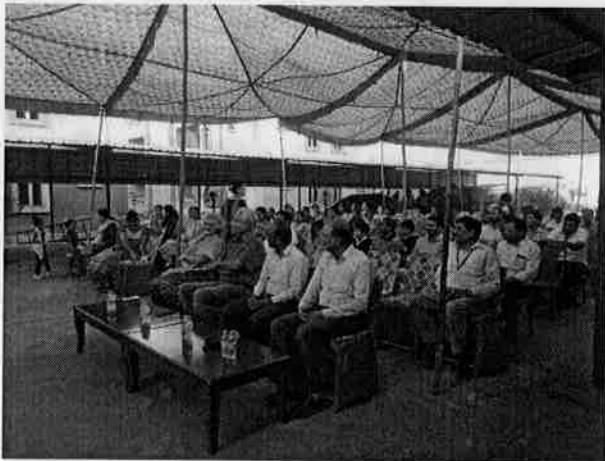
Conducted Environment awareness programme through Environmental Quiz  among GVK Employee's Families at GVKPGSL



Conducted Environment awareness programme through Environmental Quiz **GVK
among GVK Employee's Families at GVKPGSL**



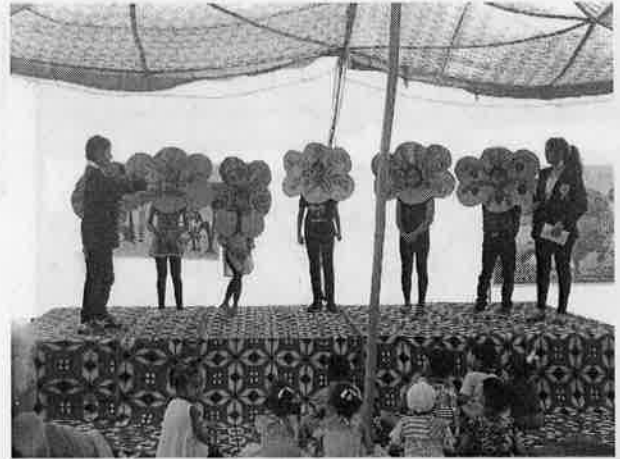
Concluding Function for environment Day 5th June, 2019 at GVKPGSL



Theme: Action Ki Panchayati

Skit Performed by children on concluding function.

GVK



Theme: Pedon Ki Panchayat!

Skit Performed by children on concluding function.

GVK



Theme: Pedon Ki Panchayat!

**Prize distributions by Sr. Executives
to the Drawing/Recitation/Poem/Speech/Quiz Competition Winner**



GVK

GVK

Prize distributions by Sr. Executives
to the Drawing/Recitation/Poem/Speech/Quiz Competition Winner



Prize distributions by Sr. Executives
to the Drawing/Recitation/Poem/Speech/Quiz Competition Winner




Prize distributions by Sr. Executives
to the Drawing/Recitation/Poem/Speech/Quiz Competition Winner




Prize distributions by Sr. Executives
to the Drawing/Recitation/Poem/Speech/Quiz Competition Winner



Prize distributions by Smt. Seema Shukla, President, Saheli Beas Kiran Club  to the Drawing/Recitation/Poem/Speech/Quiz Competition Winner

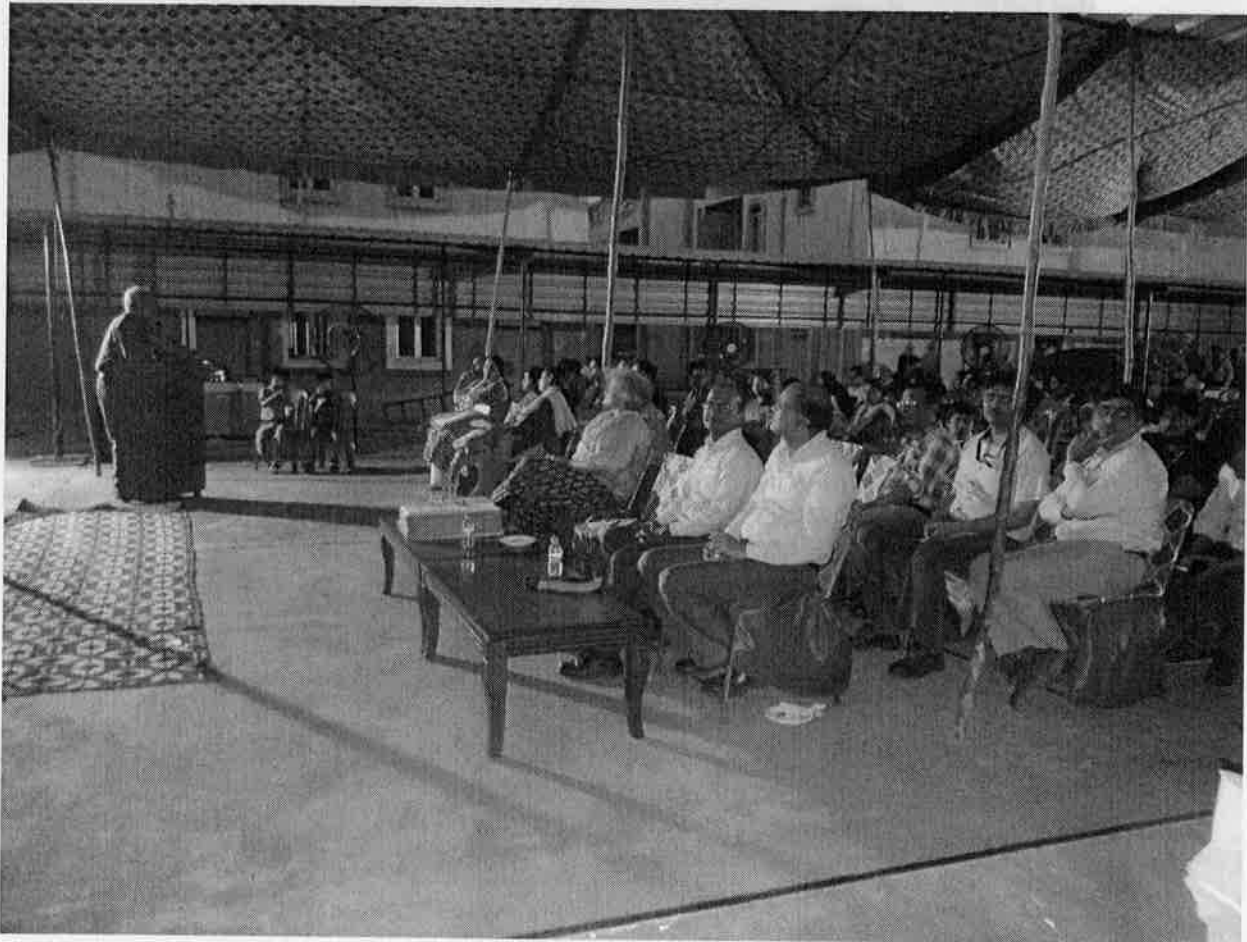


Prize distributions by Smt. Seema Shukla, President, Saheli Beas Kiran Club  to the Drawing/Recitation/Poem/Speech/Quiz Competition Winner



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

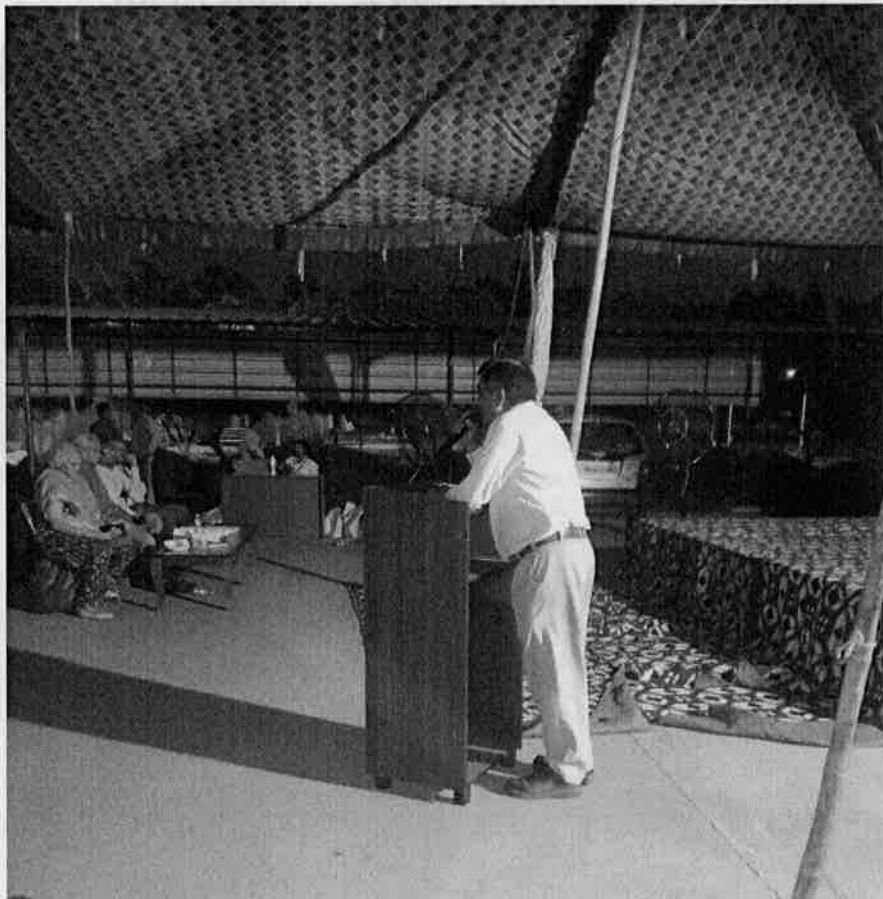
GVK



GVK

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

GVK





Thank you

GVK

GVK POWER (GOINDWALSAHIB) LIMITED.,

2X270 MW THERMAL POWER PROJECT, GOINDWALSAHIB, TARN TARAN, PUNJAB



PLANT A TREE,

THEME

वृक्ष लगाओ,

SAVE NATURE !

प्रकृति बचाओ !

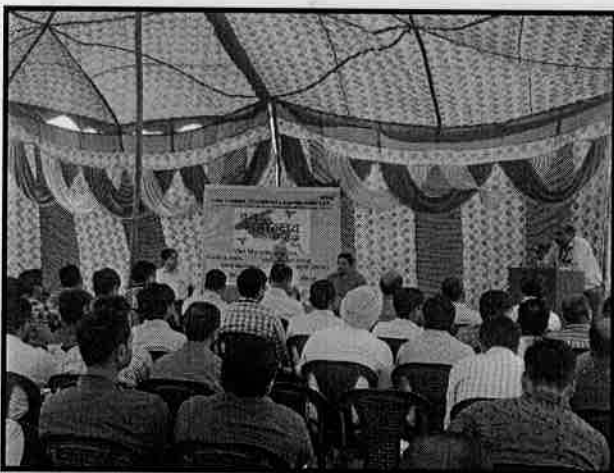
Dt. 19.07.2019 TO 25.07.2019

**VAN MAHOTSAV OPENING CEREMONY
AT GVK POWER (GOINDWAL SAHIB) LTD.**



**Welcoming the Chief
guest on this occasion Mr.
Deepak Kumar Chaddha,
(S.D.O. PPCB, Regional
office, Amritsar.)**

**VAN MAHOTSAV OPENING CEREMONY
AT GVK POWER (GOINDWAL SAHIB) LTD.**



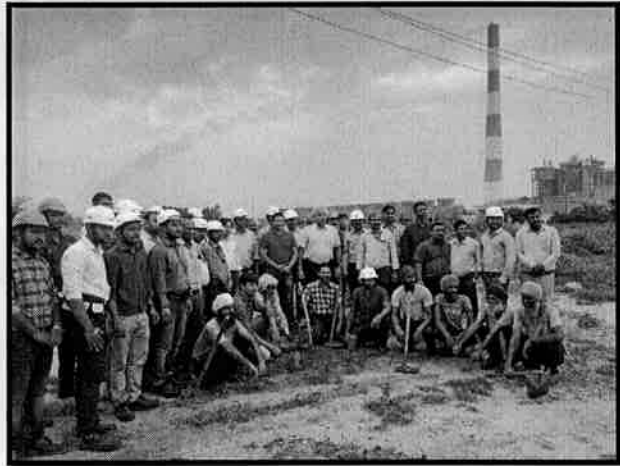
Tree Planting Drive at GVKPGSL
By GVK Employees & SDO (PPCB)



Tree Planting Drive at GVKPGSL
By GVK Employees & SDO (PPCB)



Tree Planting Drive at GVKPGSL
By GVK Employees





Tree Planting Drive at GVKPGSL



By GVK Employees





Tree Planting Drive at GVKPGSL



By GVK Employees



510

Tree Planting Drive at GVKPGSL

GVK

By GVK employees/Families



Tree Planting Drive at GVKPGSL



By GVK Security team





Tree Planting Drive at GVKPGSL



By GVK employees/families/kids/children



Tree Planting Drive at GVKPGSL



By GVK employees/families/kids/children



Tree Planting Drive at GVKPGSL



By GVK employees/families/kids/children



Tree Planting Drive at GVKPGSL



By GVK employees/families/kids/children



Concluding function of VAN MAHOTSAV at GVKPGSL



Guests on the Dais

Concluding function of VAN MAHOTSAV at GVKPGSL



Kids/children performing Poem/Narration/ Speech in the event of VAN MAHOTSAV **GVK**
at GVKPGSL



Kids/children performing Poem/Narration/ Speech in the event of VAN MAHOTSAV at GVKPGSL



Kids/children performing Poem/Narration/ Speech in the event of VAN MAHOTSAV **GVK**
at GVKPGSL



Skit Program Performed by Children



Skit Program Performed by Children

GVK



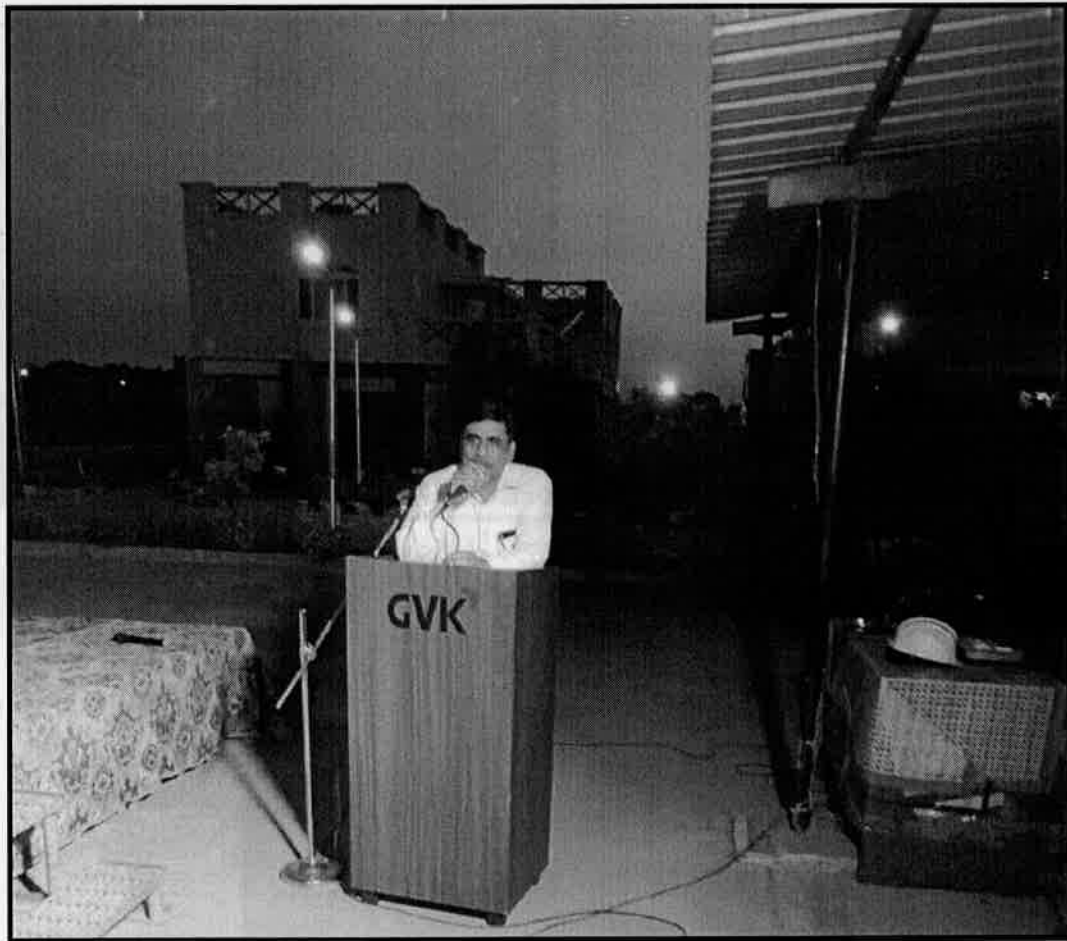
Prize Distribution to Kids and Beas Kiran club by GVK Officers
VAN MAHOTSAV at GVKPGSL



Prize Distribution to Kids and Beas Kiran club by GVK Officers
VAN MAHOTSAV at GVKPGSL

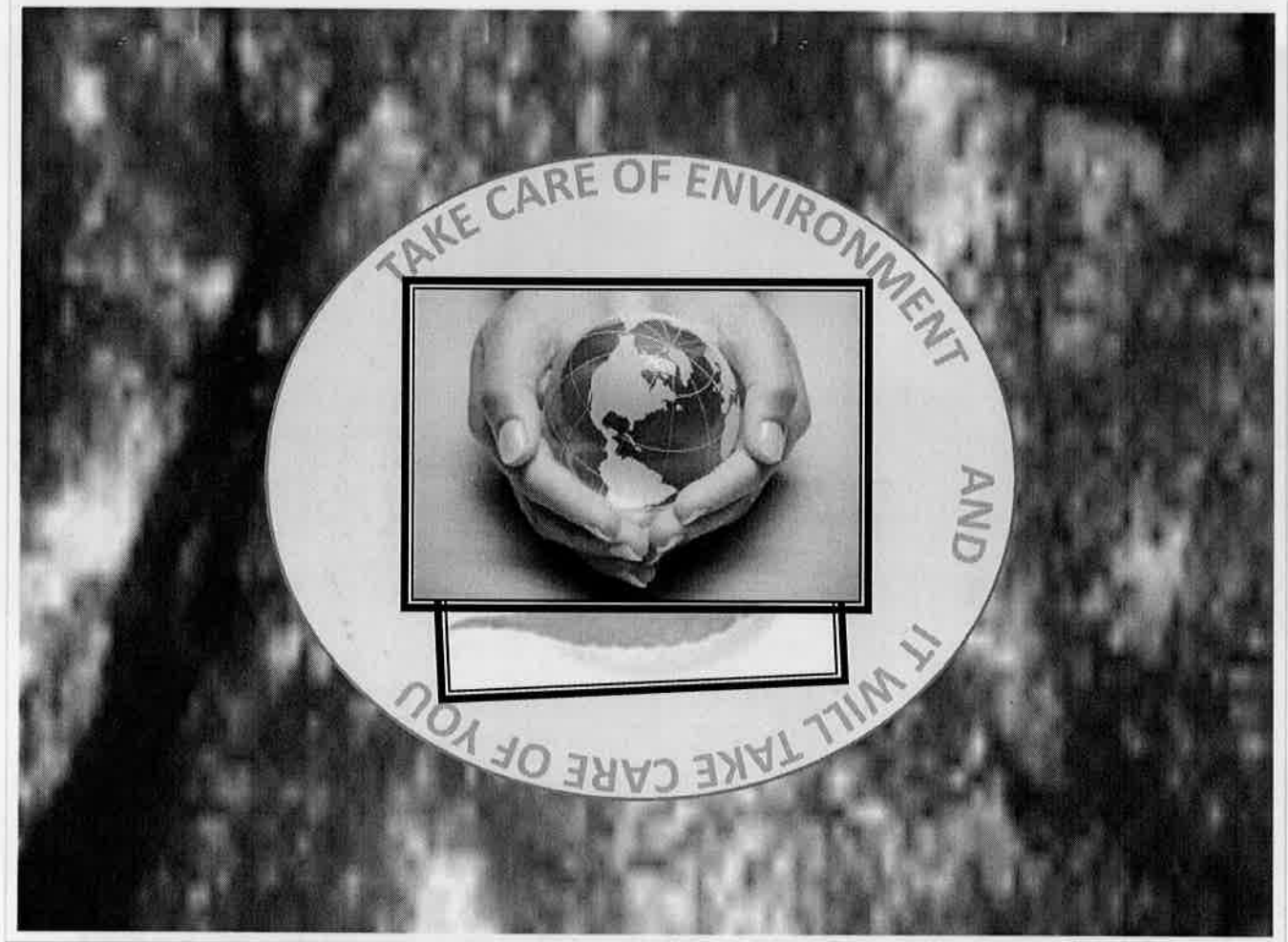


Vote of Thanks by Shri R.N. Mishra - AGM (EHS)



GVK

GVK



GVK

GVK

