



Ref: GVKPGSL/ MoEF & CC/2020/

Date: 25-05-2020

To

The Director (Thermal)

Ministry of Environment, Forest & Climate Change (IA)

Government of India,

Indira Paryavaran Bhavan, Ali Ganj, Jorbagh Road

New Delhi-110 003

Sir,

**Sub:** 2X270 MW Coal base Thermal Power Project M/s. GVK Power (Goindwal Sahib) Ltd., near Goindwal Sahib Tehsil & Distt.- Tarn Taran , Punjab- *Submission of Half Yearly report (Oct,2019-March,2020) on compliance of the stipulated conditions of Environmental Clearance awarded by MoEF&CC-reg.*

**Ref:** Environment Clearance Letter no. J-13011/78/2008-IA (T) dtd 9<sup>th</sup> May 2008, amendment and extension of validity of EC letter J-13011/78/2007-IA.II (T) dtd 19<sup>th</sup> February 2014 and further amendment of EC for change in source of Coal dtd 9<sup>th</sup> March, 2016, GOI, MoEF&CC.

We hereby submitting the soft copy (CD) of Half Yearly report (Oct,2019-March,2020) on Compliance of the stipulated conditions of Environmental Clearance awarded by MoEF&CC for 2X270 MW Coal based Thermal Power Project near Goindwal Sahib Tehsil & Distt.- Tarn Taran, Punjab as per S.O 5845 (E) under the Notification of MoEF&CC dated 28th November, 2018.

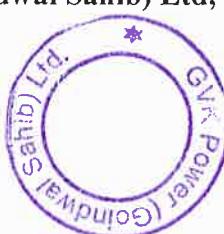
This is for your kind information and records please.

Thanking you,

Yours sincerely,

for M/s. GVK Power (Goindwal Sahib) Ltd,

Vikas Chandra Shukla  
Plant Head- (O&M)



**Encl:** 1. Half Yearly EC Compliance Report in soft copy (CD) (Oct, 2019-March, 2020)

Contd---

CC:

1. Northern Regional Officer,  
Ministry of Environment and Forests  
Addl. Principal Chief Conservator of Forests (Central)  
Bay No.24-25, Sector 31-A, Dakshin Marg,  
Chandigarh-160 030
  
2. Member Secretary,  
Central Pollution Control Board,  
Parivesh Bhawan, East Arjun Nagar,  
Delhi - 110 032
  
3. Member Secretary,  
Punjab Pollution Control Board  
Vatavaran Bhawan, Nabha Road, Patiala- 147 001
  
4. Environmental Engineer,  
Regional Officer, Punjab Pollution Control Board,  
Plot No. 164, Focal Point Mehta Road,  
Amritsar.



# ***EC Compliance Status Report***

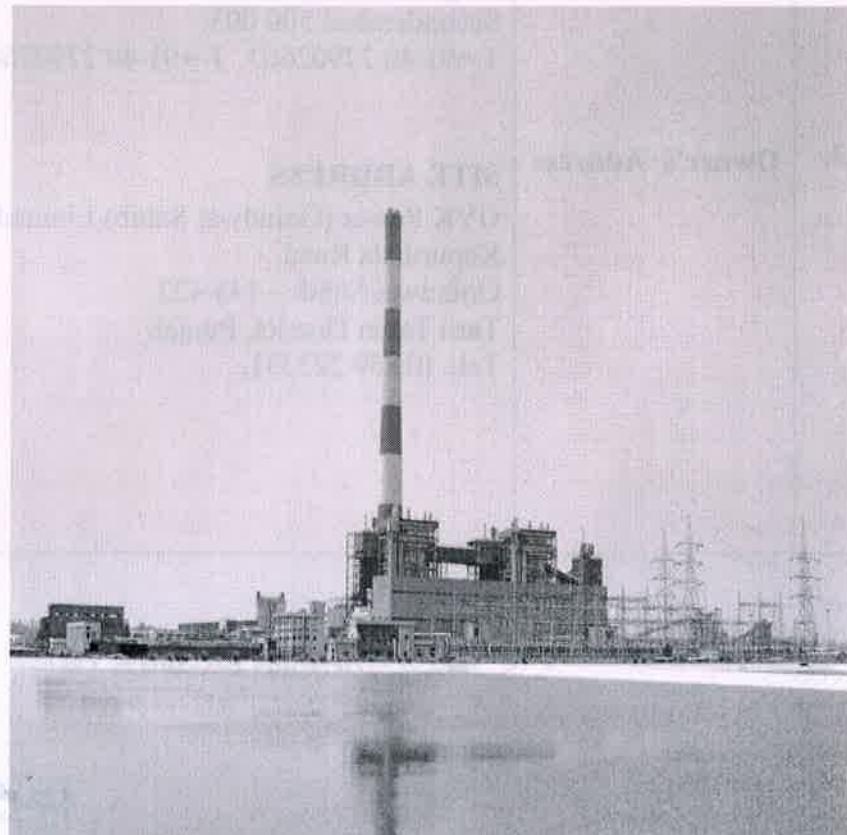
***For***

***2X270 MW  
GVK Thermal Power  
Plant ,Goindwal Sahib,  
Punjab***

***Report No-19  
March,2020***

**2X270 MW GOINDWAL SAHIB THERMAL POWER PLANT  
AT  
GOINDWAL SAHIB, TARN TARAN DISTRICT PUNJAB**

**HALF-YEARLY PROGRESS REPORT**



**Oct, 2019 to March, 2020**

**REPORT NO. 19  
MARCH, 2020**

*Vikas*



## Project Information:

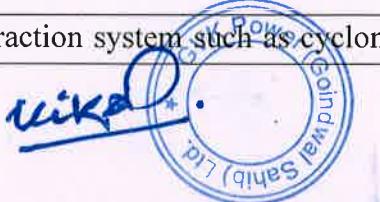
<b>1.</b>	<b>Project Name</b>	2X270 MW Goindwal Sahib Coal Based Power Plant
<b>2.</b>	<b>Location</b>	Goindwal Sahib, District – Tarn Taran- Punjab
<b>3.</b>	<b>Owner's Address</b>	<p>GVK Power (Goindwal Sahib) Ltd.      Paigah House, 156-159, Sardar Patel Road,      Secunderabad 500 003.      T +91 40 27902663 F +91 40 27902665</p> <p><b>SITE ADDRESS</b>      GVK Power (Goindwal Sahib) Limited,      Kapurthala Road      Goindwal Sahib – 143 422.      Tarn Taran District, Punjab      Tel: 01859 223331.</p>



**Compliance Status report of the stipulated conditions in the Environment Clearance granted by MoEF vide letter No. J-13011/78/2008-IA (T) Dated 9<sup>th</sup> May 2008, amendment and extension of validity of EC letter J-13011/78/2007-IA.II (T) dtd 19<sup>th</sup> February 2014 and further amendment of EC vide letter No. J-13011/78/2007-IA.II (T) dtd 9<sup>th</sup> March, 2016 for change in source of Coal, GOI, MoEF&CC for setting up of 2X270 MW Coal Based Thermal Power Project near Goindwal Sahib village, Tarn Taran dist. Punjab.**

**Terms & Conditions:**

<b>Sl. No.</b>	<b>Terms &amp; Conditions</b>	<b>Compliance Status</b>
i.	The total land requirement for the project shall be restricted to 600 acres.	Complied.
ii.	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5 % and 34% respectively	Shall be complied. Sulphur and Ash content will not exceed the permissible limits.
iii.	A bi-flue stack of 275 m height shall be provided with continuous online monitoring equipments for SO <sub>x</sub> , NO <sub>x</sub> and particulate. Exit velocity of flue gases shall not be less than 20 m/sec.	Complied, a bi-flue stack of 275 m height is constructed and Continuous online emission monitoring system equipment is operational for monitoring of SO <sub>x</sub> , NO <sub>x</sub> & Particulate Matter along with its web connectivity to CPCB/PPCB servers. The chimney flues are designed to ensure recommended exit velocities
iv.	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm <sup>3</sup>	Complied, Designed ESPs are installed to meet particulate emission not exceeding 50 mg/ Nm3.
v.	Provision for installation of FGD shall be provided for future use.	Noted. It shall be complied as per norms prescribed by MoEF & CC. In continuation of FGD implementation, CEA has approved technology and indicative cost for FGD installation at GVK. It is under implementation. Adequate space provision has been provided for FGD.
vi.	Adequate dust extraction system such as cyclones/	Complied, Water sprinklers/dust



Sl. No.	Terms & Conditions	Compliance Status
	bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	extraction and suppression systems have been provided in coal and ash handling plant at appropriate locations.
vii.	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Fly ash shall be used in a phased manner as per provisions of the notification on Fly Ash Utilization issued by the Ministry in Sept. 1999 and its amendment. By the end of 9 <sup>th</sup> year full fly ash utilization should be ensured. Unutilized fly ash shall be disposed off in the ash pond in the form of High Concentration slurry and the bottom ash in conventional slurry mode.	For utilization of fly ash, an Agreement was entered into with M/s. Ambuja cements for lifting of 100% of fly ash from GVKP (Goindwalsahib) Ltd. In addition to that, we are encouraging to the manufacturers of fly ash or clay-fly ash bricks, blocks and tiles on a priority basis and providing fly ash on free of charge.  Unutilized fly ash (bottom ash) shall be disposed off in designed ash pond in the form of High Concentration Slurry Disposal (HCSD) and the bottom ash in conventional slurry mode and the same also to be allocated to meet the demand of local area / Govt. authority/Institution.
Viii	Ash pond shall be lined with suitable impervious lining. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	Complied, LDPE lining is provided to avoid the contamination of ground water. Proper operating and regular inspection procedure are formulated to ensure and prevent from getting breached.
Ix	Closed cycle cooling system with cooling towers shall be provided. COC of at least 5 shall be adopted and the effluent treated as per prescribed norms.	Complied. Closed cycle cooling system with cooling towers is installed. COC greater than 5 is adopted and effluent shall be treated and re-used to comply the prescribed norms.



Sl. No.	Terms & Conditions	Compliance Status
X	<p>The treated effluents conforming to the prescribed standards shall be re circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.</p>	<p>Complied.</p> <p>Any industrial effluent generated from plant activities including ash pond is being treated in water pollution control devices to conform the norms and reused. We comply with stipulations.</p> <p>Additionally, we have installed Online Effluent Monitoring system at ETP to monitor the treated effluent parameters.</p> <p>Proper arrangement has been made to avoid mixing of storm water and effluent.</p>
Xi	<p>A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.</p>	<p>Complied. Sewage Treatment Plant is constructed and operational. Domestic wastewater generated from township is being treated in Sewage Treatment Plant up to the prescribed standard and after proper disinfection of treated effluent being reused for plantation &amp; gardening purpose only.</p> <p>Additionally, we have installed Online Effluent Monitoring system at STP to monitor the treated effluent parameters.</p>
Xii	<p>Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period of three months from the date of clearance and details shall be furnished.</p>	<p>A well designed Rain Water Harvesting Scheme is submitted to Central Ground Water Authority and the same is under implementation.</p>
Xiii	<p>Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the</p>	<p>Complied with.</p> <p>Adequate Fire fighting systems are installed to handle any miss happening.</p> <p>Full details &amp; plant layout are submitted.</p>



Sl. No.	Terms & Conditions	Compliance Status
	Ministry at Chandigarh.	
Xiv	Storage facilities for liquid fuel such as LDO and / HFO shall be made in the plant area where risk is minimum to the storage facilities. Adequate arrangement of risk management shall be made in the Disaster Management Plan for the same. Mock drill shall be conducted regularly as planned.	Complied with. Storage facilities are approved by Department of Explosives, Nagpur. Adequate arrangement of risk management has been made in the Disaster Management Plan for the same. Mock drills are being conducted regularly as per defined procedures.
Xv	Regular monitoring of ground water in and around the ash pond area shall be carried out, records maintained and periodic reports shall be furnished to the Regional Office of this Ministry.	Complied with. Four (4) nos. of Piezometer points are established in the prominent location of plant in consultation with PPCB officials for the purpose of ground water monitoring. Ground water sample is being analyzed and periodic report submitted to the Regional Office of MoEFCC as enclosed <i>Annexure-1 Environmental Status Report</i> .
Xvi	A Green belt of adequate width and density shall be developed around the plant periphery covering about 160 acres of project area preferably with local species.	Complied. 100% of green belt is developed scientifically with proper width and density with following the green belt development guidelines issued by CPCB, to mitigate pollution in and around the plant and maintain ecological balance. Moreover, we surveyed for developed green belt to quantify the number of plants, its density & species planted and survival rate. For that, we engaged Divisional Forests Office, Amritsar, Forest and Wildlife Preservation Department, Govt. of Punjab. As per surveyed report, developed green belts consisting more than 3 tiers and 50m width along periphery of the plant boundary and a thick vegetation also developed around the ash pond, maintaining trees density of 2500 nos. per hectare with covering area of 64 hectares Land. Mostly native plants varieties are planted e.g Sissio along with some other good forestry plants varieties such as Arjun, Karonj, Kadamba,




Sl. No.	Terms & Conditions	Compliance Status
		Alstonia, Silver oak, Jamun, Jamuni, Tuna & Dek etc. having survival rate more than 80%. The planted trees are more than One Lakhs Sixty One Thousand (1,61,000) inside the plant premises. <i>The survey report is enclosed herewith.</i>
Xvii	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Complied with. First aid centre, Primary health centre and ambulance are provided.
xviii	Leq of Noise levels emanating from gas and steam turbines shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs / ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy / less noisy areas.	Complied with. Systems are engineered to limit the noise level to 75 dBA. PPEs are being provided for workers working in high noise area.  Periodical and regular medical checkups are being carried out for all the employees working in plant area. Corrective measures, if any, as suggested will be adopted, if need be.
Xix	Regular monitoring of ground level concentration of SO <sub>2</sub> , NOx, SPM and RSP shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry.	Complied with. 8 nos. of Monitoring stations were established in consultation with PPCB and continuous monitoring been carrying out as per AAQM Notification-2009 issued by CPCB. 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. Periodic reports are being submitted to the concerned authorities as attached <i>Annexure-1 Environmental Status Report.</i>
Xx	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance	Complied.



Sl. No.	Terms & Conditions	Compliance Status
	letter are available with the SPCB/ Committee and may also be seen at website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	
xxi.	A separate environment management cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	<p>Complied with.</p> <p>An Environment Management Cell headed by Vice President and Manager (Environment) is in place.</p> <p>Our environment management cell is always pioneer to extent Awareness programs about Environmental issues /challenges among employees/families as well as in nearby villages.</p>
xxii.	Half yearly report on the status of implementation of the stipulated conditions and environmental safeguard shall be submitted to this Ministry/Regional Office/ CPCB/SPCB.	<p>Complied with.</p> <p>The status on the implementation of stipulated conditions is being submitted every 6 months to the Ministry and its Regional Office and CPCB/PPCB.</p>
xxiii.	Regional Office of the Ministry of Environment & Forests located at Chandigarh will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring.	<p>Complied with.</p>
xxiv.	Separate funds shall be allocated for implantation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	<p>Complied with.</p> <p>Funds are allocated towards environmental protection measures and the cost is included in the project cost. Year wise expenditure attached.</p>
Xxv	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of	<p>Complied.</p> <p>Financial Closure was achieved on</p>

Sl. No.	Terms & Conditions	Compliance Status
	financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	21-05-2010.
Xxvi	Full cooperation shall be extended to the Scientists / Officers from the Ministry / Regional Office of the Ministry at Chandigarh/ the CPCB / the SPCB who would be monitoring the compliance of environmental status.	Full cooperation being extended to Scientists/Officers from the Regulatory bodies.

**As per MoEF's amendment and extension of validity of EC vide letter No. J-13011/78/2007-IA-II(T) dated 19-02-2014 after the condition no. (xxvi), the following conditions are inserted**

xxvii	Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.	<p>Complied.</p> <p>We have established Solar Power Plant on the roof top of Filter Water Tank in premises of GVK Thermal Power Plant. <i>The photograph of the same is enclosed herewith.</i></p> <p>In addition to above, We have also installed Solar Power System on roof top of Khadoor Sahib Railway Station to catering the power for emergency lighting for entire station. As we have developed Khadoor Sahib Railway Station 05 km far away from our plant and spent Rs. 55 crores for this development along with residential Quarters for the Staff.</p>
xxviii	A long term study on radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	<p>Complied.</p> <p>The testing of radio activity and heavy metals contents in coal and fly ash is being carried out by certified labs (MoEFCC/ CPCB) from last two years and its records are maintained.</p>



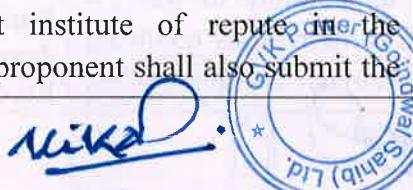
<b>Sl. No.</b>	<b>Terms &amp; Conditions</b>	<b>Compliance Status</b>
Xxix	Mercury emissions from stack shall also be monitored on periodic basis.	Complied. Mercury emission is being monitored on regular basis.
Xxx	Fugitive emissions shall be controlled to prevent impact on agricultural or non-agricultural land.	Complied. Appropriate arrangements have been made to control fugitive emissions.
Xxi	No ground water shall be extracted for use in operation of the power plant even in lean season.	Noted and complied. Plant consumptive water is sourced from River Beas for plant operational purpose.
xxxii	Source sustainability study of water requirement shall be carried out by an institute of repute. The study shall also specify the source of water for meeting the requirement during lean season. The report shall be submitted to the Regional Office of the Ministry within six months.	Noted. <b>20 cusecs</b> of water is allocated from the perennial river Beas. The lean flow in river Beas is 3000 cusecs.
xxxiii	Hydro geological study of the area shall be reviewed annually and report submitted to the Ministry. No water bodies including natural drainage system in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.	Not applicable on us. As no ground water extraction is being done. We are only using river water for generation of power. As we have been allocated 20 cusecs of water from River Beas. However, we have engaged NIH, Roorkee to do the Hydrogeological study for our plant site. The study is under progress as we receive the report we will submit the same to yours good office.  None of the existing water bodies or the drainage system is disturbed.
xxxiv	Minimum required environmental flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel/ Rivers (as applicable) even in lean season.	Noted. Not Applicable.
Xxxv	COC of 5.0 shall be adopted.	Complied, as given at Sl. No. ix.
xxxvi	Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an	Agreed.

Nitin Kulkarni  
General Manager  
GVK Power (Goindwal Sahib) Limited

Sl. No.	Terms & Conditions	Compliance Status
	option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of repute and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.	
xxxvii	Green Belt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per ha with survival rate not less than 75 %.	Green Belt with more than 5 tiers of tree has been implemented. Full details are given at Sl. No. xvi.
xxxviii	Three tier green belt shall be developed all around Ash Pond over and above the Green Belt around the plant boundary.	Complied.
xxxix	A common Green Endowment Fund shall be created and the interest earned out of it shall be used for the development and management of green cover of the area.	Complied. We have created Bank Account and deposited Rs. 11 crores in that towards Green Endowment Fund at IDBI Bank Limited, Hyderabad, Telangana dtd, 28.08.2019 enclosed herewith.
Xl	The project proponent shall also adequately contribute in the development of the neighboring villages. Special package with implementation schedule for free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	Noted and complied. Already in consultation with local bodies to understand the requirements. 100 houses for economically weaker section are already built at Manikhera village in consultation with State Government of Punjab.
Xli	An amount of Rs. 12 Crores shall be earmarked as one time capital cost for CSR programme. Subsequently a recurring expenditure of Rs. 2.4 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the	Noted and the same shall be implemented in consultation with the concerned authorities. A model Railway Station has already been developed at a cost of about Rs. 50 Crores at Khadoor Sahib, which



Sl. No.	Terms & Conditions	Compliance Status
	activities to be undertaken shall be submitted within one month along with road map for implementation.	will be very useful for the local public of that area. In addition to that, We have constructed 100 houses for EWS at Manikhera Village, Bhatinda with cost of Rs. 5 Crores.
xlii	<p>CSR scheme should address Public Hearing issues and shall be undertaken based on need based assessment in and around the villages within 5.0 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken. Development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. Vocational training programme for possible self employment and jobs shall be imparted to identify villagers free of cost.</p>	<p>Issues raised during Public Hearing this were addressed and will be addressed on continuous basis if there are any new issues.</p> <p>Agriculture demonstration centre is developed in plant vicinity. Nursery of the forestry plants has been developed in the demonstration plot. Around 20,000 saplings of different species of forestry plants like sheesham, Karanj, Arjun, cassia fistula, siris, alstonia, cassia simian have been grown in the nursery.</p> <p>Two nos. of fruit orchards Kinnow and Guava were developed in plant vicinity with the area of one hectare (10,000sqm.) and one acre (4047sqm.) respectively.</p> <p>A Green house shed has been prepared to create a better climate for the propagation of saplings. Vegetable cultivation of different vegetables like bitter gourd, bottle gourd, pumpkin, lady's finger, tomato, garlic, onion &amp; cucumber etc. are also being implemented.</p> <p>In order to conserve the environment and enhance the income of local people in future, possibility to be explored.</p>
Xliii	It shall be ensured that in-built monitoring mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the	<p>Complied.</p> <p>We have engaged <i>Guru Nanak Dev University, Amritsar</i> for carrying out the social audit at GVK Power (Goindwal Sahib) Ltd. The study is under progress as we receive the report</p>



<b>Sl. No.</b>	<b>Terms &amp; Conditions</b>	<b>Compliance Status</b>
	status of implementation of the scheme from time to time.	from the institute. We will submit the same to concern authority.
Xliv	An Environmental Cell shall be created at the project site itself and shall be headed by an officer of the company of appropriate seniority and qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the Organization.	Complied with.  Details are as per Sl. No. xxi.
Xlv	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	Complied with.  Details are as per Sl. No. xv, xix & xxviii and further more details pls refer <i>Annexure-1 Environmental Status Report.</i>
xlvi	Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	Complied with.  An monitoring of surface water quality is being conducted on regular basis and record maintained. Details are as per Xlv.
Xlvii	The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	Being complied.



<b>Sl. No.</b>	<b>Terms &amp; Conditions</b>	<b>Compliance Status</b>
xlviii	The project proponent shall formulate a well laid Corporate Environment Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	Noted and complied. PP formulated Integrated SHE policy for Safety, Health & Environment and the same is adopted.

**As per MoEF&CC's amendment of EC for change in source of Coal vide letter No. J-13011/78/2007-IA-II (T) dated 09-03-2016 after the condition no. (xlviii), the following conditions are inserted**

xlviii	Sulphur and ash contents in the coal to be used in the project shall not exceed 0.5% and 37% respectively for domestic coal and 0.8 % and 30% respectively for imported coal at any given time subject to compliance of the Ministry's Notification dated 02-01-2014 regarding use of coal with ash content not exceeding thirty four per cent, on quarterly average basis. In case of variation of coal quality at any point of time, fresh reference shall be made to the Ministry for suitable amendments to environmental clearance condition wherever necessary.	Complied. Coal supply agreement signed with CCL and SECL subsidiaries of Coal India Limited (CIL) for 1,700,000 MTPA and 6300 MTPA of coal under SHAKTI Scheme of Government of India, in February 2018. Coal under SHAKTI Scheme from CCL mines is being used from April 2018.  The imported coal from South Africa is also being utilized along with SHAKTI coal with complying the notified standards of Sulphur and Ash contents of coal prescribed by MoEF&CC.
	The PP shall advertise in the newspaper and place on the website, the amendment issued by the Ministry for public information.	Complied.



## Site Progress Photographs



Mukesh  
Mukesh  
GVK Power (Goindwal Sahib) Ltd



### Green Belt Photographs

Nikal D.



Punjab Government  
Forest and wildlife Preservation Department, Punjab  
Office Divisional Forest Office, Amritsar, Forest Complex, Taranwala Pul  
Phone no. 0183-2585480, Email : Dfoamritsar@rediffmail.com

To,

The Director,  
GVK Power Goindwal Sahib Ltd,  
Goindwal Sahib, Kapurthala Road,  
Dist Tarn Taran, Punjab.

No. 6116      Dated. 1-10-19

Sub: Study report for Plants density and its survival ratefor GVK Power  
(Goindwalsahib) Ltd., Goindwalsahib, Dist Tarn Taran-reg.

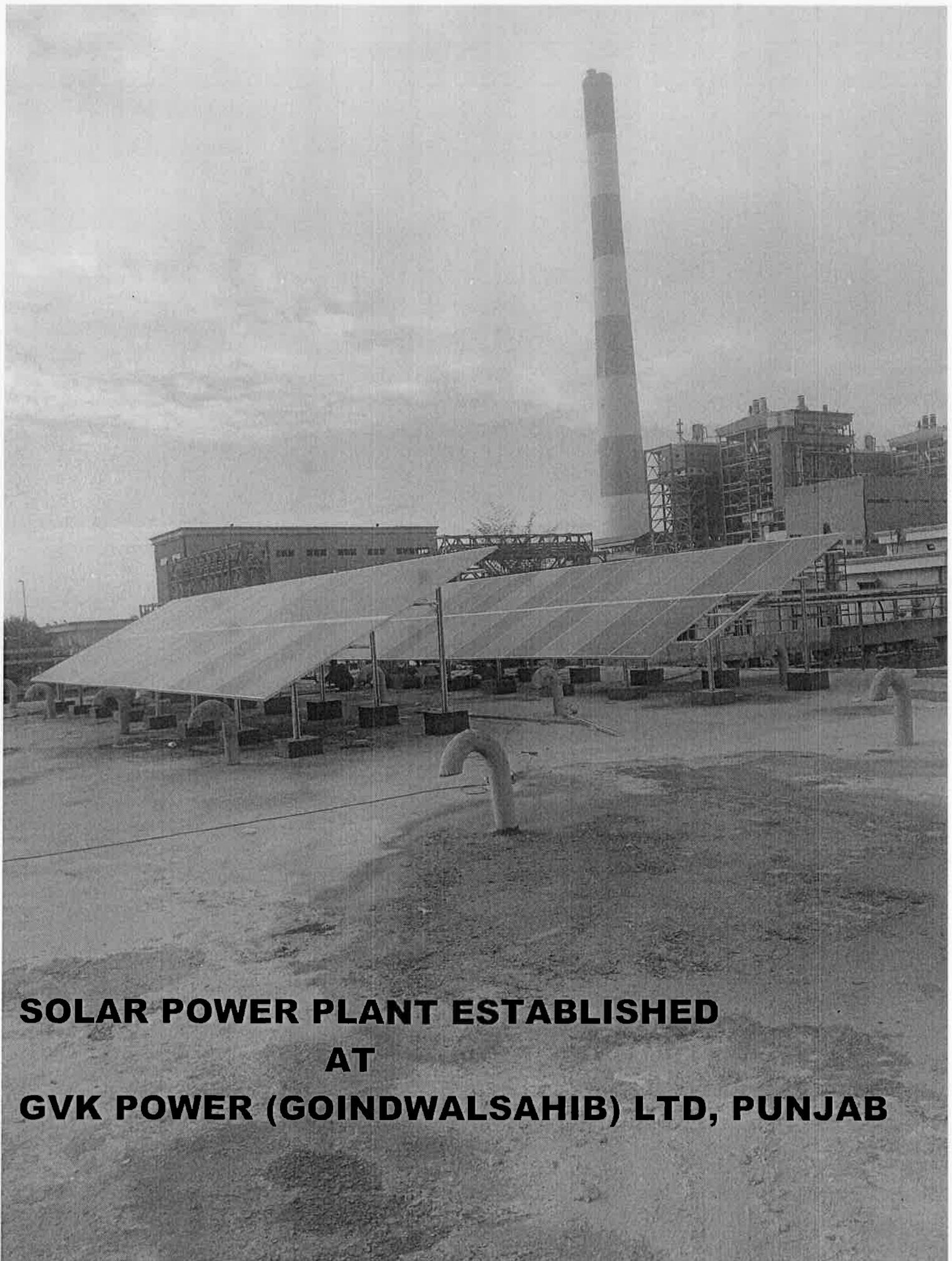
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With respect to your letter vide number 575, GVKPGSL/DFO/ASR/2019 dated 23.05.2019, the undersigned along with staff visited GVK Thermal Power Plant , Goindwalsahib site, on 23/08/2019 and surveyed the plantation area on the same day. Based on the survey report it is hereby certified that the agency has developed green belts consisting more than 3 tiers and 50 meters width along periphery of the plant boundary and a thick vegetation also developed around the ash pond, maintaining trees with density of 2500 nos. per hectares with covering area of 64 hectares Land.

The agency has planted mostly native plant species e.g Shisham along with some other good forestry plant species also such as Arjun, Karonj, Kadamba, Alstonia, Silver oak, Jamun, Tun & Dek etc. having survival rate more than 80%.The planted trees more than One Lakhs Sixty One Thousand (1,61,000) inside the plant premises.

Hence, it is hereby certified that the company has complied with condition no. XXXVII & XXXVIII of Environmental Clearance vide letter number-J-13011/78/2007-IA.II (T), Govt. of India, MoEF, New Delhi dated 19<sup>th</sup>, February, 2014, appropriately.

  
Divisional Forest Officer  
Amritsar Forest Division  
Amritsar



**SOLAR POWER PLANT ESTABLISHED  
AT  
GVK POWER (GOINDWALSAHIB) LTD, PUNJAB**

**Budget for EMP FY 2019-20**

Details about the funds kept in the budget for implementation of Environment Management Plans, up to date expenditure on different items of EMP and plan for FY 2019-20 as per following proforma.

S.No.	Items	Expenditure details Till date	Proposed budget estimates for FY 2019-20
		Non-Recurring (in Crores)	Recurring (in Crores)
a.	Air pollution control measures	131.25	100.25
b	Water pollution control measures	20.85	0.50
c	Noise pollution control measures	2	-
d	Monitoring	0.85	0.50
e	Green belt	5.90	1.00
f	Lab	0.55	0.15
g	Bio Medical Waste Management	0.60	0.10
h	HZW Management	0.40	0.10
i	E Waste Management	0.15	0.10
j	Solid waste management	59.00	10.50
<b>Total</b>		<b>221.55</b>	<b>113.20</b>




# ***Environmental Status Report***

***For***

***2X270 MW  
GVK Thermal Power  
Plant, Goindwal Sahib,  
Punjab***

***March, 2020***

## 1 THE COMPANY

GVK is a leading Indian conglomerate with experience and expertise spanning across diverse sectors including Energy, Resources, Airports, Transportation, Hospitality and Life Sciences. Having already invested over Rs.20,000 crore (US\$4.3 billion), GVK has projects worth over another Rs.30,000 crore (US\$6.6 billion) in pipeline, in India.

A pioneer, GVK set up India's first independent power plant, first six-lane road project and the first brownfield airport under the Public Private Partnership model.

GVK has over 2400 MW projects under generation and development.

## 2 THE PROJECT

GVK Power (Goindwal Sahib) Ltd. established 540 MW (2x270MW) Coal based Thermal Power Project near Goindwal Sahib Tehsil & District Tarn Taran Punjab. The project has been accorded Environment Clearance by Ministry of Environment & Forests, Govt. of India vide their Letter No. J-13011/78/2008-IA (T) Dated 9th May 2008 and Amendment and Extension of validity of EC vide letter J-13011/78/2007-IA.II (T) Dated 19th February 2014. Consent to Operate (CTO) for Air and Water for both units is granted by PPCB under Air (Prevention and Control of Pollution) Act, 1981 & Water (Prevention and Control of Pollution) Act, 1974 respectively with validly 22.07.2020.

## 3 STATUS OF THE PROJECT

At present the project is operational with full capacity of plant load since June, 2017 in a sustainable manner.

## 4 OBJECTIVE OF ENVIRONMENT MONITORING

To assess environmental impacts from operational activity, it is essential to monitor the environmental quality in the surrounding area. The environmental status within the impact zone could be used for identification of significant environmental issues to be addressed in the impact assessment study.

Environmental monitoring helps in signaling the potential problems that resulting from the project activity and will allow for prompt implementation of effective corrective measures. The main objectives of environmental monitoring are:

- To assess the changes in environmental conditions,
- To assess the effectiveness of mitigation measures,



- Warn significant deteriorations in environmental quality for further prevention action.

## 5 MONITORING PARAMETERS AND FREQUENCY

For Environment Monitoring, we have engaged a **PPCB approved Lab as ITC, Panchkula vide Registration No. PPCB/AIR LAB/32/27910** and **Envirochem Testing Lab & Research Centre, Panipat, H.R. vide Registration No. PPCB/AIR LAB/32/47705**. The monitoring area covering 10 km radius from the project site as per guidelines published by the MoEF, Govt. of India. The Environment Monitoring for the project was started from September, 2017. This Environment Status Report presents the data of Oct, 2019 to March, 2020.

The following parameters have been monitored to assess the environmental quality of the region and potential impacts from the industry:

- Ambient Air Quality
- Stack emissions
- Ambient Noise Level
- Ground and Surface Water Quality
- ETP & STP Quality
- Soil Texture, Pattern and Chemical Characteristics

## 6 AMBIENT AIR QUALITY

### 6.1 Monitoring Station Selection Criteria

Eight monitoring locations have been selected on the basis of predominant Up-wind & Down-wind directions, Topography, habitation and sensitive receptors. All probable directions, which may be polluted due to the emission from the project activity, have been covered.

Also the monitoring station as monitored during EIA stage was preferred due to availability of past data and ease to assessment of the impact of construction activities on these locations.

The monitoring stations have been setup in order to locate the locations as close as feasible to the anticipated maximum pollutant concentration areas. Logistic considerations such as accessibility, security, and availability of reliable power supply etc. were also examined while finalizing the stations. The monitoring locations are depicted in **Table 1**.

**Table 1: Ambient Air Quality Monitoring Stations**

S. No.	Location	Code
1.	Near Railway Over Bridge (ROB)	AAQ1
2.	PLL Colony	AAQ2
3.	DM Plant	AAQ3



# ENVIRONMENTAL STATUS REPORT

**GVK**

2X270 MW GVK THERMAL POWER PLANT, GOINDWAL SAHIB, TARN TARAN, PUNJAB

S. No.	Location	Code
4.	Residential Colony	AAQ4
5.	Goindwal Sahib Village	AAQ5
6.	Hansawala Village	AAQ6
7.	Vairowal Village	AAQ7
8.	Mundi Village	AAQ8

*Note- The distance and direction of the monitoring location has been considered from the mid of the project site*

## 6.2 Parameters and Monitoring Methodology

Ambient air quality monitoring has been carried out with a frequency of two samples per week at three to four locations in a day. The baseline data of ambient air has been generated for the following parameters as mentioned below.

- PM10
- PM 2.5
- Sulphur Dioxide (SO2)
- Oxides of Nitrogen (NOX)
- Ozone (O3)
- Mercury (Hg)
- Lead
- Carbon Monoxide
- Ammonia
- Benzene
- Benzo (a) Pyrene
- Arsenic
- Nickel

Respirable Dust Samplers APM-450 BL of Envirotech Instrument Pvt. Ltd. make was installed for monitoring Particulate Matter 10 (PM10) and gaseous pollutants like SO2, NOX and Ozone. Whereas the concentration Particulate Matter 2.5 (PM2.5) was monitored by installing Envirotech made APM 550 Fine Particulate Sampler. Mercury in ambient air was monitored through electrothermal atomic absorption spectro-photometric method. The dust samples for mercury analysis are collected on EPM 2000 filter papers using Respirable Dust Samplers.

*Nikita*



## ENVIRONMENTAL STATUS REPORT

**GVK**

2X270 MW GVK THERMAL POWER PLANT, GOINDWAL SAHIB, TARN TARAN, PUNJAB

### 6.3 Sampling and Analytical Techniques

The techniques used for ambient air quality monitoring are given in Table 2.

**Table 2: Techniques used for Air Quality Monitoring**

Parameter	Technique
Particulate Matter	Respirable Dust Sampler (Gravimetric method)
PM 2.5	APM 550 Fine Particulate Sampler
Sulphur Dioxide	West and Gaeke
Oxides of Nitrogen	Jacob and Hochheiser
Mercury	EPM 2000 filter paper method
Ozone	IS:5182 (P-9)
Lead	AAS & ICP Method
Carbon Monoxide	IS:5182 (P-10)
Ammonia	Indophenols blue method
Benzene	IS:5182 (P-10)
Benzo (a) Pyrene	IS:5182 (P-12)
Arsenic	AAS & ICP Method
Nickel	AAS & ICP Method

### 6.4 Duration and Frequency of Sampling

The monitoring has been carried out at a frequency of twice in a week at each station, adopting a continuous 24-hour schedule.

### 6.5 AAQ Standards

The standards of the air quality are set at a level necessary for an adequate margin of safety, to protect the public health, vegetation and property. The Ambient Air Quality standards have been notified by the Ministry of Environment and Forests (vide Gazette Notification dated 16th Nov 2009). The standards are given in Table below.

**Table 3: National Ambient Air Quality Standards**

Pollutant	Concentration in $\mu\text{g}/\text{m}^3$		
	Time	Industrial, Residential, Rural & other areas	Ecologically Sensitive area (Notified by Central Govt.)
Sulphur Dioxide ( $\mu\text{g}/\text{m}^3$ )	Annual Avg.* 24 hours**	50 80	20 80

*Rikesh*



# ENVIRONMENTAL STATUS REPORT

**GVK**

2X270 MW GVK THERMAL POWER PLANT, GOINDWAL SAHIB, TARN TARAN, PUNJAB

Pollutant	Concentration in $\mu\text{g}/\text{m}^3$		
	Time	Industrial, Residential, Rural & other areas	Ecologically Sensitive area (Notified by Central Govt.)
Oxides of Nitrogen ( $\mu\text{g}/\text{m}^3$ )	Annual Avg.	40	30
	24 hours	80	80
PM10 ( $\mu\text{g}/\text{m}^3$ )	Annual Avg.	60	60
	24 hours	100	100
PM2.5 ( $\mu\text{g}/\text{m}^3$ )	Annual Avg.	40	40
	24 hours	60	60
CO (mg/m <sup>3</sup> )	8 hours Avg.	02	02
	1 hours Avg.	04	04
Ozone (O <sub>3</sub> ) $\mu\text{g}/\text{m}^3$	8 hours*	100	100
	1 hour**	180	180
Lead(Pb) $\mu\text{g}/\text{m}^3$	Annual*	0.50	0.50
	24 hours**	1.0	1.0
Ammonia(NH <sub>3</sub> ) $\mu\text{g}/\text{m}^3$	Annual*	100	100
	24 hours**	400	400
Benzo(a)Pyrene (BaP)- particulate phase only, ng/m <sup>3</sup>	Annual*	1	1
Arsenic(As), ng/m <sup>3</sup>	Annual*	6	60
Nickel(Ni), ng/m <sup>3</sup>	Annual*	20	20

Source: Gazette of India Notification, dated 16th Nov, 2009

\* Annual Arithmetic Means of minimum 104 measurements in a year at a particular site taken twice a week 24 hourly at uniform intervals

\*\* 24 hourly or 8 hourly or 01 hourly monitored values, as applicable shall be complied with 98% of the time in a year. 2% of the time they may exceed the limits but not on two consecutive days of monitoring

## 6.6 Monitoring Results

The overall Statistical analysis (Minimum, Maximum, Arithmetic Mean, Standard deviation and 98-Percentile values through-out the study period) of the ambient air quality in region are given in **Annexure-1 Environmental monitoring result**.



The concentration of **Mercury (Hg)** was found below detectable limit. The levels of pollutants in ambient air were found well within the National Ambient Air Quality Standards for residential or rural areas.

## 7 AMBIENT NOISE LEVEL

### 7.1 Major Sources of Noise in the Study Area

The vehicular movement on nearby highway is one of the major sources of noise, which significantly increases ambient noise levels. Also, there are plant operational activities like, turbine, boiler, heavy machinery, pump etc. and domestic & commercial noise sources such as, TV, Radio, Loudspeaker, Generator set etc.

### 7.2 Ambient Noise Monitoring- Methodology and Monitoring Stations

In the present study, sound pressure levels (SPL) have been measured by a sound Level Meter. Since loudness of sound is important for its effects on people, the dependence of loudness upon frequency must be taken into account in environmental noise assessment.

A total of eight (8) locations in the plant area have been selected for measurement of ambient noise levels, covering industrial areas, commercial, residential areas as well as sensitive zones. Ambient Noise monitoring result is given in *Annexure-1 Environmental monitoring result*. These locations are presented in **Table 4**.

**Table 4: Ambient Noise Monitoring Stations**

S. No.	Name of Location	Station Code
1	Near Service Building	AN1
2	CHP Area	AN2
3	AHP Area	AN3
4	Near Plant Site Office	AN4
5	Near Boiler Area (Main Plant Area)	AN5
6	Residential Colony	AN6
7	Near Admin Building (Plant Main Gate)	AN7
8	Near DM Plant	AN8

At each location, noise monitoring has been carried out twice in a week manner for the entire study period.



# ENVIRONMENTAL STATUS REPORT

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Table 5: Ambient Noise Standards

Type of Area	Limits in dB(A) Leq*	
	Day Time	Night Time
Industrial Area	75	70
Commercial Area	65	55
Residential Area	55	45
Silence Zone	50	40

\*-dB (A) Leq denotes the time weighted average of the level sound in decibels on scale A which is relatable to human hearing

Source: Pollution Control Acts, Rule and Notifications issued Thereunder, by Pollution Control Law

Series: PCLS/02/2006(Fifth Edition) of Central Pollution Control Board, January 2006, pp 926

Day and Night time shall mean from 6:00 a.m. to 10:00 p.m. and 10:00 p.m. to 6:00 a.m. respectively.

## 8 STACK EMISSIONS

Stacks monitoring of All APCD'S have been carried out as monitoring result given in Annexure-1 Environmental monitoring result.

## STANDARDS

The standards of the stack emissions are set at a level necessary for an adequate margin of safety, to protect the public health, vegetation and property. The emission discharge standards have been notified by the Ministry of Environment and Forests/ CPCB not more than 50mg/Nm<sup>3</sup>.

## 9 WATER QUALITY

### 9.1 Sampling Locations

To assess the present water quality for industrial wastewater, surface & groundwater within the plant site sampling were carried out. The monitoring result is given in Annexure-1 Environmental Monitoring Report. The water quality sampling locations are given in Table 6.

Table 6: Water Sampling Locations

Sampling Code	Water Sampling Locations
<b>Ground Water Sampling Location</b>	
GW1	Site Office
GW2	Fire station
GW3	PLL Colony (Near Ash Pond)
GW4	North side of Ash Pond near security post
<b>Surface Water Sampling Locations</b>	
SW1	Beas River- Up stream, Vairoval village
SW2	Beas Rive- Downstream, Goindwalsahib



**Industrial wastewater Sampling Locations**

STP-1	Sewage Treatment Plant
ETP-1	Effluent Treatment Plant
Ash pond effluent	Ash pond

**9.2 Sampling and Analysis Methodology & Sampling Period**

The water samples have been collected during the month of Oct, 2019 to March, 2020. All the basic precautions were taken to avoid any contamination during the sampling. Analysis of the samples was carried out as per established standard methods and procedures prescribed by CPCB and relevant IS Codes.

**10 SOIL QUALITY**

Assessment of soil quality is an important aspect with reference to tree plantations, percolation of water, groundwater impact, etc. The soil quality of the study area has been assessed by collecting samples and corresponding result given in Annexure-1 *Environmental Monitoring Report*.

**10.1 Sampling Frequency and Analysis Methodology**

The samples of Soil were collected on quarterly basis in year. The physical and chemical characteristics of the soil of the study area have been assessed by analyzing various parameters as per the methods described in "Soil Chemical Analysis" (M.L Jackson). The monitoring result is given in Annexure-1 *Environmental Monitoring Report*.

**11 CONCLUSION**

The GVK Thermal Power Project is bound to comply the norm prescribed by MoEFCC/CPCB/PPCB. As a part of the Environment Management Plan & Monitoring Plan, the impact due to operational activities of the project, monitoring of Air, Water, Noise & soil have been carried out continuously.

The monitoring for the above parameters has been carried out for the period Oct, 2019 to March, 2020. From the above report it is found that all the parameters are within prescribed Norms after taking mitigating measures.



***ANNEXURE-I***

***Environmental Monitoring Report***

***(Oct,2019 to March,2020)***

***AAQM Data***  
***(Oct,2019 to March,2020)***

## Environment Status Report

### Environmental Status Report

#### Ambient Air Quality Monitoring results (October 2019-March 2020) Location wise inside and outside the plant

##### Inside the GVK Plant Premises

##### Location 1 - Near Railway Over Bridge (ROB)

Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NO <sub>x</sub> ( $\mu\text{g}/\text{m}^3$ )	CO ( $\text{mg}/\text{m}^3$ )	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	Hg ( $\mu\text{g}/\text{m}^3$ )	Pb ( $\mu\text{g}/\text{m}^3$ )	NH <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	C <sub>6</sub> H <sub>6</sub> ( $\mu\text{g}/\text{m}^3$ )	BaP ( $\text{ng}/\text{m}^3$ )	As ( $\text{ng}/\text{m}^3$ )	Ni ( $\text{ng}/\text{m}^3$ )
1	Oct., 2019	01.10.2019	37	80	15	18	1.4	ND	ND	ND	ND	ND	ND	ND	ND
2		04.10.2019	35	76	10	18	1.3	ND	ND	ND	ND	ND	ND	ND	ND
3		07.10.2019	38	82	9	22	1.4	ND	ND	ND	ND	ND	ND	ND	ND
4		10.10.2019	36	78	12	24	1.4	ND	ND	ND	ND	ND	ND	ND	ND
5		14.10.2019	38	84	10	17	1.3	ND	ND	ND	ND	ND	ND	ND	ND
6		17.10.2019	36	81	8	20	1.4	ND	ND	ND	ND	ND	ND	ND	ND
7		21.10.2019	34	78	11	23	1.3	ND	ND	ND	ND	ND	ND	ND	ND
8		24.10.2019	36	82	7	16	1.3	ND	ND	ND	ND	ND	ND	ND	ND
1	Nov., 2019	01.11.2019	36	70	10	21	1.4	ND	ND	ND	ND	ND	ND	ND	ND
2		4.11.2019	27	66	6	13	1.3	ND	ND	ND	ND	ND	ND	ND	ND
3		08.11.2019	32	73	9	20	1.3	ND	ND	ND	ND	ND	ND	ND	ND
4		12.11.2019	34	72	10	21	1.4	ND	ND	ND	ND	ND	ND	ND	ND
5		16.11.2019	30	70	8	19	1.3	ND	ND	ND	ND	ND	ND	ND	ND
6		20.11.2019	34	73	21	26	1.1	ND	ND	ND	ND	ND	ND	ND	ND
7		23.11.2019	35	75	23	27	1.4	ND	ND	ND	ND	ND	ND	ND	ND
8		26.11.2019	34	71	12	16	1.2	ND	ND	ND	ND	ND	ND	ND	ND
1	Dec-19	02.12.2019	46	71	16	22	ND	ND	ND	ND	ND	ND	ND	ND	ND
2		05.12.2019	45	77	13	20	ND	ND	ND	ND	ND	ND	ND	ND	ND

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		09.12.2019	49	69	12	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4		12.12.2019	38	76	13	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5		16.12.2019	45	73	12	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6		19.12.2019	40	69	15	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7		23.12.2019	43	64	12	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8		26.12.2019	40	76	13	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1	Jan-20	02.01.2020	32	65	12	18	ND	22.4	ND	ND	15.8	ND							
2		07.01.2020	36	69	14	17	ND	21.99	ND	ND	14.8	ND							
3		13.01.2020	35	70	15	20	ND	22.1	ND	ND	16.1	ND							
4		16.01.2020	36	73	12	19	ND	20.11	ND	ND	15.01	ND							
5		20.01.2020	41	75	15	22	ND	21.2	ND	ND	15.9	ND							
6		23.01.2020	40	71	14	19	ND	22.4	ND	ND	15.2	ND							
7		27.01.2020	35	69	15	18	ND	22.4	ND	ND	14.2	ND							
8		30.01.2020	33	64	16	19	ND	22.8	ND	ND	14.8	ND							
1	Feb-20	03.02.2020	29	52	13	19	ND	24.8	ND	ND	14.2	ND							
2		06.02.2020	31	58	12	19.2	ND	22.9	ND	ND	15.8	ND							
3		10.02.2020	32	57.4	12.9	18.5	ND	23.6	ND	ND	15.2	ND							
4		13.02.2020	34	54.5	14	20.1	ND	22.8	ND	ND	14.9	ND							
5		17.02.2020	33	57.4	12	19	ND	22.5	ND	ND	14.1	ND							
6		20.02.2020	32	57.8	12.4	18.3	ND	21.8	ND	ND	14.9	ND							
7		24.02.2020	34	55.4	13	19.2	ND	23.7	ND	ND	16	ND							
8		28.02.2020	32.2	54	13.8	17.1	ND	23.12	ND	ND	16.8	ND							
1	Mar-20	02.03.2020	30	51	11	20	ND	25.1	ND	ND	14.1	ND							
2		05.03.2020	32	56	11	21.2	ND	21.9	ND	ND	11.3	ND							
3		11.03.2020	31	56.2	11.2	19.3	ND	22.2	ND	ND	14.9	ND							
4		13.03.2020	31	51	11	22	ND	23.4	ND	ND	15.1	ND							
5		16.03.2020	32	54	10	21	ND	22.01	ND	ND	15	ND							
6		18.03.2020	30	51	11	19	ND	22.4	ND	ND	13.5	ND							

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<b>Minimum</b>	27	51	6	13	1.1	20.11	0	0	11.3	0	0	0	0
<b>Maximum</b>	49	84	23	27	1.4	25.1	0	0	16.8	0	0	0	0
<b>Mean</b>	35.71	67.59	12.35	19.96	1.33	22.62	#DIV/0!	#DIV/0!	14.89	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<b>Standard Deviation</b>	5.1	9.7	3.1	2.9	0.6	11.4	0.0	0.0	7.5	0.0	0.0	0.0	0.0
<b>98 Percentile</b>	49	82.16	21.16	26.08	1.4	24.974	#NUM!	#NUM!	16.506	#NUM!	#NUM!	#NUM!	#NUM!

### Location 2 - PLL Colony

Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	CO ( $\text{mg}/\text{m}^3$ )	O3 ( $\mu\text{g}/\text{m}^3$ )	Hg ( $\mu\text{g}/\text{m}^3$ )	Pb ( $\mu\text{g}/\text{m}^3$ )	NH3 ( $\mu\text{g}/\text{m}^3$ )	C6H6 ( $\mu\text{g}/\text{m}^3$ )	BaP ( $\text{ng}/\text{m}^3$ )	As ( $\text{ng}/\text{m}^3$ )	Ni ( $\text{ng}/\text{m}^3$ )
1		01.10.2019	35	76	14	17	1.2	ND	ND	ND	ND	ND	ND	ND	ND
2		04.10.2019	32	70	10	14	1.2	ND	ND	ND	ND	ND	ND	ND	ND
3		07.10.2019	34	73	17	22	1.2	ND	ND	ND	ND	ND	ND	ND	ND
4	Oct., 2019	37	72	8	17	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
5		14.10.2019	33	81	15	23	1.3	ND	ND	ND	ND	ND	ND	ND	ND
6		17.10.2019	37	78	10	21	1.2	ND	ND	ND	ND	ND	ND	ND	ND
7		21.10.2019	36	78	16	23	1.3	ND	ND	ND	ND	ND	ND	ND	ND
8		24.10.2019	33	73	13	18	1.5	ND	ND	ND	ND	ND	ND	ND	ND
1		01.11.2019	27	64	8	15	1.2	ND	ND	ND	ND	ND	ND	ND	ND
2		4.11.2019	33	74	13	23	1.1	ND	ND	ND	ND	ND	ND	ND	ND
3		08.11.2019	30	69	12	24	1.4	ND	ND	ND	ND	ND	ND	ND	ND
4	Nov., 2019	12.11.2019	26	62	6	12	1.5	ND	ND	ND	ND	ND	ND	ND	ND
5		16.11.2019	28	63	7	14	1.3	ND	ND	ND	ND	ND	ND	ND	ND
6		20.11.2019	29	69	16	20	1.2	ND	ND	ND	ND	ND	ND	ND	ND
7		23.11.2019	31	67	15	18	1.3	ND	ND	ND	ND	ND	ND	ND	ND
8		26.11.2019	32	68	9	11	ND	ND	ND	ND	ND	ND	ND	ND	ND
1		02.12.2019	44	75	11	14	ND	ND	ND	ND	ND	ND	ND	ND	ND
2		05.12.2019	41	74	14	19	ND	ND	ND	ND	ND	ND	ND	ND	ND
4		09.12.2019	41	61	11	24	ND	ND	ND	ND	ND	ND	ND	ND	ND

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5		12.12.2019	43	72	12	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6		16.12.2019	39	67	15	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7		19.12.2019	41	76	13	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		23.12.2019	44	68	11	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8		26.12.2019	43	76	10	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1		02.01.2020	33	65	12	16	ND	22.1	ND	ND	ND	14.9	ND									
2		07.01.2020	37	70	15	20	ND	22.7	ND	ND	ND	15.3	ND									
3		13.01.2020	40	71	14	19	ND	21.32	ND	ND	ND	15.89	ND									
4	Jan-20	16.01.2020	42	69	16	21	ND	20.32	ND	ND	ND	15.3	ND									
5		20.01.2020	38	72	15	20	ND	21.6	ND	ND	ND	15.8	ND									
6		23.01.2020	40	75	16	21	ND	25.1	ND	ND	ND	14.8	ND									
7		27.01.2020	41	64	12	18	ND	21.8	ND	ND	ND	14	ND									
8		30.01.2020	36	68	14	18	ND	21.8	ND	ND	ND	16.2	ND									
1		03.02.2020	32	59	13	19	ND	23.6	ND	ND	ND	15.2	ND									
2		06.02.2020	35	57	13.8	19.2	ND	23.6	ND	ND	ND	15.8	ND									
3		10.02.2020	34	51	12.5	17.9	ND	23	ND	ND	ND	16.1	ND									
4		13.02.2020	32	50.88	9.9	16.2	ND	22	ND	ND	ND	14.1	ND									
5		17.02.2020	31	50.77	14	21	ND	24.1	ND	ND	ND	16.2	ND									
6		20.02.2020	31	50.12	12	17.8	ND	24.7	ND	ND	ND	15.2	ND									
7		24.02.2020	36	49.98	12	19.7	ND	23.9	ND	ND	ND	15	ND									
8		28.02.2020	32	51	14.2	17.4	ND	22.6	ND	ND	ND	15	ND									
1		02.03.2020	31	52	12	18	ND	23.2	ND	ND	ND	15.1	ND									
2		05.03.2020	31	52	11.3	18.9	ND	22.4	ND	ND	ND	15.2	ND									
3		11.03.2020	32	52	11	19	ND	22	ND	ND	ND	15.2	ND									
4		13.03.2020	31	54	11	15.8	ND	23	ND	ND	ND	15.3	ND									
5		16.03.2020	32	51.22	11	22	ND	22.2	ND	ND	ND	13.99	ND									
6		18.03.2020	32	52	11	18	ND	23.2	ND	ND	ND	14.2	ND									

## Environment Status Report

<b>Minimum</b>	26	49.98	6	11	1.1	20.32	0	0	13.99	0	0	0	0
<b>Maximum</b>	44	81	17	24	1.5	25.1	0	0	16.2	0	0	0	0
<b>Mean</b>	34.96	65.06	12.36	18.54	1.27	22.74	#DIV/0!	#DIV/0!	15.17	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<b>Standard Deviation</b>	4.7	9.6	2.5	3.1	0.6	11.5	0.0	0.0	7.7	0.0	0.0	0.0	0.0
<b>98 Percentile</b>	44	78.3	16.1	24	1.5	24.932	#NUM!	#NUM!	16.2	#NUM!	#NUM!	#NUM!	#NUM!

### Location 3 - DM Plant

Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	CO ( $\text{mg}/\text{m}^3$ )	O3 ( $\mu\text{g}/\text{m}^3$ )	Hg ( $\mu\text{g}/\text{m}^3$ )	Pb ( $\mu\text{g}/\text{m}^3$ )	NH3 ( $\mu\text{g}/\text{m}^3$ )	C6H6 ( $\mu\text{g}/\text{m}^3$ )	BaP ( $\text{ng}/\text{m}^3$ )	As ( $\text{ng}/\text{m}^3$ )	Ni ( $\text{ng}/\text{m}^3$ )
1	Oct., 2019	01.10.2019	36	78	12	15	1.3	ND	ND	ND	ND	ND	ND	ND	
2		04.10.2019	38	82	11	18	1.2	ND	ND	ND	ND	ND	ND	ND	
3		07.10.2019	34	80	18	26	1.3	ND	ND	ND	ND	ND	ND	ND	
4		10.10.2019	37	79	9	19	1.3	ND	ND	ND	ND	ND	ND	ND	
5		14.10.2019	34	75	15	23	1.2	ND	ND	ND	ND	ND	ND	ND	
6		17.10.2019	37	79	13	19	1.3	ND	ND	ND	ND	ND	ND	ND	
7		21.10.2019	38	77	14	20	1.2	ND	ND	ND	ND	ND	ND	ND	
8	Nov., 2019	24.10.2019	40	83	10	17	1.4	ND	ND	ND	ND	ND	ND	ND	
1		01.11.2019	31	74	12	23	1.3	ND	ND	ND	ND	ND	ND	ND	
2		04.11.2019	29	70	8	20	1.2	ND	ND	ND	ND	ND	ND	ND	
3		08.11.2019	32	67	7	15	1.1	ND	ND	ND	ND	ND	ND	ND	
4		12.11.2019	30	68	8	16	1.3	ND	ND	ND	ND	ND	ND	ND	
5		16.11.2019	29	66	7	18	1.4	ND	ND	ND	ND	ND	ND	ND	
6		20.11.2019	35	75	22	30	1.3	ND	ND	ND	ND	ND	ND	ND	
7	Dec-19	23.11.2019	36	77	21	28	1.2	ND	ND	ND	ND	ND	ND	ND	
8		26.11.2019	28	67	7	9	1.1	ND	ND	ND	ND	ND	ND	ND	
1		02.12.2019	40	61	12	23	ND	ND	ND	ND	ND	ND	ND	ND	
2		05.12.2019	40	65	20	25	ND	ND	ND	ND	ND	ND	ND	ND	
3		09.12.2019	45	63	13	20	ND	ND	ND	ND	ND	ND	ND	ND	
4		12.12.2019	43	74	13	22	ND	ND	ND	ND	ND	ND	ND	ND	
5		16.12.2019	48	57	13	18	ND	ND	ND	ND	ND	ND	ND	ND	

## Environment Status Report

7		19.12.2019	34	82	13	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		23.12.2019	43	64	12	24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8		26.12.2019	44	60	13	22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1		02.01.2020	39	69	14	20	ND	22.1	ND	ND	15.47	ND	ND	ND	ND	ND	ND
2		07.01.2020	41	72	14	19	ND	21.7	ND	ND	15	ND	ND	ND	ND	ND	ND
3		13.01.2020	40	67	12	17	ND	22.08	ND	ND	16.02	ND	ND	ND	ND	ND	ND
4	Jan-20	16.01.2020	38	65	14	19	ND	20.82	ND	ND	15.4	ND	ND	ND	ND	ND	ND
5		20.01.2020	40	72	15	24	ND	21.87	ND	ND	16.03	ND	ND	ND	ND	ND	ND
6		23.01.2020	41	69	14	21	ND	24.6	ND	ND	15.6	ND	ND	ND	ND	ND	ND
7		27.01.2020	44	73	15	22	ND	22	ND	ND	15	ND	ND	ND	ND	ND	ND
8		30.01.2020	41	75	16	21	ND	23.2	ND	ND	15.8	ND	ND	ND	ND	ND	ND
1		03.02.2020	31	55	12	18	ND	23.8	ND	ND	16.1	ND	ND	ND	ND	ND	ND
2		06.02.2020	33	57	13.8	18.8	ND	23	ND	ND	14.8	ND	ND	ND	ND	ND	ND
3		10.02.2020	33	55.98	10	18.2	ND	21.9	ND	ND	15.2	ND	ND	ND	ND	ND	ND
4	Feb-20	13.02.2020	31	56.3	12	20.1	ND	24.2	ND	ND	14.6	ND	ND	ND	ND	ND	ND
5		17.02.2020	34	57	13.4	18.9	ND	22.5	ND	ND	14.1	ND	ND	ND	ND	ND	ND
6		20.02.2020	30	57	11.4	18.8	ND	22.1	ND	ND	15	ND	ND	ND	ND	ND	ND
7		24.02.2020	32	54	12.1	20.3	ND	23.6	ND	ND	15	ND	ND	ND	ND	ND	ND
8		28.02.2020	32.8	54	11.4	17.6	ND	24	ND	ND	15.2	ND	ND	ND	ND	ND	ND
1		02.03.2020	30	54	10	19.18	ND	20.1	ND	ND	15.2	ND	ND	ND	ND	ND	ND
2		05.03.2020	32	56	10	17	ND	22	ND	ND	13.9	ND	ND	ND	ND	ND	ND
3	Mar-20	11.03.2020	32	58	11	20	ND	22.8	ND	ND	17	ND	ND	ND	ND	ND	ND
4		13.03.2020	30	53	10	19	ND	22.1	ND	ND	13.9	ND	ND	ND	ND	ND	ND
5		16.03.2020	32	56	11.2	19	ND	21.2	ND	ND	15	ND	ND	ND	ND	ND	ND
6		18.03.2020	31	55	10	19.9	ND	23.4	ND	ND	14	ND	ND	ND	ND	ND	ND
<b>Minimum</b>		<b>28</b>	<b>53</b>	<b>7</b>	<b>9</b>	<b>1.1</b>	<b>20.1</b>	<b>0</b>	<b>0</b>	<b>13.9</b>	<b>0</b>						
<b>Maximum</b>		<b>48</b>	<b>83</b>	<b>22</b>	<b>30</b>	<b>1.4</b>	<b>24.6</b>	<b>0</b>	<b>0</b>	<b>17</b>	<b>0</b>						
<b>Mean</b>		<b>35.84</b>	<b>66.59</b>	<b>12.51</b>	<b>20.02</b>	<b>1.26</b>	<b>22.50</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>15.15</b>	<b>#DIV/0!</b>						
<b>Standard Deviation</b>		<b>5.1</b>	<b>9.4</b>	<b>3.3</b>	<b>3.5</b>	<b>0.6</b>	<b>11.4</b>	<b>0.0</b>	<b>0.0</b>	<b>7.7</b>	<b>0.0</b>						
<b>98 Percentile</b>		<b>45.3</b>	<b>82.1</b>	<b>21.1</b>	<b>28.2</b>	<b>1.4</b>	<b>24.432</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>16.622</b>	<b>#NUM!</b>						

## Environment Status Report

**Location 4 - Residential Colony**

Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	CO ( $\text{mg}/\text{m}^3$ )	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	Hg ( $\mu\text{g}/\text{m}^3$ )	Pb ( $\mu\text{g}/\text{m}^3$ )	NH <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	C <sub>6</sub> H <sub>6</sub> ( $\mu\text{g}/\text{m}^3$ )	BaP ( $\text{ng}/\text{m}^3$ )	As ( $\text{ng}/\text{m}^3$ )	Ni ( $\text{ng}/\text{m}^3$ )
1	Oct., 2019	01.10.2019	34	71	10	14	1.3	ND	ND	ND	ND	ND	ND	ND	ND
2		04.10.2019	35	77	7	11	1.3	ND	ND	ND	ND	ND	ND	ND	ND
3		07.10.2019	36	70	9	13	1.3	ND	ND	ND	ND	ND	ND	ND	ND
4		10.10.2019	32	73	8	18	1.3	ND	ND	ND	ND	ND	ND	ND	ND
5		14.10.2019	36	79	6	10	1.2	ND	ND	ND	ND	ND	ND	ND	ND
6		17.10.2019	39	80	12	22	1.2	ND	ND	ND	ND	ND	ND	ND	ND
7		21.10.2019	37	78	9	17	1.4	ND	ND	ND	ND	ND	ND	ND	ND
8		24.10.2019	38	81	12	27	1.4	ND	ND	ND	ND	ND	ND	ND	ND
1	Nov., 2019	01.11.2019	27	63	10	18	1.2	ND	ND	ND	ND	ND	ND	ND	ND
2		4.11.2019	32	69	14	23	1.3	ND	ND	ND	ND	ND	ND	ND	ND
3		08.11.2019	30	72	8	19	1.4	ND	ND	ND	ND	ND	ND	ND	ND
4		12.11.2019	31	69	9	17	1.3	ND	ND	ND	ND	ND	ND	ND	ND
5		16.11.2019	29	68	6	16	1.2	ND	ND	ND	ND	ND	ND	ND	ND
6		20.11.2019	33	72	18	23	1.3	ND	ND	ND	ND	ND	ND	ND	ND
7		23.11.2019	35	70	16	21	1.1	ND	ND	ND	ND	ND	ND	ND	ND
8		26.11.2019	30	69	8	10	1.3	ND	ND	ND	ND	ND	ND	ND	ND
1	Dec-19	02.12.2019	34	64	13	19	ND	ND	ND	ND	ND	ND	ND	ND	ND
2		05.12.2019	42	80	13	19	ND	ND	ND	ND	ND	ND	ND	ND	ND
3		09.12.2019	45	78	15	20	ND	ND	ND	ND	ND	ND	ND	ND	ND
4		12.12.2019	42	71	8	14	ND	ND	ND	ND	ND	ND	ND	ND	ND
5		16.12.2019	40	65	15	24	ND	ND	ND	ND	ND	ND	ND	ND	ND
6		19.12.2019	38	79	12	17	ND	ND	ND	ND	ND	ND	ND	ND	ND
7		23.12.2019	43	59	13	18	ND	ND	ND	ND	ND	ND	ND	ND	ND
8		26.12.2019	43	71	14	23	ND	ND	ND	ND	ND	ND	ND	ND	ND

## Environment Status Report

		02.01.2020	36	64	14	20	ND	20.99	ND	ND	15.3	ND							
Jan-20	1	07.01.2020	40	70	15	21	ND	22.1	ND	ND	16.4	ND							
	2	13.01.2020	38	66	9	15	ND	21.77	ND	ND	15.68	ND							
	3	16.01.2020	35	65	10	16	ND	20.6	ND	ND	17.1	ND							
	4	20.01.2020	41	72	14	20	ND	22.2	ND	ND	16.1	ND							
	5	23.01.2020	43	59	13	20	ND	22.6	ND	ND	14.2	ND							
	6	27.01.2020	39	64	15	21	ND	22.1	ND	ND	13.8	ND							
	7	30.01.2020	38	69	13	18	ND	21.8	ND	ND	14.9	ND							
	8	03.02.2020	32	58	12	18	ND	21.6	ND	ND	13.8	ND							
Feb-20	1	06.02.2020	32	56	14.2	19.6	ND	23.6	ND	ND	15.3	ND							
	2	10.02.2020	36	58.88	11.8	16.3	ND	20.9	ND	ND	14.2	ND							
	3	13.02.2020	32	52.3	11.4	17.1	ND	22.9	ND	ND	15.6	ND							
	4	17.02.2020	34	54	12.1	18.5	ND	23.4	ND	ND	14.2	ND							
	5	20.02.2020	33.8	60	9.2	14.8	ND	21	ND	ND	13.6	ND							
	6	24.02.2020	33	56	11.6	19.8	ND	23.8	ND	ND	15	ND							
	7	28.02.2020	32	55	12	19	ND	22.8	ND	ND	15	ND							
	8	02.03.2020	33	54	11	19	ND	22.1	ND	ND	14.3	ND							
Mar-20	1	05.03.2020	30	55	12.1	20.4	ND	22.2	ND	ND	14.9	ND							
	2	11.03.2020	31	55	11	15.9	ND	21	ND	ND	13.8	ND							
	3	13.03.2020	31	54	10.2	21	ND	23.05	ND	ND	15.2	ND							
	4	16.03.2020	32	56	11.2	19	ND	21.2	ND	ND	15	ND							
	5	18.03.2020	32.1	58	10.4	19.8	ND	22.5	ND	ND	14.2	ND							
	6																		
		<b>Minimum</b>	<b>27</b>	<b>52.3</b>	<b>6</b>	<b>10</b>	<b>1.1</b>	<b>20.6</b>	<b>0</b>	<b>0</b>	<b>13.6</b>	<b>0</b>							
		<b>Maximum</b>	<b>45</b>	<b>81</b>	<b>18</b>	<b>27</b>	<b>1.4</b>	<b>23.8</b>	<b>0</b>	<b>0</b>	<b>17.1</b>	<b>0</b>							
<b>Standard Deviation</b>		<b>Mean</b>	<b>35.32</b>	<b>66.07</b>	<b>11.48</b>	<b>18.31</b>	<b>1.28</b>	<b>22.10</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>14.89</b>	<b>#DIV/0!</b>							
			<b>4.4</b>	<b>8.6</b>	<b>2.7</b>	<b>3.5</b>	<b>0.6</b>	<b>11.2</b>	<b>0.0</b>	<b>0.0</b>	<b>7.5</b>	<b>0.0</b>							
		<b>98 Percentile</b>	<b>43.2</b>	<b>80.1</b>	<b>16.2</b>	<b>24.3</b>	<b>1.4</b>	<b>23.716</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>16.806</b>	<b>#NUM!</b>							

## Environment Status Report

### Outside the GVK Plant Premises

Location 5 - Goindwal Sahib															
Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	CO ( $\text{mg}/\text{m}^3$ )	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	Hg ( $\mu\text{g}/\text{m}^3$ )	Pb ( $\mu\text{g}/\text{m}^3$ )	NH <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	C6H <sub>6</sub> ( $\mu\text{g}/\text{m}^3$ )	BaP ( $\text{ng}/\text{m}^3$ )	As ( $\text{ng}/\text{m}^3$ )	Ni ( $\text{ng}/\text{m}^3$ )
Oct., 2019	1	01.10.2019	31	67	9	11	ND	ND	ND	ND	ND	ND	ND	ND	
	2	04.10.2019	33	70	7	9	ND	ND	ND	ND	ND	ND	ND	ND	
	3	07.10.2019	32	72	12	16	ND	ND	ND	ND	ND	ND	ND	ND	
	4	10.10.2019	29	68	9	19	ND	ND	ND	ND	ND	ND	ND	ND	
	5	14.10.2019	30	62	13	18	ND	ND	ND	ND	ND	ND	ND	ND	
	6	17.10.2019	34	73	19	29	ND	ND	ND	ND	ND	ND	ND	ND	
	7	21.10.2019	31	70	13	22	ND	ND	ND	ND	ND	ND	ND	ND	
	8	24.10.2019	33	65	10	16	ND	ND	ND	ND	ND	ND	ND	ND	
Nov., 2019	1	01.11.2019	35	76	10	24	ND	ND	ND	ND	ND	ND	ND	ND	
	2	4.11.2019	32	71	8	17	ND	ND	ND	ND	ND	ND	ND	ND	
	3	08.11.2019	28	67	7	20	ND	ND	ND	ND	ND	ND	ND	ND	
	4	12.11.2019	27	65	6	18	ND	ND	ND	ND	ND	ND	ND	ND	
	5	16.11.2019	26	66	6	16	ND	ND	ND	ND	ND	ND	ND	ND	
	6	20.11.2019	30	61	14	19	ND	ND	ND	ND	ND	ND	ND	ND	
	7	23.11.2019	31	64	12	18	ND	ND	ND	ND	ND	ND	ND	ND	
	8	26.11.2019	27	64	6	9	ND	ND	ND	ND	ND	ND	ND	ND	
Dec-20	1	04.12.2019	32	65	9	13	ND	ND	ND	ND	ND	ND	ND	ND	
	2	07.12.2019	34	67	5	9	ND	ND	ND	ND	ND	ND	ND	ND	
	3	11.12.2019	30	62	11	15	ND	ND	ND	ND	ND	ND	ND	ND	
	4	14.12.2019	35	60	13	17	ND	ND	ND	ND	ND	ND	ND	ND	
	5	18.12.2019	38	68	10	14	ND	ND	ND	ND	ND	ND	ND	ND	
	6	21.12.2019	33	65	12	16	ND	ND	ND	ND	ND	ND	ND	ND	
	7	25.12.2019	31	66	9	15	ND	ND	ND	ND	ND	ND	ND	ND	
	8	28.12.2019	35	61	7	14	ND	ND	ND	ND	ND	ND	ND	ND	

## Environment Status Report

<b>1</b>	02.01.2020	33	64.8	12.1	18.3	ND	20.74	ND	ND	21.14	ND	ND	ND	ND
2	07.01.2020	35	70	13	20	ND	21.7	ND	ND	15.1	ND	ND	ND	ND
3	13.01.2020	34	68	13	20	ND	20.89	ND	ND	14.98	ND	ND	ND	ND
4	16.01.2020	42	71	14	20	ND	21.4	ND	ND	14.98	ND	ND	ND	ND
5	Jan-20	20.01.2020	38	71	14	19	ND	22.1	ND	ND	15.7	ND	ND	ND
6	23.01.2020	48	72	16	20	ND	23.9	ND	ND	16.2	ND	ND	ND	ND
7	27.01.2020	40	68	13	19	ND	20.9	ND	ND	13.8	ND	ND	ND	ND
8	30.01.2020	38	68	14	21	ND	23.2	ND	ND	15.8	ND	ND	ND	ND
1	03.02.2020	31	53	13.2	20.1	ND	22.6	ND	ND	16	ND	ND	ND	ND
2	06.02.2020	36	55	12	18	ND	22.9	ND	ND	16.1	ND	ND	ND	ND
3	10.02.2020	33	54.77	12.1	17	ND	21.4	ND	ND	16.3	ND	ND	ND	ND
4	Feb-20	13.02.2020	30	55	13	20.9	ND	20.9	ND	ND	15.11	ND	ND	ND
5	17.02.2020	32	52.2	14	21	ND	23.6	ND	ND	15	ND	ND	ND	ND
6	20.02.2020	33	56	15	21.2	ND	24.1	ND	ND	15.9	ND	ND	ND	ND
7	24.02.2020	30	53	14	17.4	ND	22.5	ND	ND	15	ND	ND	ND	ND
8	28.02.2020	30	53	12.5	18.1	ND	22.7	ND	ND	14.9	ND	ND	ND	ND
1	02.03.2020	30	52	12.1	19.9	ND	23.1	ND	ND	14.8	ND	ND	ND	ND
2	05.03.2020	31	52	10	17	ND	21.1	ND	ND	13.6	ND	ND	ND	ND
3	11.03.2020	31	56	12	19	ND	22	ND	ND	19.9	ND	ND	ND	ND
4	13.03.2020	33	51.2	11	21	ND	21.2	ND	ND	14.55	ND	ND	ND	ND
5	16.03.2020	33	57	12	22	ND	22.1	ND	ND	13.4	ND	ND	ND	ND
6	18.03.2020	31	55	11	23	ND	22.8	ND	ND	16.3	ND	ND	ND	ND
<b>Minimum</b>		<b>26</b>	<b>51.2</b>	<b>5</b>	<b>9</b>	<b>0</b>	<b>20.74</b>	<b>0</b>	<b>0</b>	<b>13.4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Maximum</b>		<b>48</b>	<b>76</b>	<b>19</b>	<b>29</b>	<b>0</b>	<b>24.1</b>	<b>0</b>	<b>0</b>	<b>21.14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Mean</b>		32.80	63.11	11.30	17.98	#DIV/0!	22.17	#DIV/0!	#DIV/0!	15.66	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
<b>Standard Deviation</b>		4.0	7.0	2.9	3.9	0.0	11.2	0.0	0.0	8.0	0.0	0.0	0.0	0.0
<b>98 Percentile</b>		42.6	73.3	16.3	24.5	#NUM!	24.016	#NUM!	#NUM!	20.6192	#NUM!	#NUM!	#NUM!	#NUM!

## Environment Status Report

Location 6 - Hansawala															
Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	CO ( $\text{mg}/\text{m}^3$ )	O3 ( $\mu\text{g}/\text{m}^3$ )	Hg ( $\mu\text{g}/\text{m}^3$ )	Pb ( $\mu\text{g}/\text{m}^3$ )	NH3 ( $\mu\text{g}/\text{m}^3$ )	C6H6 ( $\mu\text{g}/\text{m}^3$ )	BaP ( $\text{ng}/\text{m}^3$ )	As ( $\text{ng}/\text{m}^3$ )	Ni ( $\text{ng}/\text{m}^3$ )
1	Oct., 2019	01.10.2019	28	68	8	12	ND	ND	ND	ND	ND	ND	ND	ND	
2		04.10.2019	30	72	11	14	ND	ND	ND	ND	ND	ND	ND	ND	
3		07.10.2019	28	71	6	13	ND	ND	ND	ND	ND	ND	ND	ND	
4		10.10.2019	34	72	11	17	ND	ND	ND	ND	ND	ND	ND	ND	
5		14.10.2019	28	67	6	9	ND	ND	ND	ND	ND	ND	ND	ND	
6		17.10.2019	32	74	12	20	ND	ND	ND	ND	ND	ND	ND	ND	
7		21.10.2019	38	76	14	28	ND	ND	ND	ND	ND	ND	ND	ND	
8		24.10.2019	30	73	12	22	ND	ND	ND	ND	ND	ND	ND	ND	
1	Nov., 2019	01.11.2019	34	82	13	27	ND	ND	ND	ND	ND	ND	ND	ND	
2		04.11.2019	30	73	10	24	ND	ND	ND	ND	ND	ND	ND	ND	
3		08.11.2019	28	65	7	14	ND	ND	ND	ND	ND	ND	ND	ND	
4		12.11.2019	29	66	9	13	ND	ND	ND	ND	ND	ND	ND	ND	
5		16.11.2019	30	67	6	11	ND	ND	ND	ND	ND	ND	ND	ND	
6		20.11.2019	30	67	17	24	ND	ND	ND	ND	ND	ND	ND	ND	
7		23.11.2019	32	68	16	20	ND	ND	ND	ND	ND	ND	ND	ND	
8		26.11.2019	30	65	8	14	ND	ND	ND	ND	ND	ND	ND	ND	
1	Dec-20	04.12.2019	35	69	11	16	ND	ND	ND	ND	ND	ND	ND	ND	
2		07.12.2019	38	65	9	15	ND	ND	ND	ND	ND	ND	ND	ND	
3		11.12.2019	42	62	12	18	ND	ND	ND	ND	ND	ND	ND	ND	
4		14.12.2019	36	64	10	15	ND	ND	ND	ND	ND	ND	ND	ND	
5		18.12.2019	33	67	8	14	ND	ND	ND	ND	ND	ND	ND	ND	
6		21.12.2019	31	70	7	13	ND	ND	ND	ND	ND	ND	ND	ND	
7		25.12.2019	35	62	13	20	ND	ND	ND	ND	ND	ND	ND	ND	
8		28.12.2019	39	61	12	18	ND	ND	ND	ND	ND	ND	ND	ND	

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## Environment Status Report

Jan-20	1	02.01.2020	32	67	12	19	ND	22.8	ND	ND	16.1	ND	ND	ND	ND	
	2	07.01.2020	32	70	12	19	ND	21.7	ND	ND	15.6	ND	ND	ND	ND	
	3	13.01.2020	40	72	14	20	ND	21.75	ND	ND	15.02	ND	ND	ND	ND	
	4	16.01.2020	39	71	12	21	ND	21.6	ND	ND	15.99	ND	ND	ND	ND	
	5	20.01.2020	42	71	14	19	ND	20.63	ND	ND	15.7	ND	ND	ND	ND	
	6	23.01.2020	40	69	14	19	ND	21.9	ND	ND	13.6	ND	ND	ND	ND	
	7	27.01.2020	41	69	16	22	ND	21.9	ND	ND	13.8	ND	ND	ND	ND	
	8	30.01.2020	42	71	16	21	ND	22.8	ND	ND	15.2	ND	ND	ND	ND	
	1	03.02.2020	31	57	13	18.2	ND	21	ND	ND	15.6	ND	ND	ND	ND	
	2	06.02.2020	33	59.9	12.4	18.2	ND	21	ND	ND	14	ND	ND	ND	ND	
Feb-20	3	10.02.2020	34	55.74	12	18	ND	22.6	ND	ND	15.2	ND	ND	ND	ND	
	4	13.02.2020	33	54.6	11.3	18.5	ND	24	ND	ND	15	ND	ND	ND	ND	
	5	17.02.2020	33.4	56	12.7	18.2	ND	22.69	ND	ND	14.5	ND	ND	ND	ND	
	6	20.02.2020	35	56	15.2	20.1	ND	23.6	ND	ND	14.9	ND	ND	ND	ND	
	7	24.02.2020	30	23.87	12.9	19.87	ND	23	ND	ND	15.6	ND	ND	ND	ND	
	8	28.02.2020	30	51	13.4	18.8	ND	23	ND	ND	14.9	ND	ND	ND	ND	
	1	02.03.2020	33	52	11	18.1	ND	22.6	ND	ND	14.3	ND	ND	ND	ND	
Mar-20	2	05.03.2020	32.1	54.8	11	19	ND	22.1	ND	ND	15.2	ND	ND	ND	ND	
	3	11.03.2020	32	56	10	21	ND	21.2	ND	ND	14.4	ND	ND	ND	ND	
	4	13.03.2020	31	56.2	11	19	ND	22.1	ND	ND	13.5	ND	ND	ND	ND	
	5	16.03.2020	32	55	12	19	ND	21	ND	ND	15	ND	ND	ND	ND	
	6	18.03.2020	33	57	11.2	22.7	ND	22.4	ND	ND	15.5	ND	ND	ND	ND	
	<b>Minimum</b>	<b>28</b>	<b>23.87</b>	<b>6</b>	<b>9</b>	<b>0</b>	<b>20.63</b>	<b>0</b>	<b>0</b>	<b>13.5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
	<b>Maximum</b>	<b>42</b>	<b>82</b>	<b>17</b>	<b>28</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>16.1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	
<b>Mean</b>		<b>33.49</b>	<b>64.15</b>	<b>11.46</b>	<b>18.25</b>	<b>#DIV/0!</b>	<b>22.15</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>14.94</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	
<b>Standard Deviation</b>		<b>4.1</b>	<b>9.4</b>	<b>2.7</b>	<b>3.9</b>	<b>0.0</b>	<b>11.2</b>	<b>0.0</b>	<b>0.0</b>	<b>7.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
<b>98 Percentile</b>		<b>42</b>	<b>76.6</b>	<b>16.1</b>	<b>27.1</b>	<b>#NUM!</b>	<b>23.832</b>	<b>#NUM!</b>	<b>16.0538</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>#NUM!</b>	

## Environment Status Report

Location 7 - Vairoval														
Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	CO ( $\mu\text{g}/\text{m}^3$ )	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	Hg ( $\mu\text{g}/\text{m}^3$ )	Pb ( $\mu\text{g}/\text{m}^3$ )	NH <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	BaP ( $\text{ng}/\text{m}^3$ )	As ( $\text{ng}/\text{m}^3$ )	Ni ( $\text{ng}/\text{m}^3$ )
Oct., 2019	1	01.10.2019	29	65	6	10	ND	ND	ND	ND	ND	ND	ND	
	2	04.10.2019	30	62	10	14	ND	ND	ND	ND	ND	ND	ND	
	3	07.10.2019	33	69	13	18	ND	ND	ND	ND	ND	ND	ND	
	4	10.10.2019	33	65	8	15	ND	ND	ND	ND	ND	ND	ND	
	5	14.10.2019	34	72	13	21	ND	ND	ND	ND	ND	ND	ND	
	6	17.10.2019	32	70	9	16	ND	ND	ND	ND	ND	ND	ND	
	7	21.10.2019	34	73	18	22	ND	ND	ND	ND	ND	ND	ND	
	8	24.10.2019	37	70	15	23	ND	ND	ND	ND	ND	ND	ND	
Nov., 2019	1	01.11.2019	32	80	12	30	ND	ND	ND	ND	ND	ND	ND	
	2	04.11.2019	28	70	13	21	ND	ND	ND	ND	ND	ND	ND	
	3	08.11.2019	30	68	9	17	ND	ND	ND	ND	ND	ND	ND	
	4	12.11.2019	26	69	7	15	ND	ND	ND	ND	ND	ND	ND	
	5	16.11.2019	27	66	8	15	ND	ND	ND	ND	ND	ND	ND	
	6	20.11.2019	29	62	10	15	ND	ND	ND	ND	ND	ND	ND	
	7	23.11.2019	30	64	11	16	ND	ND	ND	ND	ND	ND	ND	
	8	26.11.2019	25	66	6	8	ND	ND	ND	ND	ND	ND	ND	
Dec-20	1	04.12.2019	32	65	7	13	ND	ND	ND	ND	ND	ND	ND	
	2	07.12.2019	35	62	12	19	ND	ND	ND	ND	ND	ND	ND	
	4	11.12.2019	38	68	11	16	ND	ND	ND	ND	ND	ND	ND	
	5	14.12.2019	33	60	9	15	ND	ND	ND	ND	ND	ND	ND	
	6	18.12.2019	34	64	13	20	ND	ND	ND	ND	ND	ND	ND	
	7	21.12.2019	40	67	10	17	ND	ND	ND	ND	ND	ND	ND	
	8	25.12.2019	35	69	8	15	ND	ND	ND	ND	ND	ND	ND	
	8	28.12.2019	31	66	7	14	ND	ND	ND	ND	ND	ND	ND	

## Environment Status Report

1		02.01.2020	33.42	66.5	13.4	19.7	ND	21.8	ND	ND	15.3	ND	ND	ND	ND	ND
2		07.01.2020	35	68	11	20	ND	20.9	ND	ND	15.2	ND	ND	ND	ND	ND
3		13.01.2020	35	69	13	19	ND	21.55	ND	ND	16.3	ND	ND	ND	ND	ND
4	Jan-20	16.01.2020	39	68	12	19	ND	20.54	ND	ND	15.8	ND	ND	ND	ND	ND
5		20.01.2020	42	71	13	21	ND	22.02	ND	ND	15.4	ND	ND	ND	ND	ND
6		23.01.2020	41	68	14	21	ND	21.6	ND	ND	15	ND	ND	ND	ND	ND
7		27.01.2020	42	71	14	21	ND	24.2	ND	ND	15.2	ND	ND	ND	ND	ND
8		30.01.2020	71	70	16	20	ND	24	ND	ND	15	ND	ND	ND	ND	ND
1		03.02.2020	33	57	12.8	18	ND	23.2	ND	ND	15.9	ND	ND	ND	ND	ND
2		06.02.2020	34	54	13	19	ND	22	ND	ND	14.8	ND	ND	ND	ND	ND
3		10.02.2020	34	59	12.1	17.5	ND	20.7	ND	ND	15	ND	ND	ND	ND	ND
4	Feb-20	13.02.2020	33	56	11.2	21	ND	20.11	ND	ND	15.2	ND	ND	ND	ND	ND
5		17.02.2020	32	54	12.1	16.5	ND	23.5	ND	ND	15.9	ND	ND	ND	ND	ND
6		20.02.2020	33	51.99	13.5	19.7	ND	22.6	ND	ND	14	ND	ND	ND	ND	ND
7		24.02.2020	33	55.6	13.1	19.7	ND	23.8	ND	ND	14.8	ND	ND	ND	ND	ND
8		28.02.2020	31	55	13.9	18.4	ND	23.2	ND	ND	15.6	ND	ND	ND	ND	ND
1		02.03.2020	31	52	11.2	19.3	ND	24.6	ND	ND	14.1	ND	ND	ND	ND	ND
2		05.03.2020	31	55	12	20	ND	21.4	ND	ND	13.2	ND	ND	ND	ND	ND
3		11.03.2020	31	55	10.9	20.8	ND	21.02	ND	ND	19.4	ND	ND	ND	ND	ND
4		13.03.2020	32	52	11.2	22	ND	21.3	ND	ND	15.2	ND	ND	ND	ND	ND
5		16.03.2020	31	55	11	17	ND	22.9	ND	ND	14.9	ND	ND	ND	ND	ND
6		18.03.2020	31	53	14	21	ND	21.9	ND	ND	13	ND	ND	ND	ND	ND
<b>Minimum</b>		<b>25</b>	<b>51.99</b>	<b>6</b>	<b>8</b>	<b>0</b>	<b>20.11</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Maximum</b>		<b>71</b>	<b>80</b>	<b>18</b>	<b>30</b>	<b>0</b>	<b>24.6</b>	<b>0</b>	<b>0</b>	<b>19.4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Mean</b>		<b>33.81</b>	<b>63.65</b>	<b>11.38</b>	<b>18.17</b>	<b>#DIV/0!</b>	<b>22.22</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>15.19</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>
<b>Standard Deviation</b>		<b>6.8</b>	<b>6.9</b>	<b>2.6</b>	<b>3.6</b>	<b>0.0</b>	<b>11.3</b>	<b>0.0</b>	<b>0.0</b>	<b>7.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>98 Percentile</b>		<b>44.9</b>	<b>73.7</b>	<b>16.2</b>	<b>23.7</b>	<b>#NUM!</b>	<b>24.432</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>18.098</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>#NUM!</b>

## Environment Status Report

Location 8 - Mundu Village															
Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO <sub>2</sub> ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	CO ( $\mu\text{g}/\text{m}^3$ )	O <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	Hg ( $\mu\text{g}/\text{m}^3$ )	Pb ( $\mu\text{g}/\text{m}^3$ )	NH <sub>3</sub> ( $\mu\text{g}/\text{m}^3$ )	C6H6 ( $\mu\text{g}/\text{m}^3$ )	BaP ( $\text{ng}/\text{m}^3$ )	As ( $\text{ng}/\text{m}^3$ )	Ni ( $\text{ng}/\text{m}^3$ )
1		01.10.2019	30	69	7	9	ND	ND	ND	ND	ND	ND	ND	ND	
2		04.10.2019	33	70	9	14	ND	ND	ND	ND	ND	ND	ND	ND	
3		07.10.2019	29	67	12	16	ND	ND	ND	ND	ND	ND	ND	ND	
4	Oct., 2019	10.10.2019	32	72	19	23	ND	ND	ND	ND	ND	ND	ND	ND	
5		14.10.2019	35	64	7	11	ND	ND	ND	ND	ND	ND	ND	ND	
6		17.10.2019	32	69	11	16	ND	ND	ND	ND	ND	ND	ND	ND	
7		21.10.2019	36	75	14	25	ND	ND	ND	ND	ND	ND	ND	ND	
8		24.10.2019	32	71	16	23	ND	ND	ND	ND	ND	ND	ND	ND	
1		01.11.2019	32	79	10	22	ND	ND	ND	ND	ND	ND	ND	ND	
2		4.11.2019	30	74	7	18	ND	ND	ND	ND	ND	ND	ND	ND	
3		08.11.2019	27	70	13	24	ND	ND	ND	ND	ND	ND	ND	ND	
4	Nov., 2019	12.11.2019	28	67	8	20	ND	ND	ND	ND	ND	ND	ND	ND	
5		16.11.2019	25	69	10	20	ND	ND	ND	ND	ND	ND	ND	ND	
6		20.11.2019	33	67	14	18	ND	ND	ND	ND	ND	ND	ND	ND	
7		23.11.2019	32	65	12	15	ND	ND	ND	ND	ND	ND	ND	ND	
8		26.11.2019	29	66	7	12	ND	ND	ND	ND	ND	ND	ND	ND	
1		04.12.2019	30	68	7	14	ND	ND	ND	ND	ND	ND	ND	ND	
2		07.12.2019	30	69	7	10	ND	ND	ND	ND	ND	ND	ND	ND	
3		11.12.2019	30	63	9	13	ND	ND	ND	ND	ND	ND	ND	ND	
4	Dec-20	14.12.2019	28	66	6	10	ND	ND	ND	ND	ND	ND	ND	ND	
5		18.12.2019	29	69	6	8	ND	ND	ND	ND	ND	ND	ND	ND	
6		21.12.2019	31	66	7	11	ND	ND	ND	ND	ND	ND	ND	ND	
7		25.12.2019	28	67	8	13	ND	ND	ND	ND	ND	ND	ND	ND	
8		28.12.2019	32	65	6	14	ND	ND	ND	ND	ND	ND	ND	ND	
1	Jan-20	02.01.2020	34	66	13	18	ND	22.2	ND	ND	15.7	ND	ND	ND	

## Environment Status Report

		07.01.2020	40	72	13	19	ND	21.6	ND	ND	15.7	ND	ND	ND
2		13.01.2020	40	71	13	19	ND	21.7	ND	ND	16.3	ND	ND	ND
3		16.01.2020	36	69	13	21	ND	21.8	ND	ND	15.4	ND	ND	ND
4		20.01.2020	41	71	13	22	ND	20.93	ND	ND	15.8	ND	ND	ND
5		23.01.2020	43	71	16	20	ND	22.4	ND	ND	14.8	ND	ND	ND
6		27.01.2020	44	73	16	23	ND	22	ND	ND	16	ND	ND	ND
7		30.01.2020	40	69	13	19	ND	21	ND	ND	14	ND	ND	ND
8		03.02.2020	31.2	59	16	22	ND	24.6	ND	ND	15.9	ND	ND	ND
1		06.02.2020	36	56.8	14.2	20.1	ND	23.2	ND	ND	15.2	ND	ND	ND
2		10.02.2020	31	52.3	9.6	15	ND	21.9	ND	ND	14	ND	ND	ND
3		13.02.2020	34.5	55	10.9	18	ND	22.3	ND	ND	16.1	ND	ND	ND
4	Feb-20	17.02.2020	34	56.2	12.8	19.9	ND	21.58	ND	ND	16	ND	ND	ND
5		20.02.2020	37.3	53	12.1	18.5	ND	23.5	ND	ND	15	ND	ND	ND
6		24.02.2020	31	54.8	12.9	19.8	ND	24.85	ND	ND	14.2	ND	ND	ND
7		28.02.2020	30	56	12.1	17.5	ND	23.9	ND	ND	14	ND	ND	ND
8		02.03.2020	29	54	11	20	ND	23.2	ND	ND	14.33	ND	ND	ND
1		05.03.2020	32	54.3	12	21	ND	21.2	ND	ND	14.9	ND	ND	ND
2		11.03.2020	30	51	11	19	ND	20.3	ND	ND	15.8	ND	ND	ND
3		13.03.2020	31	56	10	21	ND	23.3	ND	ND	14.2	ND	ND	ND
4		16.03.2020	33	55	11	21	ND	22	ND	ND	14	ND	ND	ND
5		18.03.2020	33	54	11	19	ND	23.1	ND	ND	14.3	ND	ND	ND
6		<b>Minimum</b>	<b>25</b>	<b>51</b>	<b>6</b>	<b>8</b>	<b>0</b>	<b>20.3</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>
		<b>Maximum</b>	<b>44</b>	<b>79</b>	<b>19</b>	<b>25</b>	<b>0</b>	<b>24.85</b>	<b>0</b>	<b>0</b>	<b>16.3</b>	<b>0</b>	<b>0</b>	<b>0</b>
		<b>Mean</b>	<b>32.70</b>	<b>64.70</b>	<b>11.06</b>	<b>17.65</b>	<b>#DIV/0!</b>	<b>22.39</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>15.07</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>
		<b>Standard Deviation</b>	<b>4.2</b>	<b>7.3</b>	<b>3.2</b>	<b>4.3</b>	<b>0.0</b>	<b>11.3</b>	<b>0.0</b>	<b>0.0</b>	<b>7.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
		<b>98 Percentile</b>	<b>43.1</b>	<b>75.4</b>	<b>16.3</b>	<b>24.1</b>	<b>#NUM!</b>	<b>24.745</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>16.216</b>	<b>#NUM!</b>	<b>#NUM!</b>	<b>#NUM!</b>

**Note:** Above tabulated data 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.)

**(Oct,2019 to Oct,2019)**

# Interstellar Testing Centre Pvt. Ltd.

## TEST REPORT

Document QF: 2501

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

Report No. : E01-1910291190  
 Dated : 31.10.2019  
 Party Ref. : Nil  
 Dated : Nil

Sample description: Noise Monitoring (08 Locations)

### SAMPLE PARTICULARS

#### General Information:

1. Date of Monitoring : 20.10.2019
2. Time of Monitoring : Day & Night
3. Nature of Industry : Thermal Power Plant
4. Purpose of Monitoring : For Self Monitoring

### TEST RESULTS

Method: IS: 9989 (Reaffirmed 2001)

Sr. No.	Location	*Standards Leq dB (A)		Results Leq dB (A)					
		Day	Night	Day (06:00hrs to 22:00hrs)			Night (22:00hrs to 06:00hrs)		
1.	Near Service Building	85.0 Max	85.0 Max	71.3	73.6	68.1	69.3	70.9	70.1
2.	CHP Area	85.0 Max	85.0 Max	76.1	77.9	73.1	69.5	70.9	70.9
3.	AHP Area	85.0 Max	85.0 Max	79.4	82.8	76.1	75.7	77.6	76.9
4.	Near Plant Site Office	85.0 Max	85.0 Max	62.3	64.7	60.1	56.2	58.7	58.4
5.	Near Boiler Area (Main Plant Area)	85.0 Max	85.0 Max	80.6	82.4	77.1	80.3	82.4	82.4
6.	Residential Colony	**55.0 Max	**45.0 Max	52.4	54.4	50.4	43.0	45.9	45.9
7.	Near Admin Building (Plant Main Gate)	85.0 Max	85.0 Max	63.3	65.5	60.1	58.4	60.9	60.9
8.	Near DM Plant	85.0 Max	85.0 Max	69.2	70.9	61.2	62.6	64.7	64.7

\* As per factory act-1948

\*\*EPA-1986, PCLS/02/2010

DOS: 29.10.2019

DOC: 31.10.2019

- End of Report -



Prem Kumar  
Tech. Manager (Env.)

#### Disclaimer:

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## Test Report

Document QF : 2501  
Page 1 of 2

<b>Issued To</b>	Sample Reg. No. :E01-1910180543
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	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 <sup>3</sup> /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 <sup>3</sup> (Corrected at 6% O <sub>2</sub> )	IS:11255(P-1)	Max. 50	41
b.	Sulphur Dioxide (SO <sub>2</sub> ), mg/Nm <sup>3</sup> (Corrected at 6% Dry O <sub>2</sub> )	IS:11255(P-2)	Max. 600	659

*Saurabh Sharma*  
Saurabh Sharma  
02-11-2019  
Reviewer

Interstellar Testing Centre Pvt. Ltd.  
(ISO 9001:2015 & 14001:2015 OHSAS 18001:2007 Certified Laboratory)  
(A Government Approved Test House)  
86, Industrial Area, Phase-1, Panchkula-134109 (Haryana)  
Phone : (0172) 2561543, 2563825.  
Visit us: www.itclabs.com E-mail : customersupport@itclabs.com

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02-11-2019

Prem Kumar

[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 2

<b>Issued To</b>		Sample Reg. No. : E01-1910180543	
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		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 <sub>2</sub> ), mg/Nm <sup>3</sup> (Corrected at 6% Dry O <sub>2</sub> )	IS:11255(P-7)	Max. 300
d.	Mercury(As Hg),mg/Nm <sup>3</sup>	USEPA Method	Max. 0.03
*# represents Customer Defined Fields			

NOTE : NA- Not Applicable, BLQ- Below limit of quantification, LOQ- Limit of Quantification, During monitoring O<sub>2</sub> 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 Sharma  
02-11-2019  
Reviewer

This Authorised Signature is not Valid  
For Transaction Purpose of the Board

02-11-2019

Prem Kumar  
[Authorized Signatory]

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## Test Report

<b>Issued To</b>	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 <sup>3</sup> /hr.)	: 977495.29
Ambient Air Temperature, °C	: 34

### TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
<b>Test Details :</b>				
1.	<b>General Parameters</b>			
a.	Particulate Matter, mg/Nm <sup>3</sup> (Corrected at 6% O <sub>2</sub> )	IS:11255(P-1)	Max. 50	46
b.	Sulphur Dioxide (SO <sub>2</sub> ), mg/Nm <sup>3</sup> (Corrected at 6% Dry O <sub>2</sub> )	IS:11255(P-2)	Max. 600	619

*Sourabh Sharma*  
Sourabh Sharma  
02-11-2019  
Reviewer

*For All Test Report is valid  
For One Year from date of issue*  
02-11-2019  
Prem Kumar  
(Authorized Signatory)

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501

Page 2 of 2

<b>Issued To</b>	<b>Sample Reg. No.</b> :E01-1910180544 <b>Sample Reg. Date</b> :18-10-2019 <b>Report Date</b> :02-11-2019 <b>Report No.</b> :ICE-1911020046 <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-
c. Oxides of Nitrogen (NO <sub>2</sub> ), mg/Nm <sup>3</sup> (Corrected at 6% Dry O <sub>2</sub> )	IS:11255(P-7) Max. 300 300
d. Mercury(As Hg),mg/Nm <sup>3</sup>	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 O<sub>2</sub> 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 Sharma*  
Saurabh Sharma  
02-11-2019  
Reviewer

This Analysis Report is not Valid  
For consent Purposes of ITC  
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. If sample is not consumed during analysis, it will be stored as per SOP of controlled sample management.

## Test Report

<b>Issued To</b>	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 :-
------------------	--

<b>Test Report as per IS</b>	: EPA Act 1986/PCLS/2010
<b>General Information</b>	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 39000 m <sup>3</sup> /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
<b>Observations</b>	
Flue Gas Temperature, °C,Avg.	: 41
Flue Gas Velocity(m/s),Avg.	: 10.54
Volumetric Flow Rate(Nm <sup>3</sup> /hr.)	: 44502.46
Ambient Air Temperature, °C	: 35

## TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
<b>Test Details :</b>				
1.	<b>General Parameters</b>			
a.	Particulate Matter,mg/Nm <sup>3</sup>	IS:11255(P-I)	150 Max.	64

*Saurabh Sharma*  
Saurabh Sharma  
02-11-2019  
Reviewer

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For consent Purpose of the Emission

02-11-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 2

<b>Issued To</b>	Sample Reg. No. :E01-1910180549
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	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 Sharma  
02-11-2019  
Reviewer

This Analysis Report is not Valid  
For consent Purpose in the 

02-11-2019

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 submitted within 30 days of collection date, the sample will be discarded.

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501

Page 1 of 2

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

<b>Test Report as per IS</b>	: EPA Act 1986/PCLS/2010
<b>General Information</b>	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 25200 m <sup>3</sup> /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
<b>Observations</b>	
Flue Gas Temperature, °C,Avg.	: 45
Flue Gas Velocity(m/s),Avg.	: 14.03
Volumetric Flow Rate(Nm <sup>3</sup> /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 <sup>3</sup>	IS:11255(P-1)	150 Max.	58

*Saurabh Sharma*  
Saurabh Sharma  
02-11-2019  
Reviewer

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

02-11-2019

PremKumar

[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 2

<b>Issued To</b>	Sample Reg. No. :E01-1910180550
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	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\*\*\*\*\*

*Saurabh Sharma*  
Saurabh Sharma  
02-11-2019  
Reviewer

This Analysis Report is not Valid  
For Consent Purpose of the [Redacted]

02-11-2019

Prem Kumar  
[Authorized Signatory]

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## Test Report

<b>Issued To</b>	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 :-
------------------	--

<b>Test Report as per IS</b>	: EPA Act 1986/PCLS/2010
<b>General Information</b>	
Name of the emission source monitored	: Process Stack
(a) Rated Capacity	: 10200 m <sup>3</sup> /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
<b>Observations</b>	
Flue Gas Temperature, °C,Avg.	: 45
Flue Gas Velocity(m/s),Avg.	: 12.70
Volumetric Flow Rate(Nm <sup>3</sup> /hr.)	: 8605.09
Ambient Air Temperature, °C	: 34

## TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
<b>Test Details :</b>				
1.	<b>General Parameters</b>			
a.	Particulate Matter,mg/Nm <sup>3</sup>	IS:11255(P-1)	150 Max.	45

*Saurabh Sharma*  
Saurabh Sharma  
02-11-2019  
Reviewer

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For consent Purpose of the Board  
02-11-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 2

<b>Issued To</b>	Sample Reg. No. :E01-1910180547
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	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\*\*\*\*\*

*Saurabh Sharma*  
Saurabh Sharma  
02-11-2019  
Reviewer

This Analysis Report is not Valid  
For Litigation Purposes or Legal Submissions

02-11-2019

Prem Kumar

[Authorized Signatory]

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4. If analysis is not requested by customer, no charges will be levied.

## Test Report

Document QF : 2501  
Page 1 of 2

<b>Issued To</b>	Sample Reg. No. :E01-1910180548
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	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 <sup>3</sup> /hr
(b) Capacity on sampling day	: -do-
(c) Type of fuel used & its consumption	: Electricity
(d) Normal operating schedule	: As required

#### 2. Stack Identification

3. Type of Stack/Duct	: Stack attached to Bag filter Bunker House (Unit-2)
4. Stack Height from Ground Level(m)	: Metal

Diameter of the Stack(cm)	: 61
(6) Sampling Duration(minutes)	: 51.4

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 <sup>3</sup> /hr.)	: 8522.88
Ambient Air Temperature, °C	: 35

#### TEST RESULTS

S.No.	Test Parameter	Method	Requirement	Result
<b>Test Details :</b>				
1.	General Parameters			
a.	Particulate Matter,mg/Nm <sup>3</sup>	IS:11255(P-1)	150 Max.	55

*Saurabh Sharma*  
Saurabh Sharma  
02-11-2019  
Reviewer

*Prem Kumar*  
Prem Kumar  
[Authorized Signatory]

#### Disclaimer:

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## Test Report

Document QF : 2501  
Page 2 of 2

<b>Issued To</b>	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 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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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 returned to customer.

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 1 of 2

<b>Issued To</b>	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 <sup>3</sup> /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 <sub>2</sub> ),mg/Nm <sup>3</sup>	IS:11255(P-2)	Not Specified	18

*Saurabh Sharma*  
Saurabh Sharma  
02-11-2019  
Reviewer

#### 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

02-11-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 2

<b>Issued To</b>	Sample Reg. No. :E01-1910180545 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICB-1911020064 NABL ULR No. :TC592619000014792F Customer Ref. No.:- Letter Dated :-
c. Oxides of Nitrogen(NO <sub>2</sub> ),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 Sharma  
02-11-2019  
Reviewer

  
02-11-2019  
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 1 of 2

<b>Issued To</b>	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 :
------------------	--

<b>Test Report as per IS</b>	: EPA Act 1986/PCLS/2010,G.S.R 281(E),Dated- 07.03.2016
<b>General Information</b>	
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	
<b>2. Stack Identification</b> : Stack attached to DG Set-II (750 kVA)	
<b>3. Type of Stack/Duct</b> : Metal	
<b>4. Stack Height from Ground Level(m)</b> : 12	
Diameter of the Stack(cm) : 20.32	
(6) Sampling Duration(minutes) : 61	
<b>Purpose of Monitoring</b> : For Self monitoring	
(8) Air Pollution control measure : Not Applicable	
(a) Status : -	
(b) Recovery of Material : -	
(9) Fugitive Emission,if any : Nil	
<b>Observations</b>	
Flue Gas Temperature, °C,Avg. : 380	
Flue Gas Velocity(m/s),Avg. : 18.38	
Volumetric Flow Rate(Nm <sup>3</sup> /hr.) : 973.62	
Ambient Air Temperature, °C : 35	

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

Saurabh Sharma  
02-11-2019  
Reviewer

This Analysis Report is issued valid  
For Consent Purpose of the Emissions  
02-11-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 2 of 2

<b>Issued To</b>		Sample Reg. No. :E01-1910180546 Sample Reg. Date :18-10-2019 Report Date :02-11-2019 Report No. :ICE-1911020048 NABL ULR No. :TCS92619000014793F Customer Ref. No. : Letter Dated :-		
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran				
c.	Oxides of Nitrogen(NO <sub>2</sub> ),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 Sharma*  
Saurabh Sharma  
02-11-2019  
Reviewer

02-11-2019  
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

<b>Issued To</b>	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):
--------------------------	------------------------

### 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 : SUPPLEMENTARY INFORMATIONS

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

Saurabh Sharma  
08-11-2019  
Reviewer

08-11-2019

Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 3

<b>Issued To</b>	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
<b>Test Details :</b>			
1.	<b>Organoleptic &amp; Physical Parameter</b>		
a.	Colour	IS:3025(Part 4):1983(RA:2017)am d. no 1	Greyish
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Mild
2.	<b>General Parameters</b>		
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 Kjeldahl 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 Sharma*  
Saurabh Sharma  
08-11-2019  
Reviewer

*This Analysis Report is not valid for commercial purposes of the Board*  
08-11-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 3

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

Interstellar Testing Centre Pvt. Ltd.

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

CA Government Approved Test House

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

Phone : (O) 0172-2561543, 2565825,

Visit us : [www.itclabs.com](http://www.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 part shall not be used for promotional or Publicity purpose.

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

08-11-2019  
PremKumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 1 of 3

<b>Issued To</b>	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/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	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 Sharma  
07-11-2019  
Reviewer

07-11-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 2 of 3

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

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
<b>Test Details :</b>				
1.	<b>General Parameters</b>			
a.	Colour	IS:3025(Part4):1983(RA: 2017)amnd. 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)amnd 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 Sharma*  
Saurabh Sharma  
07-11-2019  
Reviewer

### 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 commercial or publicity purpose

*Frem Kumar*  
Frem Kumar  
[Authorized Signatory]  
07-11-2019

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 3 of 3

<b>Issued To</b>	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 :-		
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran			
o. Free Ammonia (as NH <sub>3</sub> )(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 <sup>6+</sup> ),(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 <sub>3</sub> (mg/l)	IS:3025(P-34)	Max. 10	BLQ (LOQ : 1.0)
ac. Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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, PUC or other Board  
Examination.

07-11-2019  
PremKumar  
(Authorized Signatory)

## Test Report

<b>Issued To</b>	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 :-
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Test Report as per IS:NA

With Amendment No.(s):

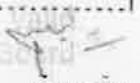
## PART A : PARTICULARS OF SAMPLE SUBMITTED

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 Sharma  
07-11-2019  
Reviewer

This Analysis Report is for internal use only.  
For consent Purposes, see the Board  
Signature :   
07-11-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 3

<b>Issued To</b>	Sample Reg. No. : E01-1910180533
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	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
<b>Test Details :</b>			
1.	<b>Organoleptic &amp; Physical Parameter</b>		
a.	Colour	IS:3025(Part4):1983(RA:2017)am d. no1	Greyish
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Mild
<b>General Parameters</b>			
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)am no 1	BLQ (LOQ: 0.1)
k.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	10.8
l.	Total Kjeldahl 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

*Prem Kumar*  
Prem Kumar  
[Authorized Signatory]  
07-11-2019

### 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

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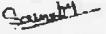
<b>Issued To</b>		Sample Reg. No. :E01-1910180533	
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. Date :18-10-2019	
		Report Date :07-11-2019	
		Report No. :ICE-1911070552	
		NABL ULR No. :TC592619000015348P	
		Customer Ref. No.:-	
		Letter Dated :-	
<b>o.</b>	Mercury(As Hg)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
<b>p.</b>	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
<b>q.</b>	Chromium (as Cr <sup>6+</sup> ),(mg/l) *	IS:3025(Part-52)	BLQ (LOQ: 0.01)
<b>r.</b>	Total Chromium as Cr(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
<b>s.</b>	Selenium(as Se)(mg/l)	IS:3025(P-66)	BLQ(LOQ:0.01)
<b>t.</b>	Cyanide (as CN),(mg/l)	IS:3025(P-27)	Absent
<b>u.</b>	Fluoride(as F),(mg/L)	IS:3025(P-60)	0.6
<b>v.</b>	Dissolved Phosphate(mg/l)	APHA-23rd Edition	2.2
<b>w.</b>	Sulphide(as S)(mg/l)	IS:3025(P-9)	1.8
<b>x.</b>	Manganese(As Mn)(mg/l)	IS:3025(P-66)	0.06
<b>y.</b>	Iron(as Fe)(mg/l)	IS:3025(P-66)	0.04
<b>z.</b>	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(P-34)	3.8
<b>aa.</b>	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/L)	IS:3025(P-43)	BLQ (LOQ : 0.01)
<b>ab.</b>	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  
07-11-2019  
Reviewer

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

07-11-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 1 of 3

<b>Issued To</b>	Sample Reg. No. :E01-1910180534 Sample Reg. Date :18-10-2019 Report Date :07-11-2019 Report No. :IICE-1911070553 NABL ULR No. :TC592619000015349P Customer Ref. No.: - Letter Dated :-
------------------	--

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

### 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
---	-------

Saurabh Sharma  
07-11-2019  
Reviewer

The Analysis Report is not valid  
For Commercial Purpose of the Client

07-11-2019  
Prem Kumar  
(Authorized Signatory)

## Test Report

**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>Issued To</b>	GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran
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
<b>Test Details :</b>				
1.	<b>General Parameters</b>			
a.	Colour	IS:3025(Part4):1983(RA:2017)amnd. 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)amnd 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 Kjeldahl Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	4.6

*[Signature]*  
Saurabh Sharma  
07-11-2019  
Reviewer

This Analytical Report is not Valid  
For consent Purpose of the Board  
07-11-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 3

<b>Issued To</b>	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 :-		
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran			
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	0.09
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 <sup>6+</sup> ),(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. 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	0.01
ab. Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(P-34)	Max. 10	BLQ (LOQ : 1.0)
ac. Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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 Sharma  
07-11-2019  
Reviewer

This Analysis Report is not Valid  
For consent Purposes of the Govt.

07-11-2019  
Prem Kumar

[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 1 of 5

<b>Issued To</b> GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	<b>Sample Reg. No.</b> :E01-1910180536 <b>Sample Reg. Date</b> :18-10-2019 <b>Report Date</b> :24-10-2019 <b>Report No.</b> :ICE-1910240610 <b>NABL ULR No.</b> :TC592619000014369P <b>Customer Ref. No.:</b> <b>Letter Dated</b> :-	
<b>Test Report as per IS:BIS Specification IS:10500-2012</b>   <b>With Amendment No.(s):02</b>		
<b>PART A : PARTICULARS OF SAMPLE SUBMITTED</b>		
a)	Nature of Sample #	Ground Water Peizometer (Site Office)
b)	Grade / Variety / Type / Class / Size etc.	NA
c)	Brand Name	NA
d)	Declared Values,if any	NA
e)	Code No.	
f)	Batch Number #	NA
g)	D.O.M #	NA
h)	Date of Expiry #	NA
i)	Sample Quantity #	9 Ltr 100ml
j)	Batch Size/Location #	NA
k)	Mode of Packing	Packed in cans & in plastic container
l)	Date of Receipt	18-10-2019
m)	Date of Start	18-10-2019
n)	Date of Completion	24-10-2019
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, Sample from Site Office
r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran ( Punjab )
s)	Manufactured By #	NA
t)	Supplied By #	NA
<b>PART B : SUPPLEMENTARY INFORMATIONS</b>		

22-10-2019  
**Rashmi Sharma**  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
**Prem Kumar**  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 5

<b>Issued To</b>	Sample Reg. No. : E01-1910180536
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. Date : 18-10-2019
	Report Date : 24-10-2019
	Report No. : ICE-1910240610
	NABL ULR No. : TC592619000014369P
	Customer Ref. No. :-
	Letter Dated :-
a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

## PART C : TEST RESULTS

### Description

Description	colourless liquid
-------------	-------------------

S.No.	Test Parameter	Method	Acceptable Limit	Permissible Limit (Absence of Alternate Source)	Result
<b>Test Details :</b>					
1.	Organoleptic & Physical Parameter				
a.	Colour (Hazen)	IS:3025(Part4):1983( RA:2017)amnd. no1	5 Max.	15 Max.	< 5
b.	Taste	IS:3025(Part 8):1984(RA:2017)	Agreeable	-	Agreeable
c.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable	-	Agreeable
d.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5	No relaxation	7.64
e.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.	5 Max.	< 0.5
f.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA:2006)	500 Max.	2000 Max.	427
2.	Parameters Concerning Undesirable Substances in excess amount				
a.	Aluminium (as Al) (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.	0.2 Max.	BLQ (LOQ : 0.02)
b.	Ammonia (as total ammonia-N) (mg/l) *	IS:3025(Part 34):1988(RA:2014)	0.5 Max.	No Relaxation	BLQ (LOQ : 0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:20 09)-Annex K	0.2 Max.	1.0 Max.	BLQ (LOQ : 0.05)

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

*Saurabh*  
Saurabh Sharma  
24-10-2019  
Reviewer

*Prem Kumar*  
24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 5

Issued To	Sample Reg. No. : E01-1910180536 Sample Reg. Date : 18-10-2019 Report Date : 24-10-2019 Report No. : ICE-1910240610 NABL ULR No. : TC592619000014369P Customer Ref. No. :- Letter Dated :-
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d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:2014) Annex F/IS:3025(P-65)	0.7 Max	No relaxation	BLQ (LOQ : 0.3)
e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017)	0.5 Max.	2.4 Max.	BLQ (LOQ : 0.5)
f.	Calcium(as Ca),(mg/l)	IS:3025(Part 40):1991(RA:2014) amd no 1	75 Max.	200 Max.	43
g.	Chloramines (as Cl <sub>2</sub> ),(mg/l) *	IS:3025(Part 26):1986(RA:2014) amd no 1	4.0 Max.	No relaxation	BLQ (LOQ : 0.02)
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014)	250 Max.	1000 Max.	10
i.	Copper (as Cu) (mg/l)	IS:3025(P-65)	0.05 Max.	1.5 Max.	BLQ(LOQ:0.001)
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 amd. no 1(RA:2013)	1.0 Max.	1.5 Max.	BLQ (LOQ : 0.1)
k.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/l)	IS:3025(P-43)	0.001 Max.	0.002 Max.	BLQ (LOQ : 0.001)
l.	Free Residual Chlorine (mg/l)	IS:3025(P-26)	0.2 Min.	1.0 Max.	Not Applicable
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014)	1.0 Max.	No relaxation	BLQ (LOQ : 0.01)
n.	Magnesium(asMg) (mg/l)	IS:3025(Part 46):1994 amd. no. 2(RA:2014)	30 Max.	100 Max.	29
o.	Manganese (as Mn) (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017)	0.1 Max.	0.3 Max.	BLQ (LOQ : 0.1)
p.	Mineral oil (mg/l)	Clause 6 of IS:3025(Part39)	0.5 Max.	No Relaxation	BLQ(LOQ:0.01)
q.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(Part 34):1988(RA:2014)	45 Max.	No Relaxation	BLQ (LOQ : 1.0)
r.	Selenium (as Se) (mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation	BLQ(LOQ:0.001)
s.	Silver (as Ag) (mg/l)	IS:3025(P-65)	0.1 Max.	No Relaxation	BLQ(LOQ:0.001)
t.	Sulphate(as SO <sub>4</sub> ) (mg/l)	IS:3025(Part 24):1986(RA:2014)	200 Max.	400 Max.	4.4
u.	Sulphide (as H <sub>2</sub> S) (mg/l)	IS:3025(Part 29)	0.05 Max.	No Relaxation	BLQ (LOQ : 0.05)

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
PremKumar  
[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,

Visit us : [www.itclabs.com](http://www.itclabs.com) E-mail : [info@itclabs.com](mailto:info@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.

## Test Report

Document QF : 2501

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Issued To  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. No. :E01-1910180536 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240610 NABL ULR No. :TC592619000014369P Customer Ref. No.: Letter Dated :-		
v.	Total Alkalinity(as CaCO <sub>3</sub> )(mg/l)	IS:3025(Part 23)	200 Max.	600 Max. 326
w.	Total Hardness(as CaCO <sub>3</sub> ),(mg/l)	IS 3025 (Part 21)	200 Max.	600 Max. 226
x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.	15 Max. BLQ(LOQ:0.001)
<b>3. Parameters Concerning Toxic Substances</b>				
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.	No Relaxation BLQ(LOQ:0.001)
b.	Cyanide(asCN)(mg/l)	IS:3025(Part 27)	0.05 Max.	No Relaxation BLQ (LOQ : 0.01)
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation BLQ(LOQ:0.001)
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.	No Relaxation BLQ(LOQ:0.001)
e.	Molybdenum(as Mo)(mg/l) *	IS:3025(P-65)	0.07 Max.	No Relaxation 0.012
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.	No Relaxation BLQ(LOQ:0.001)
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.	No relaxation 0.005
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.	No Relaxation BLQ(LOQ:0.001)
i.	Polychlorinated biphenyls(as PCB) (mg/l)	APHA 6630/IT/AC/08-02	0.0005 Max.	No relaxation BLQ (LOQ:0.0001)
j.	Polynuclear aromatic hydrocarbons(as PAH) (mg/l)	APHA 6440/it/AC/08-02	0.0001 max	No relaxation BLQ (LOQ:0.0001)
<b>4. Microbiological Tests</b>				
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	Absent	- Absent
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	Absent	- Absent
<b>5. Pesticide Residue</b>				
a.	Alachlor(µg/l)	In House	20 Max.	No Relaxation BLQ (LOQ:0.01)
b.	DDT(o,p and p,p-isomers of DDT,DDE and DDD),(µg/l)	In House	1 Max.	No Relaxation BLQ (LOQ:0.01)
c.	Atrazine(µg/l)	In House	2 Max.	No Relaxation BLQ (LOQ:0.01)
d.	Aldrin & Dieldrin,(µg/l)	In House	0.03 Max.	No Relaxation BLQ (LOQ:0.01)
e.	Alpha HCH,(µg/l)	In House	0.01 Max	No Relaxation BLQ (LOQ:0.01)
f.	Beta,HCH,(µg/l)	In House	0.04 Max.	No Relaxation BLQ (LOQ:0.01)
g.	Butachlor(µg/l)	In House	125 Max.	No Relaxation BLQ (LOQ:0.01)
h.	Chlorpyriphos(µg/l)	In House	30 Max.	No Relaxation BLQ (LOQ:0.01)
i.	Delta HCH,(µg/l)	In House	0.04 Max.	No Relaxation BLQ (LOQ:0.01)

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 5 of 5

<b>Issued To</b>		Sample Reg. No. :E01-1910180536 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240610 NABL ULR No. :TC592619000014369P Customer Ref. No.:- Letter Dated :-.			
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran					
j.	2,4-Dichlorophenoxyacetic acid ( $\mu\text{g/l}$ )	In House	30 Max.	No Relaxation	BLQ(LOQ:0.01)
k.	Isoproturon( $\mu\text{g/l}$ )	In House	9 Max.	No Relaxation	BLQ(LOQ:0.01)
l.	Malathion( $\mu\text{g/l}$ )	In House	190 max.	No Relaxation	BLQ (LOQ:0.01)
m.	Ethion( $\mu\text{g/l}$ )	In House	3 Max.	No Relaxation	BLQ (LOQ:0.01)
n.	Monocrotophos( $\mu\text{g/l}$ )	In House	1 Max.	No Relaxation	BLQ(LOQ:0.01)
o.	Phorate( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ (LOQ:0.01)
p.	Endosulfan(alpha,beta and sulphate)( $\mu\text{g/l}$ )	In House	0.4 Max.	No Relaxation	BLQ (LOQ:0.01)
q.	Gamma-HCH(Lindane)( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ (LOQ:0.01)
r.	Methyl Parathion,( $\mu\text{g/l}$ )	USEPA 3510 C & 8270 C	0.3 Max.	No Relaxation	BLQ (LOQ:0.01)
6.	<b>TriHalomethanes(<math>\text{mg/l}</math>)</b>				
a.	Bromoform( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No relaxation	BLQ (LOQ:0.1)
b.	Dibromochloromethane( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No Relaxation	BLQ (LOQ:0.1)
c.	Bromodichloromethane( $\text{mg/l}$ ) *	APHA-6232	0.06 max.	No Relaxation	BLQ (LOQ:0.05)
d.	Chloroform( $\text{mg/l}$ ) *	APHA-6232	0.2 max	No Relaxation	BLQ (LOQ:0.1)

\*' 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,

### PART D : REMARKS :N/A

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

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 1 of 5

<b>Issued To</b>  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	<b>Sample Reg. No.</b> :E01-1910180535 <b>Sample Reg. Date</b> :18-10-2019 <b>Report Date</b> :24-10-2019 <b>Report No.</b> :ICE-1910240612 <b>NABL ULR No.</b> :TC592619000014368P <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-																																																												
<b>Test Report as per IS:BIS Specification IS:10500-2012</b>	<b>With Amendment No.(s):02</b>																																																												
<b>PART A : PARTICULARS OF SAMPLE SUBMITTED</b>																																																													
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>a)</td><td>Nature of Sample#</td><td>Ground Water Peizometer (Fire Station)</td></tr> <tr> <td>b)</td><td>Grade / Variety / Type / Class / Size etc.</td><td>NA</td></tr> <tr> <td>c)</td><td>Brand Name</td><td>NA</td></tr> <tr> <td>d)</td><td>Declared Values,if any</td><td>NA</td></tr> <tr> <td>e)</td><td>Code No.</td><td></td></tr> <tr> <td>f)</td><td>Batch Number#</td><td>NA</td></tr> <tr> <td>g)</td><td>D.O.M#</td><td>NA</td></tr> <tr> <td>h)</td><td>Date of Expiry#</td><td>NA</td></tr> <tr> <td>i)</td><td>Sample Quantity#</td><td>9 Ltr 100ml</td></tr> <tr> <td>j)</td><td>Batch Size/Location#</td><td>NA</td></tr> <tr> <td>k)</td><td>Mode of Packing</td><td>Packed in cans &amp; in plastic container</td></tr> <tr> <td>l)</td><td>Date of Receipt</td><td>18-10-2019</td></tr> <tr> <td>m)</td><td>Date of Start</td><td>18-10-2019</td></tr> <tr> <td>n)</td><td>Date of Completion</td><td>24-10-2019</td></tr> <tr> <td>o)</td><td>Seal (Intact/Not Intact/Unsealed)</td><td>NA</td></tr> <tr> <td>p)</td><td>IO'S Signature (Signed/Unsigned)</td><td>Unsigned</td></tr> <tr> <td>q)</td><td>Any Other Information</td><td>Sample collected by lab rep. Mr. Kimiti on 17.10.2019, Sample from Fire Station</td></tr> <tr> <td>r)</td><td>Test Request Submitted By</td><td>GVK Power (Goindwal Sahib) Ltd.-Tarn Taran ( Punjab )</td></tr> <tr> <td>s)</td><td>Manufactured By#</td><td>NA</td></tr> <tr> <td>t)</td><td>Supplied By#</td><td>NA</td></tr> </table>		a)	Nature of Sample#	Ground Water Peizometer (Fire Station)	b)	Grade / Variety / Type / Class / Size etc.	NA	c)	Brand Name	NA	d)	Declared Values,if any	NA	e)	Code No.		f)	Batch Number#	NA	g)	D.O.M#	NA	h)	Date of Expiry#	NA	i)	Sample Quantity#	9 Ltr 100ml	j)	Batch Size/Location#	NA	k)	Mode of Packing	Packed in cans & in plastic container	l)	Date of Receipt	18-10-2019	m)	Date of Start	18-10-2019	n)	Date of Completion	24-10-2019	o)	Seal (Intact/Not Intact/Unsealed)	NA	p)	IO'S Signature (Signed/Unsigned)	Unsigned	q)	Any Other Information	Sample collected by lab rep. Mr. Kimiti on 17.10.2019, Sample from Fire Station	r)	Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran ( Punjab )	s)	Manufactured By#	NA	t)	Supplied By#	NA
a)	Nature of Sample#	Ground Water Peizometer (Fire Station)																																																											
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t)	Supplied By#	NA																																																											
<b>PART B : SUPPLEMENTARY INFORMATIONS</b>																																																													

22-10-2019  
**Rashmi Sharma**  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
**Prem Kumar**  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 5

<b>Issued To</b>	Sample Reg. No. :E01-1910180535
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. Date :18-10-2019
	Report Date :24-10-2019
	Report No. :ICE-1910240612
	NABL ULR No. :TC592619000014368P
	Customer Ref. No.:-
	Letter Dated :-
a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

## PART C : TEST RESULTS

### Description

Description	Colourless liquid
-------------	-------------------

S.No.	Test Parameter	Method	Acceptable Limit	Permissible Limit (Allowance of Alternate Sources)	Result
<b>Test Details :</b>					
1.	Organoleptic & Physical Parameter				
a.	Colour (Hazen)	IS:3025(Part4):1983( RA:2017)and. no1	5 Max.	15 Max.	< 5
b.	Taste	IS:3025(Part 8):1984(RA:2017)	Agreeable	-	Agreeable
c.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable	-	Agreeable
d.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5	No relaxation	7.48
e.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.	5 Max.	< 0.5
f.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA:2006)	500 Max.	2000 Max.	440
2.	Parameters Concerning Undesirable Substances in excess amount				
a.	Aluminium (as Al) (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.	0.2 Max.	BLQ (LOQ : 0.02)
b.	Ammonia (as total ammonia-N) (mg/l) *	IS:3025(Part 34):1988(RA:2014)	0.5 Max.	No Relaxation	BLQ (LOQ : 0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:20 09)-Annex K	0.2 Max.	1.0 Max.	BLQ (LOQ : 0.05)

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 5

Issued To  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. No. :E01-1910180535 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240612 NABL ULR No. :TC592619000014368P Customer Ref. No.:- Letter Dated :-
d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:2014)Annex F/IS:3025(P-65)
e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017)
f.	Calcium(as Ca),(mg/l)	IS:3025(Part 40):1991(RA:2014) amd no 1
g.	Chloramines (as Cl <sub>2</sub> ),(mg/l) *	IS:3025(Part 26):1986(RA:2014)a md no 1
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014)
i.	Copper (as Cu) (mg/l)	IS:3025(P-65)
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 amd. no 1(RA:2013)
k.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/l)	IS:3025(P-43)
l.	Free Residual Chlorine (mg/l)	IS:3025(P-26)
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014)
n.	Magnesium(asMg) (mg/l)	IS:3025(Part 46):1994 amd. no. 2(RA:2014)
o.	Manganese (as Mn) (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017)
p.	Mineral oil (mg/l)	Clause 6 of IS:3025(Part39)
q.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(Part 34):1988(RA:2014)
r.	Selenium (as Se) (mg/l)	IS:3025(P-65)
s.	Silver (as Ag) (mg/l)	IS:3025(P-65)
t.	Sulphate(as SO <sub>4</sub> ) (mg/l)	IS:3025(Part 24):1986(RA:2014)
u.	Sulphide (as H <sub>2</sub> S) (mg/l)	IS:3025(Part 29)

22-10-2019  
Rashni Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 4 of 5

Issued To	Sample Reg. No. :E01-1910180535
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	Sample Reg. Date :18-10-2019
	Report Date :24-10-2019
	Report No. :ICE-1910240612
	NABL ULR No. :TC592619000014368P
	Customer Ref. No. :-
	Letter Dated :-

v.	Total Alkalinity(as CaCO <sub>3</sub> )(mg/l)	IS:3025(Part 23)	200 Max.	600 Max.	339
w.	Total Hardness(as CaCO <sub>3</sub> ),(mg/l)	IS 3025 (Part 21)	200 Max.	600 Max.	230
x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.	15 Max.	BLQ(LOQ:0.001)
<b>3. Parameters Concerning Toxic Substances</b>					
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.	No Relaxation	BLQ(LOQ:0.001)
b.	Cyanide(asCN)(mg/l)	IS:3025(Part 27)	0.05 Max.	No Relaxation	BLQ (LOQ : 0.01)
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation	BLQ(LOQ:0.001)
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.	No Relaxation	BLQ(LOQ:0.001)
e.	Molybdenum(as Mo)(mg/l) *	IS:3025(P-65)	0.07 Max.	No Relaxation	0.013
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.	No Relaxation	BLQ(LOQ:0.001)
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.	No relaxation	0.005
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.	No Relaxation	BLQ(LOQ:0.001)
i.	Polychlorinated biphenyls(as PCB) (mg/l)	APHA 6630/IT/AC/08-02	0.0005 Max.	No relaxation	BLQ (LOQ:0.0001)
j.	Polynuclear aromatic hydrocarbons(as PAH) (mg/l)	APHA 6440/it/AC/08-02	0.0001 max	No relaxation	BLQ (LOQ:0.0001)
<b>4. Microbiological Tests</b>					
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	Absent	-	Absent
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	Absent	-	Absent
<b>5. Pesticide Residue</b>					
a.	Aalachlor(µg/l)	In House	20 Max.	No Relaxation	BLQ (LOQ:0.01)
b.	DDT(o,p and p,p-isomers of DDT,DDE and DDD),(µg/l)	In House	1 Max.	No Relaxation	BLQ (LOQ:0.01)
c.	Atrazine(µg/l)	In House	2 Max.	No Relaxation	BLQ (LOQ:0.01)
d.	Aldrin & Dialdrin,(µg/l)	In House	0.03 Max.	No Relaxation	BLQ (LOQ:0.01)
e.	Alpha HCH,(µg/l)	In House	0.01 Max	No Relaxation	BLQ (LOQ:0.01)
f.	Beta,HCH,(µg/l)	In House	0.04 Max.	No RELaxation	BLQ (LOQ:0.01)
g.	Butachlor(µg/l)	In House	125 Max.	No Relaxation	BLQ (LOQ:0.01)
h.	Chlorpyriphos(µg/l)	In House	30 Max.	No Relaxation	BLQ (LOQ:0.01)
i.	Delta HCH,(µg/l)	In House	0.04 Max.	No Relaxation	BLQ (LOQ:0.01)

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 5 of 5

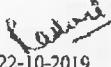
<b>Issued To</b>		Sample Reg. No. :E01-1910180535 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240612 NABL ULR No. :TC592619000014368P Customer Ref. No. :- Letter Dated :- 			
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran					
j.	2,4-Dichlorophenoxyacetic acid ( $\mu\text{g/l}$ )	In House	30 Max.	No Relaxation	BLQ(LOQ:0.01)
k.	Isoproturon( $\mu\text{g/l}$ )	In House	9 Max.	No Relaxation	BLQ(LOQ:0.01)
l.	Malathion( $\mu\text{g/l}$ )	In House	190 max.	No Relaxation	BLQ (LOQ:0.01)
m.	Ethion( $\mu\text{g/l}$ )	In House	3 Max.	No Relaxation	BLQ (LOQ:0.01)
n.	Monocrotophos( $\mu\text{g/l}$ )	In House	1 Max.	No Relaxation	BLQ(LOQ:0.01)
o.	Phorate( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ (LOQ:0.01)
p.	Endosulfan(alpha,beta and sulphate)( $\mu\text{g/l}$ )	In House	0.4 Max.	No Relaxation	BLQ (LOQ:0.01)
q.	Gamma-HCH(Lindane)( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ (LOQ:0.01)
r.	Methyl Parathion,( $\mu\text{g/l}$ )	USEPA 3510 C & 8270 C	0.3 Max.	No Relaxation	BLQ (LOQ:0.01)
<b>6. TriHalomethanes(mg/l)</b>					
a.	Bromoform(mg/l) *	APHA-6232	0.1 Max.	No relaxation	BLQ (LOQ:0.1)
b.	Dibromochloromethane(mg/l) *	APHA-6232	0.1 Max.	No Relaxation	BLQ (LOQ:0.1)
c.	Bromodichloromethane(mg/l) *	APHA-6232	0.06 max.	No Relaxation	BLQ (LOQ:0.05)
d.	Chloroform(mg/l) *	APHA-6232	0.2 max	No Relaxation	BLQ (LOQ:0.1)

\* 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,

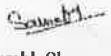
**PART D : REMARKS :** N/A

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



22-10-2019

Rashmi Sharma  
[Authorized Signatory]



Saurabh Sharma  
24-10-2019  
Reviewer



24-10-2019

Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501

Page 1 of 5

<b>Issued To</b>	Sample Reg. No. :E01-1910180538 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240611 NABL ULR No. :TC592619000014370P Customer Ref. No.:- Letter Dated :-
------------------	--

Test Report as per IS:BIS Specification IS:10500-2012

With Amendment No.(s):02

### PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample #	Ground Water Peizometer (PLL Colony)
b) Grade / Variety / Type / Class / Size etc.	NA
c) Brand Name	NA
d) Declared Values,if any	NA
e) Code No.	
f) Batch Number #	NA
g) D.O.M #	NA
h) Date of Expiry #	NA
i) Sample Quantity #	9 Ltr 100ml
j) Batch Size/Location #	NA
k) Mode of Packing	Packed in cans & in plastic container
l) Date of Receipt	18-10-2019
m) Date of Start	18-10-2019
n) Date of Completion	24-10-2019
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, Sample from PLL Colony Near Ash Pond
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

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501

Page 2 of 5

<b>Issued To</b>	<b>Sample Reg. No.</b> :E01-1910180538 <b>Sample Reg. Date</b> :18-10-2019 <b>Report Date</b> :24-10-2019 <b>Report No.</b> :ICE-1910240611 <b>NABL ULR No.</b> :TC592619000014370P <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-
a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

## PART C : TEST RESULTS

### Description

Description	colourless liquid
-------------	-------------------

S.No.	Test Parameter	Method	Acceptable Limit	Permissible Limit (Absence of Alternate Source)	Result
<b>Test Details :</b>					
1.	<b>Organoleptic &amp; Physical Parameter</b>				
a.	Colour (Hazen)	IS:3025(Part4):1983(RA:2017)amnd. no1	5 Max.	15 Max.	< 5
b.	Taste	IS:3025(Part 8):1984(RA:2017)	Agreeable	-	Agreeable
c.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable	-	Agreeable
d.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5	No relaxation	7.58
e.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.	5 Max.	< 0.5
f.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA.2006)	500 Max.	2000 Max.	465
2.	<b>Parameters Concerning Undesirable Substances in excess amount</b>				
a.	Aluminium (as Al) (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.	0.2 Max.	BLQ (LOQ : 0.02)
b.	Ammonia (as total ammonia-N) (mg/l) *	IS:3025(Part 34):1988(RA:2014)	0.5 Max.	No Relaxation	BLQ (LOQ : 0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:2009)-Annex K	0.2 Max.	1.0 Max.	BLQ (LOQ : 0.05)

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

*Saurabh Sharma*  
Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 5

<b>Issued To</b>  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		<b>Sample Reg. No. :</b> E01-1910180538 <b>Sample Reg. Date :</b> 18-10-2019 <b>Report Date :</b> 24-10-2019 <b>Report No. :</b> ICE-1910240611 <b>NABL ULR No. :</b> TC592619000014370P <b>Customer Ref. No.:-</b> <b>Letter Dated :-</b>		
d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:2014)Annex F/IS:3025(P-65)	0.7 Max.	No relaxation
e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017)	0.5 Max.	2.4 Max.
f.	Calcium(as Ca),(mg/l)	IS:3025(Part 40):1991(RA:2014) amd no 1	75 Max.	200 Max.
g.	Chloramines (as Cl <sub>2</sub> ),(mg/l) *	IS:3025(Part 26):1986(RA:2014)a md no 1	4.0 Max.	No relaxation
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014)	250 Max.	1000 Max.
i.	Copper (as Cu) (mg/l)	IS:3025(P-65)	0.05 Max.	1.5 Max.
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 amd. no 1(RA:2013)	1.0 Max.	1.5 Max.
k.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/l)	IS:3025(P-43)	0.001 Max.	0.002 Max.
l.	Free Residual Chlorine (mg/l)	IS:3025(P-26)	0.2 Min.	1.0 Max.
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014)	1.0 Max.	No relaxation
n.	Magnesium(asMg) (mg/l)	IS:3025(Part 46):1994 amd. no. 2(RA:2014)	30 Max.	100 Max.
o.	Manganese (as Mn) (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017)	0.1 Max.	0.3 Max.
p.	Mineral oil (mg/l)	Clause 6 of IS:3025(Part39)	0.5 Max.	No Relaxation
q.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(Part 34):1988(RA:2014)	45 Max.	No Relaxation
r.	Selenium (as Se) (mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation
s.	Silver (as Ag) (mg/l)	IS:3025(P-65)	0.1 Max.	No Relaxation
t.	Sulphate(as SO <sub>4</sub> ) (mg/l)	IS:3025(Part 24):1986(RA:2014)	200 Max.	400 Max.
u.	Sulphide (as H <sub>2</sub> S) (mg/l)	IS:3025(Part 29)	0.05 Max.	No Relaxation

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

*Saurabh*  
Saurabh Sharma  
24-10-2019  
Reviewer

*Prem Kumar*  
24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 4 of 5

<b>Issued To</b>  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. No. :E01-1910180538 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240611 NABL ULR No. :TC592619000014370P Customer Ref. No. :- Letter Dated :-		
v.	Total Alkalinity(as CaCO <sub>3</sub> )(mg/l)	IS:3025(Part 23)	200 Max.	600 Max. 348
w.	Total Hardness(as CaCO <sub>3</sub> ),(mg/l)	IS 3025 (Part 21)	200 Max.	600 Max. 230
x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.	15 Max. BLQ(LOQ:0.001)
3.	<b>Parameters Concerning Toxic Substances</b>			
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.	No Relaxation BLQ(LOQ:0.001)
b.	Cyanide(asCN)(mg/l)	IS:3025(Part 27)	0.05 Max.	No Relaxation BLQ (LOQ : 0.01)
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation BLQ(LOQ:0.001)
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.	No Relaxation BLQ(LOQ:0.001)
e.	Molybdenum(as Mo)(mg/l) *	IS:3025(P-65)	0.07 Max.	No Relaxation 0.016
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.	No Relaxation BLQ(LOQ:0.001)
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.	No relaxation 0.001
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.	No Relaxation BLQ(LOQ:0.001)
i.	Polychlorinated biphenyls(as PCB) (mg/l)	APHA 6630/IT/AC/08-02	0.0005 Max.	No relaxation BLQ (LOQ:0.0001)
j.	Polynuclear aromatic hydrocarbons(as PAH) (mg/l)	APHA 6440/it/AC/08-02	0.0001 max	No relaxation BLQ (LOQ:0.0001)
4.	<b>Microbiological Tests</b>			
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	Absent	- Absent
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	Absent	- Absent
5.	<b>Pesticide Residue</b>			
a.	Alachlor(µg/l)	In House	20 Max.	No Relaxation BLQ (LOQ:0.01)
b.	DDT(o,p and p,p-isomers of DDT,DDE and DDD),(µg/l)	In House	1 Max.	No Relaxation BLQ (LOQ:0.01)
c.	Atrazine(µg/l)	In House	2 Max.	No Relaxation BLQ (LOQ:0.01)
d.	Aldrin & Dialdrin,(µg/l)	In House	0.03 Max.	No Relaxation BLQ (LOQ:0.01)
e.	Alpha HCH,(µg/l)	In House	0.01 Max	No Relaxation BLQ (LOQ:0.01)
f.	Beta,HCH,(µg/l)	In House	0.04 Max.	No Relaxation BLQ (LOQ:0.01)
g.	Butachlor(µg/l)	In House	125 Max.	No Relaxation BLQ (LOQ:0.01)
h.	Chlorpyrifos(µg/l)	In House	30 Max.	No Relaxation BLQ (LOQ:0.01)
i.	Delta HCH,(µg/l)	In House	0.04 Max.	No Relaxation BLQ (LOQ:0.01)

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
PremKumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 5 of 5

<b>Issued To</b>	Sample Reg. No. :E01-1910180538 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240611 NABL ULR No. :TCS92619000014370P Customer Ref. No.:- Letter Dated :- -				
j. 2,4-Dichlorophenoxyacetic acid ( $\mu\text{g/l}$ )	In House	30 Max.	No Relaxation	BLQ(LOQ:0.01)	
k. Isoproturon( $\mu\text{g/l}$ )	In House	9 Max.	No Relaxation	BLQ(LOQ:0.01)	
l. Malathion( $\mu\text{g/l}$ )	In House	190 max.	No Relaxation	BLQ (LOQ:0.01)	
m. Ethion( $\mu\text{g/l}$ )	In House	3 Max.	No Relaxation	BLQ (LOQ:0.01)	
n. Monocrotophos( $\mu\text{g/l}$ )	In House	1 Max.	No Relaxation	BLQ(LOQ:0.01)	
o. Phorate( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ (LOQ:0.01)	
p. Endosulfan(alpha,beta and sulphate)( $\mu\text{g/l}$ )	In House	0.4 Max.	No Relaxation	BLQ (LOQ:0.01)	
q. Gamma-HCH(Lindane)( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ (LOQ:0.01)	
r. Methyl Parathion,( $\mu\text{g/l}$ )	USEPA 3510 C & 8270 C	0.3 Max.	No Relaxation	BLQ (LOQ:0.01)	
6. TriHalomethanes( $\text{mg/l}$ )					
a. Bromoform( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No relaxation	BLQ (LOQ:0.1)	
b. Dibromochloromethane( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No Relaxation	BLQ (LOQ:0.1)	
c. Bromodichloromethane( $\text{mg/l}$ ) *	APHA-6232	0.06 max.	No Relaxation	BLQ (LOQ:0.05)	
d. Chloroform( $\text{mg/l}$ ) *	APHA-6232	0.2 max	No Relaxation	BLQ (LOQ:0.1)	

\* 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,

**PART D : REMARKS :N/A**

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

22-10-2019  
Rashni Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 1 of 5

<b>Issued To</b>	Sample Reg. No. :E01-1910180537 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240613 NABL ULR No. :TC592619000014366P Customer Ref. No.:- Letter Dated :-
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Test Report as per IS:BIS Specification IS:10500-2012

With Amendment No.(s):02

### PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample#	Ground Water Peizometer (Village: Vairoval)
b) Grade / Variety / Type / Class / Size etc.	NA
c) Brand Name	NA
d) Declared Values,if any	NA
e) Code No.	
f) Batch Number#	NA
g) D.O.M#	NA
h) Date of Expiry#	NA
i) Sample Quantity#	9 Ltr 100ml
j) Batch Size/Location#	NA
k) Mode of Packing	Packed in cans & in plastic container
l) Date of Receipt	18-10-2019
m) Date of Start	18-10-2019
n) Date of Completion	24-10-2019
o) Seal (Intact/Not Intact/Unscaled)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. Mr. Kimiti on 17.10.2019, Sample from Near Ash Pond
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

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 5

<b>Issued To</b>	Sample Reg. No. :E01-1910180537 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240613 NABL ULR No. :TC592619000014366P Customer Ref. No.:-- Letter Dated :-
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a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

## PART C : TEST RESULTS

### Description

Description	Colourless liquid
-------------	-------------------

S.No.	Test Parameter	Method	Acceptable Limit	Permissible Limit (Absence of Alternate Source)	Result
<b>Test Details :</b>					
1.	<b>Organoleptic &amp; Physical Parameter</b>				
a.	Colour (Hazen)	IS:3025(Part4):1983( RA:2017)amnd. no1	5 Max.	15 Max.	< 5
b.	Taste	IS:3025(Part 8):1984(RA:2017)	Agreeable	-	Agreeable
c.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable	-	Agreeable
d.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5	No relaxation	7.78
e.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.	5 Max.	< 0.5
f.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA.2006)	500 Max.	2000 Max.	460
2.	<b>Parameters Concerning Undesirable Substances in excess amount</b>				
a.	Aluminium (as Al) (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.	0.2 Max.	BLQ (LOQ : 0.02)
b.	Ammonia (as total ammonia-N) (mg/l) *	IS:3025(Part 34):1988(RA:2014)	0.5 Max.	No Relaxation	BLQ (LOQ : 0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:20 09)-Annex K	0.2 Max.	1.0 Max.	BLQ (LOQ : 0.05)

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 5

<b>Issued To</b>					
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran					
d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:2014)Annex. F/IS:3025(P-65)	0.7 Max.	No relaxation	BLQ (LOQ : 0.3)
e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017)	0.5 Max.	2.4 Max.	BLQ (LOQ : 0.5)
f.	Calcium(as Ca),(mg/l)	IS:3025(Part 40):1991(RA:2014) amd no 1	75 Max.	200 Max.	41
g.	Chloramines (as Cl <sub>2</sub> ),(mg/l) *	IS:3025(Part 26):1986(RA:2014)a md no 1	4.0 Max.	No relaxation	BLQ (LOQ : 0.02)
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014)	250 Max.	1000 Max..	10
i.	Copper (as Cu) (mg/l)	IS:3025(P-65)	0.05 Max.	1.5 Max.	BLQ(LOQ:0.001)
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 amd. no 1(RA:2013)	1.0 Max.	1.5 Max.	BLQ (LOQ : 0.1)
k.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/l)	IS:3025(P-43)	0.001 Max.	0.002 Max.	BLQ (LOQ : 0.001)
l.	Free Residual Chlorine (mg/l)	IS:3025(P-26)	0.2 Min.	1.0 Max.	Not Applicable
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014)	1.0 Max.	No relaxation	BLQ (LOQ : 0.01)
n.	Magnesium(asMg) (mg/l)	IS:3025(Part 46):1994 amd. no. 2(RA:2014)	30 Max.	100 Max.	29
o.	Manganese (as Mn) (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017)	0.1 Max.	0.3 Max.	BLQ (LOQ : 0.1)
p.	Mineral oil (mg/l)	Clause 6 of IS:3025(Part39)	0.5 Max.	No Relaxation	BLQ(LOQ:0.01)
q.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(Part 34):1988(RA:2014)	45 Max.	No Relaxation	BLQ (LOQ : 1.0)
r.	Selenium (as Se) (mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation	BLQ(LOQ:0.001)
s.	Silver (as Ag) (mg/l)	IS:3025(P-65)	0.1 Max.	No Relaxation	BLQ(LOQ:0.001)
t.	Sulphate(as SO <sub>4</sub> ) (mg/l)	IS:3025(Part 24):1986(RA:2014)	200 Max.	400 Max.	4.9
u.	Sulphide (as H <sub>2</sub> S) (mg/l)	IS:3025(Part 29)	0.05 Max.	No Relaxation	BLQ (LOQ : 0.05)

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

*C. Sharma*  
Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 4 of 5

<b>Issued To</b>  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		<b>Sample Reg. No.</b> :E01-1910180537 <b>Sample Reg. Date</b> :18-10-2019 <b>Report Date</b> :24-10-2019 <b>Report No.</b> :ICE-1910240613 <b>NABL ULR No.</b> :TC592619000014366P <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-		
v.	Total Alkalinity(as CaCO <sub>3</sub> )(mg/l)	IS:3025(Part 23)	200 Max.	600 Max.
w.	Total Hardness(as CaCO <sub>3</sub> ),(mg/l)	IS 3025 (Part 21)	200 Max.	600 Max.
x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.	15 Max.
<b>3. Parameters Concerning Toxic Substances</b>				
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.	No Relaxation
b.	Cyanide(asCN)(mg/l)	IS:3025(Part 27)	0.05 Max.	No Relaxation
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.	No Relaxation
e.	Molybdenum(as Mo)(mg/l) *	IS:3025(P-65)	0.07 Max.	No Relaxation
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.	No Relaxation
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.	No relaxation
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.	No Relaxation
i.	Polychlorinated biphenyls(as PCB) (mg/l)	APHA 6630/it/AC/08-02	0.0005 Max.	No relaxation
j.	Polynuclear aromatic hydrocarbons(as PAH) (mg/l)	APHA 6440/it/AC/08-02	0.0001 max	No relaxation
<b>4. Microbiological Tests</b>				
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	Absent	Absent
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	Absent	Absent
<b>5. Pesticide Residue</b>				
a.	Alachlor(µg/l)	In House	20 Max.	No Relaxation
b.	DDT(o,p and p,p-isomers of DDT,DDE and DDD),(µg/l)	In House	1 Max.	No Relaxation
c.	Atrazine(µg/l)	In House	2 Max.	No Relaxation
d.	Aldrin & Dialdrin,(µg/l)	In House	0.03 Max.	No Relaxation
e.	Alpha HCH,(µg/l)	In House	0.01 Max	No Relaxation
f.	Beta,HCH,(µg/l)	In House	0.04 Max.	No Relaxation
g.	Butachlor(µg/l)	In House	125 Max.	No Relaxation
h.	Chlorpyriphos(µg/l)	In House	30 Max.	No Relaxation
i.	Delta HCH,(µg/l)	In House	0.04 Max.	No Relaxation

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 5 of 5

<b>Issued To</b>	<b>Sample Reg. No.</b> :E01-1910180537 <b>Sample Reg. Date</b> :18-10-2019 <b>Report Date</b> :24-10-2019 <b>Report No.</b> :ICE-1910240613 <b>NABL ULR No.</b> :TC592619000014366P <b>Customer Ref. No. :-</b> <b>Letter Dated</b> :-
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j.	2,4-Dichlorophenoxyacetic acid ( $\mu\text{g/l}$ )	In House	30 Max.	No Relaxation	BLQ(LOQ:0.01)
k.	Isoproturon( $\mu\text{g/l}$ )	In House	9 Max.	No Relaxation	BLQ(LOQ:0.01)
l.	Malathion( $\mu\text{g/l}$ )	In House	190 max.	No Relaxation	BLQ (LOQ:0.01)
m.	Ethion( $\mu\text{g/l}$ )	In House	3 Max.	No Relaxation	BLQ (LOQ:0.01)
n.	Monocrotophos( $\mu\text{g/l}$ )	In House	1 Max.	No Relaxation	BLQ(LOQ:0.01)
o.	Phorate( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ (LOQ:0.01)
p.	Endosulfan(alpha,beta and sulphate)( $\mu\text{g/l}$ )	In House	0.4 Max.	No Relaxation	BLQ (LOQ:0.01)
q.	Gamma-HCH(Lindane)( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ (LOQ:0.01)
r.	Methyl Parathion,( $\mu\text{g/l}$ )	USEPA 3510 C & 8270 C	0.3 Max.	No Relaxation	BLQ (LOQ:0.01)
6.	TriHalomethanes( $\text{mg/l}$ )				
a.	Bromoform( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No relaxation	BLQ (LOQ:0.1)
b.	Dibromochloromethane( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No Relaxation	BLQ (LOQ:0.1)
c.	Bromodichloromethane( $\text{mg/l}$ ) *	APHA-6232	0.06 max.	No Relaxation	BLQ (LOQ:0.05)
d.	Chloroform( $\text{mg/l}$ ) *	APHA-6232	0.2 max	No Relaxation	BLQ (LOQ:0.1)

\* 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,

PART D : REMARKS :N/A

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

22-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 1 of 4

<b>Issued To</b>	Sample Reg. No. :E01-1910180539 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240637 Customer Ref. No.:- Letter Dated :-
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Test Report as per IS:IS 10500 - 2012	With Amendment No.(s):02
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### PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample#	Surface Water Upstream (Village: vairoval)
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 100ml
j) Batch Size/Location#	NA
k) Mode of Packing	Packed in can & in plastic container
l) Date of Receipt	18-10-2019
m) Date of Start	18-10-2019
n) Date of Completion	24-10-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on Mr. Kimiti 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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24-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

<b>Issued To</b>	Sample Reg. No. : E01-1910180539 Sample Reg. Date : 18-10-2019 Report Date : 24-10-2019 Report No. : ICE-1910240637 Customer Ref. No. :- Letter Dated :-
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- 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	Clear colourless water
-------------	------------------------

S.No.	Test Parameter	Method	Requirement	Result
<b>Test Details :</b>				
1.	<b>Organoleptic &amp; Physical Parameter</b>			
a.	Colour (Hazen)	IS:3025(Part4):1983(RA: 2017)amd. no1	5 Max.-15 Max.	< 5
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable--	Agreeable
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5-No relaxation	7.91
d.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.-5 Max.	4.2
e.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA.2006)	500 Max.-2000 Max.	130
2.	<b>General Parameters</b>			
a.	Chemical Oxygen Demand(mg/l)	IS: 3025(Part-58)	--	BLQ (LOQ: 1.0)
b.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)		BLQ (LOQ: 1.0)
3.	<b>Parameters Concerning Undesirable Substances in excess amount</b>			
a.	Aluminium (as Al) (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.-0.2 Max.	BLQ (LOQ : 0.02)
b.	Ammonia (as total ammonia-N) (mg/l)	IS:3025(Part 34):1988(RA:2014)	0.5 Max.-No Relaxation	BLQ (LOQ : 0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:2009) -Annex K	0.2 Max.-1.0 Max.	BLQ (LOQ : 0.05)
d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:2014) Annex. F/IS:3025(P-65)	0.7 Max.-No relaxation	BLQ (LOQ : 0.3)

24-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
PremKumar  
[Authorized Signatory]

## Test Report

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Page 3 of 4

<b>Issued To</b>		Sample Reg. No. :E01-1910180539		
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. Date :18-10-2019		
		Report Date :24-10-2019		
		Report No. :ICE-1910240637		
		Customer Ref. No.:-		
		Letter Dated :-		
e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017)	0.5 Max.-2.4 Max.	BLQ (LOQ : 0.5)
f.	Calcium(as Ca),(mg/l)	IS:3025(Part 40):1991(RA:2014) and no 1	75 Max.-200 Max.	29
g.	Chloramines (as Cl <sub>2</sub> ),(mg/l)	IS:3025(Part 26):1986(RA:2014)and no 1	4.0 Max.-No relaxation	BLQ (LOQ : 0.02)
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014)	250 Max.-1000 Max.	8
i.	Copper (as Cu) (mg/l)	IS:3025(P-65)	0.05 Max.-1.5 Max.	0.001
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 and. no 1(RA:2013)	1.0 Max.-1.5 Max.	BLQ (LOQ : 0.1)
k.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/l)	IS:3025(P-43)	0.001 Max.-0.002 Max.	BLQ (LOQ : 0.001)
l.	Free Residual Chlorine (mg/l)	IS:3025(P-26)	0.2 Min.-1.0 Max.	Not Applicable
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014)	1.0 Max.-No relaxation	BLQ (LOQ : 0.01)
n.	Magnesium(as Mg) (mg/l)	IS:3025(Part 46):1994 and. no. 2(RA:2014)	30 Max.-100 Max.	4.5
o.	Manganese (as Mn) (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017)	0.1 Max.-0.3 Max.	BLQ (LOQ : 0.1)
p.	Mineral oil (mg/l)	Clause 6 of IS:3025(Part39)	0.5 Max.-No Relaxation	BLQ(LOQ:0.01)
q.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(Part 34):1988(RA:2014)	45 Max.-No Relaxation	BLQ (LOQ : 1.0)
r.	Selenium (as Se) (mg/l)	IS:3025(P-65)	0.01 Max.-No Relaxation	BLQ(LOQ:0.001)
s.	Silver (as Ag) (mg/l)	IS:3025(P-65)	0.1 Max.-No Relaxation	BLQ(LOQ:0.001)
t.	Sulphate(as SO <sub>4</sub> ) (mg/l)	IS:3025(Part 24):1986(RA:2014)	200 Max.-400 Max.	13
u.	Sulphide (as H <sub>2</sub> S) (mg/l)	IS:3025(Part 29)	0.05 Max.-No Relaxation	BLQ (LOQ : 0.05)
v.	Total Alkalinity(as CaCO <sub>3</sub> )(mg/l)	IS:3025(Part 23)	200 Max.-600 Max.	84
w.	Total Hardness(as CaCO <sub>3</sub> ),(mg/l)	IS 3025 (Part 21)	200 Max.-600 Max.	91
x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.-15 Max.	BLQ(LOQ:0.001)
4.	Parameters Concerning Toxic Substances			

24-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
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<b>Issued To</b>		Sample Reg. No. :E01-1910180539		
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. Date :18-10-2019		
		Report Date :24-10-2019		
		Report No. :ICE-1910240637		
		Customer Ref. No. :-		
		Letter Dated :-		
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.-No Relaxation	BLQ(LOQ:0.001)
b.	Cyanide(asCN)(mg/l)	IS:3025(Part 27)	0.05 Max.-No Relaxation	BLQ (LOQ : 0.01)
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.-No Relaxation	BLQ(LOQ:0.001)
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.-No Relaxation	BLQ(LOQ:0.001)
e.	Molybdenum(as Mo)(mg/l)	IS:3025(P-65)	0.07 Max.-No Relaxation	0.001
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.-No Relaxation	BLQ(LOQ:0.001)
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.-0.05 Max.	0.004
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.-No Relaxation	BLQ(LOQ:0.001)
5.	<b>Microbiological Tests</b>			
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	--Absent	Absent
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	--Absent	Absent

\*# represents Customer Defined Fields

**NOTE :** NA- Not Applicable, BLQ :- Below Limit of Quantification, LOQ :- Limit of Quantification,

**PART D : REMARKS :**N/A

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

24-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 1 of 4

<b>Issued To</b>	Sample Reg. No. :E01-1910180540 Sample Reg. Date :18-10-2019 Report Date :24-10-2019 Report No. :ICE-1910240638 Customer Ref. No.:- Letter Dated :-
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	

Test Report as per IS:IS 10500 - 2012

With Amendment No.(s):02

### PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample#	Surface Water Downstream (Village: Goindwal Sahib)
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 100ml
j) Batch Size/Location#	NA
k) Mode of Packing	Packed in can & in plastic container
l) Date of Receipt	18-10-2019
m) Date of Start	18-10-2019
n) Date of Completion	24-10-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on Mr. Kimiti 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

24-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 4

<b>Issued To</b>	<b>Sample Reg. No.</b> :E01-1910180540 <b>Sample Reg. Date</b> :18-10-2019 <b>Report Date</b> :24-10-2019 <b>Report No.</b> :ICE-1910240638 <b>Customer Ref. No.</b> :- <b>Letter Dated</b> :-
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

<b>Description</b>	Clear colourless liquid
--------------------	-------------------------

S.No.	Test Parameter	Method	Requirement	Result
<b>Test Details :</b>				
1.	<b>Organoleptic &amp; Physical Parameter</b>			
a.	Colour (Hazen)	IS:3025(Part4):1983(RA:2017)amnd. no1	5 Max.-15 Max.	< 5
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable--	Agreeable
c.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5-No relaxation	7.84
d.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.-5 Max.	4.4
e.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA:2006)	500 Max.-2000 Max.	132
2.	<b>General Parameters</b>			
a.	Chemical Oxygen Demand(mg/l)	IS: 3025(Part-58)	-	BLQ (LOQ: 1.0)
b.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)		BLQ (LOQ: 1.0)
3.	<b>Parameters Concerning Undesirable Substances in excess amount</b>			
a.	Aluminium (as Al) (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.-0.2 Max.	BLQ (LOQ : 0.02)
b.	Ammonia (as total ammonia-N) (mg/l)	IS:3025(Part 34):1988(RA:2014)	0.5 Max.-No Relaxation	BLQ (LOQ : 0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:2009)-Annex K	0.2 Max.-1.0 Max.	BLQ (LOQ : 0.05)
d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:2014) Annex. F/IS:3025(P-65)	0.7 Max.-No relaxation	BLQ (LOQ : 0.3)

24-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 4

<b>Issued To</b>		Sample Reg. No. :E01-1910180540				
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. Date :18-10-2019				
		Report Date :24-10-2019				
		Report No. :ICE-1910240638				
<b>Customer Ref. No.:-</b>						
<b>Letter Dated :-</b>						
e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017)	0.5 Max.-2.4 Max.	BLQ (LOQ : 0.5)		
f.	Calcium(as Ca),(mg/l)	IS:3025(Part 40):1991(RA:2014) and no 1	75 Max.-200 Max.	27		
g.	Chloramines (as Cl <sub>2</sub> ),(mg/l)	IS:3025(Part 26):1986(RA:2014)and no 1	4.0 Max.-No relaxation	BLQ (LOQ : 0.02)		
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014)	250 Max.-1000 Max.	10		
i.	Copper (as Cu) (mg/l)	IS:3025(P-65)	0.05 Max.-1.5 Max.	0.001		
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 and. no 1(RA:2013)	1.0 Max.-1.5 Max.	BLQ (LOQ : 0.1)		
k.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/l)	IS:3025(P-43)	0.001 Max.-0.002 Max.	BLQ (LOQ : 0.001)		
l.	Free Residual Chlorine (mg/l)	IS:3025(P-26)	0.2 Min.-1.0 Max.	Not Applicable		
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014)	1.0 Max.-No relaxation	BLQ (LOQ : 0.1)		
n.	Magnesium(as Mg) (mg/l)	IS:3025(Part 46):1994 and. no. 2(RA:2014)	30 Max.-100 Max.	4.7		
o.	Manganese (as Mn) (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017)	0.1 Max.-0.3 Max.	BLQ (LOQ : 0.1)		
p.	Mineral oil (mg/l)	Clause 6 of IS:3025(Part39)	0.5 Max.-No Relaxation	BLQ(LOQ:0.01)		
q.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(Part 34):1988(RA:2014)	45 Max.-No Relaxation	BLQ (LOQ : 1.0)		
r.	Selenium (as Se) (mg/l)	IS:3025(P-65)	0.01 Max.-No Relaxation	BLQ(LOQ:0.001)		
s.	Silver (as Ag) (mg/l)	IS:3025(P-65)	0.1 Max.-No Relaxation	BLQ(LOQ:0.001)		
t.	Sulphate(as SO <sub>4</sub> ) (mg/l)	IS:3025(Part 24):1986(RA:2014)	200 Max.-400 Max.	14		
u.	Sulphide (as H <sub>2</sub> S) (mg/l)	IS:3025(Part 29)	0.05 Max.-No Relaxation	BLQ (LOQ : 0.05)		
v.	Total Alkalinity(as CaCO <sub>3</sub> )(mg/l)	IS:3025(Part 23)	200 Max.-600 Max.	84		
w.	Total Hardness(as CaCO <sub>3</sub> ),(mg/l)	IS 3025 (Part 21)	200 Max.-600 Max.	87		
x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.-15 Max.	BLQ(LOQ:0.001)		
4.	Parameters Concerning Toxic Substances					

24-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501

Page 4 of 4

<b>Issued To</b>		Sample Reg. No. :E01-1910180540	Report Date :18-10-2019
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Report Date :24-10-2019	Report No. :ICE-1910240638
		Customer Ref. No.:-	
		Letter Dated :-	
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.-No Relaxation BLQ(LOQ:0.001)
b.	Cyanide(asCN)(mg/l)	IS:3025(Part 27)	0.05 Max.-No Relaxation BLQ (LOQ : 0.01)
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.-No Relaxation BLQ(LOQ:0.001)
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.-No Relaxation BLQ(LOQ:0.001)
e.	Molybdenum(as Mo)(mg/l)	IS:3025(P-65)	0.07 Max.-No Relaxation 0.001
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.-No Relaxation BLQ(LOQ:0.001)
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.-0.05 Max. 0.004
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.-No Relaxation BLQ(LOQ:0.001)
5.	<b>Microbiological Tests</b>		
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	-Absent Absent
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	--Absent Absent

# represents Customer Defined Fields

**NOTE :** NA- Not Applicable, BLQ :- Below Limit of Quantification, LOQ :- Limit of Quantification,

## PART D : REMARKS :N/A

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

24-10-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
24-10-2019  
Reviewer

24-10-2019  
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 1 of 3

<b>Issued To</b>	<b>Sample Reg. No.</b> :E01-1910180541 <b>Sample Reg. Date</b> :18-10-2019 <b>Report Date</b> :22-10-2019 <b>Report No.</b> :ICE-1910220584 <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :- .
<b>Test Report as per IS:EPA Act 1986/PCLS/2010</b>	<b>With Amendment No.(s):</b>

### PART A : PARTICULARS OF SAMPLE SUBMITTED

a)	Nature of Sample #	Ash Pond Effluent 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 #	2 Ltr
j)	Batch Size/Location #	NA
k)	Mode of Packing	Packed in can
l)	Date of Receipt	18-10-2019
m)	Date of Start	18-10-2019
n)	Date of Completion	22-10-2019
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 Sharma*  
Saurabh Sharma  
22-10-2019  
Reviewer

*Prem Kumar*  
Prem Kumar

22-10-2019  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 3

<b>Issued To</b>	Sample Reg. No. :E01-1910180541 Sample Reg. Date :18-10-2019 Report Date :22-10-2019 Report No. :ICE-1910220584 Customer Ref. No.: - Letter Dated :-
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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	Ash Pond Effluent Water
-------------	-------------------------

S.No.	Test Parameter	Method	Requirement	Result
<b>Test Details :</b>				
1	<b>General Parameters</b>			
a.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5	7.50
b.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	100 max.	42
c.	Oil & Grease(mg/l)	IS:3025(P-39)	10 max.	< 1.0
d.	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Not Specified	BLQ(LOQ : 0.01)
e.	Lead(as Pb)(mg/l)	IS:3025(P-66)	Not Specified	BLQ(LOQ : 0.01)
f.	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Not Specified	BLQ(LOQ : 0.01)
g.	Nickel(as Ni),mg/l	IS:3025(P-66)	Not Specified	BLQ(LOQ : 0.01)
h.	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Not Specified	0.03
i.	Copper as Cu(mg/l)	IS:3025(P-66)	Not Specified	BLQ(LOQ : 0.01)
j.	Zinc as Zn(mg/l)	IS:3025(P-66)	Not Specified	BLQ(LOQ : 0.01)
k.	Arsenic(as As)(mg/l)	IS:3025(P-66)	Not Specified	0.09
l.	Aluminium(as Al)(mg/l)	IS:3025(P-66)	Not Specified	0.04

\*# 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

*Saurabh Sharma*  
Saurabh Sharma  
22-10-2019  
Reviewer

*Prem Kumar*  
Prem Kumar  
22-10-2019  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 3

<b>Issued To</b>	<b>Sample Reg. No.</b> :E01-1910180541 <b>Sample Reg. Date</b> :18-10-2019 <b>Report Date</b> :22-10-2019 <b>Report No.</b> :ICE-1910220584 <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	

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

Saurabh Sharma  
22-10-2019  
Reviewer

22-10-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 1 of 2

<b>Issued To</b>	Sample Reg. No. :E01-1910180542 Sample Reg. Date :18-10-2019 Report Date :22-10-2019 Report No. :ICE-1910220583 Customer Ref. No.: - Letter Dated :-
------------------	---

Test Report as per IS:IS:2720      With Amendment No.(s):

### PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample#	Soil Sample
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#	500gm
j) Batch Size/Location#	NA
k) Mode of Packing	Packed in a poly pack
l) Date of Receipt	18-10-2019
m) Date of Start	18-10-2019
n) Date of Completion	22-10-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on dated 17.10.2019, Sample from Near Hazardous Waste Site
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 Sharma  
22-10-2019  
Reviewer

22-10-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 2

Issued To	Sample Reg. No. :E01-1910180542 Sample Reg. Date :18-10-2019 Report Date :22-10-2019 Report No. :ICE-1910220583 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	Soil Sample			
S.No.	Test Parameter	Method	Requirement	Result
<b>Test Details :</b>				
1.	<b>General Parameters</b>			
a.	pH Value(1 % sol.)	STP/ITC/EW-20	Not Specified	6.38
b.	Lead(as Pb)(mg/kg)	STP/ITC/EW-07	5000 Max.	2.38
c.	Copper(as Cu)(mg/kg)	STP/ITC/EW-07	5000 Max.	3.96
d.	Total Chromium(as Cr)(mg/kg)	STP/ITC/EW-07	5000 Max.	2.71
e.	Mercury(as Hg)(mg/kg)	STP/ITC/EW-07	50 Max.	4.37
f.	Cobalt as Co (mg/kg)	STP/ITC/EW-07	5000 Max.	0.32

\*# represents Customer Defined Fields

**NOTE : N/A-Not Applicable, Purpose - For Self Purpose**

## PART D : REMARKS :N/A

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

  
Saurabh Sharma  
22-10-2019  
Reviewer

  
22-10-2019  
Prem Kumar  
[Authorized Signatory]

**(Nov,2019 to Nov,2019)**

# Interstellar Testing Centre Pvt. Ltd.

## TEST REPORT

Document QF: 2501

ISSUED TO:	M/s GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Taran Taran-143422 (Punjab)	Report No. : E01-1912050468 Dated : 10.12.2019 Party Ref. : Nil Dated : Nil
------------	--	--

Sample description: Noise Monitoring (08 Locations)

### SAMPLE PARTICULARS

#### General Information:

- |                          |                       |
|--------------------------|-----------------------|
| 1. Date of Monitoring    | : 16.11.2019          |
| 2. Time of Monitoring    | : Day & Night         |
| 3. Nature of Industry    | : Thermal Power Plant |
| 4. Purpose of Monitoring | : For Self Monitoring |

### TEST RESULTS

Method: IS: 9989 (Reaffirmed 2001)

Sr. No.	Location	*Standards Leq dB (A)		Results Leq dB (A)					
				Day (06:00hrs to 22:00hrs)			Night (22:00hrs to 06:00hrs)		
		Day	Night	L <sub>avg</sub>	L <sub>max</sub>	L <sub>min</sub>	L <sub>Night</sub>	L <sub>max</sub>	L <sub>min</sub>
1.	Near Service Building	85.0 Max	85.0 Max	71.3	73.8	68.2	69.4	70.9	65.3
2.	CHP Area	85.0 Max	85.0 Max	75.9	77.9	73.1	69.6	70.9	67.2
3.	AHP Area	85.0 Max	85.0 Max	79.6	82.9	76.1	75.7	77.8	73.1
4.	Near Plant Site Office	85.0 Max	85.0 Max	62.6	64.7	60.0	56.1	58.4	53.1
5.	Near Boiler Area (Main Plant Area)	85.0 Max	85.0 Max	80.7	82.5	77.1	80.3	82.4	76.2
6.	Residential Colony	**55.0 Max	**45.0 Max	52.6	55.5	50.1	43.0	45.9	40.1
7.	Near Admin Building (Plant Main Gate)	85.0 Max	85.0 Max	63.3	65.5	60.1	58.3	61.5	55.2
8.	Near DM Plant	85.0 Max	85.0 Max	69.0	70.9	61.4	62.2	64.5	60.0

\*As per factory act-1948

\*\*EPA -1986, PCLS/02/2010

DOS: 05.12.2019

DOC: 10.12.2019

- End of Report -

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

Prem Kumar  
Tech. Manager (Env.)

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 1 of 3

<b>Issued To</b>  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	<b>Sample Reg. No.</b> :E01-1911220668 <b>Sample Reg. Date</b> :22-11-2019 <b>Report Date</b> :26-11-2019 <b>Report No.</b> :ICE-1911261114 <b>NABL ULR No.</b> :TC592619000016052P <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-
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<b>Test Report as per IS:NA</b>	<b>With Amendment No.(s):</b>
---------------------------------	-------------------------------

### 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	22-11-2019
m)	Date of Start	22-11-2019
n)	Date of Completion	26-11-2019
o)	Seal (Intact/Not Intact/Unsealed)	NA
p)	IO'S Signature (Signed/Unsigned)	Unsigned
q)	Any Other Information	Sample collected by lab rep. on 21.11.2019
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 Sharma  
26-11-2019  
Reviewer

This Analysis Report is not suitable  
For consent Purpose of the Govt.  
26-11-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 3

<b>Issued To</b>	<b>Sample Reg. No.</b> :E01-1911220668 <b>Sample Reg. Date</b> :22-11-2019 <b>Report Date</b> :26-11-2019 <b>Report No.</b> :ICE-1911261114 <b>NABL ULR No.</b> :TC592619000016052P <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-
------------------	---

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
<b>Test Details :</b>			
1. Organoleptic & Physical Parameter			
a.	Colour	IS:3025(Part4):1983(RA:2017)am d. no1	Colorless
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Mild
2. General Parameters			
a.	pH Value	IS:3025 (Part - II):1983(RA:2017)	7.15
b.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	150
c.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	404
d.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	128
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)	BLQ(LOQ : 0.01)
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	7.2
l.	Total Kjeldahl Nitrogen (as N)	APHA-23rd Edition Guidelines	25
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)

*[Signature]*  
Saurabh Sharma  
26-11-2019  
Reviewer

This Analysis Report is not valid  
For consult Purpose of the  
26-11-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 3

Issued To		Sample Reg. No. :E01-1911220668	
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. Date :22-11-2019	
		Report Date :26-11-2019	
		Report No. :ICE-1911261114	
		NABL ULR No. :TC592619000016052P	
		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 <sup>6+</sup> ),(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)	0.5
v.	Dissolved Phosphate(mg/l)	APHA-23rd Edition	0.6
w.	Sulphide(as S)(mg/l)	IS: 3025 (P-9)	BLQ (LOQ : 0.05)
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 <sub>3</sub> (mg/l)	IS:3025(P-34)	1.8
aa.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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  
26-11-2019  
Reviewer

This Analysts Report is not Valid  
For Consequential Purpose of the Board

26-11-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 1 of 3

<b>Issued To</b>	Sample Reg. No. : E01-1911220669 Sample Reg. Date : 22-11-2019 Report Date : 28-11-2019 Report No. : ICE-1911281281 NABL ULR No. : TC592619000016187P Customer Ref. No. :- Letter Dated : -
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Test Report as per IS:EPA Act 1986/PCLS/2010	With Amendment No.(s):
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<b>PART A : PARTICULARS OF SAMPLE SUBMITTED</b>	
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	22-11-2019
m) Date of Start	22-11-2019
n) Date of Completion	28-11-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on dated 21.11.2019
r) Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran ( Punjab )
s) Manufactured By#	NA
t) Supplied By#	NA

<b>PART B : SUPPLEMENTARY INFORMATIONS</b>	
a. Reference to sampling procedure, whenever applicable	: N/A

Saurabh Sharma  
28-11-2019  
Reviewer

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

28-11-2019

Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 3

<b>Issued To</b> <b>GVK Power (Goindwal Sahib) Ltd.</b> <b>Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil:</b> <b>Khadur Sahib,</b> <b>Tarn Taran</b>	<b>Sample Reg. No.</b> :E01-1911220669 <b>Sample Reg. Date</b> :22-11-2019 <b>Report Date</b> :28-11-2019 <b>Report No.</b> :ICE-1911281281 <b>NABL ULR No.</b> :TC592619000016187P <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-  <b>b.</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  <b>c.</b> 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
<b>Test Details :</b>				
1.	<b>General Parameters</b>			
a.	Colour	IS:3025(Part4):1983(RA:2017)amnd. 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	7.10
d.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	Max. 100	3
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	28
f.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	Max. 30	9
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)amnd no 1	Max. 1.0	BLQ (LOQ: 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	1.2
n.	Total Kjeldahl Nitrogen (as N)	APIHA-23rd Edition Guidelines	Max. 100	4.4

*Saurabh Sharma*  
 Saurabh Sharma  
 28-11-2019  
 Reviewer

This Analysis Report is not valid  
for consent Purpose of the Law

28-11-2019  
 Prem Kumar  
 [Authorized Signatory]

## Test Report

<b>Issued To</b>	<b>Sample Reg. No.</b> :E01-1911220669 <b>Sample Reg. Date</b> :22-11-2019 <b>Report Date</b> :28-11-2019 <b>Report No.</b> :ICE-1911281281 <b>NABL ULR No.</b> :TC592619000016187P <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran	

o.	Free Ammonia (as NH <sub>3</sub> )(mg/l) *	APHA-23rd Edition	Max. 5.0	Nil
p.	Arsenio(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 <sup>6+</sup> ),(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	BLQ(LOQ:0.01)
aa.	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0	0.02
ab.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(P-34)	Max. 10	1.2
ac.	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> 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	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, Requirements as per EPA Act 1986/PCLS/2010, Purpose - For Self monitoring

### PART D : REMARKS :N/A

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

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

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 1 of 3

<b>Issued To</b>	Sample Reg. No. :E01-1911220670 Sample Reg. Date :22-11-2019 Report Date :26-11-2019 Report No. :ICE-1911261115 NABL ULR No. :TC592619000016054P 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	22-11-2019
m) Date of Start	22-11-2019
n) Date of Completion	26-11-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on 21.11.2019
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 Sharma  
26-11-2019  
Reviewer

This Analysis Report is not Valid  
For consent Purpose of the Body  
26-11-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 2 of 3

<b>Issued To</b>	Sample Reg. No. :E01-1911220670 Sample Reg. Date :22-11-2019 Report Date :26-11-2019 Report No. :ICE-1911261115 NABL ULR No. :TC592619000016054P 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

<b>Description</b>			
S.No.	Test Parameter	Method	Result
<b>Test Details :</b>			
1.	<b>Organoleptic &amp; Physical Parameter</b>		
a.	Colour	IS:3025(Part4):1983(RA:2017)am d. no1	Blackish
b.	Odour	IS:3025(Part 5):1983(RA:2017)	Septic
2.	<b>General Parameters</b>		
a.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.95
b.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	180
c.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	364
d.	Bio-chemical Oxygen Demand(mg/l)(3 days at 27°C)	IS:3025(P-44)	110
e.	Oil & Grease(mg/l)	IS:3025(P-39)	10.2
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)	BLQ(LOQ : 0.01)
j.	Total Residual Chlorine(mg/l)	IS:3025(Part 26):1986(RA:2014)and no 1	BLQ (LOQ : 0.1)
k.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	15.2
l.	Total Kjeldahl Nitrogen (as N)	APHA-23rd Edition Guidelines	34
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 Sharma  
26-11-2019  
Reviewer

This Analysis Report is not Valid  
For commercial Purpose of the  
26-11-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 3

<b>Issued To</b>		Sample Reg. No. :E01-1911220670	
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. Date :22-11-2019	
		Report Date :26-11-2019	
		Report No. :ICE-1911261115	
		NABL ULR No. :TC592619000016054P	
<b>Customer Ref. No.:-</b>			
<b>Letter Dated :-</b>			
<b>o.</b>	Mercury(As Hg)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
<b>p.</b>	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
<b>q.</b>	Chromium (as Cr <sup>6+</sup> ),(mg/l) *	IS:3025(Part-52)	BLQ (LOQ : 0.01)
<b>r.</b>	Total Chromium as Cr(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
<b>s.</b>	Selenium(as Se)(mg/l)	IS:3025(P-66)	BLQ(LOQ : 0.01)
<b>t.</b>	Cyanide (as CN),(mg/l)	IS:3025(P-27)	Absent
<b>u.</b>	Fluoride(as F),(mg/L)	IS:3025(P-60)	0.4
<b>v.</b>	Dissolved Phosphate(mg/l)	APHA-23rd Edition	0.8
<b>w.</b>	Sulphide(as S)(mg/l)	IS: 3025 (P-9)	BLQ (LOQ : 0.5)
<b>x.</b>	Manganese(As Mn)(mg/l)	IS:3025(P-66)	0.09
<b>y.</b>	Iron(as Fe)(mg/l)	IS:3025(P-66)	0.10
<b>z.</b>	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(P-34)	2.1
<b>aa.</b>	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/L)	IS:3025(P-43)	BLQ (LOQ : 0.01)
<b>ab.</b>	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\*\*\*\*\*

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

Saurabh Sharma  
26-11-2019  
Reviewer

26-11-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 1 of 3

<b>Issued To</b>	Sample Reg. No. :E01-1911220671 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281263 NABL ULR No. :TC592619000016162P Customer Ref. No.: Letter Dated :-
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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#	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	22-11-2019
m) Date of Start	22-11-2019
n) Date of Completion	28-11-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. on dated 21.11.2019
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

This Analysis Report is not Valid  
For consent Purposes of the Govt.

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019

Prem Kumar  
[Authorized Signatory]

## Test Report

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<b>Issued To</b>	<b>Sample Reg. No.</b> : E01-1911220671 <b>Sample Reg. Date</b> : 22-11-2019 <b>Report Date</b> : 28-11-2019 <b>Report No.</b> : ICE-1911281263 <b>NABL ULR No.</b> : TC592619000016162P <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-
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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
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S.No.	Test Parameter	Method	Requirement	Result
<b>Test Details :</b>				
1.	<b>General Parameters</b>			
a.	Colour	IS:3025(Part4):1983(RA: 2017)amnd. 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	7.62
d.	Total Suspended Solids,(mg/l)	IS:3025(Part 17)	Max. 100	5
e.	Chemical Oxygen Demand(mg/l)	APHA-23rd Edition	Max. 250	32
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	0.02
l.	Total Residual Chlorine(mg/l)	IS:3025(Part 26):1986(RA:2014)amnd no 1	Max. 1.0	BLQ (LOQ: 0.1)
m.	Ammonical Nitrogen(As N)(mg/l)	APHA-23rd Edition Guidelines	Max. 50	4.4
n.	Total Kjeldahl Nitrogen (as N)	APHA-23rd Edition Guidelines	Max. 100	16.2

*[Signature]*  
Seurabh Sharma  
28-11-2019  
Reviewer

This Analysis Report is not valid  
For consent Purpose of the Board  
28-11-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
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<b>Issued To</b>		Sample Reg. No. :E01-1911220671	
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. Date :22-11-2019	
		Report Date :28-11-2019	
		Report No. :ICE-1911281263	
		NABL ULR No. :TC592619000016162P	
		Customer Ref. No.:-	
		Letter Dated :-	
<b>o.</b>	Free Ammonia (as NH <sub>3</sub> )(mg/l) *	APHA-23rd Edition	Max. 5.0 Nil
<b>p.</b>	Arsenic(as As)(mg/l)	IS:3025(P-66)	Max. 0.2 0.01
<b>q.</b>	Mercury(As Hg)(mg/l)	IS:3025(P-66)	Max. 0.01 BLQ(LOQ:0.01)
<b>r.</b>	Cadmium(as Cd)(mg/l)	IS:3025(P-66)	Max. 2.0 BLQ(LOQ:0.01)
<b>s.</b>	Chromium (as Cr <sup>6+</sup> ),(mg/l) *	IS:3025(Part-52)	Max. 0.1 BLQ (LOQ: 0.01)
<b>t.</b>	Total Chromium as Cr(mg/l)	IS:3025(P-66)	Max. 2.0 BLQ(LOQ:0.01)
<b>u.</b>	Selenium(as Se)(mg/l)	IS:3025(P-66)	Max. 0.05 BLQ(LOQ:0.01)
<b>v.</b>	Cyanide (as CN),(mg/l)	IS:3025(P-27)	Max. 0.2 Absent
<b>w.</b>	Fluoride(as F),(mg/L)	IS:3025(P-60)	Max. 2.0 0.2
<b>x.</b>	Dissolved Phosphate(mg/l)	APHA-23rd Edition	Max. 5.0 0.9
<b>y.</b>	Sulphide(as S)(mg/l)	IS:3025(Part 29)	Max. 2.0 BLQ (LOQ: 0.5)
<b>z.</b>	Manganese(As Mn)(mg/l)	IS:3025(P-66)	Max. 2 BLQ(LOQ:0.01)
<b>aa.</b>	Iron(as Fe)(mg/l)	IS:3025(P-66)	Max. 3.0 0.02
<b>ab.</b>	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(P-34)	Max. 10 1.2
<b>ac.</b>	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/L)	IS:3025(P-43)	Max. 1.0 BLQ (LOQ: 0.01)
<b>ad.</b>	Vanadium(As V)(mg/l) *	IS:3025(P-66)	Max. 0.2 BLQ(LOQ:0.01)
<b>ae.</b>	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,G.S.R. 1265(E), Dated 13.10.2017, 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*  
Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 1 of 5

<b>Issued To</b>	Sample Reg. No. :E01-1911220674 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281254 NABL ULR No. :TC592619000016168P Customer Ref. No.:- Letter Dated :-
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Test Report as per IS:BIS Specification IS:10500-2012 | With Amendment No.(s):02

### PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample#	Ground Water Peizometer (Site Office)
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	22-11-2019
m) Date of Start	22-11-2019
n) Date of Completion	28-11-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. Mr. Vipin on dated 21.11.2019
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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28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 5

<b>Issued To</b>	Sample Reg. No. :E01-1911220674 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281254 NABL ULR No. :TC592619000016168P Customer Ref. No.:- Letter Dated :-
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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	Clear Colourless Liquid
-------------	-------------------------

S.No.	Test Parameter	Method	Acceptable Limit	Permissible Limit (Absence of Alternate Source)	Result
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### Test Details :

1.	<b>Organoleptic &amp; Physical Parameter</b>				
a.	Colour (Hazen)	IS:3025(Part4):1983( RA:2017)amnd. no1	5 Max.	15 Max.	< 5
b.	Taste	IS:3025(Part 8):1984(RA:2017)	Agreeable	-	Agreeable
c.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable	-	Agreeable
d.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5	No relaxation	7.41
e.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.	5 Max.	< 0.5
f.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA.2006)	500 Max.	2000 Max.	398
2.	<b>Parameters Concerning Undesirable Substances in excess amount</b>				
a.	Aluminium (as Al) (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.	0.2 Max.	BLQ (LOQ : 0.02)
b.	Ammonia (as total ammonia-N) (mg/l) *	IS:3025(Part 34):1988(RA:2014)	0.5 Max.	No Relaxation	BLQ (LOQ : 0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:20 09)-Annex K	0.2 Max.	1.0 Max.	BLQ (LOQ : 0.05)
d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:20 14)Annex. F/IS:3025(P-65)	0.7 Max.	No relaxation	BLQ (LOQ : 0.3)

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 3 of 5

Issued To  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. No. :E01-1911220674 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281254 NABL ULR No. :TC592619000016168P Customer Ref. No.:- Letter Dated :-
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e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017)	0.5 Max.	2.4 Max.	BLQ (LOQ : 0.5)
f.	Calcium(as Ca),(mg/l)	IS:3025(Part 40):1991(RA:2014) and no 1	75 Max.	200 Max.	45.9
g.	Chloramines (as Cl <sub>2</sub> ),(mg/l) *	IS:3025(Part 26):1986(RA:2014) and no 1	4.0 Max.	No relaxation	BLQ (LOQ : 0.02)
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014)	250 Max.	1000 Max.	16
i.	Copper (as Cu) (mg/l)	IS:3025(P-65)	0.05 Max.	1.5 Max.	BLQ(LOQ:0.001)
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 and. no 1(RA:2013)	1.0 Max.	1.5 Max.	BLQ (LOQ : 0.1)
k.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/l)	IS:3025(P-43)	0.001 Max.	0.002 Max.	BLQ (LOQ : 0.001)
l.	Free Residual Chlorine (mg/l)	IS:3025(P-26)	0.2 Min.	1.0 Max.	Not Applicable
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014)	1.0 Max.	No relaxation	BLQ (LOQ : 0.01)
n.	Magnesium(asMg) (mg/l)	IS:3025(Part 46):1994 and. no. 2(RA:2014)	30 Max.	100 Max.	20.2
o.	Manganese (as Mn) (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017)	0.1 Max.	0.3 Max.	BLQ (LOQ : 0.1)
p.	Mineral oil (mg/l)	Clause 6 of IS:3025(Part39)	0.5 Max.	No Relaxation	BLQ(LOQ:0.01)
q.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(Part 34):1988(RA:2014)	45 Max.	No Relaxation	BLQ (LOQ : 1.0)
r.	Selenium (as Se) (mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation	BLQ(LOQ:0.001)
s.	Silver (as Ag) (mg/l)	IS:3025(P-65)	0.1 Max.	No Relaxation	BLQ(LOQ:0.001)
t.	Sulphate(as SO <sub>4</sub> ) (mg/l)	IS:3025(Part 24):1986(RA:2014)	200 Max.	400 Max.	2.8
u.	Sulphide (as H <sub>2</sub> S) (mg/l)	IS:3025(Part 29)	0.05 Max.	No Relaxation	BLQ (LOQ : 0.05)
v.	Total Alkalinity(as CaCO <sub>3</sub> )(mg/l)	IS:3025(Part 23)	200 Max.	600 Max.	338.8
w.	Total Hardness(as CaCO <sub>3</sub> ),(mg/l)	IS 3025 (Part 21)	200 Max.	600 Max.	198

28-11-2019  
Rashmi Sharma  
{Authorized Signatory}

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
{Authorized Signatory}

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 4 of 5

<b>Issued To</b>	Sample Reg. No. :E01-1911220674 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281254 NABL ULR No. :TC592619000016168P Customer Ref. No.:- Letter Dated :- Zinc(as Zn)(mg/l) IS:3025(P-65) 5 Max. 15 Max. BLQ(LOQ:0.001)				
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran					

x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.	15 Max.	BLQ(LOQ:0.001)
<b>3. Parameters Concerning Toxic Substances</b>					
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.	No Relaxation	BLQ(LOQ:0.001)
b.	Cyanide(as CN)(mg/l)	IS:3025(Part 27)	0.05 Max.	No Relaxation	BLQ(LOQ:0.01)
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation	BLQ(LOQ:0.001)
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.	No Relaxation	BLQ(LOQ:0.001)
e.	Molybdenum(as Mo)(mg/l) *	IS:3025(P-65)	0.07 Max.	No Relaxation	BLQ(LOQ:0.001)
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.	No Relaxation	BLQ(LOQ:0.001)
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.	No relaxation	BLQ(LOQ:0.001)
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.	No Relaxation	BLQ(LOQ:0.001)
i.	Polychlorinated biphenyls(as PCB) (mg/l)	APHA 6630/IT/AC/08-02	0.0005 Max.	No relaxation	BLQ(LOQ:0.0001)
j.	Polynuclear aromatic hydrocarbons(as PAH) (mg/l)	APHA 6440/it/AC/08-02	0.0001 max	No relaxation	BLQ(LOQ:0.0001)
<b>4. Microbiological Tests</b>					
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	Absent	-	Absent
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	Absent	-	Absent
<b>5. Pesticide Residue</b>					
a.	Alachlor(µg/l)	In House	20 Max.	No Relaxation	BLQ(LOQ:0.01)
b.	DDT(o,p and p,p-isomers of DDT,DDE and DDD),(µg/l)	In House	1 Max.	No Relaxation	BLQ(LOQ:0.01)
c.	Atrazine(µg/l)	In House	2 Max.	No Relaxation	BLQ(LOQ:0.01)
d.	Aldrin & Dialdrin,(µg/l)	In House	0.03 Max.	No Relaxation	BLQ(LOQ:0.01)
e.	Alpha HCH,(µg/l)	In House	0.01 Max	No Relaxation	BLQ(LOQ:0.01)
f.	Beta,HCH,(µg/l)	In House	0.04 Max.	No Relaxation	BLQ(LOQ:0.01)
g.	Butachlor(µg/l)	In House	125 Max.	No Relaxation	BLQ(LOQ:0.01)
h.	Chlorpyriphos(µg/l)	In House	30 Max.	No Relaxation	BLQ(LOQ:0.01)
i.	Delta HCH,(µg/l)	In House	0.04 Max.	No Relaxation	BLQ(LOQ:0.01)
j.	2,4-Dichlorophenoxyacetic acid (µg/l)	In House	30 Max.	No Relaxation	BLQ(LOQ:0.01)
k.	Isoproturon(µg/l)	In House	9 Max.	No Relaxation	BLQ(LOQ:0.01)

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 5 of 5

Issued To	Sample Reg. No. :E01-1911220674 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281254 NABL ULR No. :TCS92619000016168P Customer Ref. No.:- Letter Dated :-
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l.	Malathion( $\mu\text{g/l}$ )	In House	190 max.	No Relaxation	BLQ(LOQ:0.01)
m.	Ethion( $\mu\text{g/l}$ )	In House	3 Max.	No Relaxation	BLQ(LOQ:0.01)
n.	Monocrotophos( $\mu\text{g/l}$ )	In House	1 Max.	No Relaxation	BLQ(LOQ:0.01)
o.	Phorate( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ(LOQ:0.01)
p.	Endosulfan(alpha,beta and sulphate)( $\mu\text{g/l}$ )	In House	0.4 Max.	No Relaxation	BLQ(LOQ:0.01)
q.	Gamma-HCH(Lindane)( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ(LOQ:0.01)
r.	Methyl Parathion,( $\mu\text{g/l}$ )	USEPA 3510 C & 8270 C	0.3 Max.	No Relaxation	BLQ(LOQ:0.01)
6.	TriHalomethanes( $\text{mg/l}$ )				
a.	Bromoform( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No relaxation	BLQ(LOQ:0.1)
b.	Dibromochloromethane( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No Relaxation	BLQ(LOQ:0.1)
c.	Bromodichloromethane( $\text{mg/l}$ ) *	APHA-6232	0.06 max.	No Relaxation	BLQ(LOQ:0.05)
d.	Chloroform( $\text{mg/l}$ ) *	APHA-6232	0.2 max	No Relaxation	BLQ(LOQ:0.1)

\*# 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,

PART D : REMARKS :N/A

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

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 1 of 5

Issued To	Sample Reg. No. :E01-1911220673 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281251 NABL ULR No. :TC592619000016166P Customer Ref. No. :- Letter Dated :-
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Test Report as per IS:BIS Specification IS:10500-2012 | With Amendment No.(s):02

### PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample #	Ground Water Peizometer (Fire Station)
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	22-11-2019
m) Date of Start	22-11-2019
n) Date of Completion	28-11-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. Mr. Vipin on dated 21.11.2019
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
---	-------

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 2 of 5

<b>Issued To</b>	Sample Reg. No. :E01-1911220673 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281251 NABL ULR No. :TC592619000016166P Customer Ref. No.:- Letter Dated :-
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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

<b>Description</b>	
Description	Clear Colourless Liquid

S.No.	Test Parameter	Method	Acceptable Limit	Permissible Limit (Absence of Alternate Source)	Result
-------	----------------	--------	------------------	---	--------

### Test Details :

1.	<b>Organoleptic &amp; Physical Parameter</b>				
a.	Colour (Hazen)	IS:3025(Part4):1983( RA:2017)amnd. no1	5 Max.	15 Max.	< 5
b.	Taste	IS:3025(Part 8):1984(RA:2017)	Agreeable	-	Agreeable
c.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable	-	Agreeable
d.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5	No relaxation	7.30
e.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.	5 Max.	< 0.5
f.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA.2006)	500 Max.	2000 Max.	140
2.	<b>Parameters Concerning Undesirable Substances in excess amount</b>				
a.	Aluminium (as Al) (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.	0.2 Max.	BLQ (LOQ : 0.02)
b.	Ammonia (as total ammonia-N) (mg/l) *	IS:3025(Part 34):1988(RA:2014)	0.5 Max.	No Relaxation	BLQ (LOQ : 0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:20 09)-Annex K	0.2 Max.	1.0 Max.	BLQ (LOQ : 0.05)
d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:20 14)Annex. F/IS:3025(P-65)	0.7 Max.	No relaxation	BLQ (LOQ : 0.3)

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

Document QF : 2501

## Test Report

Page 3 of 5

Issued To  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. No. :E01-1911220673 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281251 NABL ULR No. :TC592619000016166P Customer Ref. No.:- Letter Dated :-
e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017)
f.	Calcium(as Ca),(mg/l)	IS:3025(Part 40):1991(RA:2014) amd no 1
g.	Chloramines (as Cl <sub>2</sub> ),(mg/l) *	IS:3025(Part 26):1986(RA:2014)a md no 1
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014)
i.	Copper (as Cu) (mg/l)	IS:3025(P-65)
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 amd. no 1(RA:2013)
k.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/l)	IS:3025(P-43)
l.	Free Residual Chlorine (mg/l)	IS:3025(P-26)
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014)
n.	Magnesium(asMg) (mg/l)	IS:3025(Part 46):1994 amd. no. 2(RA:2014)
o.	Manganese (as Mn) (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017)
p.	Mineral oil (mg/l)	Clause 6 of IS:3025(Part39)
q.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(Part 34):1988(RA:2014)
r.	Selenium (as Se) (mg/l)	IS:3025(P-65)
s.	Silver (as Ag) (mg/l)	IS:3025(P-65)
t.	Sulphate(as SO <sub>4</sub> ) (mg/l)	IS:3025(Part 24):1986(RA:2014)
u.	Sulphide (as H <sub>2</sub> S) (mg/l)	IS:3025(Part 29)
v.	Total Alkalinity(as CaCO <sub>3</sub> )(mg/l)	IS:3025(Part 23)
w.	Total Hardness(as CaCO <sub>3</sub> ),(mg/l)	IS 3025 (Part 21)

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

Document QF : 2501  
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## Test Report

Issued To		Sample Reg. No. :E01-1911220673		
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. Date :22-11-2019		
		Report Date :28-11-2019		
		Report No. :ICE-1911281251		
		NABL ULR No. :TC592619000016166P		
		Customer Ref. No.:-		
		Letter Dated :-		
x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.	15 Max.
3.	<b>Parameters Concerning Toxic Substances</b>			
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.	No Relaxation
b.	Cyanide(asCN)(mg/l)	IS:3025(Part 27)	0.05 Max.	No Relaxation
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.	No Relaxation
e.	Molybdenum(as Mo)(mg/l) *	IS:3025(P-65)	0.07 Max.	No Relaxation
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.	No Relaxation
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.	No relaxation
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.	No Relaxation
i.	Polychlorinated biphenyls(as PCB) (mg/l)	APHA 6630/IT/AC/08-02	0.0005 Max.	No relaxation
j.	Polynuclear aromatic hydrocarbons(as PAH) (mg/l)	APHA 6440/it/AC/08-02	0.0001 max	No relaxation
4.	<b>Microbiological Tests</b>			
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	Absent	-
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	Absent	-
5.	<b>Pesticide Residue</b>			
a.	Alachlor(µg/l)	In House	20 Max.	No Relaxation
b.	DDT(o,p and p,p-isomers of DDT,DDE and DDD),(µg/l)	In House	1 Max.	No Relaxation
c.	Atrazine(µg/l)	In House	2 Max.	No Relaxation
d.	Aldrin & Dialdrin,(µg/l)	In House	0.03 Max.	No Relaxation
e.	Alpha HCH,(µg/l)	In House	0.01 Max	No Relaxation
f.	Beta,HCH,(µg/l)	In House	0.04 Max.	No Relaxation
g.	Butachlor(µg/l)	In House	125 Max.	No Relaxation
h.	Chlorpyriphos(µg/l)	In House	30 Max.	No Relaxation
i.	Delta HCH,(µg/l)	In House	0.04 Max.	No Relaxation
j.	2,4-Dichlorophenoxyacetic acid (µg/l)	In House	30 Max.	No Relaxation
k.	Isoproturon(µg/l)	In House	9 Max.	No Relaxation

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

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Issued To		Sample Reg. No. :E01-1911220673			
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. Date :22-11-2019			
		Report Date :28-11-2019			
		Report No. :ICE-1911281251			
		NABL ULR No. :TC592619000016166P			
		Customer Ref. No.:-			
		Letter Dated :-			
l.	Malathion( $\mu\text{g/l}$ )	In House	190 max.	No Relaxation	BLQ(LOQ:0.01)
m.	Ethion( $\mu\text{g/l}$ )	In House	3 Max.	No Relaxation	BLQ(LOQ:0.01)
n.	Monocrotophos( $\mu\text{g/l}$ )	In House	1 Max.	No Relaxation	BLQ(LOQ:0.01)
o.	Phorate( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ(LOQ:0.01)
p.	Endosulfan(alpha,beta and sulphate)( $\mu\text{g/l}$ )	In House	0.4 Max.	No Relaxation	BLQ(LOQ:0.01)
q.	Gamma-HCH(Lindane)( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ(LOQ:0.01)
r.	Methyl Parathion,( $\mu\text{g/l}$ )	USEPA 3510 C & 8270 C	0.3 Max.	No Relaxation	BLQ(LOQ:0.01)
6.	TriHalomethanes( $\text{mg/l}$ )				
a.	Bromoform( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No relaxation	BLQ(LOQ:0.1)
b.	Dibromochloromethane( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No Relaxation	BLQ(LOQ:0.1)
c.	Bromodichloromethane( $\text{mg/l}$ ) *	APHA-6232	0.06 max.	No Relaxation	BLQ(LOQ:0.05)
d.	Chloroform( $\text{mg/l}$ ) *	APHA-6232	0.2 max	No Relaxation	BLQ(LOQ:0.1)

\*# 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,

### PART D : REMARKS :N/A

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

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
Page 1 of 5

Issued To	Sample Reg. No. :E01-1911220675 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281253 NABL ULR No. :TC592619000016169P Customer Ref. No.: Letter Dated :-
Test Report as per IS:BIS Specification IS:10500-2012	With Amendment No.(s):02
<b>PART A : PARTICULARS OF SAMPLE SUBMITTED</b>	
a) Nature of Sample#	Ground Water Peizometer (PLL Colony)
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	22-11-2019
m) Date of Start	22-11-2019
n) Date of Completion	28-11-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. Mr. Vipin on dated 21.11.2019, Sample from Near Ash Pond
r) Test Request Submitted By	GVK Power (Goindwal Sahib) Ltd.-Tarn Taran ( Punjab )
s) Manufactured By#	NA
t) Supplied By#	NA
<b>PART B : SUPPLEMENTARY INFORMATIONS</b>	

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
Prem Kumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
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<b>Issued To</b>	Sample Reg. No. :E01-1911220675 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281253 NABL ULR No. :TC592619000016169P Customer Ref. No. :- Letter Dated :-
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a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

## PART C : TEST RESULTS

### Description

Description	Clear Colourless Liquid
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S.No.	Test Parameter	Method	Acceptable Limit	Permissible Limit (Absence of Alternate Source)	Result
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### Test Details :

<b>1. Organoleptic &amp; Physical Parameter</b>					
a.	Colour (Hazen)	IS:3025(Part4):1983( RA:2017)amnd. no1	5 Max.	15 Max.	< 5
b.	Taste	IS:3025(Part 8):1984(RA:2017)	Agreeable	-	Agreeable
c.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable	-	Agreeable
d.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5	No relaxation	7.50
e.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.	5 Max.	0.5
f.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA.2006)	500 Max.	2000 Max.	445
<b>2. Parameters Concerning Undesirable Substances in excess amount</b>					
a.	Aluminium (as Al) (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.	0.2 Max.	BLQ (LOQ : 0.02)
b.	Ammonia (as total ammonia-N) (mg/l) *	IS:3025(Part 34):1988(RA:2014)	0.5 Max.	No Relaxation	BLQ (LOQ : 0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:2009)-Annex K	0.2 Max.	1.0 Max.	BLQ (LOQ : 0.05)

28-11-2019  


Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
  
PremKumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

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## Test Report

**Sample Reg. No.** :E01-1911220675  
**Sample Reg. Date** :22-11-2019  
**Report Date** :28-11-2019  
**Report No.** :ICE-1911281253  
**NABL ULR No.** :TC592619000016169P  
**Customer Ref. No.:-**  
**Letter Dated** :-

**Issued To**  
 GVK Power (Goindwal Sahib) Ltd.  
 Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil:  
 Khadur Sahib,  
 Tarn Taran

d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:2014)Annex. F/IS:3025(P-65)	0.7 Max.	No relaxation	BLQ (LOQ : 0.3)
e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017)	0.5 Max.	2.4 Max.	BLQ (LOQ : 0.5)
f.	Calcium(as Ca),(mg/l)	IS:3025(Part 40):1991(RA:2014) and no 1	75 Max.	200 Max.	54
g.	Chloramines (as Cl <sub>2</sub> ),(mg/l) *	IS:3025(Part 26):1986(RA:2014)and no 1	4.0 Max.	No relaxation	BLQ (LOQ : 0.02)
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014)	250 Max.	1000 Max.	12
i.	Copper (as Cu) (mg/l)	IS:3025(P-65)	0.05 Max.	1.5 Max.	BLQ(LOQ:0.001)
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 and. no 1(RA:2013)	1.0 Max.	1.5 Max.	BLQ (LOQ : 0.1)
k.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/l)	IS:3025(P-43)	0.001 Max.	0.002 Max.	BLQ (LOQ : 0.001)
l.	Free Residual Chlorine (mg/l)	IS:3025(P-26)	0.2 Min.	1.0 Max.	Not Applicable
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014)	1.0 Max.	No relaxation	BLQ (LOQ : 0.01)
n.	Magnesium(asMg) (mg/l)	IS:3025(Part 46):1994 and. no. 2(RA:2014)	30 Max.	100 Max.	15.3
o.	Manganese (as Mn) (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017)	0.1 Max.	0.3 Max.	BLQ (LOQ : 0.1)
p.	Mineral oil (mg/l)	Clause 6 of IS:3025(Part39)	0.5 Max.	No Relaxation	BLQ(LOQ:0.01)
q.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(Part 34):1988(RA:2014)	45 Max.	No Relaxation	BLQ (LOQ : 1.0)
r.	Selenium (as Se) (mg/l)	IS:3025(P-65)	0.01 Max	No Relaxation	BLQ(LOQ:0.001)
s.	Silver (as Ag) (mg/l)	IS:3025(P-65)	0.1 Max.	No Relaxation	BLQ(LOQ:0.001)
t.	Sulphate(as SO <sub>4</sub> ) (mg/l)	IS:3025(Part 24):1986(RA:2014)	200 Max.	400 Max.	10.8
u.	Sulphide (as H <sub>2</sub> S) (mg/l)	IS:3025(Part 29)	0.05 Max.	No Relaxation	BLQ (LOQ : 0.05)

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

*(Signature)*  
Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
[Authorized Signatory]

## Test Report

<b>Issued To</b>  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		<b>Sample Reg. No.</b> :E01-1911220675 <b>Sample Reg. Date</b> :22-11-2019 <b>Report Date</b> :28-11-2019 <b>Report No.</b> :ICE-1911281253 <b>NABL ULR No.</b> :TC592619000016169P <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-		
v.	Total Alkalinity(as CaCO <sub>3</sub> )(mg/l)	IS:3025(Part 23)	200 Max.	600 Max.
w.	Total Hardness(as CaCO <sub>3</sub> ),(mg/l)	IS 3025 (Part 21)	200 Max.	600 Max.
x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.	15 Max
<b>3. Parameters Concerning Toxic Substances</b>				
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.	No Relaxation
b.	Cyanide(asCN)(mg/l)	IS:3025(Part 27)	0.05 Max.	No Relaxation
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.	No Relaxation
e.	Molybdenum(as Mo)(mg/l) *	IS:3025(P-65)	0.07 Max.	No Relaxation
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.	No Relaxation
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.	No relaxation
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.	No Relaxation
i.	Polychlorinated biphenyls(as PCB) (mg/l)	APHA 6630/TT/AC/08-02	0.0005 Max.	No relaxation
j.	Polynuclear aromatic hydrocarbons(as PAH) (mg/l)	APHA 6440/it/AC/08-02	0.0001 max	No relaxation
<b>4. Microbiological Tests</b>				
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	Absent	-
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	Absent	-
<b>5. Pesticide Residue</b>				
a.	Alachlor(µg/l)	In House	20 Max.	No Relaxation
b.	DDT(o,p and p,p-isomers of DDT,DDE and DDD),(µg/l)	In House	1 Max.	No Relaxation
c.	Atrazine(µg/l)	In House	2 Max.	No Relaxation
d.	Aldrin & Dialdrin,(µg/l)	In House	0.03 Max.	No Relaxation
e.	Alpha HCH,(µg/l)	In House	0.01 Max	No Relaxation
f.	Beta,HCH,(µg/l)	In House	0.04 Max.	No Relaxation
g.	Butachlor(µg/l)	In House	125 Max.	No Relaxation
h.	Chlorpyriphos(µg/l)	In House	30 Max.	No Relaxation
i.	Delta HCH,(µg/l)	In House	0.04 Max.	No Relaxation

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 5 of 5

Issued To		Sample Reg. No. :E01-1911220675			
GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. Date :22-11-2019			
		Report Date :28-11-2019			
		Report No. :ICE-1911281253			
		NABL ULR No. :TC592619000016169P			
		Customer Ref. No.:-			
		Letter Dated :-			
j.	2,4-Dichlorophenoxyacetic acid ( $\mu\text{g/l}$ )	In House	30 Max.	No Relaxation	BLQ(LOQ:0.01)
k.	Isoproturon( $\mu\text{g/l}$ )	In House	9 Max.	No Relaxation	BLQ(LOQ:0.01)
l.	Malathion( $\mu\text{g/l}$ )	In House	190 max.	No Relaxation	BLQ(LOQ:0.01)
m.	Ethion( $\mu\text{g/l}$ )	In House	3 Max.	No Relaxation	BLQ(LOQ:0.01)
n.	Monocrotophos( $\mu\text{g/l}$ )	In House	1 Max.	No Relaxation	BLQ(LOQ:0.01)
o.	Phorate( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ(LOQ:0.01)
p.	Endosulfan(alpha,beta and sulphate)( $\mu\text{g/l}$ )	In House	0.4 Max.	No Relaxation	BLQ(LOQ:0.01)
q.	Gamma-HCH(Lindane)( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ(LOQ:0.01)
r.	Methyl Parathion,( $\mu\text{g/l}$ )	USEPA 3510 C & 8270 C	0.3 Max.	No Relaxation	BLQ(LOQ:0.01)
6.	TriHalomethanes( $\text{mg/l}$ )				
a.	Bromoform( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No relaxation	BLQ(LOQ:0.1)
b.	Dibromochloromethane( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No Relaxation	BLQ(LOQ:0.1)
c.	Bromodichloromethane( $\text{mg/l}$ ) *	APHA-6232	0.06 max.	No Relaxation	BLQ(LOQ:0.05)
d.	Chloroform( $\text{mg/l}$ ) *	APHA-6232	0.2 max	No Relaxation	BLQ(LOQ:0.1)

\*# 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,

### PART D : REMARKS :N/A

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

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
Prem Kumar  
[Authorized Signatory]



# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 1 of 5

Issued To	Sample Reg. No. :E01-1911220672 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281252 NABL ULR No. :TC592619000016170P Customer Ref. No.: Letter Dated :-
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Test Report as per IS:BIS Specification IS:10500-2012 | With Amendment No.(s):02

### PART A : PARTICULARS OF SAMPLE SUBMITTED

a) Nature of Sample*	Ground Water Peizometer (Village: Vairoval)
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	22-11-2019
m) Date of Start	22-11-2019
n) Date of Completion	28-11-2019
o) Seal (Intact/Not Intact/Unsealed)	NA
p) IO'S Signature (Signed/Unsigned)	Unsigned
q) Any Other Information	Sample collected by lab rep. Mr. Vipin on dated 21.11.2019, Sample from Near Ash Pond
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

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
Prem Kumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
Page 2 of 5

<b>Issued To</b>	Sample Reg. No. :E01-1911220672 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281252 NABL ULR No. :TC592619000016170P Customer Ref. No. :- Letter Dated :-
a. Reference to sampling procedure, whenever applicable	: N/A
b. Supporting documents for the measurement taken and results derived like graphs, tables, sketches and / or photographs as appropriate to test reports, if any	: N/A
c. Deviation from the test methods as prescribed in relevant ISS/WORK Instruments, if any	: N/A

## PART C : TEST RESULTS

### Description

Description	Clear Colourless Liquid
-------------	-------------------------

S.No.	Test Parameter	Method	Acceptable Limit	Permissible Limit (Absence of Alternate Source)	Result
<b>Test Details :</b>					
1.	<b>Organoleptic &amp; Physical Parameter</b>				
a.	Colour (Hazen)	IS:3025(Part4):1983( RA:2017)amd. no1	5 Max.	15 Max.	< 5
b.	Taste	IS:3025(Part 8):1984(RA:2017)	Agreeable	-	Agreeable
c.	Odour	IS:3025(Part 5):1983(RA:2017)	Agreeable	-	Agreeable
d.	pH Value	IS:3025 (Part - 11):1983(RA:2017)	6.5-8.5	No relaxation	7.52
e.	Turbidity(NTU)	IS:3025(Part 10):1984(RA:2017)	1 Max.	5 Max.	0.6
f.	Total Dissolved Solids (mg/l)	IS:3025(Part 16):1984(RA.2006)	500 Max.	2000 Max.	540
2.	<b>Parameters Concerning Undesirable Substances in excess amount</b>				
a.	Aluminium (as Al) (mg/l)	IS:3025(Part 55):RA2014	0.03 Max.	0.2 Max.	BLQ (LOQ : 0.02)
b.	Amonia (as total ammonia-N) (mg/l) *	IS:3025(Part 34):1988(RA:2014)	0.5 Max.	No Relaxation	BLQ (LOQ : 0.1)
c.	Anionic detergent(as MBAS),(mg/l)	IS:13428:2005(RA:20 09)-Annex K	0.2 Max.	1.0 Max.	BLQ (LOQ : 0.05)

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
[Authorized Signatory]

## Test Report

Document QF : 2501  
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Issued To  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. No. :E01-1911220672 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281252 NABL ULR No. :TC592619000016170P Customer Ref. No.: Letter Dated :-
d.	Barium (as Ba) (mg/l)	IS:13428:2005(RA:2014)Annex F/IS:3025(P-65) 0.7 Max. No relaxation BLQ (LOQ : 0.3)
e.	Boron (as B) (mg/l)	Apha 23rd Edn.2017-3120 B/IS:3025(Part 57):2004(RA:2017) 0.5 Max. 2.4 Max. BLQ (LOQ : 0.5)
f.	Calcium(as Ca),(mg/l)	IS:3025(Part 40):1991(RA:2014) amd no 1 75 Max. 200 Max. 57
g.	Chloramines (as Cl <sub>2</sub> ),(mg/l) *	IS:3025(Part 26):1986(RA:2014) amd no 1 4.0 Max. No relaxation BLQ (LOQ : 0.02)
h.	Chloride(as Cl) (mg/l)	IS:3025(Part 32):1988(RA:2014) 250 Max. 1000 Max. 22
i.	Copper (as Cu) (mg/l)	IS:3025(P-65) 0.05 Max. 1.5 Max. BLQ(LOQ:0.001)
j.	Fluoride as F (mg/l)	IS:3025(Part 60):2008 amd. no 1(RA:2013) 1.0 Max. 1.5 Max. BLQ (LOQ : 0.1)
k.	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH) (mg/l)	IS:3025(P-43) 0.001 Max. 0.002 Max. BLQ (LOQ : 0.001)
l.	Free Residual Chlorine (mg/l)	IS:3025(P-26) 0.2 Min. 1.0 Max. Not Applicable
m.	Iron (as Fe) (mg/l)	IS:3025(Part 53):2003(RA:2014) 1.0 Max. No relaxation BLQ (LOQ : 0.01)
n.	Magnesium(asMg) (mg/l)	IS:3025(Part 46):1994 amd. no. 2(RA:2014) 30 Max. 100 Max. 18.3
o.	Manganese (as Mn) (mg/l)	Apha 23rd Edn.2017-3125 B/IS:3025(Part 59):2004(RA:2017) 0.1 Max. 0.3 Max. BLQ (LOQ : 0.1)
p.	Mineral oil (mg/l)	Clause 6 of IS:3025(Part39) 0.5 Max. No Relaxation BLQ(LOQ:0.01)
q.	Nitrate as NO <sub>3</sub> (mg/l)	IS:3025(Part 34):1988(RA:2014) 45 Max. No Relaxation BLQ (LOQ : 1.0)
r.	Selenium (as Se) (mg/l)	IS:3025(P-65) 0.01 Max. No Relaxation BLQ(LOQ:0.001)
s.	Silver (as Ag) (mg/l)	IS:3025(P-65) 0.1 Max. No Relaxation BLQ(LOQ:0.001)
t.	Sulphate(as SO <sub>4</sub> ) (mg/l)	IS:3025(Part 24):1986(RA:2014) 200 Max. 400 Max. 15.2
u.	Sulphide (as H <sub>2</sub> S) (mg/l)	IS:3025(Part 29) 0.05 Max. No Relaxation BLQ (LOQ : 0.05)

28-11-2019  
Rashmi Sharma  
[Authorized Signatory]

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
PremKumar  
[Authorized Signatory]

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
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Issued To  GVK Power (Goindwal Sahib) Ltd. Goindwal Sahib-Kapurthala Road, VPO Goindwal Sahib, Tehsil: Khadur Sahib, Tarn Taran		Sample Reg. No. :E01-1911220672 Sample Reg. Date :22-11-2019 Report Date :28-11-2019 Report No. :ICE-1911281252 NABL ULR No. :TC592619000016170P Customer Ref. No.:- Letter Dated :-		
v.	Total Alkalinity(as CaCO <sub>3</sub> )(mg/l)	IS:3025(Part 23)	200 Max.	600 Max.
w.	Total Hardness(as CaCO <sub>3</sub> ),(mg/l)	IS 3025 (Part 21)	200 Max.	600 Max.
x.	Zinc(as Zn)(mg/l)	IS:3025(P-65)	5 Max.	15 Max.
<b>3. Parameters Concerning Toxic Substances</b>				
a.	Cadmium(as Cd)(mg/l)	IS:3025(P-65)	0.003 Max.	No Relaxation
b.	Cyanide(as CN)(mg/l)	IS:3025(Part 27)	0.05 Max.	No Relaxation
c.	Lead(as Pb)(mg/l)	IS:3025(P-65)	0.01 Max.	No Relaxation
d.	Mercury(as Hg)(mg/l)	IS:3025(P-65)	0.001 Max.	No Relaxation
e.	Molybdenum(as Mo)(mg/l)	IS:3025(P-65)	0.07 Max.	No Relaxation
f.	Nickel(as Ni) (mg/l)	IS:3025(P-65)	0.02 Max.	No Relaxation
g.	Total Arsenic(as As)(mg/l)	IS:3025(P-65)	0.01 Max.	No relaxation
h.	Total Chromium(as Cr)(mg/l)	IS:3025(P-65)	0.05 Max.	No Relaxation
i.	Polychlorinated biphenyls(as PCB) (mg/l)	APHA 6630/IT/AC/08-02	0.0005 Max.	No relaxation
j.	Polynuclear aromatic hydrocarbons(as PAH) (mg/l)	APHA 6440/it/AC/08-02	0.0001 max	No relaxation
<b>4. Microbiological Tests</b>				
a.	E.Coli/100 ml	IS:15185(Membrane Filtration Method)	Absent	-
b.	Total Coliform Count/100 ml	IS:15185(Membrane Filtration Method)	Absent	-
<b>5. Pesticide Residue</b>				
a.	Alachlor(µg/l)	In House	20 Max.	No Relaxation
b.	DDT(o,p and p,p-isomers of DDT,DDE and DDD),(µg/l)	In House	1 Max.	No Relaxation
c.	Atrazine(µg/l)	In House	2 Max.	No Relaxation
d.	Aldrin & Dialdrin,(µg/l)	In House	0.03 Max.	No Relaxation
e.	Alpha HCH,(µg/l)	In House	0.01 Max	No Relaxation
f.	Beta,HCH,(µg/l)	In House	0.04 Max.	No Relaxation
g.	Butachlor(µg/l)	In House	125 Max.	No Relaxation
h.	Chlorpyriphos(µg/l)	In House	30 Max.	No Relaxation
i.	Delta HCH,(µg/l)	In House	0.04 Max.	No Relaxation

28-11-2019  
Rashmi Sharma  
(Authorized Signatory)

Saurabh Sharma  
28-11-2019  
Reviewer

28-11-2019  
Prem Kumar  
(Authorized Signatory)

# Interstellar Testing Centre Pvt. Ltd.

## Test Report

Document QF : 2501  
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<b>Issued To</b>	<b>Sample Reg. No.</b> :E01-1911220672 <b>Sample Reg. Date</b> :22-11-2019 <b>Report Date</b> :28-11-2019 <b>Report No.</b> :ICE-1911281252 <b>NABL ULR No.</b> :TC592619000016170P <b>Customer Ref. No.:-</b> <b>Letter Dated</b> :-
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j.	2,4-Dichlorophenoxyacetic acid ( $\mu\text{g/l}$ )	In House	30 Max.	No Relaxation	BLQ(LOQ:0.01)
k.	Isoproturon( $\mu\text{g/l}$ )	In House	9 Max.	No Relaxation	BLQ(LOQ:0.01)
l.	Malathion( $\mu\text{g/l}$ )	In House	190 max.	No Relaxation	BLQ(LOQ:0.01)
m.	Ethion( $\mu\text{g/l}$ )	In House	3 Max.	No Relaxation	BLQ(LOQ:0.01)
n.	Monocrotophos( $\mu\text{g/l}$ )	In House	1 Max.	No Relaxation	BLQ(LOQ:0.01)
o.	Phorate( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ(LOQ:0.01)
p.	Endosulfan(alpha,beta and sulphate)( $\mu\text{g/l}$ )	In House	0.4 Max.	No Relaxation	BLQ(LOQ:0.01)
q.	Gamma-HCH(Lindane)( $\mu\text{g/l}$ )	In House	2 Max.	No Relaxation	BLQ(LOQ:0.01)
r.	Methyl Parathion,( $\mu\text{g/l}$ )	USEPA 3510 C & 8270 C	0.3 Max.	No Relaxation	BLQ(LOQ:0.01)
<b>6. TriHalomethanes(<math>\text{mg/l}</math>)</b>					
a.	Bromoform( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No relaxation	BLQ(LOQ:0.1)
b.	Dibromochloromethane( $\text{mg/l}$ ) *	APHA-6232	0.1 Max.	No Relaxation	BLQ(LOQ:0.1)
c.	Bromodichloromethane( $\text{mg/l}$ ) *	APHA-6232	0.06 max.	No Relaxation	BLQ(LOQ:0.05)
d.	Chloroform( $\text{mg/l}$ ) *	APHA-6232	0.2 max	No Relaxation	BLQ(LOQ:0.1)

\* 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,

PART D : REMARKS :N/A

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

***(Dec,2019 to Dec,2019)***

<b>Environmental Status Report</b>							
<b>Ambient Air Quality Location wise</b>							
<b>Location 1 - Near Railway Over Bridge (ROB)</b>							
Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	
1	Dec-19	02.12.2018	46	71	16	22	
2		05.12.2018	45	77	13	20	
3		09.12.2018	49	69	12	24	
4		12.12.2018	38	76	13	20	
5		16.12.2018	45	73	12	26	
6		19.12.2018	40	69	15	24	
7		23.12.2018	43	64	12	16	
8		26.12.2018	40	76	13	16	
<b>Minimum</b>			<b>38</b>	<b>64</b>	<b>12</b>	<b>16</b>	
<b>Maximum</b>			<b>49</b>	<b>77</b>	<b>16</b>	<b>26</b>	
<b>Mean</b>			<b>43.25</b>	<b>71.88</b>	<b>13.25</b>	<b>21.00</b>	
<b>Standard Deviation</b>			<b>3.7</b>	<b>4.5</b>	<b>1.5</b>	<b>3.7</b>	
<b>98 Percentile</b>			<b>48.58</b>	<b>76.86</b>	<b>15.86</b>	<b>25.72</b>	
<b>Location 2 - PLL Colony</b>							
Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	
1	Dec-19	02.12.2018	44	75	11	14	
2		05.12.2018	41	74	14	19	
3		09.12.2018	41	61	11	24	
4		12.12.2018	43	72	12	18	
5		16.12.2018	39	67	15	24	
6		19.12.2018	41	76	13	17	
7		23.12.2018	44	68	11	16	
8		26.12.2018	43	76	10	16	
<b>Minimum</b>			<b>39</b>	<b>61</b>	<b>10</b>	<b>14</b>	
<b>Maximum</b>			<b>44</b>	<b>76</b>	<b>15</b>	<b>24</b>	
<b>Mean</b>			<b>42.00</b>	<b>71.13</b>	<b>12.13</b>	<b>18.50</b>	
<b>Standard Deviation</b>			<b>1.8</b>	<b>5.4</b>	<b>1.7</b>	<b>3.7</b>	
<b>98 Percentile</b>			<b>44</b>	<b>76</b>	<b>14.86</b>	<b>24</b>	

**Location 3 - DM Plant**

Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	
1	Dec-19	02.12.2018	40	61	12	23	
2		05.12.2018	40	65	20	25	
3		09.12.2018	45	63	13	20	
4		12.12.2018	43	74	13	22	
5		16.12.2018	48	57	13	18	
6		19.12.2018	34	82	13	23	
7		23.12.2018	43	64	12	24	
8		26.12.2018	44	60	13	22	
<b>Minimum</b>			<b>34</b>	<b>57</b>	<b>12</b>	<b>18</b>	
<b>Maximum</b>			<b>48</b>	<b>82</b>	<b>20</b>	<b>25</b>	
<b>Mean</b>			<b>42.13</b>	<b>65.75</b>	<b>13.63</b>	<b>22.13</b>	
<b>Standard Deviation</b>			<b>4.2</b>	<b>8.2</b>	<b>2.6</b>	<b>2.2</b>	
<b>98 Percentile</b>			<b>47.58</b>	<b>80.88</b>	<b>19.02</b>	<b>24.86</b>	

**Location 4 - Residential Colony**

Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	
1	Dec-19	02.12.2018	34	64	13	19	
2		05.12.2018	42	80	13	19	
3		09.12.2018	45	78	15	20	
4		12.12.2018	42	71	8	14	
5		16.12.2018	40	65	15	24	
6		19.12.2018	38	79	12	17	
7		23.12.2018	43	59	13	18	
8		26.12.2018	43	71	14	23	
<b>Minimum</b>			<b>34</b>	<b>59</b>	<b>8</b>	<b>14</b>	
<b>Maximum</b>			<b>45</b>	<b>80</b>	<b>15</b>	<b>24</b>	
<b>Mean</b>			<b>40.88</b>	<b>70.88</b>	<b>12.88</b>	<b>19.25</b>	
<b>Standard Deviation</b>			<b>3.5</b>	<b>7.8</b>	<b>2.2</b>	<b>3.2</b>	
<b>98 Percentile</b>			<b>44.72</b>	<b>79.86</b>	<b>15</b>	<b>23.86</b>	

**Location 5 – Village Goindwal sahib**

Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	
1	Dec-19	04.12.2019	32	65	9	13	
2		07.12.2019	34	67	5	9	
3		11.12.2019	30	62	11	15	
4		14.12.2019	35	60	13	17	
5		18.12.2019	38	68	10	14	
6		21.12.2019	33	65	12	16	
7		25.12.2019	31	66	9	15	
8		28.12.2019	35	61	7	14	
<b>Minimum</b>			<b>30</b>	<b>60</b>	<b>5</b>	<b>9</b>	
<b>Maximum</b>			<b>38</b>	<b>68</b>	<b>13</b>	<b>17</b>	
<b>Mean</b>			<b>33.5</b>	<b>64.25</b>	<b>9.5</b>	<b>14.125</b>	
<b>Standard Deviation</b>			<b>2.56348</b>	<b>2.915476</b>	<b>2.618615</b>	<b>2.416461</b>	
<b>98 Percentile</b>			<b>37.58</b>	<b>67.86</b>	<b>12.86</b>	<b>16.86</b>	

**Location 6 – Village Hansawala**

Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	
1	Dec-19	04.12.2019	35	69	11	16	
2		07.12.2019	38	65	9	15	
3		11.12.2019	42	62	12	18	
4		14.12.2019	36	64	10	15	
5		18.12.2019	33	67	8	14	
6		21.12.2019	31	70	7	13	
7		25.12.2019	35	62	13	20	
8		28.12.2019	39	61	12	18	
<b>Minimum</b>			<b>31</b>	<b>61</b>	<b>7</b>	<b>13</b>	
<b>Maximum</b>			<b>42</b>	<b>70</b>	<b>13</b>	<b>20</b>	
<b>Mean</b>			<b>36.125</b>	<b>65</b>	<b>10.25</b>	<b>16.125</b>	
<b>Standard Deviation</b>			<b>3.482097</b>	<b>3.380617</b>	<b>2.12132</b>	<b>2.356602</b>	
<b>98 Percentile</b>			<b>41.58</b>	<b>69.86</b>	<b>12.86</b>	<b>19.72</b>	

### Location 3 – Village Vairoval

Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	
1	Dec-19	04.12.2019	32	65	7	13	
2		07.12.2019	35	62	12	19	
3		11.12.2019	38	68	11	16	
4		14.12.2019	33	60	9	15	
5		18.12.2019	34	64	13	20	
6		21.12.2019	40	67	10	17	
7		25.12.2019	35	69	8	15	
8		28.12.2019	31	66	7	14	
<b>Minimum</b>			<b>31</b>	<b>60</b>	<b>7</b>	<b>13</b>	
<b>Maximum</b>			<b>40</b>	<b>69</b>	<b>13</b>	<b>20</b>	
<b>Mean</b>			<b>34.75</b>	<b>65.125</b>	<b>9.625</b>	<b>16.125</b>	
<b>Standard Deviation</b>			<b>3.011881</b>	<b>3.044316</b>	<b>2.263846</b>	<b>2.416461</b>	
<b>98 Percentile</b>			<b>39.72</b>	<b>68.86</b>	<b>12.86</b>	<b>19.86</b>	

### Location 4 - Residential Colony

Sr. No.	Month	Date of Monitoring	PM-2.5 ( $\mu\text{g}/\text{m}^3$ )	PM-10 ( $\mu\text{g}/\text{m}^3$ )	SO2 ( $\mu\text{g}/\text{m}^3$ )	NOX ( $\mu\text{g}/\text{m}^3$ )	
1	Dec-19	04.12.2019	30	68	7	14	
2		07.12.2019	30	69	7	10	
3		11.12.2019	30	63	9	13	
4		14.12.2019	28	66	6	10	
5		18.12.2019	29	69	6	8	
6		21.12.2019	31	66	7	11	
7		25.12.2019	28	67	8	13	
8		28.12.2019	32	65	6	14	
<b>Minimum</b>			<b>28</b>	<b>63</b>	<b>6</b>	<b>8</b>	
<b>Maximum</b>			<b>32</b>	<b>69</b>	<b>9</b>	<b>14</b>	
<b>Mean</b>			<b>29.75</b>	<b>66.625</b>	<b>7</b>	<b>11.625</b>	
<b>Standard Deviation</b>			<b>1.38873</b>	<b>2.065879</b>	<b>1.069045</b>	<b>2.199838</b>	
<b>98 Percentile</b>			<b>31.86</b>	<b>69</b>	<b>8.86</b>	<b>14</b>	

## Stack monitoring

DATED 27.12.2019

UNIT	DATE	PARAMETER	RESULT	Units
1	27.12.2019	SPM	41	mg/Nm <sup>3</sup>
2	*	*	*	*

**\*UNIT-2 WAS NOT OPERATIONAL DURING WHOLE MONTH DUE TO LESS POWER DEMAND**

## Noise monitoring report

DATED 27.12.2019

Sr. No.	Location	*Standards Leq dB (A)		Results Leq dB (A)					
		Day	Night	Day (06:00hrs to 22:00hrs)			Night (22:00hrs to 06:00hrs)		
		L <sub>Day</sub>	L <sub>max</sub>	L <sub>min</sub>			L <sub>Night</sub>	L <sub>max</sub>	L <sub>min</sub>
1.	<b>Near Service Building</b>	85.0 Max	85.0 Max	71.1	73.2	68.7	68.3	70.2	65.2
2.	<b>CHP Area</b>	85.0 Max	85.0 Max	74.4	77.8	70.2	69.0	70.3	66.2
3.	<b>AHP Area</b>	85.0 Max	85.0 Max	78.2	80.2	75.2	74.8	77.2	70.2
4.	<b>Near Plant Site Office</b>	85.0 Max	85.0 Max	62.4	64.2	60.2	55.9	58.4	53.2
5.	<b>Near Boiler Area (Main Plant Area)</b>	85.0 Max	85.0 Max	80.2	82.4	77.2	78.9	82.3	76.2
6.	<b>Residential Colony</b>	**55.0 Max	**45.0 Max	52.2	54.1	50.2	42.6	45.9	40.2
7.	<b>Near Admin Building (Plant Main Gate)</b>	85.0 Max	85.0 Max	62.3	65.2	60.2	58.3	60.3	55.7
8.	<b>Near DM Plant</b>	85.0 Max	85.0 Max	68.9	70.5	61.2	62.1	64.0	60.2

## ETP OUTLET MONITORING REPORT

**DATED: 19-12-2019**

<b>S.No.</b>	<b>Test Parameter</b>	<b>Requirement</b>	<b>Result</b>
1	pH Value	5.5-9	7.93
2	Total Suspended Solids,(mg/L)	Max. 100	8.9
3	Chemical Oxygen Demand(mg/l)	Max. 250	17
4	Bio-chemical Oxygen Demand(mg/l)	Max. 30	7

## STP COLONY OUTLET MONITORING REPORT

**DATED: 19-12-2019**

<b>S.No.</b>	<b>Test Parameter</b>	<b>Requirement</b>	<b>Result</b>
1	pH Value	5.5-9	7.56
2	Total Suspended Solids,(mg/l)	Max. 100	4.5
3	Chemical Oxygen Demand,(mg/l)	Max. 250	15
4	Bio-chemical Oxygen Demand,(mg/l)	Max. 30	6

**(Jan,2020 to Jan,2020)**



# Envirochem Testing Lab & Research Centre

Govt. Approved Lab

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## TEST REPORT

Report No.	ETL/ PNP/2088	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:	2088

### SAMPLE PARTICULARS

1	Type of sample	:	AMBIENT NOISE - DAY & NIGHT TIME
2	Date of sample measurement	:	31.01.2020
3	Purpose of analysis	:	Self Monitoring purpose
4	Sample collected/ supplied by	:	By Lab Representative

### TEST RESULTS

Sr. No.	Point of Measurement	Day Time Noise Level (dB) 6:00 AM -10:00PM)			Night Time Noise Level (dB) ( 10:00 PM – 6.00AM )			Limit (dB)	Limit (dB)
		Avg.	Max	Min	Avg.	Max.	Min		
1	Near Service building	70.9	73.8	67.2	68.3	70.5	66.1	85	85
2	CHP Area	72.3	75.6	70.1	69.9	70.9	68.8	85	85
3	AHP Area	71.3	73.5	68.1	68.2	70.5	66.1	85	85
4	Nar Plant Site Office	63.1	64.7	60.8	52.7	53.6	51.1	85	85
5	Near Boiler Area	76.3	78.5	75.1	72.3	75.6	69.1	85	85
6	Residential Colony	52.8	54.1	48.3	41.2	42.7	38.1	55	45
7	Near Admin Building	64.3	66.5	62.1	56.4	60.9	54.1	85	85
8	Near DM Plant	68.6	70.1	66.1	62.3	66.6	60.1	85	85
9.	Near Railway over bridge	50.5	51.2	48.2	48.7	50.3	47.2	85	85

Remarks: Limits on Sr no. 1-7 & 9 as per Factory Act-1948 and On Sr no 8 as per EPA-1986.

*Rajender Kumar*  
Manager Lab./ Sr. Chemist

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

(Dr. Rajender Kumar)

MD



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

#### NOTE

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TC-6015

# Envirochem Testing Lab & Research Centre

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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

### 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 <sup>3</sup> /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) 1986
2.	Oxides of Nitrogen (NO <sub>x</sub> ), (gm/Kwh)	1.09	-	IS 11255 (Part 7) 2005
3.	Carbon Monoxide (CO), (gm/Kwh)	0.48	3.5	ETL/SOP/S - 06
4.	Hydrocarbons (CH <sub>4</sub> ), (gm/K Wh)	0.12	-	IS: 13270 1992
5.	Total Hydrocarbons + NO <sub>x</sub>	1.21	4.0	-

Remarks: Analysed Parameters meet the Standards Limits.

\*\*\*\*\*End Report\*\*\*\*\*

*(Signature)*  
Manager Lab./ Sr. Chemist

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NOT FOR CONSENT PURPOSES.

(Dr. Rajender Kumar)  
MD

Date: Rajesh  
Panjab - 2-20

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

#### NOTE

1. Samples shall be disposed off after 2-3 days of issue of test report unless specified.
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## TEST REPORT

Report No	ETL/ PNP/2085	Report Date	07.02.2020	Doc No.	ETL/QF/7.8/01
Issue to:	Party's Ref No: Nil				
M/s GVK Power (Goindwal Sahib) Ltd. Kapurihala Road, Goindwal Sahib, Distt. Tarn Taran - 143422	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 <sup>3</sup> /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) 1985
2.	Oxides of Nitrogen (NO <sub>2</sub> ), (gm/Kwh)	1.11	-	IS 11255 (Part 7) 2015
3.	Carbon Monoxide (CO), (gm/Kwh)	0.45	3.5	ETL/SOP/S – 06
4.	Hydrocarbons (CH <sub>4</sub> ), (gm/KWh)	0.11	-	IS: 13270 1992
5.	Total Hydrocarbons + NO <sub>x</sub>	1.22	4.0	-

Remarks: Analysed Parameters meet the Standards Limits.

\*\*\*\*\*End Report\*\*\*\*\*

*Rajender Kumar*  
Manager Lab./ Sr. Chemist

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NOT FOR CONSENT PURPOSES

(Dr. Rajender Kumar)  
MD  
*Rajender Kumar*  
Panipat - 2-2020

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

#### NOTE

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## 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. Tarn 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) 1983
2.	Odour	Foul	Odourless	--	-	-	IS 3025 (P-5) 1983
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) 1991

*(Signature)*  
Manager Lab./ Sr. Chemist

(Dr. Rajender Kumar)  
MD

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

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## 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

### 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) : 2001
9.	Total Chromium as Cr, mg/L	ND ( DL-0.01 )	Not Specified	IS 3025 (P-52) : 2001
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.

*QW*  
Manager Lab./ Sr. Chemist

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NOT FOR CONSENT PURPOSES.

(Dr. Rajender Kumar)  
MD  
Date: 02/02/2020  
Panipat - 134102

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

#### NOTE

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**(Feb,2020 to Feb,2020)**



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## TEST REPORT

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Report No	ETL/ PNP/2153	Report Date	09.03.2020	Doc No.	ETL/QF/7.8/01
Issue to:		Party's Ref No:	Nil		
M/s GVK Power (Goindwal Sahib) Ltd. Kapurthala Road, Goindwal Sahib, Distt. Tarn Taran - 143422		Work Order No:	2153		
		Period of Testing:	02.03.2020 – 09.03.2020		

### SAMPLE PARTICULARS

1	Type of sample	:	GROUND WATER
2	Point of Sample Collection	:	Piezometer ( PLL Colony)
3	Date of sample collection/ received	:	29.02.2020
4	Purpose of analysis	:	Monitoring purpose
5	Sample collected/ supplied by	:	By Lab Representative
6	Sample Quantity	:	15 litre + 250 ml for Microbiology
7	Method of Sampling	:	IS 3025 (P-1) 1987

### TEST RESULTS

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>A. Organoleptic and Physical Parameter</b>					
1.	Colour, Hazen units	ND (DL-5)	5	15	IS 3025 (P-4) : 1983
2.	Odour	Unobjectionable	Agreeable	Agreeable	IS 3025 (P-5) : 1983
3.	Turbidity, NTU	ND (DL-1)	1	5	IS 3025 (P-10) : 1984
4.	pH	7.71	6.5 – 8.5	No Relaxation	IS 3025 (P-11) : 1995
5.	Total Dissolved Solids, mg/l	546	500	2000	IS 3025 (P-16) : 2002
6.	Taste	Agreeable	Agreeable	Agreeable	IS 3025 (P-7&8) : 2012
<b>B. General Parameters Concerning Substances Undesirable in Excessive Amount</b>					
7	Aluminium (as Al), mg/L	ND (DL-0.03)	0.03	0.2	IS 3025(P-53)
8	Ammonical Nitrogen (as NH <sub>3</sub> -N), mg/L	ND ( DL-0.05)	0.5	No relaxation	IS 3025 (P-34) : 1985
9	Anionic Detergents (as MBAS),mg/L	ND( DL-0.01)	0.02	1.0	IS 13428
10	Barium (as Ba), mg/L	ND ( DL-0.05)	0.7	No Relaxation	IS 13428
11	Boron (as B), mg/l	ND ( DL-0.1)	0.5	1.0	IS 3025 (P-57) : 2003
12	Calcium Hardness (as Ca), mg/L	50.10	75	200	IS 3025 (P-40) : 1998
13	Chloramines (as Cl <sub>2</sub> ), mg/L	ND( DL-0.01)	4.0	No Relaxation	IS 3025(P-26)
14	Chloride (as Cl) mg/l	14.88	250	1000	IS 3025 (P-32) : 1993
15	Copper (as Cu), mg/l	ND ( DL-0.01)	0.05	1.50	IS 3025 (P-42) : 1992
16	Fluoride (as F), mg/l	ND ( DL-0.1)	1.0	1.5	APHA Method
17	Residual Free Chlorine, mg/l	ND ( DL-0.1)	0.2	1	IS 3025 (P-26) : 1986
18	Iron (as Fe), mg/l	ND ( DL-0.05)	0.3	No Relaxation.	IS 3025 (P-53) : 2003

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## TEST REPORT

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19	Magnesium Hardness (as Mg), mg/l	40.24	30	100	IS 3025 (P-46) : 1994
20	Manganese (as Mn), mg/l	ND (DL-0.01)	0.1	0.3	APHA Method
21	Mineral Oil, mg/L	ND (DL-0.1)	0.5	No Relaxation	IS 3025 (P-39)
22	Nitrate (as NO <sub>3</sub> ), mg/l	ND (DL-0.1)	45	No relaxation	IS 3025 (P-34) : 1988
23	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	ND (DL-0.001)	0.001	0.002	IS 3025 (P-43) : 1992
24	Selenium (as Se), mg/L	ND (DL-0.01)	0.01	No Relaxation	IS 3025 (P-55)
25	Silver (as Ag), mg/L	ND (DL-0.01)	0.1	No Relaxation	IS 13428
26	Sulphate (as SO <sub>4</sub> ), mg/l	23.17	200	400	IS 3025 (P-24) : 1986
27	Sulphides (as H <sub>2</sub> S), mg/L	ND (DL-0.05)	0.05	No Relaxation	IS 3025(P-29)
28	Total Alkalinity (as CaCO <sub>3</sub> ), mg/l	385.53	200	600	IS 3025 (P-23) : 1998
29	Total Hardness (as CaCO <sub>3</sub> ), mg/l	286.8	200	600	IS 3025 (P-21) : 2009
30	Zinc (as Zn), mg/l	ND (DL-0.01)	5.0	15.0	IS 3025 (P-49) : 1994
<b>C. Parameter Concerning Toxic Substances</b>					
31	Cadmium (as Cd), mg/l	ND (DL-0.003)	0.003	No relaxation	IS 3025 (P-41) : 1998
32	Lead (as Pb), mg/l	ND (DL-0.01)	0.01	No relaxation	IS 3025 (P-47) : 1994
33	Cyanide (as CN), mg/l	ND (DL-0.02)	Max 0.05	No relaxation	IS 3025 (Part 27)
34	Mercury (as Hg), mg/L	ND (DL-0.001)	0.001	No Relaxation	IS 3025 (P-48)
35	Molybdenum (Mo), mg/L	ND (DL-0.01)	0.07	No Relaxation	IS 3025 (P-2)
36	Nickel (as Ni), mg/l	ND (DL-0.01)	0.02	No relaxation	IS 3025 (P-54) : 2013
37	Polychlorinated Biphenyls, mg/L	ND (DL-0.0001)	0.0005	No Relaxation	APHA method
38	Polynuclear Aromatic Hydrocarbons (as PAH), mg/L	ND (DL-0.0001)	0.0001	No Relaxation	APHA method
39	Total Chromium (as Cr), mg/l	ND (DL-0.05)	0.05	No relaxation	IS 3025 (P-52) : 2003
40	Hexavalent Chromium (as Cr <sup>6+</sup> ), mg/l	ND (DL-0.01)	-	-	IS 3025 (P-52) : 2003
41	Bromoform, mg/L	ND (DL-0.01)	0.1	--	APHA Method
42	Dibromoiodomethane, mg/L	ND (DL-0.01)	0.1	--	APHA Method
43	Bromoethchloromethane, mg/L	ND (DL-0.01)	0.06	--	APHA Method
44	Chloroform, mg/L	ND (DL-0.05)	0.2	--	APHA Method
45	Arsenic mg/L	ND(DL-0.01)	0.01	0.01	IS 3025 (P-37)
<b>D. Pesticide Residue Limits and Test Method</b>					
46	Alachor, µg/L	ND (DL-0.01)	20	--	US EPA Method
47	Atrazine, µg/L	ND (DL-0.01)	2	--	US EPA Method
48	Aldrin, µg/L	ND (DL-0.01)	0.03	--	US EPA Method
49	Dieldrin, µg/L	ND (DL-0.01)	0.03	--	US EPA Method
50	Delta HCH, µg/L	ND (DL-0.01)	0.04	--	US EPA Method
51	Butachlor, µg/L	ND (DL-0.01)	125	--	US EPA Method

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

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TC-6015

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## TEST REPORT

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52.	Chlorpyrifos, µg/L	ND (DL-0.01)	30	--	US EPA Method
53.	2, 4 – Dichlorophenoxy Acetic Acid, µg/L	ND (DL-0.01)	30	--	US EPA Method
54.	2, 4 DDT, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
55.	4,4 DDT, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
56.	2,4 DDD, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
57.	4,4 DDD, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
58.	2,4 DDE, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
59.	4,4 DDE, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
60.	Endosulfan, µg/L	ND (DL-0.01)	0.4	--	US EPA Method
61.	Endosulfan – I, µg/L	ND (DL-0.01)	0.4	--	US EPA Method
62.	Endosulfan – II, µg/L	ND (DL-0.01)	0.4	--	US EPA Method
63.	Ethion, µg/L	ND (DL-0.01)	3.0	--	US EPA Method
64.	Isopturon, µg/L	ND (DL-0.01)	9.0	--	US EPA Method
65.	Malathion, µg/L	ND (DL-0.01)	190	--	US EPA Method
66.	Methyl Parathion, µg/L	ND (DL-0.01)	0.3	--	US EPA Method
67.	Monocrotophos, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
68.	Phorate, µg/L	ND (DL-0.01)	2.0	--	US EPA Method
69.	Gamma HCH (Lindane), µg/L	ND (DL-0.01)	2.0	--	US EPA Method

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>E. Bacteriological Quality of Drinking Water</b>					
1.	Coliform Organisms, MPN/100 mL	ND(DL-1)	ND		IS 1622: 1981
2.	E. Coli (per 100 mL)	Absent	Absent		IS 1622: 1981

Remarks:

1. Limit: N.D. is &lt; 1 MPN / 100 mL

2. N.D.: Not Detectable

3. DL= Detection Limit

Page 3 of 3

Manager Lab./ Sr. Chemist

*Rajesh*  
Authority Signatory  
Date: QM/TB/2020  
Panipat

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## TEST REPORT

Page 1 of 3

Report No.	ETL/ PNP/2154	Report Date	09.03.2020	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:	2154

Period of Testing: 02.03.2020 – 09.03.2020

### SAMPLE PARTICULARS

1	Type of sample	:	GROUND WATER
2	Point of Sample Collection	:	Piezometer ( Near Fire Station)
3	Date of sample collection/ received	:	29.02.2020
4	Purpose of analysis	:	Monitoring purpose
5	Sample collected/ supplied by	:	By Lab Representative
6	Sample Quantity	:	15 litre + 250 ml for Microbiology
7	Method of Sampling	:	IS 3025 (P-1) 1987

### TEST RESULTS

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>A. Organoleptic and Physical Parameter</b>					
1.	Colour, Hazen units	ND ( DL-5 )	5	15	IS 3025 (P-4) : 1983
2.	Odour	Unobjectionable	Agreeable	Agreeable	IS 3025 (P-5) : 1983
3.	Turbidity, NTU	ND ( DL-1 )	1	5	IS 3025 (P-10) : 1984
4.	pH	7.43	6.5 – 8.5	No Relaxation	IS 3025 (P-11) : 1996
5.	Total Dissolved Solids, mg/l	512	500	2000	IS 3025 (P-16) : 2002
6.	Taste	Agreeable	Agreeable	Agreeable	IS 3025 (P-7&8) : 2012
<b>B. General Parameters Concerning Substances Undesirable in Excessive Amount</b>					
7	Aluminium (as Al), mg/L	ND( DL-0.03 )	0.03	0.2	IS 3025(P-55)
8	Ammonical Nitrogen (as NH <sub>3</sub> -N), mg/L	ND ( DL-0.05 )	0.5	No relaxation	IS 3025 (P-34) : 1988
9	Anionic Detergents (as MBAS),mg/L	ND( DL-0.01 )	0.02	1.0	IS 13428
10	Barium (as Ba), mg/L	ND ( DL-0.05 )	0.7	No Relaxation	IS 13428
11	Boron (as B), mg/l	ND ( DL-0.1 )	0.5	1.0	IS 3025 (P-57) : 2005
12	Calcium Hardness (as Ca), mg/l	72.7	75	200	IS 3025 (P-40) : 1998
13	Chloramines (as Cl <sub>2</sub> ), mg/L	ND( DL-0.01 )	4.0	No Relaxation	IS 3025(P-26)
14	Chloride (as Cl) mg/l	9.92	250	1000	IS 3025 (P-32) : 1993
15	Copper (as Cu), mg/l	ND ( DL-0.01 )	0.05	1.50	IS 3025 (P-42) : 1992
16	Fluoride (as F), mg/l	ND ( DL-0.1 )	1.0	1.5	APHA Method
17	Residual Free Chlorine, mg/l	ND ( DL-0.1 )	0.2	1	IS 3025 (P-26) : 1986
18	Iron (as Fe), mg/l	ND ( DL-0.05 )	0.3	No Relaxation	IS 3025 (P-53) : 2003

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## TEST REPORT

Page 2 of 3

19	Magnesium Hardness (as Mg), mg/l	17.60	30	100	IS 3025 (P-46) : 1994
20	Manganese (as Mn), mg/l	ND (DL-0.01)	0.1	0.3	APHA Method
21	Mineral Oil, mg/L	ND (DL-0.1)	0.5	No Relaxation	IS 3025 (P-39)
22	Nitrate (as NO <sub>3</sub> ), mg/l	ND (DL-0.1)	45	No relaxation	IS 3025 (P-34) : 1988
23	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	ND (DL-0.001)	0.001	0.002	IS 3025 (P-43) : 1992
24	Selenium (as Se), mg/L	ND (DL-0.01)	0.01	No Relaxation	IS 3025 (P-56)
25	Silver (as Ag), mg/L	ND (DL-0.01)	0.1	No Relaxation	IS 13428
26	Sulphate (as SO <sub>4</sub> ), mg/l	3.08	200	400	IS 3025 (P-24) : 1986
27	Sulphides (as H <sub>2</sub> S), mg/L	ND (DL-0.05)	0.05	No Relaxation	IS 3025 (P-29)
28	Total Alkalinity (as CaCO <sub>3</sub> ), mg/l	361.44	200	600	IS 3025 (P-23) : 1998
29	Total Hardness (as CaCO <sub>3</sub> ), mg/l	252.52	200	600	IS 3025 (P-21) : 2009
30	Zinc (as Zn), mg/l	ND (DL-0.01)	5.0	15.0	IS 3025 (P-49) : 1994

C. Parameter Concerning Toxic Substances					
31	Cadmium (as Cd), mg/l	ND (DL-0.003)	0.003	No relaxation	IS 3025 (P-41) : 1998
32	Lead (as Pb), mg/l	ND (DL-0.01)	0.01	No relaxation	IS 3025 (P-47) : 1994
33	Cyanide (as CN), mg/l	ND (DL-0.02)	Max 0.05	No relaxation	IS 3025 (Part 2)
34	Mercury (as Hg), mg/L	ND (DL-0.001)	0.001	No Relaxation	IS 3025 (P-48)
35	Molybdenum (Mo), mg/L	ND (DL-0.01)	0.07	No Relaxation	IS 3025 (P-2)
36	Nickel (as Ni), mg/l	ND (DL-0.01)	0.02	No relaxation	IS 3025 (P-54) : 2003
37	Polychlorinated Biphenyls, mg/L	ND (DL-0.0001)	0.0005	No Relaxation	APHA method
38	Polynuclear Aromatic Hydrocarbons (as PAH), mg/L	ND (DL-0.0001)	0.0001	No Relaxation	APHA method
39	Total Chromium (as Cr), mg/l	ND (DL-0.05)	0.05	No relaxation	IS 3025 (P-52) : 2003
40	Hexavalent Chromium (as Cr <sup>VI</sup> ), mg/l	ND (DL-0.01)	--	--	IS 3025 (P-52) : 2003
41	Bromoform, mg/L	ND (DL-0.01)	0.1	--	APHA Method
42	Dibromochloromethane, mg/L	ND (DL-0.01)	0.1	--	APHA Method
43	Bromochloromethane, mg/L	ND (DL-0.01)	0.06	--	APHA Method
44	Chloroform, mg/L	ND (DL-0.05)	0.2	--	APHA Method
45	Arsenic mg/L	ND (DL-0.01)	0.01	0.01	IS 3025 (P-37)

D. Pesticide Residue Limits and Test Method					
47	Alachlor, µg/L	ND (DL-0.01)	20	--	US EPA Method
48	Atrazine, µg/L	ND (DL-0.01)	2	--	US EPA Method
48	Aldrin, µg/L	ND (DL-0.01)	0.03	--	US EPA Method
49	Dieldrin, µg/L	ND (DL-0.01)	0.03	--	US EPA Method
50	Delta HCH, µg/L	ND (DL-0.01)	0.04	--	US EPA Method
51	Butachlor, µg/L	ND (DL-0.01)	125	--	US EPA Method

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## TEST REPORT

Page 3 of 3

52	Chlorpyrifos, µg/L	ND (DL-0.01)	30	--	US EPA Method
53	2, 4 - Dichlorophenoxy Acetic Acid, µg/L	ND (DL-0.01)	30	--	US EPA Method
54	2, 4 DDT, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
55	4,4 DDT, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
56	2,4 DDD, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
57	4,4 DDD, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
58	2,4 DDE, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
59	4,4 DDE, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
60	Endosulfan, µg/L	ND (DL-0.01)	0.4	--	US EPA Method
61	Endosulfan - I, µg/L	ND (DL-0.01)	0.4	--	US EPA Method
62	Endosulfan - II, µg/L	ND (DL-0.01)	0.4	--	US EPA Method
63	Ethion, µg/L	ND (DL-0.01)	3.0	--	US EPA Method
64	Isoproturon, µg/L	ND (DL-0.01)	9.0	--	US EPA Method
65	Malathion, µg/L	ND (DL-0.01)	190	--	US EPA Method
66	Methyl Parathion, µg/L	ND (DL-0.01)	0.3	--	US EPA Method
67	Monocrotophos, µg/L	ND (DL-0.01)	1.0	--	US EPA Method
68	Phorate, µg/L	ND (DL-0.01)	2.0	--	US EPA Method
69	Gamma HCH (Lindane), µg/L	ND (DL-0.01)	2.0	--	US EPA Method

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>E. Bacteriological Quality of Drinking Water</b>					
1.	Coliform Organisms, MPN/100 mL	ND(DL-1)	ND		IS 1622: 1981
2.	E. Coli (per 100 mL)	Absent	Absent		IS 1622: 1981

Remarks: 1. Limit: N.D. is  $\leq$  1 MPN / 100 ml      2. N.D.: Not Detectable      3. DL= Detection Limit

Page 3 of 3

*Renuka*  
Manager Lab./ Sr. Chemist



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## TEST REPORT

Page 1 of 3

Report No	ETL/ PNP/2155	Report Date	09.03.2020	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: 2155  Period of Testing: 02.03.2020 – 09.03.2020			

### SAMPLE PARTICULARS

1	Type of sample	:	GROUND WATER
2	Point of Sample Collection	:	Piezometer ( Site Office)
3	Date of sample collection/ received	:	29.02.2020
4	Purpose of analysis	:	Monitoring purpose
5	Sample collected/ supplied by	:	By Lab Representative
6	Sample Quantity	:	15 litre + 250 ml for Microbiology
7	Method of Sampling	:	IS 3025 (P - 1) 1987

### TEST RESULTS

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>A. Organoleptic and Physical Parameter</b>					
1.	Colour, Hazen units	ND ( DL-5)	5	15	IS 3025 (P-4) : 1983
2.	Odour	Unobjectionable	Agreeable	Agreeable	IS 3025 (P-5) : 1983
3.	Turbidity, NTU	ND ( DL-1)	1	5	IS 3025 (P-10) : 1984
4.	pH	7.68	6.5 – 8.5	No Relaxation	IS 3025 (P-11) : 1996
5.	Total Dissolved Solids, mg/l	498	500	2000	IS 3025 (P-16) : 2002
6.	Taste	Agreeable	Agreeable	Agreeable	IS 3025 (P-7&8) : 2012
<b>B. General Parameters Concerning Substances Undesirable in Excessive Amount</b>					
7	Aluminium (as Al), mg/l	ND( DL-0.03)	0.03	0.2	IS 3025(P-55)
8	Ammonical Nitrogen (as NH <sub>3</sub> -N), mg/l	ND ( DL-0.05)	0.5	No relaxation	IS 3025 (P-34) : 1988
9	Anionic Detergents (as MBAS),mg/l	ND( DL-0.01)	0.02	1.0	IS 13428
10	Barium (as Ba), mg/L	ND ( DL-0.05)	0.7	No Relaxation	IS 13428
11	Boron (as B), mg/l	ND ( DL-0.1)	0.5	1.0	IS 3025 (P-57) : 2005
12	Calcium Hardness (as Ca), mg/l	52.52	75	200	IS 3025 (P-40) : 1998
13	Chloramines (as Cl <sub>2</sub> ), mg/L	ND(DL-0.01)	4.0	No Relaxation	IS 3025(P-26)
14	Chloride (as Cl), mg/l	14.7	250	1000	IS 3025 (P-32) : 1991
15	Copper (as Cu), mg/l	ND ( DL-0.01)	0.05	1.50	IS 3025 (P-42) : 1992
16	Fluoride (as F), mg/l	ND ( DL-0.1)	1.0	1.5	APHA Method
17	Residual Free Chlorine, mg/l	ND ( DL-0.1)	0.2	1	IS 3025 (P-26) : 1991
18	Iron (as Fe), mg/l	ND ( DL-0.05)	0.3	No Relaxation.	IS 3025 (P-53) : 2002

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Page 2 of 3

19	Magnesium Hardness (as Mg), mg/l	32.69	30	100	IS 3025 (P-46) : 1994
20	Manganese (as Mn), mg/l	ND ( DL-0.01)	0.1	0.3	APHA Method
21	Mineral Oil, mg/L	ND ( DL-0.1)	0.5	No Relaxation	IS 3025 (P-39)
22	Nitrate (as NO <sub>3</sub> ), mg/l	ND ( DL-0.1)	45	No relaxation	IS 3025 (P-34) : 1988
23	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	ND ( DL-0.001)	0.001	0.002	IS 3025 (P-43) : 1992
24	Selenium (as Se), mg/L	ND ( DL-0.01)	0.01	No Relaxation	IS 3025 (P-56)
25	Silver (as Ag), mg/L	ND ( DL-0.01)	0.1	No Relaxation	IS 13428
26	Sulphate (as SO <sub>4</sub> ), mg/l	15.1	200	400	IS 3025 (P-24) : 1986
27	Sulphides (as H <sub>2</sub> S), mg/L	ND ( DL-0.05)	0.05	No Relaxation	IS 3025(P-29)
28	Total Alkalinity (as CaCO <sub>3</sub> ), mg/l	232.52	200	600	IS 3025 (P-23) : 1998
29	Total Hardness (as CaCO <sub>3</sub> ), mg/l	262.62	200	600	IS 3025 (P-21) : 2009
30	Zinc (as Zn), mg/l	ND ( DL-0.01)	5.0	15.0	IS 3025 (P-49) : 1994
<b>C. Parameter Concerning Toxic Substances</b>					
31	Cadmium (as Cd), mg/l	ND ( DL-0.003)	0.003	No relaxation	IS 3025 (P-41) : 1998
32	Lead (as Pb), mg/l	ND ( DL-0.01)	0.01	No relaxation	IS 3025 (P-47) : 1994
33	Cyanide (as CN), mg/l,	ND ( DL-0.02)	Max 0.05	No relaxation	IS 3025 (Part 27)
34	Mercury (as Hg), mg/L	ND ( DL-0.001)	0.001	No Relaxation	IS 3025 (P-48)
35	Molybdenum (Mo), mg/L	ND ( DL-0.01)	0.07	No Relaxation	IS 3025 (P-2)
36	Nickel (as Ni), mg/l	ND ( DL-0.01)	0.02	No relaxation	IS 3025 (P-54) : 2003
37	Polychlorinated Biphenyls, mg/L	ND ( DL-0.0001)	0.0005	No Relaxation	APHA method
38	Polynuclear Aromatic Hydrocarbons (as PAH), mg/L	ND ( DL-0.0001)	0.0001	No Relaxation	APHA method
39	Total Chromium (as Cr), mg/l	ND ( DL-0.05)	0.05	No relaxation	IS 3025 (P-52) : 2003
40	Hexavalent Chromium (as Cr <sup>6+</sup> ), mg/l	ND ( DL-0.01)	--	--	IS 3025 (P-52) : 2003
41	Bromoform, mg/L	ND ( DL-0.01)	0.1	--	APHA Method
42	Dibromochloromethane, mg/L	ND ( DL-0.01)	0.1	--	APHA Method
43	Bromochloromethane, mg/L	ND ( DL-0.01)	0.06	--	APHA Method
44	Chloroform, mg/L	ND ( DL-0.05)	0.2	--	APHA Method
45	Arsenic mg/L	ND(DL-0.01)	0.01	0.01	IS 3025 (P-37)
<b>D. Pesticide Residue Limits and Test Method</b>					
46	Alachlor, µg/L	ND ( DL-0.01)	20	--	US EPA Method
47	Atrazine, µg/L	ND ( DL-0.01)	2	--	US EPA Method
48	Aldrin, µg/L	ND ( DL-0.01)	0.03	--	US EPA Method
49	Dieldrin, µg/L	ND ( DL-0.01)	0.03	--	US EPA Method
50	Delta HCH, µg/L	ND ( DL-0.01)	0.04	--	US EPA Method
51	Butachlor, µg/L	ND ( DL-0.01)	125	--	US EPA Method

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## TEST REPORT

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52	Chlorpyrifos, µg/L	ND ( DL-0.01)	30	--	US EPA Method
53	2, 4 - Dichlorophenoxy Acetic Acid, µg/L	ND ( DL-0.01)	30	--	US EPA Method
54	2, 4 DDT, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
55	4,4 DDT, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
56	2,4 DDD, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
57	4,4 DDD, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
58	2,4 DDE, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
59	4,4 DDE, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
60	Endosulfan, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
61	Endosulfan - I, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
62	Endosulfan - II, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
63	Ethion, µg/L	ND ( DL-0.01)	3.0	--	US EPA Method
64	Isoproturon, µg/L	ND ( DL-0.01)	9.0	--	US EPA Method
65	Malathion, µg/L	ND ( DL-0.01)	190	--	US EPA Method
66	Methyl Parathion, µg/L	ND ( DL-0.01)	0.3	--	US EPA Method
67	Monocrotophos, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
68	Phorate, µg/L	ND ( DL-0.01)	2.0	--	US EPA Method
69	Gamma HCH (Lindane), µg/L	ND ( DL-0.01)	2.0	--	US EPA Method

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>E. Bacteriological Quality of Drinking Water</b>					
1.	Coliform Organisms, MPN/100 mL	ND( DL-1)	ND		IS 1622: 1981
2.	E. Coli (per 100 mL)	Absent	Absent		IS 1622: 1981

Remarks:

1. Limit: N.D. is < 1 MPN / 100 mL

2. N.D.: Not Detectable

3. DL- Detection Limit

Page 3 of 3

*[Signature]*  
Manager Lab./ Sr. Chemist

*[Signature]*  
Authority Signatory  
QM / PM  
Panipat

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## TEST REPORT

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Report No	ETL/ PNP/2156	Report Date	09.03.2020	Doc No.	ETL/QF/7.8/01
Issue to:		Party's Ref No:	Nil		
M/s GVK Power (Goindwal Sahib) Ltd, Kapurthala Road, Goindwal Sahib, Distt. Tarn Taran - 143422		Work Order No:	2156		
		Period of Testing:	02.03.2020 – 09.03.2020		

### SAMPLE PARTICULARS

1	Type of sample	:	GROUND WATER
2	Point of Sample Collection	:	Piezometer ( North Side of Ash Pond Near Security Post)
3	Date of sample collection/ received	:	29.02.2020
4	Purpose of analysis	:	Monitoring purpose
5	Sample collected/ supplied by	:	By Lab Representative
6	Sample Quantity	:	15 litre + 250 ml for Microbiology
7	Method of Sampling	:	IS 3025 (P - 1) 1987

### TEST RESULTS

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>A. Organoleptic and Physical Parameter</b>					
1.	Colour, Hazen units	ND (DL-5)	5	15	IS 3025 (P-4) : 1983
2.	Odour	Unobjectionable	Agreeable	Agreeable	IS 3025 (P-5) : 1983
3.	Turbidity, NTU	ND (DL-1)	1	5	IS 3025 (P-10) : 1984
4.	pH	7.25	6.5 – 8.5	No Relaxation	IS 3025 (P-11) : 1996
5.	Total Dissolved Solids, mg/l	523	500	2000	IS 3025 (P-16) : 2002
6.	Taste	Agreeable	Agreeable	Agreeable	IS 3025 (P-7&8) : 2012
<b>B. General Parameters Concerning Substances Undesirable in Excessive Amount</b>					
7	Aluminium (as Al), mg/L	ND( DL-0.03)	0.03	0.2	IS 3025(P-5) : 1988
8	Ammonical Nitrogen (as NH <sub>3</sub> -N), mg/L	ND ( DL-0.05)	0.5	No relaxation	IS 3025 (P-34) : 1988
9	Anionic Detergents (as MBAS),mg/L	ND( DL-0.01)	0.02	1.0	IS 13428
10	Barium (as Ba), mg/L	ND ( DL-0.05)	0.7	No Relaxation	IS 13428
11	Boron (as B), mg/l	ND ( DL-0.1)	0.5	1.0	IS 3025 (P-57) : 2005
12	Calcium Hardness (as Ca), mg/l	66.2	75	200	IS 3025 (P-40) : 1998
13	Chloramines (as Cl <sub>2</sub> ), mg/L	ND( DL-0.01)	4.0	No Relaxation	IS 3025(P-2) : 1986
14	Chloride (as Cl), mg/l	12.24	250	1000	IS 3025 (P-32) : 1993
15	Copper (as Cu), mg/l	ND ( DL-0.01)	0.05	1.50	IS 3025 (P-42) : 1992
16	Fluoride (as F), mg/l	ND ( DL-0.1)	1.0	1.5	APHA Method
17	Residual Free Chlorine, mg/l	ND ( DL-0.1)	0.2	1	IS 3025 (P-26) : 1986
18	Iron (as Fe), mg/l	ND ( DL-0.05)	0.3	No Relaxation	IS 3025 (P-53) : 2003

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TC-6015

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## TEST REPORT

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19	Magnesium Hardness (as Mg), mg/l	35.2	30	100	IS 3025 (P-46) : 1994
20	Manganese (as Mn), mg/l	ND ( DL-0.01)	0.1	0.3	APHA Method
21	Mineral Oil, mg/L	ND (DL-0.1)	0.5	No Relaxation	IS 3025 (P-35)
22	Nitrate (as NO <sub>3</sub> ), mg/l	ND ( DL-0.1)	45	No relaxation	IS 3025 (P-34) : 1988
23	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	ND ( DL-0.001)	0.001	0.002	IS 3025 (P-43) : 1992
24	Selenium (as Se), mg/L	ND ( DL-0.01)	0.01	No Relaxation	IS 3025 (P-56)
25	Silver (as Ag), mg/L	ND (DL-0.01)	0.1	No Relaxation	IS 13428
26	Sulphate (as SO <sub>4</sub> ), mg/l	9.23	200	400	IS 3025 (P-24) : 1986
27	Sulphides (as H <sub>2</sub> S), mg/L	ND ( DL-0.05)	0.05	No Relaxation	IS 3025(P-29)
28	Total Alkalinity (as CaCO <sub>3</sub> ), mg/l	372.12	200	600	IS 3025 (P-23) : 1998
29	Total Hardness (as CaCO <sub>3</sub> ), mg/l	268.7	200	600	IS 3025 (P-21) : 2009
30	Zinc (as Zn), mg/l	ND ( DL-0.01)	5.0	15.0	IS 3025 (P-49) : 1994
<b>C. Parameter Concerning Toxic Substances</b>					
31	Cadmium (as Cd), mg/l	ND ( DL-0.003)	0.003	No relaxation	IS 3025 (P-41) : 1998
32	Lead (as Pb), mg/l	ND ( DL-0.01)	0.01	No relaxation	IS 3025 (P-47) : 1994
33	Cyanide (as CN), mg/l,	ND (DL-0.02)	Max 0.05	No relaxation	IS 3025 (Part 27)
34	Mercury (as Hg), mg/L	ND ( DL-0.001)	0.001	No Relaxation	IS 3025 (P-48)
35	Molybdenum (Mo), mg/L	ND (DL-0.01)	0.07	No Relaxation	IS 3025 (P-2)
36	Nickel (as Ni), mg/l	ND ( DL-0.01)	0.02	No relaxation	IS 3025 (P-54) : 2003
37	Polychlorinated Biphenyls, mg/L	ND ( DL-0.0001)	0.0005	No Relaxation	APHA method
38	Polynuclear Aromatic Hydrocarbons (as PAH), mg/L	ND ( DL-0.0001)	0.0001	No Relaxation	APHA method
39	Total Chromium (as Cr), mg/l	ND ( DL-0.05)	0.05	No relaxation	IS 3025 (P-52) : 2003
40	Hexavalent Chromium (as Cr <sup>6+</sup> ), mg/l	ND ( DL-0.01)	-	-	IS 3025 (P-52) : 2003
41	Bromoform, mg/L	ND ( DL-0.01)	0.1	--	APHA Method
42	Dibromochloromethane, mg/L	ND ( DL-0.01)	0.1	--	APHA Method
43	Bromochloromethane, mg/L	ND ( DL-0.01)	0.06	--	APHA Method
44	Chloroform, mg/L	ND ( DL-0.05)	0.2	--	APHA Method
45	Arsenic mg/L	ND(DL-0.01)	0.01	0.01	IS 3025 (P-37)
<b>D. Pesticide Residue Limits and Test Method</b>					
46	Alachlor, µg/L	ND ( DL-0.01)	20	--	US EPA Method
47	Atrazine, µg/L	ND ( DL-0.01)	2	--	US EPA Method
48	Aldrin, µg/L	ND ( DL-0.01)	0.03	--	US EPA Method
49	Dieldrin, µg/L	ND ( DL-0.01)	0.03	--	US EPA Method
50	Delta HCH, µg/L	ND ( DL-0.01)	0.04	--	US EPA Method
51	Butachlor, µg/L	ND ( DL-0.01)	125	--	US EPA Method

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## TEST REPORT

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53	2, 4 - Dichlorophenoxy Acetic Acid, µg/L	ND ( DL-0.01)	30	--	US EPA Method
54	2, 4 DDT, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
55	4,4 DDT, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
56	2,4 DDD, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
57	4,4 DDD, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
58	2,4 DDE, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
59	4,4 DDE, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
60	Endosulfan, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
61	Endosulfan - I, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
62	Endosulfan - II, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
63	Ethion, µg/L	ND ( DL-0.01)	3.0	--	US EPA Method
64	Isoproturon, µg/L	ND ( DL-0.01)	9.0	--	US EPA Method
65	Malathion, µg/L	ND ( DL-0.01)	190	--	US EPA Method
66	Methyl Parathion, µg/L	ND ( DL-0.01)	0.3	--	US EPA Method
67	Monocrotophos, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
68	Phorate, µg/L	ND ( DL-0.01)	2.0	--	US EPA Method
69	Gamma HCH (Lindane), µg/L	ND ( DL-0.01)	2.0	--	US EPA Method

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
E.	Bacteriological Quality of Drinking Water				
1.	Coliform Organisms, MPN/100 mL	ND( DL-1)	ND		IS 1622: 1981
2.	E. Coli (per 100 mL)	Absent	Absent		IS 1622: 1981

Remarks: 1. Limit: N.D. is  $\leq$  1 MPN / 100 ml      2. N.D.: Not Detectable      3. DL= Detection Limit

Page 3 of 3

*Plurals*  
Manager Lab./ Sr. Chemist

Authority Signatory



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## TEST REPORT

Page 1 of 3

Report No	ETL/PNP/2157	Report Date	09.03.2020	Doc No.	ETL/QF/7.8/01
Issue to:		Party's Ref No:	Nil		
M/s GVK Power (Goindwal Sahib) Ltd. Kapurthala Road, Goindwal Sahib, Distt. Tarn Taran - 143422		Work Order No:	2157		
		Period of Testing:	02.03.2020 – 09.03.2020		

### SAMPLE PARTICULARS

1	Type of sample	:	GROUND WATER
2	Point of Sample Collection	:	Handpump ( Village- Mundi)
3	Date of sample collection/ received	:	29.02.2020
4	Purpose of analysis	:	Monitoring purpose
5	Sample collected/ supplied by	:	By Lab Representative
6	Sample Quantity	:	15 litre + 250 ml for Microbiology
7	Method of Sampling	:	IS 3025 (P - 1) 1987

### TEST RESULTS

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>A. Organoleptic and Physical Parameter</b>					
1.	Colour, Hazen units	ND ( DL-5)	5	15	IS 3025 (P-4) : 1983
2.	Odour	Unobjectionable	Agreeable	Agreeable	IS 3025 (P-5) : 1983
3.	Turbidity, NTU	ND ( DL-1)	1	5	IS 3025 (P-10) : 1984
4.	pH	7.39	6.5 – 8.5	No Relaxation	IS 3025 (P-11) : 1996
5.	Total Dissolved Solids, mg/l	516	500	2000	IS 3025 (P-16) : 2002
6.	Taste	Agreeable	Agreeable	Agreeable	IS 3025 (P-7&8) : 2012
<b>B. General Parameters Concerning Substances Undesirable in Excessive Amount</b>					
7.	Aluminium (as Al), mg/L	ND( DL-0.03)	0.03	0.2	IS 3025(P-5)
8.	Ammonical Nitrogen (as NH <sub>3</sub> -N), mg/L	ND ( DL-0.05)	0.5	No relaxation	IS 3025 (P-34) : 1988
9.	Anionic Detergents (as MBAS),mg/L	ND( DL-0.01)	0.02	1.0	IS 13428
10.	Barium (as Ba), mg/L	ND ( DL-0.05)	0.7	No Relaxation	IS 13428
11.	Boron (as B), mg/l	ND ( DL-0.1)	0.5	1.0	IS 3025 (P-57) : 2005
12.	Calcium Hardness (as Ca), mg/l	57.6	75	200	IS 3025 (P-40) : 1998
13.	Chloramines (as Cl <sub>2</sub> ), mg/L	ND( DL-0.01)	4.0	No Relaxation	IS 3025(P-16)
14.	Chloride (as Cl), mg/l	22.7	250	1000	IS 3025 (P-32) : 1993
15.	Copper (as Cu), mg/l	ND ( DL-0.01)	0.05	1.50	IS 3025 (P-42) : 1992
16.	Fluoride (as F), mg/l	ND ( DL-0.1)	1.0	1.5	APHA Method
17.	Residual Free Chlorine, mg/l	ND ( DL-0.1)	0.2	1	IS 3025 (P-26) : 1986
18.	Iron (as Fe), mg/l	ND ( DL-0.05)	0.3	No Relaxation.	IS 3025 (P-53) : 2003

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19	Magnesium Hardness (as Mg), mg/l	25.3	30	100	IS 3025 (P-46) : 1994
20	Manganese (as Mn), mg/l	ND ( DL-0.01)	0.1	0.3	APHA Method
21	Mineral Oil, mg/L	ND (DL-0.1)	0.5	No Relaxation	IS 3025 (P-39)
22	Nitrate (as NO <sub>3</sub> ), mg/l	ND ( DL-0.1)	45	No relaxation	IS 3025 (P-34) : 1988
23	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	ND ( DL-0.001)	0.001	0.002	IS 3025 (P-43) : 1992
24	Selenium (as Se), mg/L	ND ( DL-0.01)	0.01	No Relaxation	IS 3025 (P-56)
25	Silver (as Ag), mg/L	ND (DL-0.01)	0.1	No Relaxation	IS 13428
26	Sulphate (as SO <sub>4</sub> ), mg/l	18.9	200	400	IS 3025 (P-24) : 1986
27	Sulphides (as H <sub>2</sub> S), mg/L	ND ( DL-0.05)	0.05	No Relaxation	IS 3025(P-29)
28	Total Alkalinity (as CaCO <sub>3</sub> ), mg/l	346.87	200	600	IS 3025 (P-23) : 1998
29	Total Hardness (as CaCO <sub>3</sub> ), mg/l	255.7	200	600	IS 3025 (P-21) : 2009
30	Zinc (as Zn), mg/l	ND ( DL-0.01)	5.0	15.0	IS 3025 (P-49) : 1994
<b>C. Parameter Concerning Toxic Substances</b>					
31	Cadmium (as Cd), mg/l	ND ( DL-0.003)	0.003	No relaxation	IS 3025 (P-41) : 1998
32	Lead (as Pb), mg/l	ND ( DL-0.01)	0.01	No relaxation	IS 3025 (P-47) : 1994
33	Cyanide (as CN), mg/l,	ND (DL-0.02)	Max 0.05	No relaxation	IS 3025 (Part 21)
34	Mercury (as Hg), mg/L	ND ( DL-0.001)	0.001	No Relaxation	IS 3025 (P-48)
35	Molybdenum (Mo), mg/L	ND (DL-0.01)	0.07	No Relaxation	IS 3025 (P-2)
36	Nickel (as Ni), mg/l	ND ( DL-0.01)	0.02	No relaxation	IS 3025 (P-54) : 2003
37	Polychlorinated Biphenyls, mg/L	ND ( DL-0.0001)	0.0005	No Relaxation	APHA method
38	Polynuclear Aromatic Hydrocarbons (as PAH), mg/L	ND ( DL-0.0001)	0.0001	No Relaxation	APHA method
39	Total Chromium (as Cr), mg/l	ND ( DL-0.05)	0.05	No relaxation	IS 3025 (P-52) : 2003
40	Hexavalent Chromium (as Cr <sup>6+</sup> ), mg/l	ND ( DL-0.01)	-	-	IS 3025 (P-52) : 2003
41	Bromoform, mg/L	ND ( DL-0.01)	0.1	--	APHA Method
42	Dibromochloromethane, mg/L	ND ( DL-0.01)	0.1	--	APHA Method
43	Bromochloromethane, mg/L	ND ( DL-0.01)	0.06	--	APHA Method
44	Chloroform, mg/L	ND ( DL-0.05)	0.2	--	APHA Method
45	Arsenic mg/L	ND(DL-0.01)	0.01	0.01	IS 3025 (P-37)
<b>D. Pesticide Residue Limits and Test Method</b>					
46	Alachor, µg/L	ND ( DL-0.01)	20	--	US EPA Method
47	Atrazine, µg/L	ND ( DL-0.01)	2	--	US EPA Method
48	Aldrin, µg/L	ND ( DL-0.01)	0.03	--	US EPA Method
49	Dieldrin, µg/L	ND ( DL-0.01)	0.03	--	US EPA Method
50	Delta HCH, µg/L	ND ( DL-0.01)	0.04	--	US EPA Method
51	Butachlor, µg/L	ND ( DL-0.01)	125	--	US EPA Method

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## TEST REPORT

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52	Chlorpyrifos, µg/L	ND ( DL-0.01)	30	--	US EPA Method
53	2, 4 - Dichlorophenoxy Acetic Acid, µg/L	ND ( DL-0.01)	30	--	US EPA Method
54.	2, 4 DDT, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
55	4,4 DDT, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
56	2,4 DDD, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
57	4,4 DDD, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
58	2,4 DDE, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
59	4,4 DDE, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
60	Endosulfan, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
61	Endosulfan - I, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
62	Endosulfan - II, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
63	Ethion, µg/L	ND ( DL-0.01)	3.0	--	US EPA Method
64	Isoproturon, µg/L	ND ( DL-0.01)	9.0	--	US EPA Method
65	Malathion, µg/L	ND ( DL-0.01)	190	--	US EPA Method
66	Methyl Parathion, µg/L	ND ( DL-0.01)	0.3	--	US EPA Method
67	Monocrotophos, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
68	Phorate, µg/L	ND ( DL-0.01)	2.0	--	US EPA Method
69	Gamma HCH (Lindane), µg/L	ND ( DL-0.01)	2.0	--	US EPA Method

Sr. No.	Parameters	Results	Drinking Water Specifications		Protocol Used
			(As per IS 10500 : 2012) Acceptable Limit	Permissible limit	
<b>E. Bacteriological Quality of Drinking Water</b>					
1.	Coliform Organisms, MPN/100 mL	ND( DL-1)	ND		IS 1622: 1981
2.	E. Coli (per 100 mL)	Absent	Absent		IS 1622: 1981

Remarks: 1. Limit N.D. is < 1 MPN / 100 ml      2. N.D.: Not Detectable      3. DL= Detection Limit

Page 3 of 3

*[Signature]*  
Manager Lab./ Sr. Chemist

*[Signature]*  
Authority Signature  
Date: QM / 01 / 20  
PANIPAT

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

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TC-6015

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## TEST REPORT

Page 1 of 3

Report No	ETL/ PNP/2158	Report Date	09.03.2020	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:	2158		
		Period of Testing:	02.03.2020 – 09.03.2020		

### SAMPLE PARTICULARS

1	Type of sample	:	GROUND WATER
2	Point of Sample Collection	:	Handpump ( Village- Goindwal Sahib)
3	Date of sample collection/ received	:	29.02.2020
4	Purpose of analysis	:	Monitoring purpose
5	Sample collected/ supplied by	:	By Lab Representative
6	Sample Quantity	:	15 litre + 250 ml for Microbiology
7	Method of Sampling	:	IS 3025 (P - 1) 1987

### TEST RESULTS

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>A. Organoleptic and Physical Parameter</b>					
1.	Colour, Hazen units	ND ( DL-5 )	5	15	IS 3025 (P-4) : 1983
2.	Odour	Unobjectionable	Agreeable	Agreeable	IS 3025 (P-5) : 1983
3.	Turbidity, NTU	ND ( DL-1 )	1	5	IS 3025 (P-10) : 1984
4.	pH	7.08	6.5 – 8.5	No Relaxation	IS 3025 (P-11) : 1996
5.	Total Dissolved Solids, mg/l	562	500	2000	IS 3025 (P-16) : 2002
6.	Taste	Agreeable	Agreeable	Agreeable	IS 3025 (P-7&8) : 2012
<b>B. General Parameters Concerning Substances Undesirable in Excessive Amount</b>					
7.	Aluminium (as Al), mg/L	ND ( DL-0.03 )	0.03	0.2	IS 3025(P-53)
8.	Ammonical Nitrogen (as NH <sub>3</sub> -N), mg/L	ND ( DL-0.05 )	0.5	No relaxation	IS 3025 (P-34) : 1988
9.	Anionic Detergents (as MBAS), mg/L	ND( DL-0.01 )	0.02	1.0	IS 13428
10.	Barium (as Ba), mg/L	ND ( DL-0.05 )	0.7	No Relaxation	IS 13428
11.	Boron (as B), mg/l	ND ( DL-0.1 )	0.5	1.0	IS 3025 (P-57) : 2005
12.	Calcium Hardness (as Ca), mg/l	69.7	75	200	IS 3025 (P-40) : 1998
13.	Chloramines (as Cl <sub>2</sub> ), mg/L	ND( DL-0.01 )	4.0	No Relaxation	IS 3025(P-26)
14.	Chloride (as Cl), mg/l	13.9	250	1000	IS 3025 (P-32) : 1993
15.	Copper (as Cu), mg/l	ND ( DL-0.01 )	0.05	1.50	IS 3025 (P-42) : 1992
16.	Fluoride (as F), mg/l	ND ( DL-0.1 )	1.0	1.5	APHA Method
17.	Residual Free Chlorine, mg/l	ND ( DL-0.1 )	0.2	1	IS 3025 (P-26) : 1986
18.	Iron (as Fe), mg/l	ND ( DL-0.05 )	0.3	No Relaxation.	IS 3025 (P-53) : 2003

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## TEST REPORT

Page 2 of 3

19	Magnesium Hardness (as Mg), mg/l	21.34	30	100	IS 3025 (P-46) : 1994
20	Manganese (as Mn), mg/l	ND (DL-0.01)	0.1	0.3	APHA Method
21	Mineral Oil, mg/L	ND (DL-0.1)	0.5	No Relaxation	IS 3025 (P-39)
22	Nitrate (as NO <sub>3</sub> ), mg/l	ND (DL-0.1)	45	No relaxation	IS 3025 (P-34) : 1988
23	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	ND (DL-0.001)	0.001	0.002	IS 3025 (P-43) : 1992
24	Selenium (as Se), mg/L	ND (DL-0.01)	0.01	No Relaxation	IS 3025 (P-56)
25	Silver (as Ag), mg/l	ND (DL-0.01)	0.1	No Relaxation	IS 13428
26	Sulphate (as SO <sub>4</sub> ), mg/l	7.89	200	400	IS 3025 (P-24) : 1986
27	Sulphides (as H <sub>2</sub> S), mg/L	ND (DL-0.05)	0.05	No Relaxation	IS 3025 (P-29)
28	Total Alkalinity (as CaCO <sub>3</sub> ), mg/l	368.12	200	600	IS 3025 (P-23) : 1998
29	Total Hardness (as CaCO <sub>3</sub> ), mg/l	237.6	200	600	IS 3025 (P-21) : 2009
30	Zinc (as Zn), mg/l	ND (DL-0.01)	5.0	15.0	IS 3025 (P-49) : 1994
<b>C. Parameter Concerning Toxic Substances</b>					
31	Cadmium (as Cd), mg/l	ND (DL-0.003)	0.003	No relaxation	IS 3025 (P-41) : 1998
32	Lead (as Pb), mg/l	ND (DL-0.01)	0.01	No relaxation	IS 3025 (P-47) : 1994
33	Cyanide (as CN), mg/l,	ND (DL-0.02)	Max 0.05	No relaxation	IS 3025 (Part 27)
34	Mercury (as Hg), mg/L	ND (DL-0.001)	0.001	No Relaxation	IS 3025 (P-48)
35	Molybdenum (Mo), mg/L	ND (DL-0.01)	0.07	No Relaxation	IS 3025 (P-2)
36	Nickel (as Ni), mg/l	ND (DL-0.01)	0.02	No relaxation	IS 3025 (P-54) : 2003
37	Polychlorinated Biphenyls, mg/L	ND (DL-0.0001)	0.0005	No Relaxation	APHA method
38	Polynuclear Aromatic Hydrocarbons (as PAH), mg/L	ND (DL-0.0001)	0.0001	No Relaxation	APHA method
39	Total Chromium (as Cr), mg/l	ND (DL-0.05)	0.05	No relaxation	IS 3025 (P-52) : 2003
40	Hexavalent Chromium (as Cr <sup>6+</sup> ), mg/l	ND (DL-0.01)	-	-	IS 3025 (P-52) : 2003
41	Bromoform, mg/L	ND (DL-0.01)	0.1	--	APHA Method
42	Dibromochloromethane, mg/L	ND (DL-0.01)	0.1	--	APHA Method
43	Bromochloromethane, mg/L	ND (DL-0.01)	0.06	--	APHA Method
44	Chloroform, mg/L	ND (DL-0.05)	0.2	--	APHA Method
45	Arsenic mg/L	ND (DL-0.01)	0.01	0.01	IS 3025 (P-37)
<b>D. Pesticide Residue Limits and Test Method</b>					
46	Alachor, µg/L	ND (DL-0.01)	20	--	US EPA Method
47	Atrazine, µg/L	ND (DL-0.01)	2	--	US EPA Method
48	Aldrin, µg/L	ND (DL-0.01)	0.03	--	US EPA Method
49	Dieldrin, µg/L	ND (DL-0.01)	0.03	--	US EPA Method
50	Delta HCH, µg/L	ND (DL-0.01)	0.04	--	US EPA Method
51	Butachlor, µg/L	ND (DL-0.01)	125	--	US EPA Method

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## TEST REPORT

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52	Chlorpyrifos, µg/L	ND ( DL-0.01)	30	--	US EPA Method
53	2, 4 - Dichlorophenoxy Acetic Acid, µg/L	ND ( DL-0.01)	30	--	US EPA Method
54	2, 4 DDT, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
55	4,4 DDT, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
56	2,4 DDD, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
57	4,4 DDD, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
58	2,4 DDE, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
59	4,4 DDE, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
60	Endosulfan, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
61	Endosulfan - I, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
62	Endosulfan - II, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
63	Ethion, µg/L	ND ( DL-0.01)	3.0	--	US EPA Method
64	Isoproturon, µg/L	ND ( DL-0.01)	9.0	--	US EPA Method
65	Malathion, µg/L	ND ( DL-0.01)	190	--	US EPA Method
66	Methyl Parathion, µg/L	ND ( DL-0.01)	0.3	--	US EPA Method
67	Monocrotophos, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
68	Phorate, µg/L	ND ( DL-0.01)	2.0	--	US EPA Method
69	Gamma HCH (Lindane), µg/L	ND ( DL-0.01)	2.0	--	US EPA Method

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>E. Bacteriological Quality of Drinking Water</b>					
1.	Coliform Organisms, MPN/100 mL	ND( DL-1)	ND		IS 1622: 1981
2.	E. Coli (per 100 mL)	Absent	Absent		IS 1622: 1981

Remarks: 1. Limit: N.D. is < 1 MPN / 100 ml      2. N.D.: Not Detectable      3. DL- Detection Limit

*Rajesh*  
Manager Lab./ Sr. Chemist

*Rajesh*  
Authority Signatory  
Date: 20  
QM / LM  
Panipat

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## TEST REPORT

Page 1 of 3

Report No	ETL/ PNP/2159	Report Date	09.03.2020	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			

### SAMPLE PARTICULARS

1	Type of sample	:	GROUND WATER
2	Point of Sample Collection	:	Handpump ( Village-Vairowal)
3	Date of sample collection/ received	:	29.02.2020
4	Purpose of analysis	:	Monitoring purpose
5	Sample collected/ supplied by	:	By Lab Representative
6	Sample Quantity	:	15 litre + 250 ml for Microbiology
7	Method of Sampling	:	IS 3025 (P - 1) 1987

### TEST RESULTS

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>A. Organoleptic and Physical Parameter</b>					
1.	Colour, Hazen units	ND ( DL-5 )	5	15	IS 3025 (P-4) : 1983
2.	Odour	Unobjectionable	Agreeable	Agreeable	IS 3025 (P-5) : 1983
3.	Turbidity, NTU	ND ( DL-1 )	1	5	IS 3025(P-10) : 1984
4.	pH	7.58	6.5 – 8.5	No Relaxation	IS 3025 (P-11) : 1996
5.	Total Dissolved Solids, mg/l	527	500	2000	IS 3025 (P-16) : 2002
6.	Taste	Agreeable	Agreeable	Agreeable	IS 3025 (P-7&8) : 2012
<b>B. General Parameters Concerning Substances Undesirable in Excessive Amount</b>					
7	Aluminium (as Al), mg/L	ND( DL-0.03 )	0.03	0.2	IS 3025(P-55)
8	Ammonical Nitrogen (as NH <sub>3</sub> -N), mg/L	ND ( DL-0.05 )	0.5	No relaxation	IS 3025 (P-34) : 1998
9	Anionic Detergents (as MBAS),mg/L	ND( DL-0.01 )	0.02	1.0	IS 13428
10	Barium (as Ba), mg/L	ND ( DL-0.05 )	0.7	No Relaxation	IS 13428
11	Boron (as B), mg/l	ND ( DL-0.1 )	0.5	1.0	IS 3025 (P-57) : 2005
12	Calcium Hardness (as Ca), mg/l	63.4	75	200	IS 3025 (P-40) : 1998
13	Chloramines (as Cl <sub>2</sub> ), mg/L	ND( DL-0.01 )	4.0	No Relaxation	IS 3025(P-26)
14	Chloride (as Cl), mg/l	11.23	250	1000	IS 3025 (P-32) : 1993
15	Copper (as Cu), mg/l	ND ( DL-0.01 )	0.05	1.50	IS 3025 (P-42) : 1992
16	Fluoride (as F), mg/l	ND ( DL-0.1 )	1.0	1.5	APHA Method
17	Residual Free Chlorine, mg/l	ND ( DL-0.1 )	0.2	1	IS 3025 (P-26) : 1986
18	Iron (as Fe), mg/l	ND ( DL-0.05 )	0.3	No Relaxation.	IS 3025 (P-53) : 2003

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## TEST REPORT

Page 2 of 3

19	Magnesium Hardness (as Mg), mg/l	27.64	30	100	IS 3025 (P-46) : 1994
20	Manganese (as Mn), mg/l	ND (DL-0.01)	0.1	0.3	APHA Method
21	Mineral Oil, mg/L	ND (DL-0.1)	0.5	No Relaxation	IS 3025 (P-39)
22	Nitrate (as NO <sub>3</sub> ), mg/l	ND (DL-0.1)	45	No relaxation	IS 3025 (P-34) : 1988
23	Phenolic Compounds (as C <sub>6</sub> H <sub>5</sub> OH), mg/l	ND (DL-0.001)	0.001	0.002	IS 3025 (P-43) : 1992
24	Selenium (as Se), mg/L	ND (DL-0.01)	0.01	No Relaxation	IS 3025 (P-56)
25	Silver (as Ag), mg/L	ND (DL-0.01)	0.1	No Relaxation	IS 13428
26	Sulphate (as SO <sub>4</sub> ), mg/l	15.6	200	400	IS 3025 (P-24) : 1986
27	Sulphides (as H <sub>2</sub> S), mg/L	ND (DL-0.05)	0.05	No Relaxation	IS 3025(P-29)
28	Total Alkalinity (as CaCO <sub>3</sub> ), mg/l	372.8	200	600	IS 3025 (P-23) : 1998
29	Total Hardness (as CaCO <sub>3</sub> ), mg/l	266.4	200	600	IS 3025 (P-21) : 2009
30	Zinc (as Zn), mg/l	ND (DL-0.01)	5.0	15.0	IS 3025 (P-49) : 1994
<b>C. Parameter Concerning Toxic Substances</b>					
31	Cadmium (as Cd), mg/l	ND (DL-0.003)	0.003	No relaxation	IS 3025 (P-41) : 1998
32	Lead (as Pb), mg/l	ND (DL-0.01)	0.01	No relaxation	IS 3025 (P-47) : 1994
33	Cyanide (as CN), mg/l,	ND (DL-0.02)	Max 0.05	No relaxation	IS 3025 (Part 27)
34	Mercury (as Hg), mg/L	ND (DL-0.001)	0.001	No Relaxation	IS 3025 (P-48)
35	Molybdenum (Mo), mg/L	ND (DL-0.01)	0.07	No Relaxation	IS 3025 (P-2)
36	Nickel (as Ni), mg/l	ND (DL-0.01)	0.02	No relaxation	IS 3025 (P-54) : 2003
37	Polychlorinated Biphenyls, mg/L	ND (DL-0.0001)	0.0005	No Relaxation	APHA method
38	Polynuclear Aromatic Hydrocarbons (as PAH), mg/L	ND (DL-0.0001)	0.0001	No Relaxation	APHA method
39	Total Chromium (as Cr), mg/l	ND (DL-0.05)	0.05	No relaxation	IS 3025 (P-52) : 2003
40	Hexavalent Chromium (as Cr <sup>6+</sup> ), mg/l	ND (DL-0.01)	-	-	IS 3025 (P-52) : 2003
41	Bromoform, mg/L	ND (DL-0.01)	0.1	--	APHA Method
42	Dibromochloromethane, mg/L	ND (DL-0.01)	0.1	--	APHA Method
43	Bromochloromethane, mg/L	ND (DL-0.01)	0.06	--	APHA Method
44	Chloroform, mg/L	ND (DL-0.05)	0.2	--	APHA Method
45	Arsenic mg/L	ND(DL-0.01)	0.01	0.01	IS 3025 (P-37)
<b>D. Pesticide Residue Limits and Test Method</b>					
46	Alachlor, µg/L	ND (DL-0.01)	20	--	US EPA Method
47	Atrazine, µg/L	ND (DL-0.01)	2	--	US EPA Method
48	Aldrin, µg/L	ND (DL-0.01)	0.03	--	US EPA Method
49	Dieldrin, µg/L	ND (DL-0.01)	0.03	--	US EPA Method
50	Delta HCH, µg/L	ND (DL-0.01)	0.04	--	US EPA Method
51	Butachlor, µg/L	ND (DL-0.01)	125	--	US EPA Method

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## TEST REPORT

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52	Chlorpyrifos, µg/L	ND ( DL-0.01)	30	--	US EPA Method
53	2, 4 - Dichlorophenoxy Acetic Acid, µg/L	ND ( DL-0.01)	30	--	US EPA Method
54	2, 4 DDT, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
55	4,4 DDT, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
56	2,4 DDD, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
57	4,4 DDD, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
58	2,4 DDE, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
59	4,4 DDE, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
60	Endosulfan, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
61	Endosulfan - I, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
62	Endosulfan - II, µg/L	ND ( DL-0.01)	0.4	--	US EPA Method
63	Ethion, µg/L	ND ( DL-0.01)	3.0	--	US EPA Method
64	Isoproturon, µg/L	ND ( DL-0.01)	9.0	--	US EPA Method
65	Malathion, µg/L	ND ( DL-0.01)	190	--	US EPA Method
66	Methyl Parathion, µg/L	ND ( DL-0.01)	0.3	--	US EPA Method
67	Monocrotophos, µg/L	ND ( DL-0.01)	1.0	--	US EPA Method
68	Phorate, µg/L	ND ( DL-0.01)	2.0	--	US EPA Method
69	Gamma HCH (Lindane), µg/L	ND ( DL-0.01)	2.0	--	US EPA Method

Sr. No.	Parameters	Results	Drinking Water Specifications (As per IS 10500 : 2012)		Protocol Used
			Acceptable Limit	Permissible limit	
<b>E. Bacteriological Quality of Drinking Water</b>					
1.	Coliform Organisms, MPN/100 mL	ND( DL-1)	ND		IS 1622: 1981
2.	E. Coli (per 100 mL)	Absent	Absent		IS 1622: 1981

Remarks: 1. Limit: N.D. is < 1 MPN / 100 ml      2. N.D.: Not Detectable      3. DL= Detection Limit

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*Pullela*  
Manager Lab./ Sr. Chemist



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

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 listed above relate to the only tested samples. Endorsement of the same is neither inferred nor implied.
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 in any advertising agency/media without the written approval of laboratory.