**TEST REPORT**

- **ULR No.:** TC747721000002848F
- **Type of Sample:** Water (Ground Water)
- **Test Report No.:** EL200521NW014
- **Date of Reporting:** 22/05/2021

**Customer:** Thapar Institute of Engineering & Technology
Bhadson Road, Distt Patiala, (Punjab)

**Work Order No. & Date:**
W.O. NO. WO/TIET/CS/PR/20250 Dt.: 17/11/2020

**Customer reference No. (If any):** NA

**Sampling Protocol:** IS:3025 (P-1) 1987 RA 2019

**Mode of Collection of Sample:** Sampling by laboratory

**Sample Description:** Clear, colourless liquid.

**Date of Sampling:** 20/05/2021

**Sampling Location:** From Tubewell No.1

**Date of Receipt of Sample:** 20/05/2021

**Testing Protocol:** IS 10500 : 2012 (Second Revision)

**Testing Location:** Permanent Facility

**Period of Analysis:** 20/05/2021 To 22/05/2021

**包装、标记、数量和质量:** 2 litre Plastic & 250ml Glass Bottle Marked 'R/20/02'

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**RESULTS**

**I. Chemical Testing**

1. Water (Ground Water)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameter</th>
<th>Unit</th>
<th>Result</th>
<th>Acceptable limit</th>
<th>Permissible limit in absence of alternate source</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Colour</td>
<td>Colour Units</td>
<td>BDL(DL5)</td>
<td>5</td>
<td>15</td>
<td>IS:3025(P-4):1983 RA2017</td>
</tr>
<tr>
<td>2</td>
<td>Odour</td>
<td>Agreeable</td>
<td>Agreeable</td>
<td>Agreeable</td>
<td>No relaxation</td>
<td>IS: 3025 (P-5): 1983 RA 1988</td>
</tr>
<tr>
<td>3</td>
<td>pH</td>
<td>-</td>
<td>7.11</td>
<td>6.5-8.5</td>
<td>No relaxation</td>
<td>IS:3025(P-11): 1984RA2017</td>
</tr>
<tr>
<td>4</td>
<td>Turbidity</td>
<td>NTU</td>
<td>BDL(DL0.1)</td>
<td>1</td>
<td>5</td>
<td>IS:3025(P-10):1984 RA2017</td>
</tr>
<tr>
<td>5</td>
<td>Chloride</td>
<td>mg/l</td>
<td>85</td>
<td>250</td>
<td>1000</td>
<td>IS:3025(P-32):1988 RA2019</td>
</tr>
<tr>
<td>6</td>
<td>Iron</td>
<td>mg/l</td>
<td>0.11</td>
<td>1.0</td>
<td>No relaxation</td>
<td>IS:3025(P-53):2003 RA 2019</td>
</tr>
<tr>
<td>7</td>
<td>Total hardness</td>
<td>mg/l</td>
<td>245</td>
<td>200</td>
<td>600</td>
<td>IS:3025(P-21):2009 RA2019</td>
</tr>
</tbody>
</table>

**II. Biological Testing**

1. Water (Ground Water)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameter</th>
<th>Unit</th>
<th>Result</th>
<th>Acceptable limit</th>
<th>Permissible limit in absence of alternate source</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total coliforms</td>
<td>CFU/100ml</td>
<td>Absent</td>
<td>Absent</td>
<td></td>
<td>IS:15185 :2016</td>
</tr>
</tbody>
</table>

---

Checked by QA

Simranjit Kaur
Authorized Signatory-Biological

Dr Rai Singh
Authorized Signatory-Chemical

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Format No. F/7.8.2-W-01-18.06.20 Rev 05

Page No. 1/2

ECO BHAWAN
E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071

0172-4616225  9781303109  consulteco@yahoo.com  ecolab@ecoparyavaran.org  www.ecoparyavaran.org
<table>
<thead>
<tr>
<th><strong>ULR No.</strong></th>
<th>TC747721000002848F</th>
<th><strong>Test Report No.</strong></th>
<th>EL200521NW014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Sample</strong></td>
<td>Water (Ground Water)</td>
<td><strong>Date of Reporting</strong></td>
<td>22/05/2021</td>
</tr>
<tr>
<td><strong>Remarks</strong></td>
<td>NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**OTHER INFORMATION**

**Abbreviation:**
ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable

**Terms & Conditions:**
Please refer terms and conditions on backside of Test Report (Page-1)

**End of Report**
TEST REPORT

ULR No. : NA
Type of Sample : Water (Ground Water)
Test Report No. : EL200521NW014/A
Date of Reporting : 22/05/2021

Customer
Thapar Institute of Engineering & Technology
Bhadson Road, Distt Patiala, (Punjab)

Work Order No. & Date
WO NO.
WO/TIET/CS/PR/20250 Dt.:
17/11/2020

Customer reference No. (If any)
NA

Sampling Protocol
IS:3025 (P-1) 1987 RA 2019
Mode of Collection of Sample
Sampling by laboratory

Date of Sampling
20/05/2021
Date of Receipt of Sample
20/05/2021

Sampling Location
From Tubewell No.1
Testing Location
Permanent Facility

Testing Protocol
IS 10500 : 2012 (Second Revision)
Period of Analysis
20/05/2021 To 22/05/2021

Sample Description
Clear, colourless liquid.
Packing, Markings, Seal & Qty.
2 litre Plastic & 250ml Glass Bottle Marked 'R/20/02'

RESULTS

II - Biological Testing
1. Water (Ground Water)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameter</th>
<th>Unit</th>
<th>Result</th>
<th>Acceptable limit</th>
<th>Permissible limit in absence of alternate source</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Escherichia coli</td>
<td>CFU/100ml</td>
<td>Absent</td>
<td>Absent</td>
<td>-</td>
<td>IS:15185:2016</td>
</tr>
</tbody>
</table>

Remarks : This test report is the part of the Test Report No. EL200521NW014

OTHER INFORMATION
Abbreviation : ULR: Unique Lab Report, BDL: Below Detection Level, NA: Not Applicable
Terms & Conditions: Please refer terms and conditions on backside of Test Report (Page-1)

**End of Report**

Simranjit Kaur
Authorized Signatory-Biological

Format No. F7.8.2-W-01-18.06.20 Rev 05
Page No. 1/1

ECO BHAWAN E-207, Industrial Area, Phase VIII-B (Sector-74), Mohali (Punjab) 160071
0172-4616225  9781303109 consulteco@yahoo.com  ecolab@ecoparyavaran.org  www.ecoparyavaran.org
TEST REPORT

ULR No. : TC747721006002849F
Type of Sample : Soil

Test Report No. : EL200521NS002
Date of Reporting : 22/05/2021

Customer : Thapar Institute of Engineering & Technology
Bhadson Road, Distt Patiala, (Punjab)

Work Order No. & Date : WO NO.
WO/TIET/CS/PR/20250 Dt.: 17/11/2020

Mode of Collection of Sample : Sampling by laboratory

Sample Description : Brown colored soil.

Sampling Protocol : USEPA/600/R-92/128
Date of Sampling : 20/05/2021
Sampling Location : Near K-Hostel Park
Testing Protocol : IS Method
Date of Receipt of Sample : 20/05/2021
Testing Location : Permanent Facility
Period of Analysis : 20/05/2021 To 22/05/2021

5 Kg Poly Bag Marked 'R/20/01'

RESULTS

I. Chemical Testing
1. Pollution & Environment (Soil)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameter</th>
<th>Unit</th>
<th>Result</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pH</td>
<td></td>
<td>7.88</td>
<td>IS: 2720 (P-26) 1987 RA2016</td>
</tr>
<tr>
<td>2</td>
<td>Conductivity</td>
<td>mhos/cm</td>
<td>0.243</td>
<td>IS: 14767: 2000 RA2016</td>
</tr>
<tr>
<td>3</td>
<td>Moisture Content</td>
<td>%</td>
<td>9.3</td>
<td>IS: 2720 (P-II) 1973 R 2015</td>
</tr>
<tr>
<td>4</td>
<td>Organic Matter</td>
<td>%</td>
<td>1.17</td>
<td>IS: 2720 (Part XXII ) 1972 R2015</td>
</tr>
<tr>
<td>5</td>
<td>Texture</td>
<td></td>
<td>Sandy Loam</td>
<td>IS: 2720(P- 4 ) 1985 RA 2015</td>
</tr>
</tbody>
</table>

Remarks : NA

OTHER INFORMATION
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Terms & Conditions : Please refer terms and conditions on backside of Test Report (Page-1)

**End of Report**

Check by QA

Dr Rai Singh
Authorized Signatory-Chemical

Page No. 1/1
TEST REPORT

ULR No.: TC747721000002871F
Type of Sample: Ambient Air Quality
Test Report No.: EL210521NA002
Date of Reporting: 22/05/2021

Customer: Thapar Institute of Engineering & Technology
            Bhadson Road, Distt Patiala, (Punjab)

Work Order No. & Date: WO NO.
            WO/TIET/CS/PR/20250 Dt.: 17/11/2020

Customer reference No. (If any): NA

            (NAAQMS/36/2012-13) / CPCBNAQS-2009
Mode of Collection of Sample: Sampling by laboratory

Date of Sampling: 20/05/2021
Date of Receipt of Sample: 21/05/2021

Sampling Location: Near Project & Estate Department
Period of Analysis: 21/05/2021 To 22/05/2021

            (NAAQMS/36/2012-13) / CPCBNAQS-2009
Environmental Conditions: Partially cloudy weather*

Testing Location: Site Testing & Permanent Facility

RESULTS

I-Chemical Testing
1. Atmospheric Pollution (Ambient Air)

<table>
<thead>
<tr>
<th>S.No</th>
<th>Test Parameter</th>
<th>Unit</th>
<th>Result</th>
<th>Standard</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Particulate Matter (as PM10)</td>
<td>µg/m³</td>
<td>77</td>
<td>100</td>
<td>IS: 5182 (Part-23) : 2006, RA 2017</td>
</tr>
<tr>
<td>2</td>
<td>Particulate Matter (as PM2.5)</td>
<td>µg/m³</td>
<td>38</td>
<td>60</td>
<td>Lab SOP: EL/SOP/AAQ/01</td>
</tr>
<tr>
<td>3</td>
<td>Sulphur Dioxide (as SO2)</td>
<td>µg/m³</td>
<td>10</td>
<td>80</td>
<td>IS: 5182 (Part-2) : 2001, RA 2017</td>
</tr>
<tr>
<td>4</td>
<td>Nitrogen Dioxide (as NO2)</td>
<td>µg/m³</td>
<td>21</td>
<td>80</td>
<td>IS: 5182 (Part-6) : 2006, RA 2017</td>
</tr>
<tr>
<td>5</td>
<td>Ammonia (as NH3)</td>
<td>µg/m³</td>
<td>19</td>
<td>400</td>
<td>Lab SOP: EL/SOP/AAQ/02</td>
</tr>
<tr>
<td>6</td>
<td>Ozone (as O3)</td>
<td>µg/m³</td>
<td>25</td>
<td>180</td>
<td>IS: 5182 (Part-9) : 1974, RA 2019</td>
</tr>
<tr>
<td>7</td>
<td>Carbon Monoxide (as CO)</td>
<td>mg/m³</td>
<td>0.57</td>
<td>04</td>
<td>IS: 5182 (Part-10) :1999, RA 1999</td>
</tr>
</tbody>
</table>

Remarks: *Drizzling for approx 2-3 hours.

OTHER INFORMATION
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Terms & Conditions: Please refer terms and conditions on backside of Test Report (Page-1)

**End of Report**
TEST REPORT

ULR No. : TC747721000002872F
Type of Sample : Ambient Noise
Test Report No. : EL210521NN002
Date of Reporting : 22/05/2021

Customer : Thapar Institute of Engineering & Technology
            Bhadson Road, Distt Patiala, (Punjab)
Work Order No. & Date : WO NO.
                       WO/TIET/CS/PR/20250 Dt.:
                       17/11/2020

Customer reference No. (If any) : NA
Mode of Collection of Sample : Sampling by laboratory
Date of Sampling : 20/05/2021
Date of Receipt of Sample : 21/05/2021

Sampling Location : Near Project & Estate Department
Period of Analysis : 21/05/2021 To 21/05/2021
Testing Location : Site Testing

RESULTS

I- Chemical Testing
1. Atmospheric Pollution (Ambient Noise Level)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Test Parameters</th>
<th>Units</th>
<th>Results</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ambient Day Time Noise Levels</td>
<td>dB(A)</td>
<td>48.3</td>
<td>LAB SOP: EL/SOP/NL/01</td>
</tr>
</tbody>
</table>

Ambient Noise Quality Standards as per Noise Pollution (Regulation and Control) Rules, 2000

<table>
<thead>
<tr>
<th>Area Code</th>
<th>Category of Area/Zone</th>
<th>Limits in dB(A) Leq*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Industrial area</td>
<td>Day Time: 75</td>
</tr>
<tr>
<td>B</td>
<td>Commercial area</td>
<td>Day Time: 65</td>
</tr>
<tr>
<td>C</td>
<td>Residential area</td>
<td>Day Time: 55</td>
</tr>
<tr>
<td>D</td>
<td>Silence Zone</td>
<td>Day Time: 50</td>
</tr>
</tbody>
</table>

Day time shall mean from 6.00 a.m. to 10.00 p.m., Night time shall mean from 10.00 p.m. to 6.00 a.m., Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority, Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.

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

Remarks : NA

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**End of Report**