Historical and Geographical background, location:

Geography of Visakhapatnam:

- Location: (17' 15 and 18' 20 N latitude and 18' 54 and 30' 30 E longitude)
- Area: 11,161 Sq. Kms
- Visakhapatnam is surrounded by Kailasa, Yarada and Narava hill ranges on north, south and west, respectively and east by Bay of Bengal.

History:

According to History, the city of Visakhapatnam has been named after Visakha, the second son of Lord Shiva and Goddess Parvati. Visakha is the god of valor and war. According to another belief, the city was named Visakhapatnam by an Andhra king in the 4th century in the honor of his family deity “Visakha”.

Visakhapatnam has been ruled by a number of dynasties like Kalingas, the Chankyas, the Rajahmundry Reddy kings, the Cholas and the Golkonda Nawabs. Vizag was under the rule of the Mughals during the 15th and 16th centuries.

Till 1956, the Visakhapatnam Custom House was under the administrative control of the Commissioner of Central Excise, Hyderabad. Since 1.1.1957, the Custom House was attached to the Custom House, Madras. A Commissionerate of Customs & Central Excise was formed at Visakhapatnam on 6th April, 1990. In July, 1997, a separate Commissionerate of Customs was formed at Visakhapatnam vide notification no. 27/97- us (NT) dated 7.7.1997. The Custom House Laboratory, Visakhapatnam is functioning from the year 1997 and renovated laboratory was inaugurated on 03.05.2010.
Vision & Mission

Our vision is:

To be a globally recognized laboratory in area of product certification/Drug testing

Our Mission is:

- To provide high quality chemical analysis of samples received, by testing through standard test procedures.
- To issue unbiased test reports/technical opinions to assist field formations of CBIC and other agencies in discharge of their functions.

Functions:

- Analysis of samples sent by the Revenue authorities for the purpose of classification under Central Excise Tariff, Customs Tariff, Import Trade Control and Export Trade Control Policy books and Draw- back schedule.
- Furnishing of Opinions on technical problems referred to them.
- To inspect factories, in order to study technical problems from Revenue aspect, as and when the Head of Laboratory feels necessary, with the prior approval of the Commissioner of Customs.
- To carry out any other work deemed necessary for safeguarding revenue and any other work of special nature allotted by the Board, Commissioner and Director (RL).
- This laboratory is attached with the Office of Principal Commissioner of Customs, Visakhapatnam and headed by the Chemical Examiner Gr-I, Dr. Parthasarathi Karmakar. Strength of the laboratory lies in its highly qualified and experienced technical personnel, minimum qualifications at entry level is B.Sc (Chemistry) with laboratory working experience of analysis. The highly qualified professionals are recruited as Chemical Examiners through Union Public Service Commission by departmental promotion. Chemist Assistants used to be recruited through the Department itself (past practice)/presently they are recruiting through Staff Selection Commission. A team of personnel have been trained by the National Accreditation Board for Testing and Calibration Laboratories (NABL). Total sanctioned strength (manpower) of this laboratory is 29.
Organizational Structure of Custom House Laboratory Visakhapatnam:

The Commissioner of Customs, Visakhapatnam

The Director (Revenue Laboratories), CRCL, New Delhi (Technical matters)

Chemical Examiner Grade-I/HOD/QM

Sample Receiving Section

Store

Library

Administration

Technical Manager

Food Lab

Assistant Chemical Examiner

Chemical Assistant

Lab Assistant Gr. II & Gr. III

Supporting Staffs

Chemical Examiner Grade-II/ Dy. QM
Duties of officers:

- **Director (Revenue Laboratories):** Director (Revenue Laboratories) is the technical and administrative head of the organization. He is cadre controlling authority of the Group "B" "C" & "D" Officers. Director (Revenue Laboratories) is also appealate authority in respect of disputes if any arisen in testing matters.

- **Joint Director:** To assist the Director (Revenue Laboratories) in respect of technical & Administrative matters.

- **Chemical Examiner Grade-I:** To assist the Joint Director and Director (Revenue Laboratories) in day to day technical administrative works. Issue the test report under his signature.

When posted as an In-Charge of any Custom House Lab./Revenue Lab., **Chemical Examiner Grade-I** looks after the administration and overall functioning of the laboratory.

- **Chemical Examiner Grade-II:** To assist Director, Joint Director and Chemical Examiner Gr. I in day to day technical and administrative matters. Issue the test report under his signature.

- **Assistant Chemical Examiner:** Assistant Chemical Examiner supervise the works of Chemical Assistants and analyse the typical samples. Assistant Chemical Examiner's assist the Chemical Examiners in test report formation. They also provide the referencing works to the Chemical Examiners and guide the Chemical Assistant in their work.

- **Chemical Assistant:** Analysis of samples.

- **Laboratory Assistants:** General Laboratory cleaning, maintenance and Assistant Chemical Assistants in the Analysis of Samples.

Description of samples received for testing:

**Customs (Import):**

<table>
<thead>
<tr>
<th>Ores</th>
<th>Miscellaneous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese ore</td>
<td>Bentonite Sulphur</td>
</tr>
<tr>
<td>Chrome ore</td>
<td>Sun flower oil cake</td>
</tr>
<tr>
<td>Molybdenum ore</td>
<td>Cashew nut shell</td>
</tr>
<tr>
<td>Rutile</td>
<td>Alumina refractory cement</td>
</tr>
<tr>
<td>Coal &amp; Coke</td>
<td>Animal feed supplementary</td>
</tr>
<tr>
<td>Steam coal</td>
<td>Calcium Nitrate</td>
</tr>
<tr>
<td>Non-Coking coal</td>
<td>Manganous sulphate</td>
</tr>
<tr>
<td>Coking coal</td>
<td>Acetone</td>
</tr>
<tr>
<td>PCI coal</td>
<td>Toluene</td>
</tr>
<tr>
<td>Petroleum coke(Raw)</td>
<td>PP Bag</td>
</tr>
</tbody>
</table>

**Customs (Export):**

<table>
<thead>
<tr>
<th>Ores</th>
<th>Ferro Alloys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron ore</td>
<td>Ferro chrome</td>
</tr>
<tr>
<td>Mill scale</td>
<td>Ferro silicon</td>
</tr>
<tr>
<td>Garnet</td>
<td>Ferro manganese</td>
</tr>
<tr>
<td>Silimanite</td>
<td>Ferro silico manganese</td>
</tr>
<tr>
<td></td>
<td>Silico manganese</td>
</tr>
</tbody>
</table>
Petroleum coke(calcined)  
Metallurgical coke  

Petroleum Products  
Diesel oil  
Furnace oil  
Lubricating oil  
Base oil  
Waste/Sludge oil  

Chemicals  
Ammonium sulphate  
Benzoin  
2,4 Disodium salt  
2,4 Dimethyl Amine salt  
Quick lime  
Potassium dichromate  

Vegetable Oils  
RBD Palm oil  
RBD Palmolein  
Crude Sun Flower seed oil  
Crude degummed Soya bean oil  
Crude Palm Kernel oil  
Palm Acid oil  
Fatty Acid Methyl Ester(FAME)  
Bio Diesel  

Fertilizers  
Muriate of Potash  
Urea  
Rock phosphate  
Phosphoric acid  

Resources:  

**(i) Man power:** The existing manpower is shown below

<table>
<thead>
<tr>
<th>S.No</th>
<th>DESIGNATION</th>
<th>SANCTIONED STRENGTH</th>
<th>WORKING STRENGTH</th>
<th>VACANCY POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CHEMICAL EXAMINER GR-I</td>
<td>01</td>
<td>01</td>
<td>NIL</td>
</tr>
<tr>
<td>2</td>
<td>CHEMICAL EXAMINER GR-II</td>
<td>03</td>
<td>01</td>
<td>02</td>
</tr>
<tr>
<td>3</td>
<td>ASSISTANT CHEMICAL EXAMINER</td>
<td>06</td>
<td>04</td>
<td>02</td>
</tr>
<tr>
<td>4</td>
<td>CHEMICAL ASSISTANT</td>
<td>12</td>
<td>06</td>
<td>06</td>
</tr>
<tr>
<td>5</td>
<td>LABORATORY ASSISTANT GR-II</td>
<td>03</td>
<td>03</td>
<td>NIL</td>
</tr>
<tr>
<td>6</td>
<td>LABORATORY ASSISTANT GR-III</td>
<td>04</td>
<td>03</td>
<td>01</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>29</strong></td>
<td><strong>18</strong></td>
<td><strong>11</strong></td>
</tr>
</tbody>
</table>
(ii) **Instruments:**

- U.V Visible Spectrophotometer (Thermo)
- U.V Visible Spectrophotometer (Motras)
- Gas Chromatograph
- Gas chromatograph–mass spectrometer (GC-MS)
- High Performance Liquid Chromatography (HPLC)
- F.T.I.R. Bruker Alfa with KBr
- F.T.I.R. Bruker Alfa with ZnSe
- HPTLC & LC-MS
- Atomic absorption spectrometer (AAS)
- Karl Fisher apparatus
- Automatic Titrator
- Microwave Digestion System
- Rotary Evaporator
- Bomb Calorimeter
- Lovibond Tintometer
- Refractometer
- pH meter
- Constant Viscosity Bath and Viscometer
- Flash point apparatus
- Melting Point apparatus
- Microscope
- Distillation apparatus
- Oil Centrifuge apparatus

(iii) **Library:** The following books are present in the library.

1. Ullmann's Encyclopedia of Industrial chemistry (40 volumes).
2. Standard Methods of Chemical Analysis by F.J. Welcher (3 volumes).
3. Encyclopedia of Industrial chemical Analysis by F. D Snell (20 volumes).
4. Wealth of India (30 volumes)
5. Bailey's Industrial Oil & Fat products (5 volumes).
6. Clarke's analysis of Drugs and Poisons (2 volumes).
7. Fuels & Lubricants Handbook Edited by G. E Totten
8. Coal Geology by Larry Thomas.
Achievements:

Recently this laboratory has granted NABL (National Accreditation Board for Testing and Calibration Laboratories) accreditation in accordance with ISO/IEC 17025:2017 in the discipline of chemical testing.

Photographs:
CUSTOM HOUSE LABORATORY

VISAKHAPATNAM

IN THE PRESENCE OF

SHRI P.N. VITTAI DASS,
MEMBER (HAC), CBEC, NEW DELHI
ON 07-06-2010

IN THE PRESENCE OF

SHRI CHANDRANAG MATHUR, IRS
CHIEF COMMISSIONER, VIZAG ZONE
AND

SHRI M. PONNUSWAMY, IRS
COMMISSIONER OF CUSTOMS, VIZAG.