2023-24

Delhi Technological University

Shahabad Daulatpur, Bawana Road, Delhi – 42

Email Id:-cpodtu@gmail.com tel 01127852188

F. No DTU/EC/00178/2023-24/Electrical /699

Dated: 11.06.2024

Namdhari Eco Energies Pvt Ltd
B-801, 8th Floor, Tower -4,Plot No 17,
NX One Sector Techzone -4, Greater Noida West,
Gautam Buddha Nagar,Uttar Pradesh -201301

SUBJECT:- DETAIL ENERGY AUDIT OF ELECTRICAL EQUIPMENTS IN DTU , DELHI.

Sir,

Your tender for the above mentioned work has been accepted on behalf of DTU at your quoted amount of of Rs.4,91,898/- (Rupees Four Lakh Ninety One Thousand Eight Hundred Ninety Eight Only)which is 62.09% (Six Two Decimal Zero Nine) percent below the estimated cost of Rs.12,97,668/-(Rupees Twelve Lakh Ninety Seven Thousand Six Hundred Sixty Eight Only).

You are requested to submit the performance guarantee **Rs.24,595/-(Rupees Twenty Four Thousand Five Hundred Ninety Five Only)** within seven days of issue this letter. The performance guarantee shall be in the prescribed form as provided in clause 1 of General Condition of Contractor for CPWD works, in favour of "Registrar, DTU" New Delhi, and valid up to 31/07/2025.

Please note that the time allowed for carrying out of the work as entered in the (12 Months) shall be reckoned as mentioned, after the date of issue of this letter.

10/6/24

Chief Project Officer

Copy To:-

1. PS to VC, DTU for kind information please. 11/6/24
2. Registrar, DTU 11/6
3. Controller of Finance, DTU 11/06/2024
4. J.E. (Elect.), DTU
5. Guard File

A. Project Officer (Elect.)

CIN: U74999HR2014PTC053123; MSME:UDYAM-UK-05-0007990
GSTIN: 09AAECN7430J1Z8; Start-Up REGN No: DIPP51372

NAMDHARI ECO ENERGIES PVT LTD

Energy for better future

Head Office: C 105 Galaxy Vega TechZone 4 Greater Noida
Phone: 0120-6056188, info@ecoenergies.co.in www.ecoenergies.co.in

To,
Project Officer (Elect.)
Delhi Technological University Shahbad Daulatpur Delhi 42

Subject: Submission of Bank Guarantee as per Energy Audit Service Ref No: GEM/2023/B/4123530

Dear Project Officer (Elect.),

As per scope of energy audit service for Training And Technical Education Department Delhi at Delhi Technological University under the contact No. GEMC-511687708782374, which is awarded to M/s Namdhari Eco Energies Pvt Ltd Greater Noida.

In Favor of PAO, DDO, DELHI TECHNOLOGICAL UNIVERSITY, Bank Guarantee has submitted by M/s Namdhari Eco Energies Pvt Ltd.

Performance Bank Guarantee No. 7218NDDG00003725

Performance Bank Guarantee Amount No. Rs. 24,595.00 (Rupees Twenty-Four Thousand Five Hundred Ninety Five Only)

GeM Contract No. GEMC-511687708782374

Bid Number: GEM/2023/B/4123530

BG issuance Date: 19/04/2024

Namdhari Eco Energies Pvt. Ltd.

Applicant / Seller

Mr. Bali Singh

M/s Namdhari Eco Energies Pvt Ltd

Place: Greater Noida

Date: 24/06/2024

CIN : U74999HR2014PTC053123; MSME:UDYAM-UK-05-0007990
GSTIN: 09AAECN7430J1Z8; Start-Up REGN No: DIPP51372

NAMDHARI ECO ENERGIES PVT LTD

Head Office: C 105 Galaxy vega Techzone 4 Greater Noida
Phone : 0120-4220122, info@ecoenergies.co.in www.ecoenergies.co.in

Date :21.08.2024

To,
The Registrar
Delhi Technological University
Shahbad Daulatpur, Main Bawana Road,
Rohini, North East Delhi,
Delhi-110042, India

Subject: Schedule for the Energy Audit (Summer) as per GEM Order No: GEMC-511687708782374

Dear Sir

This is in reference to the GeM Order No: GEMC-511687708782374Bali SIngh . As per the contract, Namdhari Eco Energies Pvt Ltd is scheduled to conduct the energy audit of Delhi Technological University in two seasons.

We are planning to commence the Summer Audit from 26th August 2024. The audit is expected to span approximately two weeks. To facilitate our work, we kindly request you to arrange accommodation for our team of three engineers for the duration of the audit.

Your cooperation in this matter will greatly assist us in completing the audit efficiently and effectively.

We look forward to your prompt response and confirmation of the accommodation arrangements.

Thank you for your support and assistance.

Yours sincerely,

Bali Singh
Namdhari Eco Energies Pvt Ltd
Mob - 9711591550
Email : bali@ecoenergies.co.in

DELHI TECHNOLOGICAL UNIVERSITY
Formerly, Delhi College of Engineering
Govt. of NCT of Delhi
Shahbad Daulatpur, Main Bawana Rd., Delhi - 110042
(Department of Environmental Engineering)

Event Report

Event Name: *21-Day Eco-Challenge Campaign*
Date of Visit: *21 days (3rd – 23rd March, 2024)*
Theme: *Earth Day*
Organizer: *Department of Environmental Engineering, DTU*

Overview: The Department of Environmental Engineering at Delhi Technological University organized Paryavarnam's 21-Day Eco Challenge Campaign with the goal of raising participants' awareness of environmental issues and sustainable practices. The challenge spanned three weeks, focusing on energy conservation, waste reduction, and nature appreciation.

Highlights:

- *Participant Engagement:* The challenge saw active participation from students, faculty, and staff members of Delhi Technological University, as well as external participants.
- *Daily Challenges:* Each day featured a unique eco-friendly task, such as reducing energy consumption, minimizing waste, and connecting with nature. Participants showcased their efforts on social media platforms using designated hashtags.
- *Community Building:* Participants engaged in discussions, shared experiences, and encouraged each other to adopt sustainable habits. This encouraged a sense of community and collective responsibility towards the environment.
- *Educational Resources:* Alongside the challenges, educational resources were provided to enhance participants' understanding of environmental issues and sustainable living practices.
- *Closing Ceremony:* The challenge concluded with the Earth Hour.

Contents:

Week 1: Energy Conservation

DAY 1. No Iron Day: Wrinkles ache Hai ! Avoid using irons or pressing machines for clothes. Hanging clothes to air-dry reduces energy use. Every Monday shall be dedicated to reducing the carbon footprint used for ironing clothes. #WrinkesAcheHai #ParyavarnamDTU

DAY2. Unplug Unused Electronics: Unplug it ! Unplug chargers, appliances, and electronics when not in use. Even on standby, they consume energy. #UnpulgToday #ParyavarnamDTU

DAY3. Natural Lighting Day: Use a dipper at night, Din me only Sun-Light ! Use natural light during the day instead of turning on lights. #OnlySunLight #ParyavarnamDTU

DAY4. Cooking using a pressure cooker: Seeti bajao Cooker Wow ! Cook today's meal using a pressure cooker. It uses less oil in cooking and also less fuel. #CookerWow #ParyavarnamDTU

DAY5. Turn off excess Lights: Batti Gul ! Be mindful of lights in unoccupied rooms. Challenge yourself to turn off lights as you leave each room. #BattiGul #ParyavarnamDTU

DAY6. Reduce your shower time: Bucket Today ! Shorten showers to save water and the energy used to heat it. Try going for a bucket bath today. #BucketToday #ParyavarnamDTU

DAY7. Open Windows for Cooling: Khidki Khol ! Instead of turning on fans or air conditioning, open windows to cool the house naturally. #KhidkiKhol #ParyavarnamDTU

Week 2: Waste Reduction

DAY8. Vegetarian Meal Day: Avoid consuming non-vegetarian food today, reducing your carbon footprint. #VeggieBowl #ParyavarnamDTU

DAY9. Reusable Bottle day: Plastics Bye Bye ! Use a reusable water bottle, no single-use plastic bottles. #ByePlastics #ParyavarnamDTU

DAY10. Compost Day: Nature’s post..Only Compost ! Start composting food scraps if you haven't already. #OnlyCompost #ParyavarnamDTU

DAY11. BYOB (Bring Your Own Bag): Use only reusable bags when shopping. #BYOB #ParyavarnamDTU

DAY12. Paperless Day: Avoid using paper. Opt for digital notes, receipts, and communication. #WiseByte #ParyavarnamDTU

DAY13. No Disposable Utensils: Use reusable utensils instead of disposable ones for meals. #NoDisposables #ParyavarnamDTU

DAY14. Zero Waste Day: Try to produce zero waste for the day by being mindful of packaging and recycling properly. #ZeroWaste #ParyavarnamDTU

Week 3: Nature Appreciation

DAY15. Plant a Tree: Whether in your backyard or a community area, plant a tree. #PlantATree #ParyavarnamDTU

DAY16. Bird Feeder Day: Set up a bird feeder or birdhouse to support local wildlife or setup a bowl for water for birds. #BirdFeeding #ParyavarnamDTU

DAY17. Nature Walk: Take a walk outside, appreciating and observing nature. #WalkDTU #ParyavarnamDTU

DAY18. Eco-friendly Transportation: Use public transport, bike, walk, or carpool for the day. #GreenWays #ParyavarnamDTU

DAY19. Local Produce Day: Purchase locally grown fruits and vegetables to support local farmers and reduce carbon footprint. #VocalForLocal #ParyavarnamDTU

DAY20. Educational Day: Spend time learning about local environmental issues or a new way to live sustainably. #EcoEdDay #ParyavarnamDTU

DAY21. Mindful Water Usage: Conserve water today by turning off taps when not in use. Every drop counts! #EveryDropCounts #ParyavarnamDTU

DAY	**Link to post**
DAY01	https://www.instagram.com/p/C4CNoMsptz3/
DAY02	https://www.instagram.com/p/C4Eu4djPy4o/
DAY03	https://www.instagram.com/p/C4HSsMGvrGn/
DAY04	https://www.instagram.com/p/C4KBKr5J89p/

DAY05	https://www.instagram.com/p/C4Mx9Yip9PT/
DAY06	https://www.instagram.com/p/C4PEcODJdEL/
DAY07	https://www.instagram.com/p/C4RJ9_fSZmL/
DAY08	https://www.instagram.com/p/C4UM9ahJI-y/
DAY09	https://www.instagram.com/p/C4Ww0lKvE1G/
DAY10	https://www.instagram.com/p/C4ZZDUapulZ/
DAY11	https://www.instagram.com/p/C4b_po3p6kb/
DAY12	https://www.instagram.com/p/C4eiI8Yp9Fp/
DAY13	https://www.instagram.com/p/C4hJmCDNsja/
DAY14	https://www.instagram.com/p/C4jpVSnpCBA/
DAY15	https://www.instagram.com/p/C4mWB_PJU01/
DAY16	https://www.instagram.com/p/C4o92udp1rc/
DAY17	https://www.instagram.com/p/C4rsZQ2p1Nc/
DAY18	https://www.instagram.com/p/C4uAQIxJVMI/
DAY19	https://www.instagram.com/p/C4wj-2yJ3pV/
DAY20	https://www.instagram.com/p/C4zPbAjJkbX/
DAY21	https://www.instagram.com/p/C412FykpUVR/

Impact:

- *Environmental Impact:* The campaign strived to reduce energy consumption and waste generation and promote eco-friendly practices.
- *Personal Development:* Participants developed healthier habits, increased awareness of environmental issues, and cultivated a deeper appreciation for nature.
- *Community Impact:* The challenge created a ripple effect, inspiring others to adopt sustainable behaviors and encouraging a culture of environmental consciousness within the community.

Conclusion:

Paryavarnam's 21-Day Eco Challenge was a resounding success, exemplifying the commitment of Delhi Technological University towards environmental sustainability. Through collective efforts and individual actions, participants made a positive impact on the environment and set a precedent for future initiatives.

Dr. Rajeev Kumar Mishra
Deptt. Coordinator, ViksitBharat@2047

Gour Anunay Ashokkumar
Co-ordinator

DELHI TECHNOLOGICAL UNIVERSITY
Formerly, Delhi College of Engineering
Govt. of NCT of Delhi
Shahbad Daulatpur, Main Bawana Rd., Delhi - 110042
(Department of Environmental Engineering)

Event Report

Event Name: *Yamuna Biodiversity Park Field Visit for Wetland Awareness*
Date of Visit: *21.03.2024*
Theme: *Wetland Awareness*
Venue: *Yamuna Biodiversity Park, Wazirabad*
Organizer: *Department of Environmental Engineering, DTU*

Objective: The aim of this event is to educate individuals about the importance of wetlands in the ecosystem, including their role in water purification, flood control, biodiversity conservation and climate regulation. Visitors can learn about the significance of preserving wetlands and the threats they face, as well as engage in activities to promote wetland conservation and restoration efforts.

No. of participants: 30

Highlights: The field trip began with an informative presentation about the park. The park authorities took the opportunity to enlighten the visiting students about the park's intricate ecosystem and its vital role in preserving wetlands. Through a comprehensive presentation, they delved into the park's history, highlighting its creation and purpose. They emphasized the significance of wetlands in maintaining ecological balance, showcasing how these habitats support diverse plant and animal species. Through visual aids, data, and real-life examples, the presentation engaged the students and encouraged them to appreciate the complexity and fragility of wetland ecosystems.

After the presentation, the park authorities led an insightful guided tour through Yamuna Biodiversity Park, offering students a firsthand experience of its rich biodiversity. With expertise and enthusiasm, they pointed out various bird species, plants, trees, and animals inhabiting the park, providing valuable insights into their characteristics and ecological roles.

As students traversed the park's winding paths, the authorities highlighted the diverse avian population, pointing out migratory birds and resident species. They shared fascinating facts about each bird's behavior, habitat preferences, and migratory patterns, fostering a deeper appreciation for avian diversity and the importance of wetlands as crucial bird habitats.

Amidst the lush vegetation, the park authorities identified native plants and trees, explaining their ecological significance and cultural importance. They showcased the role of these plants in supporting wildlife, purifying water, and stabilizing soil, underscoring the interconnectedness of the park's ecosystem.

Although direct animal sightings were rare, the students encountered evidence of wildlife presence in the form of footprints and defecation. As they traversed the park's trails, the keen eyes of the park authorities pointed out various signs left behind by elusive inhabitants, sparking curiosity and excitement among the students.

Throughout the guided tour, the park authorities encouraged students to ask questions, fostering an interactive and engaging learning environment.

Feedback: The students eagerly shared their feedback, expressing a mixture of awe, curiosity, and newfound appreciation for the natural world. Several students highlighted the educational value of the tour, noting how it deepened their understanding of biodiversity and environmental conservation. They praised the park authorities for their expertise and enthusiasm, commending their efforts to make the tour engaging and informative. Many students expressed gratitude for the opportunity to learn outside the classroom, emphasizing the importance of hands-on experiences in fostering environmental awareness.

Overall, the feedback from the students was overwhelmingly positive, with many expressing a desire to visit similar parks in the future.

Conclusion: The event was wrapped up with a token of appreciation by the organizing committee to the senior park official. The event successfully achieved its objectives by raising awareness about local environmental challenges.

Dr. Rajeev Kumar Mishra
Deptt. Coordinator, ViksitBharat@2047

Gour Anunay Ashokkumar
Coordinator

Glimpses of the Visit







DELHI TECHNOLOGICAL UNIVERSITY
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(Department of Environmental Engineering)

Event Report

Event Name: *International Day of Happiness Celebration*
Date of Visit: *20.03.2024*
Time: *10:00 AM - 2:00 PM*
Theme: *International Day of Happiness*
Venue: *Pragyan Hall, Delhi Technological University*
Organizers: *Centre of Excellence for Science of Happiness (CESH) and Department of Environmental Engineering in association with Science of Spirituality (SOS) under the aegis of ViksitBharat@2047*

Overview: The International Day of Happiness celebration, jointly organized by CESH, the Department of Environmental Engineering, and SOS, aimed to promote happiness and well-being among the DTU community. The event featured insightful lectures, discussions, and activities focused on achieving holistic happiness and leading purposeful lives.

Event Itinerary:

10:32 AM - 10:40 AM: Welcome Address by Prof. T. Vijaya Kumar, Head of CESH DTU, setting the tone for the day's festivities and emphasizing the importance of happiness in academic and personal life.

10:40 AM - 10:50 AM: Inaugural Speech by Prof. S. Indu, Dean Student Welfare, highlighting the significance of mental well-being and happiness in student life.

10:50 AM - 10:55 AM: Introduction of Mr. Jim Rose by Mr. Suraaj Pal Bhatia, Alumnus 1969, ME, introducing the keynote speaker for the day's event.

10:55 AM - 11:55 AM: Expert Lecture on Meditation for Body, Mind, and Soul by Mr. Jim Rose, providing valuable insights and techniques for achieving inner peace and happiness through meditation.

11:55 AM - 12:00 PM: Introduction of HG Keshava Murari Prabhu Ji by HG Vaikuntha Chandra Prabhu Ji, introducing the next speaker focusing on spiritual well-being.

12:00 PM - 01:15 PM: Expert Lecture on Living a Purposeful Life - Simple Living, High Thinking by HG Keshava Murari Prabhu Ji, guiding participants on leading purposeful and meaningful lives.

01:15 PM - 01:20 PM: Vote of Thanks by Mr. Gour Anunay Ashokkumar, expressing gratitude to all participants, speakers, competent authorities, and organizers for their contributions to the event's success.

01:20 PM - 02:00 PM: Refreshments and networking session allowed participants to interact, share experiences, and build connections in a joyful atmosphere.

Event Impact: The International Day of Happiness celebration provided a platform for the DTU community to explore and enhance their understanding of happiness, well-being, and purposeful living. The insightful lectures and interactive sessions inspired attendees to incorporate happiness practices into their daily lives, fostering a positive and supportive campus environment.

Conclusion: The event successfully celebrated the International Day of Happiness, leaving a lasting impact on participants and reinforcing the importance of happiness, mindfulness, and purpose in academic and personal pursuits.

Dr. Rajeev Kumar Mishra
Deptt. Coordinator, ViksitBharat@2047

Gour Anunay Ashokkumar
Coordinator

Glimpses of the event











DTU-विकसित भारत@2047

DELHI TECHNOLOGICAL UNIVERSITY
Formerly, Delhi College of Engineering
Govt. of NCT of Delhi
Shahbad Daulatpur, Main Bawana Rd., Delhi - 110042
(Department of Environmental Engineering)

Event Report

Event Details:

Event Name: *One Day National Seminar on "Environment, Climate, Health, and Occupational Safety" (ECHOS)*
Date: *23.02.2024*
Theme: *Challenges and Ideas towards ViksitBharat@2047 - Focus on Local Environmental Challenges*
Venue: *Pragyan Hall, 2nd Floor, Admin Building, Delhi Technological University.*
Organizers: *Paryavarnam, Department of Environmental Engg. DTU*

Introduction: The Department of Environmental Engineering in association with Institution's Innovation Council at Delhi Technological University successfully organized a comprehensive One Day National Seminar on "Environment, Climate, Health, and Occupational Safety" (ECHOS), on February 23, 2024. The seminar aimed to explore the intersections of environment, climate, health, and occupational safety, bringing together experts, researchers, and practitioners in these fields.

Inaugural Session: The event commenced with the inaugural session, graced by esteemed Chief Guest Prof. Prateek Sharma, Hon'ble Vice Chancellor, DTU, Guest of Honour Prof. Madhusudan Singh, Registrar, DTU. Coordinator for the seminar Dr. Rajeev Kumar put forward the theme and context of the seminar. The seminar included an insightful addresses by Prof. Madhusudan Singh. Prof. Prateek Sharma, in his keynote address, emphasized the pivotal role of academia in addressing contemporary environmental challenges.

Technical Sessions:

The day unfolded with enlightening technical sessions featuring eminent speakers:

Dr. Pawan Kumar (12:00 PM-1:00 PM): Topic: "Climate Safety through Urban Sustainability", Dr. Kumar, Associate TCP, Ministry of Housing and Urban Affairs, illuminated the audience on the critical linkages between climate safety and sustainable urban development.

Prof. Kiranmay Sharma (2:00 PM-3:00 PM): Topic: "Application of Geospatial Technology in Environmental Management". Prof. Sharma, from GGSIPU, demonstrated the transformative role of geospatial technology in effective environmental management.

Shri Umesh Kumar Purbey (3:00 PM-4:00 PM): Topic: "Chemical Safety in Lab, Safety in Classroom, Road Safety, Fire Safety, Disaster Management Plan, Electrical Safety, and Work Environment Monitoring". Shri Purbey, CEO of HAWKSVALE, UK, provided comprehensive insights into various dimensions of safety, emphasizing a holistic approach.

Concluding Session: The seminar concluded with a thoughtful set of concluding remarks, expressing gratitude to the speakers, coordinators, and participants. The Vote of Thanks was delivered by Sh. Anunay Gour, the Co-Coordinator of ECHOS-2024, acknowledging the collective effort that made the seminar a success.

Key Takeaways:

- In-depth discussions and insights on the nexus of environment, climate, health, and occupational safety.
- Integration of technology for environmental monitoring and management.
- Comprehensive understanding of safety measures across various domains.

Feedbacks: Positive feedback from a wide audience was received, praising the organization and impact of the seminar. Participants also appreciated the opportunity to engage in meaningful discussions on this domain.

Conclusion: The One Day National Seminar on "Environment, Climate, Health, and Occupational Safety" (ECHOS) proved to be a forum for rich intellectual exchange and collaborative learning. The diverse perspectives shared by the speakers and the active participation of the attendees contributed to the success of the event. The knowledge gained and connections forged during ECHOS-2024 are expected to resonate in future endeavours towards a sustainable and safer world.

Dr. Rajeev Kumar Mishra
Deptt. Coordinator, ViksitBharat@2047

Gour Anunay Ashokkumar
Coordinator

DELHI TECHNOLOGICAL UNIVERSITY
Formerly, Delhi College of Engineering
Govt. of NCT of Delhi
Shahbad Daulatpur, Main Bawana Rd., Delhi - 110042
(Department of Environmental Engineering)

Event Report

Event Details:

Event Name: *Photography Competition and Round Table Group Discussion*
Date of Visit: *23.01.2024*
Theme: *Challenges and Ideas towards ViksitBharat@2047 - Focus on Local Environmental Challenges*
Venue: *GIS Lab, Deptt. of Environmental Engineering, DTU.*
Organizers: *Paryavarnam, Department of Environmental Engg. DTU*

Overview: The aim of this event is to empower students to actively contribute to the vision of a ViksitBharat@2047 by visually capturing and discussing local environmental challenges and encourage innovative solutions. For this event, a team of a maximum of two students visited any of the 5 villages adopted by DTU i.e. Barwala, Sahibabad Daulatpur, Siraspur, Bhalswa Jahangir Puri and Pahladpur Bangar. Later in the Round Table Conference the same students will discuss and define engineering solutions to the identified problems.

Photography Competition Highlights:

Participation: A total of 30 participants or teams participated in the photography competition and round table conference presenting diverse and impactful entries depicting a range of local environmental challenges.



Judging Panel: Judges evaluated and selected entries based on creativity, relevance to the theme, visual impact, and technical excellence.

Exhibition: The selected photography competition entries were displayed at GIS Lab to raise awareness about local environmental challenges. Along with it the participants were taken forward to the next round, i.e. Round Table Group Discussion.

Round Table Group Discussion Highlights:

Faculty of the department shared insights on local environmental challenges and potential solutions and gave a direction to participants to think and excel.

Participants: The same participants (30 no.) as in the Photography Competition were promoted to this round of evaluation.

Topics Discussed: Engaging brainstorming session followed by discussions on the identified challenges, and finding innovative ideas, and collaborative initiatives for the same. Actionable plans were developed during small-group discussions.

Winners: Recognition and certificates were awarded to the participants who actively contributed to the round table discussion. Winners were, Mr. Hardik Tyagi (2K22/CH/26), Mr. Jayesh (23/CH/35) and Mr. Anmol Dhankar (2K22/CE/28), receiving a total prize of Rs. 10,000.



Feedback: A positive feedback was received from participants, praising the organization and impact of both the photography competition and the round table discussion. Participants also appreciated the opportunity to engage in meaningful discussions and contribute to potential solutions.

Conclusion: The Photography Competition and Round Table Group Discussion successfully achieved their objectives by encouraging creative expression, raising awareness about local environmental challenges, and facilitating constructive discussions. The positive feedback received underscores the success of these events in promoting the vision of ViksitBharat@2047.

Next Steps: Considering the success of these events, the organizing committee will explore opportunities for future photography competitions and roundtable discussions to further promote environmental awareness and sustainable solutions. Also, it will engage with Centre for Outreach and Extension to expand the event in the future.

Dr. Rajeev Kumar Mishra
Deptt. Coordinator, ViksitBharat@2047

Gour Anunay Ashokkumar
Coordinator

Glimpses of the Event

2022-23

AQAR for AY 2022-23

Criteria	Description	Paragraphs for AQAR 2022-23
7.1.6	The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following: 1. Green audit 2. Energy Audit 3. Environment audit 4. Clean and green campus recognitions/awards 5. Beyond the campus environmental promotional activities	Thorough review of the Green Audit Recommendations, seeking necessary actions for administrative decision-making, specifically addressing 10 key Green Audit recommendations as prescribed in the audit report, steps have been taken accordingly. The University maintains a consistent commitment to resource management and sustainability by regularly conducting audits on its diverse resources, reflecting a proactive approach to ensure effective utilization and adherence to environmental standards.

95/c

Delhi Technological University

(Estd. By Govt. of NCT of Delhi vide Act 6 of 2009)

(Formerly Delhi College of Engineering)

Internal Quality Assurance Cell (IQAC)

DTU/IQAC/2018/24/1152 **Date: 09. 06. 2023**

The 5th meeting of IQAC was held on 24st May, 2023 at 12:00 AM in Sangyan Hall (Room no. 307), 2nd Floor, Administrative Building, Delhi Technological University. The following members were present during the meeting:-

1. Prof. Jai Prakash Saini, Vice Chancellor, DTU
2. Prof. Madhusudan Singh, Registrar, DTU
3. Sh. Kamal Pathak, Controller of Examination, DTU
4. Prof. Nirendra Dev, Professor CED & Controller of Finance, DTU
5. Prof. Neeta Pandey, Professor ECE & Director IQAC
6. Prof. Rajeshwari Pandey, Professor ECE
7. Prof. Rinku Sharma, Professor AP
8. Ms. Divya Narayan, Chief Operating Officer, DTU
9. Prof. Girish Kumar, Professor MED & Coordinator IQAC
10. Prof. Poornima Mittal, Professor ECE & Coordinator, IQAC
11. Prof. Anil Kumar, Professor, AC& Coordinator, IQAC
12. Dr. Shilpa Pal, Associate Professor, CED & Associate Director IQAC
13. Mr. Yashdeep Singh, Assistant Professor, DSM & Dy. Coordinator IQAC
14. Sh. Pradeep Teotia, Officer in charge Store & Purchase, DTU
15. Sh. Arun Gupta, Alumni & Local Society
16. Sh. Sunil Singh Solanki – Employer (SAP Cloud Platform)
17. Sh. Piyush C. Ojha – Industrialist (Synergy System and Solutions)
18. Sh. Parmod Kumar Panda – Parent (ITS Director)
19. Dr. Harikesh, Assistant Professor ECE & Dy. Coordinator, IQAC
20. Dr. Prashant Giridhar Shambharkar, Assistant Professor CSE & Dy. Coordinator, IQAC
21. Dr. Manjeet, Assistant Professor ECE & Dy. Coordinator, IQAC
22. Dr. Asmita Das, Assistant Professor, BT
23. Dr. Rajeev Mishra, Assistant Professor, ENE
24. Mr. Pradeep Kumar, JE (Civil) Engineering Cell, DTU
25. Mr. Pradeep Yadav, JE (Electrical) Engineering Cell, DTU
26. Mr. Satish Kumar, Engineering Cell, DTU

Agenda 5.1 : Opening remarks by the Chairperson

The Chairperson welcomed all the members and appreciated the efforts of IQAC team in bringing out relevant agenda items which are most essential for the development of the University.

Agenda 5.2 : Confirmation of the minutes of 4rd meeting of the IQAC held on 31.03.2022.

The minutes of the 4th meeting of the IQAC, DTU held on 31.03.2022, were circulated among all the members vide forwarding No. DTU/IQAC/Minutes/2018-19/24/791 dated 06.04.2022. No comments have been received from any of the member.

Decision: IQAC confirmed the minutes of the 4th meeting of IQAC.

Agenda 5.3 : Action taken report on the decision taken in the 4th meeting of the IQAC held on 31.03.2022.

Decision: IQAC took the action taken report on record.

Agenda 5.4 : ISO 9001:2015 Audit (Internal & External)

It is submitted to IQAC that Internal ISO Audit AY 2021-22 was conducted 17th -18th October 2022 and external ISO Audit was held on **17th -18th November 2022.** The University has now received re-certification of ISO 9001:2015 QMS till **26.11.2024**. IQAC has requested STQC to conduct ISO QMS auditors training programmers at DTU. The training will have participation of 01 officer from each of the 16 academic and 25 non-academic departments and all IQAC members. The training is expected to streamline the process of SOP revision, designing new SOPs and create a pool of new ISO auditors for internal audit. The training will be conducted in DTU during May to July 2023.

Decision: IQAC took the development on record and approved the proposal

Agenda 5.5 : NBA Accreditation of various courses of DTU

It is submitted to IQAC that the Self-Assessment Report (SAR) of 02 PG Programs (Signal Processing & Digital Design and VLSI Design & Embedded System) and 03 UG Programs (Engineering Physics, Chemical Engineering and Mathematics& Computing) have been submitted to NBA.

The expert team visited university during 31st March to 02nd April, 2023 and result is awaited. University is planning to go for NBA accreditation of M. Tech (Power Electronics and Systems (PES)) program.

Decision:

- IQAC took the action taken report on record and M. Tech (Power Electronics and Systems (PES) program has been selected for possible NBA accreditation.
- The status of NBA accreditated programs may be displayed in HOD office of respective department.

Agenda 5.6 : Feedback from stakeholders

It is submitted to IQAC that Program Exit survey was taken before date of viva-voce examination from exiting students (Passing out students). Teacher survey was taken by COE and form was modified as per requirements of NBA/NAAC. The course feedback form was designed and customizable form was shared to all HoD's with a request to circulate it among all faculty members. IQAC is in the process of finalizing the feedback forms based on inputs received from experts of NBA team.

Decision:

- IQAC took the action taken report on record. IQAC suggested that SOP for feedback analysis should be prepared by IQAC.
- The feedback of teachers taken by COE, should be shared with HOD's of the concerned Department so that counselling of teacher may be done, if needed the action taken on feedback shall be shared with competent authority.
- Teacher feedback should be taken twice in a semester so that appropriate action can be taken based on midterm review.
- Feedback forms should be prepared covering all the points required for the 360° feedback as laid down in AICTE Gazette notification 2019.
- For the promotion of the faculty members as per AICTE gazette notification 2019, selection committee will decide on how to accommodate the feedback not taken for certain duration (e.g. pandemic duration etc.)

Agenda 5.7 : Green Audit of the University

It is submitted to IQAC that to meet the requirement of NAAC criteria 7.1 of out of 13 recommendations of Green Audit:

- Action on 1, 3, 4, 5, 7,8,12 and 13recommendations has been completed.
- Action on 2, 6,9,10 and 11 recommendations has been initiated and is in progress.

Decision:

- IQAC took the action taken report on record and suggested that the schedule for smog gun should be made for proper utilization of the facility to make dust free campus. The log book of the same may be monitored on regular basis.

- The Department of Biotechnology should explore the possibility of disposing the bio-medical waste with hospital/clinics where the visiting doctors of the health centre of the University are currently working.

- Drip Irrigation of the lawns of DTU may be explored.

- Horticulture department should look into the plantation alongside the trees.

Agenda 5.8 : IT/ERP Audit of the University

It is submitted to IQAC that the STQC was contacted and because of massive work load they refused to carry IT/ERP audit and suggested to go for other lab. We contacted other organization and came to know that it requires website manual and security certificate prior to IT/ERP audit, which is conveyed to Head CC and the work has been initiated by Head CC.

Decision:

- IQAC took the development on record regarding security certificate of DTU website. It was suggested that the security certificate may be obtained at the earliest.

- The ERP used by DTU is of third party and security audit had been done by their side only.

- Head CC should explore the possibility of hosting DTU website on cloud.

Agenda 5.9 : Academic and Administrative Audit

It is submitted to IQAC that External Academic Audit of AY (2020-21) was conducted during the period of 17th -18th May 2022 and 26th -27th May

2022as per NAAC requirement. Internal Academic Audit 2021-22 has been conducted on 17th -18th October 2022.
The expert committee proposed to revise the academic audit Performa. The IQAC proposed the seven member committee. The committee reviewed the existing Performa and suggested changes. The Performa is being modified.

Decision:

- IQAC took the development on record and suggested that the academic audit report should be put up in the Academic council and BOM

Agenda 5.10 : Safety audit of the University

It is submitted to IQAC that Structural Safety Audit of the University has been conducted as per the notification from MCD of Delhi. Action on disability audit has been communicated to EOC and the work is in progress. Fire Drill was conducted on 21.03.2023in DTU.

Decision:

- IQAC took the development on records and suggested that the disability audit should be conducted. Structural stability of the truss structure in the foir of UG/PG section and back of the auditorium may be analysed

Agenda 5.11 : Accreditation of labs by NABL

It is submitted to IQAC that 04 Labs namely concrete lab from Civil Engineering, Industrial Engineering Lab from Mechanical Engineering, The Environmental Microbiology & Bioremediation Laboratory from Environmental Engineering and Power System Laboratory from Electrical Engineering Department has been identified and permission has been taken by Hon'ble Vice Chancellor to re-initiate the NABL Accreditation process of these laboratories after COVID.

Each concern department is requested to nominate two faculty members for conduction of NABL accreditation of their respective departments. The work is under process.

Decision:

- IQAC took the action taken report on record and suggested that PO order issued to National Academy of Construction in January 2020, for NABL accreditation as consultant may be reissued, if the vendor agrees to do the work at same rate and condition.

Agenda 5.12 : **Annual report of the University**

It is submitted to IQAC that Annual report of the University has been published for 2018-19, 2019-20 and 2020-21. Annual Report 2021-22 has been prepared and approved by chairman BOM and has been placed in the Court Meeting.

Decision: IQAC took the development on record.

Agenda 5.13 : **Monthly Data Collection**

It is submitted to IQAC that a Sub-committee is constituted under the Chairpersonship of Ms. Divya Narayan, COO and Head CC to implement the Software/Portal.

Decision:

- IQAC took the action taken report on record and suggested that the computer centre should start module wise development of the data portal and make the necessary application for monthly data collection from the departments and other units.
- Data collected should be stored on cloud/ local server.

Agenda 5.14 : **NAAC AQAR**

It is submitted to IQAC that DTU has been granted NAAC accreditation on 26/11/2019. Thereafter, Annual Quality Assurance Report (AQAR) is to be submitted annually. The AQAR for AY 2018-19, 2019-20, 2020-21and 2021-22 has been submitted on NAAC portal.The same has been placed on DTU website at link- **http://iqac.dtu.ac.in/assets/docs/aqar/AQAR-20-21.pdf**

As per Mandatory requirement of AQAR NAAC Criterion VII, "7.1.6 – (Quality audits on environmental and energy are regularly undertaken by the institution). Energy Audit and Environmental Audit are to be conducted for which HOD Electrical Engineering for Energy Audit and HoD, Environmental Engineering have been nominated.

Also as per AQAR NAAC following actions/activities are proposed by IQAC:-

- Conduct of workshop/lecture on gender issues

- Conduct of workshop/lecture on swachbharat
- Conduct of workshop/lecture on AIDS Awareness
- Conduct of workshop on teaching pedagogy with funding from NAAC
- Conduct of annual awareness program on code of conduct

The work on aforementioned is in process.

Decision:

- IQAC took the development on record and approved the proposal.
- IQAC should explore the possibility of applying for NAAC accreditation (fresh application) prior to first cycle completion i.e. 26/11/2024.

Agenda 5.15: Any other item with the permission of the chair IQAC discussed the grades obtained in internal academic audit of A.Y. 2021-22.

- IQAC discussed the grades obtained by the Departments in the internal academic audit of A.Y. 2021-22. It was observed that 12 department have obtained grades less than A in the internal Academic Audit A.Y. 2021-22.
    - IQAC advised to reassess academic audit for academic year 2021-2022 for all the Departments who scored grades less than 'A' in the said audit. The report of the same may be presented in IQAC meeting and placed before Academic council and Board of management.
- IQAC took the development on Digital preservation/archival of documents on record. IQAC suggested that the process for record keeping in digital form may be documented and disseminated amongst stakeholders.
- IQAC deliberated on the Content development for ICT enabled learning and suggested that the In-house facility to prepare these models shall be looked into.
    - All faculty members' especially young faculty members must be encouraged to record few online lectures.
    - IQAC suggested formalizing the process of online course development in line with the AICTE guidelines/norms.
    - The faculty member may apply for funding from AICTE to develop the modules/courses of their expertise.
    - The development of online courses will not only help in brand building of the University but also be an initiave towards Skill India program of the Government.

Neeta

(Prof. Neeta Pandey)
Director, IQAC

M

DTU/IQAC/2018/24/1152 Date: 9.06. 2023

Copy to:-

1. Prof. Jai Prakash Saini, Vice Chancellor, DTU
2. Prof. Madhusudan Singh, Registrar, DTU
3. Sh. Kamal Pathak, Controller of Examination, DTU
4. Prof. Nirendra Dev, Professor CED & Controller of Finance, DTU
5. Prof. Neeta Pandey, Professor ECE & Director IQAC
6. Prof. Rajeshwari Pandey, Professor ECE
7. Prof. Rinku Sharma, Professor AP
8. Ms. Divya Narayan, Chief Operating Officer, DTU
9. Prof. Girish Kumar, Professor MED & Coordinator IQAC
10. Prof. Poornima Mittal, Professor ECE & Coordinator, IQAC
11. Prof. Anil Kumar, Professor, AC& Coordinator, IQAC
12. Dr. Shilpa Pal, Associate Professor, CED & Associate Director IQAC
13. Mr. Yashdeep Singh, Assistant Professor, DSM & Dy. Coordinator IQAC
14. Sh. Pradeep Teotia, Officer in charge Store & Purchase, DTU
15. Sh. Arun Gupta, Alumni & Local Society
16. Sh. Sunil Singh Solanki – Employer (SAP Cloud Platform)
17. Sh. Piyush C. Ojha – Industrialist (Synergy System and Solutions)
18. Sh. Parmod Kumar Panda – Parent (ITS Director)
19. Dr. Harikesh, Assistant Professor ECE & Dy. Coordinator, IQAC
20. Dr. Prashant Giridhar Shambharkar, Assistant Professor CSE & Dy. Coordinator, IQAC
21. Dr. Manjeet, Assistant Professor ECE & Dy. Coordinator, IQAC
22. Dr. Asmita Das, Assistant Professor, BT
23. Dr. Rajeev Mishra, Assistant Professor, ENE
24. Mr. Pradeep Kumar, JE (Civil) Engineering Cell, DTU
25. Mr. Pradeep Yadav, JE (Electrical) Engineering Cell, DTU
26. Mr. Satish Kumar, Engineering Cell, DTU

Shilpa Pal 9/6/23

Dr. Shilpa Pal
Associate Director, IQAC

Engineering Cell
DELHI TECHNOLOGICAL UNIVERSITY

Shahbad Daulatpur, Bawana Road, Delhi – 110042

F.No. DTU/Engg.Cell/2021-22/Electrical/6679 Dated: - 27/2/22

To,

Dr. Shilpa Pal
Associate Director, IQAC
Delhi Technological University

Subject: Regarding Action Taken Report on Agenda 3.8 if Green Audit.
Ref: - Your office letter no. DTU/IQAC/2018-19/49 dated: 20.04.2022.

Dear Sir,

With the reference to your letter mentioned above regarding the action taken on agenda no. 3.8 of review meeting of Green Audit, in this regard action taken as under: -

S.No.	DTU/IQAC/2019	Action Taken
1.	Acoustic enclosures of diesel generators are required to be installed and maintain to ensure overall noise level during DG set operations	A proposal for procurement of new Generators is under process. The replacement of old DG set and condemnation is also process. Letter sent for PWD this work. (Copy enclosed) C/18
2.	Collection of biodegradable waste	The process of collection of biodegradable and non-biodegradable waste from each house in the University (DTU Campus) has been maintained regularly. Log Book is Enclosed. (C/12 to C/14)
3.	Consumption of water supply in campus	A water supply connection 25mm Dia with communication pipe 50mm Dia has been approved by Delhi Jal Board. A new domestic connection for residential area is also applied to meet out the gap between demand and supply. (C/11)
4.	Commercial non subsidized cylinders are required to use in canteen.	Commercial non subsidized cylinders has been installed in canteen. (C/06-C/08)
5.	Drinking water monitoring on regular basis as per IS 10500-2012 check fortnightly basis	Maintained on regular basis. (Report is enclosed) (C/03 & C/04)
6.	Organic dry waste, university should consider some briquettes which may be used as fuel in boilers and some other	Presently, Waste to Energy Plant having capacity 1 Ton Per Day (TPD) has been installed and running in the campus and composting pits are also maintained for horticulture leaves. Log Book is enclosed. (C/12-C/14)
7.	Maintenance of pond includes lining of the pond clean supply of water and good habits for the fishers in the pond.	Preliminary plan has been finalized work will be taken by PWD Delhi. According requisition has been send to the PWD office. (C/02)
8.	Dust free campus	Anti-Smoke Gun, Plantation Trees, Sprinkler, used to make campus dust free. (C/01)

10429/Cf
28/2/22

This is for your kind information please.

Enclose: As above.

27/2/23

(Prof. A.K. Srivastava)
Chief Project Officer, DTU

F.No. DTU/Engg.Cell/2021-22/Electrical/

Dated: -

Copy to: -

1. Registrar, DTU for kind information.
2. Guard File.

27/02/2023.

(Er. Mohit Tyagi)
Assistant Engineer, DTU

c/108

Delhi Technological University

Established under Govt. of Delhi Act 6 of 2009
(Formerly Delhi College of Engineering)
Shahabad Daulatpur, Bawana Road, Delhi – 42

F.No. DTU/Engg.Cell/003506/2022-23/Electrical/6375 Date: 1/12/2022

To,
Chief Engineer (Other Projects),
P.W.D. (GNCTD) 13th Floor,
M.S.O. Building. IP Estate, New Delhi-110002

Subject: Replacement/Upgradation of HT & LT (11KV/440 V) power line distribution network at the main campus DTU, Bawana Road, Delhi-110042.

Sir,

With reference to above subject it is brought to your kind notice that building and works committee of Delhi Technological University has approved the above work and decided to execute this work through PWD Delhi. Therefore, I have been directed by the Competent Authority to place the requisition for taking the above said work.

Existing system is 25-year-old at present the electricity load has been increased due to the increasing of heating and cooling load installed in campus and increased infrastructure, it leads to create pressure to old existing HT & LT lines and panels. Due to increased load/ overburden to existing HT & LT power lines and panels, the electric faults are happening frequently, therefore complete renewal/upgradation is required.

Scope of Works: - 11000/440Volt Four no(ESS No:-1,2,3,&4) of Substations with all associate equipment's and emergency supply sources.i.e Dry Transformers, Cables, Busbar, CB's, Switches and Generators etc.

In view of above, it is requested to you direct the concerned engineer to take up the work at priority. It is also requested to submit the preliminary estimate after conducting proper survey and taking measurement at site. Necessary A/A & E/S shall be conveyed by the DTU as soon as the P.E. is received. An immediate action in the matter is requested please.

1/12/22
(Prof. Amit Srivastava)
Chief Project Officer

Copy to:

1. P.S. to Hon'ble V.C. for kind information to Hon'ble V.C., DTU.
2. Registrar, DTU for kind information.
3. Consultant (Civil), DTU.
4. AE (Civil), DTU.
5. Guard File.

01.12.2022
(Prof. M. Rizwan)
Project Officer (Elect.)

Decision: - BW&C has approved the Agenda i.e. Re-carpeting of Campus internal roads with cleaning of rain water lines of DTU Campus having estimated cost of Rs. 6 crores. with the following additional recommendations: -

a) The cement concrete pavement may be adopted for the most used road routes.
b) The proper drainage should be planned along with the re carpeting of roads.
c) A detailed survey of existing services and drainage line may be done before the execution of the proposed work.
d) The work may be executed by the PWD, Delhi.

Agenda No. 15.9: Augmentation and upgradation of HT & LT power line distribution with the replacement of panels at the main campus DTU.

Proposal is regarding augmentation and upgradation of HT & LT power line distribution with the replacement of panels at the main campus DTU. The old HT & LT power lines was laid many years before. Since, laying the HT & LT power lines and electric panels have not been replaced with the new one. As, the electricity load has been increased due to the increasing nos. of ACs installed in campus and increased infrastructure, it leads to create pressure to old existing HT & LT lines and panels. Due to increased load/ overburden to existing HT & LT power lines and panels, the electric faults are happening rapidly.

To run the electric system in smooth manner there is requirement of replacing the old HT, LT Power lines and panels with the new one.

The Building & Works Committee was requested to approve Augmentation and upgradation of HT & LT power line distribution with the replacement of panels at the main campus DTU having estimated cost of Rs. 17.0 crores.

Decision: - BW&C has approved the Agenda i.e. the Augmentation and up-gradation of HT & LT power line distribution with the replacement of panels at the main campus DTU having estimated cost of Rs. 17.0 crores with the following additional recommendations: -

a) The sanctioned electricity load of the DTU campus may be reviewed and the planning of the proposed work may be done accordingly.
b) The work may be executed by the PWD, Delhi.

Agenda No. 15.10 : Development of DTU Pond including student's activity centre.

Proposal is regarding the development of DTU Pond inside the DTU Main campus. The existing DTU Pond is filled up with waste water from many years ago. The water is percolating from adjoining areas in the pond and water gets logged in it. The nearby areas have been developed already with (G+8) academic block and (G+11) boys hostel. Accordingly, the premises of DTU pond required to be developed for the effective use by DTU students and staff in this area. Hence, it is proposed to develop DTU Pond including student's activity centre. The tentative estimate is prepared which is amounting to 30.60 crores which includes students' activity centre of G+3.

WTEP

C/14

(4)

Date .....

January, 2023

(5)

Date .....

Date	PH	PH 4-4	Food Received (kg)	Food Reject (kg)	Food PH	Temp (°c)	Actual Feeding: Food	SBC	CS	Water	Generator Running: Initial	Final	Time (Hr)	Power Generated: Initial	Final	Unit (KWh)	Disposal (kg)	Remarks	Checked by Supervisor	Approved by JE
01/01/23	8·37	35·9	171	1	5·69	35°c	160	0	0	15 L	1779·8	1782·2	2·40	4137·2	4140·6	3·40			Fatma	—
02/01/23	8·45	36·3	174	1	6·17	35°c	160	0	0	15 L	1782·2	1784·7	2·50	4140·6	4144·1	3·50	300 kg.		Fatma	Sunday
03/01/23	8·46	36·2	155	1	6·55	35°c	170	0	0	15 L	1784·7	1787·2	2·50	4144·1	4147·6	3·50			Fatma	
04/01/23	8·39	36·0	147	1	5·81	35°c	170	0	0	15 L	1787·2	1789·6	2·40	4147·6	4151·0	3·40	300 kg.		Fatma	
05/01/23	8·60	36·2	188	1	6·57	35°c	170	0	0	20 L	1789·6	1792·0	2·40	4151·0	4154·6	3·60			Fatma	
06/01/23	8·54	36·1	192	2	6·19	35°c	180	0	0	20 L	1792·0	1794·5	2·50	4154·6	4158·2	3·60			Fatma	
07/01/23	8·71	36·2	207	2	5·58	35°c	180	0	0	20 L	1794·5	1797·1	2·60	4158·2	4161·9	3·70	550 kg.		Fatma	
08/01/23	8·75	36·2	215	2	5·60	34°c	200	0	0	20 L	1797·1	1799·7	2·60	4161·9	4165·6	3·70			Fatma	Sunday
09/01/23	8·64	36·1	180	1	6·24	34°c	200	0	0	15 L	1799·7	1802·3	2·60	4165·6	4169·4	3·80	400 kg.		Fatma	
10/01/23	8·69	36·3	254	2	6·09	34°c	220	0	0	20 L	1802·3	1804·8	2·50	4169·4	4173·2	3·80			Fatma	
11/01/23	8·77	36·1	240	1	5·81	34°c	220	0	0	20 L	1804·8	1807·5	2·70	4173·2	4176·9	3·70	350 kg.		Fatma	
12/01/23	8·72	36·2	251	4	5·69	35°c	240	0	0	30 L	1807·5	1810·4	2·90	4176·9	4180·7	3·80			Fatma	
13/01/23	8·81	36·3	415	3	5·27	35°c	260	0	0	30 L	1810·4	1813·3	2·90	4180·7	4184·6	3·90	400 kg.		Fatma	
14/01/23	8·74	36·0	280	1	6·12	34°c	260	0	0	20 L	1813·3	1816·4	3·10	4184·6	4188·7	4·10			Fatma	
15/01/23	8·66	36·1	340	2	5·71	35°c	280	0	0	20 L	1816·4	1819·4	3·00	4188·7	4192·7	4·00	350 kg.		Fatma	Sunday
16/01/23	8·87	36·2	365	3	5·34	35°c	300	0	0	30 L	1819·4	1822·5	3·10	4192·7	4196·4	3·70			Fatma	
17/01/23	8·80	36·3	341	3	5·44	35°c	320	0	0	30 L	1822·5	1825·7	3·20	4196·4	4200·1	3·70			Fatma	
18/01/23	8·93	36·3	377	1	6·07	34°c	320	0	0	20 L	1825·7	1828·8	3·10	4200·1	4204·0	3·90	600 kg.		Fatma	
19/01/23	8·92	36·2	316	1	5·59	34°c	340	0	0	20 L	1828·8	1832·1	3·30	4204·0	4208·1	4·10			Fatma	
20/01/23	8·88	36·1	310	1	6·10	34°c	340	0	0	20 L	1832·1	1835·2	3·10	4208·1	4211·9	3·80	500 kg.		Fatma	
21/01/23	9·04	36·4	424	2	6·35	35°c	350	0	0	30 L	1835·2	1838·1	2·90	4211·9	4215·8	3·90			Fatma	
22/01/23	8·97	36·2	320	1	5·78	34°c	350	0	0	20 L	1838·1	1841·2	3·10	4215·8	4219·9	4·10	650 kg.		Fatma	Sunday
23/01/23	9·07	36·3	458	2	5·59	35°c	380	0	0	30 L	1841·2	1844·4	3·20	4219·9	4223·9	4·00			Fatma	
24/01/23	9·14	36·3	446	2	5·81	36°c	400	0	0	30 L	1844·4	1847·5	3·10	4223·9	4227·8	3·90	400 kg.		Fatma	
25/01/23	9·10	36·4	465	3	6·24	36°c	400	0	0	30 L	1847·5	1850·7	3·20	4227·8	4231·9	4·10	350 kg.		Fatma	
26/01/23	8·98	36·2	420	3	5·96	36°c	400	0	0	30 L	1850·7	1854·0	3·30	4231·9	4235·9	4·00			Fatma	
27/01/23	9·11	36·4	530	2	5·64	38°c	440	0	0	30 L	1854·0	1857·4	3·40	4235·9	4239·8	3·90	500 kg.		Fatma	
28/01/23	9·07	36·5	517	2	6·37	39°c	440	050	0	30 L	1857·4	1860·8	3·40	4239·8	4243·9	4·10	450 kg.		Fatma	
29/01/23	8·89	36·3	545	3	6·19	39°c	450	050	0	30 L	1860·8	1864·1	3·30	4243·9	4247·8	3·90	500 kg.		Fatma	Sunday

SE(I)

Executive Engg.
AE.

C/13

(8)

Date .....

(9)

February, 2023

Date .....

Date	PH	PH 9.4	Food Received (kg)	Food Reject (kg)	Food PH	Temp (°C)	Actual Feeding: Food	SBe	CS	Water	Generator Running: Initial	Final
01/02/23	8.19	36.1	520	2	5.37	39°	450	0.30	0	40 l.	1870.9	1874.4
02/02/23	8.27	36.2	541	2	5.78	39°	450	0.30	0	40 l.	1874.4	1876.8
03/02/23	8.21	36.2	446	2	5.65	39°	400	0.30	0	40 l.	1876.8	1878.9
04/02/23	7.89	35.8	427	1	5.74	39°	400	0.20	0	40 l.	1878.9	1881.1
05/02/23	7.93	35.7	464	3	6.22	39°	420	0.20	0	40 l.	1881.1	1883.2
06/02/23	7.69	35.8	410	2	5.91	39°	420	0.20	0	40 l.	1883.2	1885.4
07/02/23	7.73	35.9	370	2	5.68	39°	400	0	0	30 l.	1885.4	1887.6
08/02/23	7.54	35.7	420	2	6.87	39°	400	0	0	30 l.	1887.6	1890.0
09/02/23	7.44	35.8	390	2	6.28	39°	380	0	0	30 l.	1890.0	1892.5
10/02/23	7.51	35.6	370	3	5.96	39°	380	0	0	30 l.	1892.5	1895.4
11/02/23	7.62	35.7	410	2	6.11	38°	400	0	0	30 l.	1895.4	1898.1
12/02/23	7.58	35.7	490	2	6.19	39°	400	0	0	30 l.	1898.1	1900.9
13/02/23	7.74	35.8	405	1	5.59	39°	400	0	0	30 l.	1900.9	1903.8
14/02/23	7.71	35.9	385	3	5.85	38°	400	0	0	30 l.	1903.8	1906.9
15/02/23	7.76	35.6	430	3	5.44	38°	400	0	0	30 l.	1906.9	1910.1
16/02/23	7.82	35.6	460	2	6.08	38°	420	0	0	30 l.	1910.1	1913.3
17/02/23	7.80	35.7	425	1	6.17	39°	420	0	0	20 l.	1913.3	1916.6
18/02/23	7.85	35.8	438	2	5.77	39°	420	0	0	30 l.	1916.6	1919.8
19/02/23	7.78	35.7	451	2	5.95	39°	430	0	0	30 l.	1919.8	1923.2
20/02/23	7.79	35.7	445	3	6.33	38°	430	0	0	30 l.	1923.2	1926.2
21/02/23	7.67	35.6	421	3	6.12	39°	430	0	0	20 l.	1926.2	1929.4
22/02/23	7.65	35.9	430	2	5.64	38°	430	0	0	30 l.	1929.4	1932.6
23/02/23	7.63	35.8	455	2	5.91	38°	430	0	0	30 l.	1932.6	1935.9
24/02/23	7.73	35.9	442	3	6.07	39°	430	0	0	30 l.	1935.9	1939.3
25/02/23	7.88	36.1	410	1	5.57	39°	430	0	0	20 l.	1939.3	1942.7
26/02/23	7.82	36.1	407	2	5.76	38°	430	0	0	30 l.	1942.7	1946.2
27/02/23	7.75	36.2	405	1	5.80	39°	420	0	0	20 l.	1946.2	1949.6

Time (Hr)	Power Generated: Initial	Final	Unit (kwh)	Disposal (kg)	Checked by Supervisor	Approved by JE	Remarks
3.50	4256.3	4260.6	4.30		Jatav	01/02	
2.40	4260.6	4264.1	3.50	500 kg.	Jatav	02/02	Kindly clean the disposal
2.10	4264.1	4267.4	3.30		Jatav	03/02	
2.20	4267.4	4270.7	3.30	500 kg.	Jatav	04/02	Kindly clean the disposal
2.10	4270.7	4273.9	3.20		Jatav	Sunday	
2.20	4273.9	4277.2	3.30	600 kg.	Jatav	06/02	
2.20	4277.2	4280.3	3.10		Nitesh	07/02	
2.40	4280.3	4283.7	3.40	550 kg	Nitesh	08/02	Kindly clean the disposal
2.50	4283.7	4287.1	3.40		Nitesh	09/02	
2.90	4287.1	4290.9	3.80	600 kg	Nitesh	10/02	
2.70	4290.9	4294.6	3.70		Nitesh	11/02	
2.80	4294.6	4298.5	3.90	500 kg	Nitesh	Sunday	Kindly clean the disposal
2.90	4298.5	4302.1	3.60		Nitesh	13/02	
3.10	4302.1	4306.00	3.90	500 kg	Nitesh	14/02	
3.20	4306.0	4310.0	4.0		Nitesh	15/02	
3.20	4310.0	4313.9	3.90	600 kg	Nitesh	16/02	Kindly clean the disposal
3.30	4313.9	4317.7	3.80		Nitesh	17/02	
3.20	4317.7	4321.8	4.10	550 kg	Nitesh	18/02	Kindly clean the plant
3.40	4321.8	4325.7	3.90		Nitesh	Sunday	
3.00	4325.7	4329.9	4.20	500 kg	Nitesh	20/02	
3.20	4329.9	4334.0	4.10		Nitesh	21/02	
3.20	4334.0	4338.3	4.30	600 kg	Nitesh	22/02	Kindly clean the plant
3.30	4338.3	4342.6	4.30		Nitesh	23/02	
3.40	4342.6	4346.8	4.20	550 kg	Nitesh	24/02	Kindly clean the plant
3.40	4346.8	4350.9	4.10		Nitesh	25/02	
3.50	4350.9	4355.4	4.50	500 kg	Nitesh	Sunday	Kindly clean the plant
3.40	4355.4	4359.9	4.50		Nitesh	27/02	

JE(U)

Criteria- 7.1.3

Solid Waste Management:- DTU established **Waste to Energy Plant (WTEP)** with the capacity of plant 1 TPD (Tone per Day) near DTU pond and front side of Dr. A.P.J. Abdul Kalam Hostel. The plant established in May, 2019 at DTU main campus by M/s Absolute Water Pvt Ltd. The plant has also running by M/s Absolute Water Pvt Ltd. who is the OEM of this plant. The waste used for management, has been collected from Boys Hostel Mess, Girls Hostel Mess and also collected from residential area. These waste converted into energy through the plant which has been used for electricity purpose.

Data for 2022-23

a) Average feeding of food per Day:- 40 kg

   Total feed for 2020-21:- 40X30X12 = 14,400 kg

b) Average pH of food when received:- 4.75
c) Average temperature of food when feed:- 36 degree celcius.

The energy produced with the plant used for running the WTEP plant.

e/11

ENGINEERING CELL
DELHI TECHNOLOGICAL UNIVERSITY
Shahbad Daulatpur, Main Bawana Road, Delhi – 110042

F.NO: DTU/Engg Cell/002298/2017-18/Civil/6154 Dated: 20/9/2022

To,
The Zonal Revenue Officer,
Main Safiabad,
Major District Road 138,
Sanjay Colony, Narela,
Delhi, 110040

Sub:- Submitting of Application form for New Connection of Domestic Water supply and Sewerage Connection for DTU at Shahbad Daulatpur Bawana Road Delhi.

Sir,

Kindly refer to your office letter No. DJB/ZE-VII (NW)-II/2020/375 dated 01-02-2020, through which water supply /ferrule connection 25 mm dia. with communication pipe 50 mm dia. (G.I. pipe) has been approved by Delhi Jal Board. DJB has allowed bulk/ individual water connections. As DTU is a residential campus where in 336 Nos. of different quarters and hostels for about 3000 students are there. Present bulk water supply is used to meet the residential demand only. As the present average water supply is about 0.185 MLD as against actual demand of 1.25 MLD (Potable Water) for both the residential and academic area.

In this matter, a review meeting was held on 29.01.2022 with DJB senior officials & DTU officers after discussion. It was decided that DTU may apply for new domestic connection for the residential area. Accordingly the new domestic water connection is applied online through Application Ref. No.468612674723 on dated 17.09.2022.

Hence, you are requested to provide a separate new domestic water connection for the residential area at earliest.

Please find enclosed herewith details as follows:-

1. Application Form for New Connection water and Sewerage.
2. Adhar Card
3. Photo identity card
4. Khasra No.
5. Master Plan
6. Purposed Area

17/9/22
(Prof. Amit Kumar Srivastava)
Chief Project Officer

F.NO: DTU/Engg Cell/002298/2017-18/Civil/6154 Dated: 20/9/2022

Copy to:-

1. PS to Hon'ble Vice Chancellor for kind information of Hon'ble VC, DTU
2. Registrar, DTU
3. Member (Finance), Delhi Jal Board
4. COF,DTU
5. Guard File

20/09/22

V25/9/22

17/9/22
(Prof. Amit Kumar Srivastava)
Chief Project Officer

O/C

c/10

STOP CORONA:
I. Wear Mask.
II. Follow Physical Distancing.
III. Maintain Hand Hygiene.

Regular Water Bill

Name(नाम): DELHI TECHNOLGICAL UNIVERSITY
Address(पता): SHAHBAD DAULATPUR , BAWANA ROAD DELHI, SHIV VIHAR, SHAHBAD DAULATPUR VILLAGE, 110042
Mobile No. . (मोबाइल): 8505812925
Zone/Loc (क्षेत्र / स्थान): NW2 / Narela
Area Code (एरिया कोड): A-1
MR Code (एमआर कोड): 387/

KNO(केएनओ): 6033081242

Consumer Category(उपभोक्ता श्रेणी): CAT II
Premise Detail (परिसर विवरण): Individual House(No of floors-1)
Meter No. (मीटर संख्या): 12428/67
Meter Type (मीटर का प्रकार) **(DJB/Pvt)**:
Bill No. (बिल संख्या): 603538830732
Bill Cycle(बिल चक्र): (B9-2022)
Bill Basis(बिल आधार): REGULAR

Bill Date(बिल की तिथि)
27-DEC-2022

Bill Amount (Rs.) (बिल राशि (रु))
1506043

Bill Amount Payable (Rs.)(देय बिल राशि (रु।))
(Nearest up to Rs. 10) (लगभग 10 रु। तक)
1506040

Bill Due Date(बिल देय तिथि)
13-JAN-2023

Amount Payable After Due Date(Rs.)
(देय तिथि के बाद देय राशि (रु))
1581345

Meter No (मीटर संख्या)	UoM	Current Meter Read (मीटर की वर्तमान रीडिंग)		Previous Meter Read (मीटर की पिछली रीडिंग)		Consumption (खपत)	
		Meter Reading Date (मीटर रीडिंग की तारीख)	Reading / Meter Status (रीडिंग / मीटर स्थिति)	Meter Reading Date (मीटर रीडिंग की तारीख)	Reading / Meter Status (रीडिंग / मीटर स्थिति)	Days (दिन)	Units (यूनिट)
12428/67	KL	27-DEC-2022	23924 / OK	18-NOV-2022	15305 / OK	39	8619

Bill Details: Current Period Charges (बिल विवरण: वर्तमान अवधि शुल्क) (18-NOV-2022 to 27-DEC-2022)

Applicable Rate Period	Description	Amount(Rs.)
19-NOV-2022 to 27-DEC-2022	Total Consumption Charges	1504326.11
19-NOV-2022 to 27-DEC-2022	Service Charge - Consumption > 100 KL	1713.00
19-NOV-2022 to 27-DEC-2022	Sub Total Bill Amount without Meter Rent	1506039.11
19-NOV-2022 to 27-DEC-2022	Subtotal Bill Amount	1506039.11
	Adjustment Details Are Listed Below	

**********REBATE SCHEME**********
Avail 75% LPSC Rebate till 31-03-2023 0
Payable Amount upto 31-03-2023 3

Arrear, If any **(Rs.)** (बकाया, यदि कोई (रु))			3.74
Total Consolidated Bill Amount Payable (Rs.) (कुल समेकित बिल राशि देय (रु))			1506043
Late Payment Surcharge (Rs.)(देर से भुगतान पर अधिभार) (5% surcharge will be applicable after due date)(देय तिथि पश्चात 5% अधिभार लागू होगा)	7530 2.14	**Amount with LPSC after due date (Rs.)** (देय तिथि के बाद अधिभार के साथ राशि (रु)	1581345
PAYABLE AMOUNT TO AVAIL REBATE SCHEME (Rs.) (छूट योजना के लिए देय राशि (रु।))			

Bill History (पिछला बिल)

Bill from Date	Bill to Date	Days	Reading	Status	Units	Amount(Rs
15-OCT-2022	18-NOV-2022	34	15305	OK	2248	387774
12-SEP-2022	15-OCT-2022	33	13057	OK	2142	42153544
27-AUG-2022	12-SEP-2022	16		UNMT	2150	41764163
24-JUL-2022	27-AUG-2022	34		UNMT	5088	41409827
30-JUN-2022	24-JUL-2022	24		UNMT	3775	38593422

Payment History (पिछला भुगतान)

Receipt Id	Amount(Rs)	Date
603517637040	387770.00	05-DEC-2022
603590578808	24679944.00	04-NOV-2022
603557998811	10820.00	02-FEB-2021

Important Message

Rebate Scheme will be applicable till 31-Mar-2023

If bill is not paid till Bill Due Date- connection may be disconnected (यदि बिल देय तिथि तक बिल का भुगतान नहीं किया जाता है- कनेक्शन काट दिया जा सकता है)
For any assistance / query : Please call 1916 or www.djb.gov.in (किसी भी सहायता / जानकारी के लिए: 1916 पर कॉल करें या www.djb.gov.inपर जाएं)

Delhi Jal Board
Bill Payment Counter Foil

Cheque / DD should be drawn in favour of DJB in the following format
(चेक / डिमांड ड्राफ्ट द्वारा भुगतान करने के लिए निम्न फार्मेट का प्रयोग करें) DJB KNO

KNO(केएनओ)	6033081242	Name(नाम)	DELHI TECHNOLGICAL UNIVERSITY	**Bill No.** (बिल संख्या)	603538830732
Bill Date(बिल की तिथि)	27-DEC-2022	Bill Due Date (बिल देय तिथि)	13-JAN-2023	**Bill Amount (Rs.)** (बिल राशि (रु।)	1506043
Bill Amount with LPSC (Rs.): (LPSC के साथ बिल राशि (रु।)):	1581345	Payment Date/ (भुगतान की तारीख)		**Cash/Cheque No./DD No.:** (कैश / चेक नंबर / डीडी नं .:)	
		Amount Paid(Rs.) (राशि का भुगतान (रु।)			
		Name of Bank / Branch (बैंक / शाखा का नाम)			

Tariff Structure for monthly consumption w.e.f 01-02-2018

Category	Monthly Consumption (KL)	Service Charge (Rs)	Volumetric Charge (Rs. per KL)
Category - I(Domestic)	Up-to 20	146.41	5.27
	20-30	219.62	26.36
	Above 30	292.82	43.93
Category - II(Non-Domestic)	0-6	146.41	17.57
	6-15	292.82	26.35
	15-25	585.64	35.14
	25-50	1024.87	87.85
	50-100	1171.28	140.56
	100-above	1317.69	175.69

Note: To ensure proper implementation of Rain Water Harvesting and Waste Water Recycling norms and incompliance of Building Byelaws, it will be mandatory for plots/properties having area of 100 Sq. Mtrs. or more to have functional Rain Water Harvesting System, even if the property is constructed prior to 28-07-2001. Such plot/property owning consumers would be required to install functional Rain Water Harvesting System and will get rebate on water bill. In case, consumer fail to comply with the aforesaid mandatory provision within the time limit prescribed, the traffic as applicable for respective consumer category will be increased by 1.5 times, till the system is installed and intimated to the respective Zonal Revenue officer. Functionality certificate of RWH need to be given in the month of 'May' of every year in ZRO Office.

Tariff consists of following components:

1. Water-to be measured on volumetric charges of water consumed as reported in meter.
2. Sewerage maintenance charge- @60% of water volumetric consumption charges.
3. Service Charges-Levied on the basis of slab wise consumption.
4. Meter rent in case meter has been provided by DJB.

How to Calculate Bill- Divide the total units consumed by number of days for which bill has been issued and multiply by 30 to give per month average water consumption. Water consumption charge (multiplying monthly charge by the actual period of reading) will be calculated as per tariff for the respective category as mentioned above. Sewerage maintenance charge will be 80% of water consumption charges. Add service charges as per respective category and Consumption slab. It will give you the bill amount.

Payment Facilities:

Besides DJB ZRO Offices listed below, consumers can make payment online through e-payment gateways of Axis Bank, Utkarsh Bank, IDBI & Union Bank at Customer portal (www.djb.gov.in) and branches of authorized bank at IDBI Bank. Payment can also be made online through e-wallets, Net Banking, Debit/Credit Card, UPI etc. though any agency under Bharat Bill Payment System (BBPS) viz Paytm, Google Pay, Phone Pay, Amazon Pay, Free charge & other major banks.
Cheque may be issued in favor of "DJB K.NO XXXXXXXXXX", where XXXXXXXXXX represent 10-digit of New K. No. of the consumer mentioned on the bill.

Payment may be made through NEFT/RTGS to DJB A/C using Utkarsh Small Finance Bank Limited, Axis Bank Ltd, South Indian Bank Ltd. & IDBI Banks. Please visit Customer portal (www.djb.gov.in) - Pay Online > Pay through NEFT/RTGS for details of beneficiary account.

- For any issue related to reading, billing, the consumer can call **CUSTOMER CARE NUMBER No. 1916-** Extn. 2 and take online complaint No. instantly. Consumer can avail different online facilities regarding New Connection, Mutation, Re-Opening, Disconnection, online payments and register grievances through Customer portal (www.djb.gov.in). Please use your New K.NO for all communication with DJB. Consumer can contact concerned ZRO or his Dy. Director Revenue or Joint Director Revenue to resolve all billing and application regarding New Connection, Mutation, Re-Opening, Disconnection and Payment related grievance at followings:

SL.No	Zone	ZRO Location and Collection Counter	Office No.	SL.No	Zone	ZRO Location and Collection Counter	Office No.
1	NW1	Sultan Puri	25476298	26	CZ2	Pratap Nagar	23692201
2	WZ1	Subhash Nagar	25408765	27	SW3	R K Puram	26193424
3	WZ2	Punjabi Bagh	25223568	28	SZ2	Lajpat Nagar	29814106
4	NW1	Kirari	8920657545	29	SZ3	Greater Kailash	29239663
5	NE1	Shahadara	22591171	30	PP1	MNWS R K Puram	18001024639
6	NE2	Yamuna Vihar	22910491	31	PP1	MNWS Mehrauli	18001024639
7	NE1	GTB Enclave	22571986	32	PP1	MNWS Greater Kailash	18001024639
8	NE3	New Seelam Pur	22182253	33	PP2	MVV R K Puram	18001037232
9	CZ1	Jhandewalan	23612792	34	PP2	MVV Mehrauli	18001037232
10	NW4	Kewal Park	27975270	35	EZ1	Preet Vihar	22444424
11	NZ2	Mukherjee Nagar	27606527	36	EZ2	Shiv Puri	22047239
12	WZ3	Paschim Vihar	25252797	37	EZ2	Yojna Vihar	22158119
12	NZ2	Burari	27613757	38	EZ1	Mayur Vihar	22759551
14	PP3	NWS BHERA ENCLAVE	180030000136	39	EZ1	MANDAWALI	22444424
15	PP3	NWS Mohan Garden	18001020389	40	NW2	Narela	27281673
16	SW1	Kakrola More	8851254848	41	NW2	Rohini	27040004
17	WZ1	Janak Puri	25557475	42	NW3	Kanhaiya Nagar	27395044
18	PP3	Nangloi Water Service	27975270	43	NW3	Ashok Vihar	27301456
19	WZ1	Rajouri Garden	8800233464	44	CZ2	Tibbiya College	23546251
20	SW4	Dwarka	28062442				
21	WZ2	Rajendra Nagar	25724938				
22	SW2	Vasant Kunz	26897787				
23	SZ1	Saket	29561916				
24	SZ2	Giri Nagar	26212219				
25	SZ4	Sarita Vihar	29941159				

Abbreviations on bill:

New Code	Meter Status	New Code	Meter Status
OK	OK	RDDT	Reading Detained
NUW	NO Use Of Water	TEST	Meter Under Testing
PLUG	Plugged	DFMT	Defective Meter
DEM	Demolished	STP	Stopped
PLOC	Premises Locked	MTTM	Meter Tempered
NRES	NO Response	MREV	Meter Reverse
MBUR	Meter Buried	UNMT	Running Unmetered
VMMT	Vapoured/Moistured Meter	BYPS	T-Joint/ByPass
DUST	Dusty Meter	CUT	Meter Cut-Off
MLOC	Meter Locked	ADF	Access Denied/Refused

UOM	Unit Of Measurement

As can be observed from the tariff that Delhi Jal Board emphasizes on the conservation of water and tariff is designed on the principle- 'Use More Pay More'. Hence, consumers are advised to conserve water by:-

1. Plugging all leakages in pipes, joints, taps, overhead tanks etc.
2. To use kitchen waste water for gardening purposes.
3. To wash vehicle etc. by bucket instead of pipe.
4. Install valve before meter and close it when water is not use.
5. Consumers should use MDPE pipes for underground position for carrying portable water.

Note: Payment in respect of New water connection, mutation, disconnection and reopening cases should be made within prescribed time, failure may result in withdrawal of sanction.

Any work on DJB Water & Sewer Lines can be allowed only through Licensed Plumber or Authorized Agency of DJB with prior approval/sanction.

For any issue related to water, contamination, tanker or sewerage consumer can call **CUSTOMER CARE NUMBER No. 1916-** Extn. 1 or visit www.delhijalboard.nic.in

INDRAPRASTHA GAS LIMITED

(A Joint Venture of GAIL (India) Ltd., BPCL & Govt. of NCT of Delhi)
Corporate Office : IGL BHAWAN, Plot No. 4, Community Centre, R.K.Puram,
Sector - 9, New Delhi - 110022

c/08

Retail Invoice/Bill of Supply

INVOICE

BUSINESS PARTNER NO: 4100005146

Officer incharge
DELHI TECHNOLOGICAL UNIVERSITY-canteen
MAIN BAWANA ROAD, SHAHBAD DAULATPUR
NEW DELHI - 110042
Phone Number : 9868053941
TIN No. :
GSTN :
PAN :

Delhi Small Commercial Post PNGRB

Invoice No. : 10003118819
Invoice Date : 31.01.2023
Dispatch Date : 07.02.2023
Due Date : 22.02.2023
Disconnection Date : 28.02.2023
HSN code - 2711
Commodity-Natural Gas

RTGS Details
Beneficiary Party Name : Indraprastha Gas Ltd.
Bank A/C Number :IGLCOMZ4100005146
Bank IFSC Code : IDFB0010204
Bank Name : IDFC
Bank Address : CMS HUB Branch, Mumbai

Billed period : 01.01.2023 - 31.01.2023

S NO	METER NO	PREVIOUS DATE	PREVIOUS READING (A)	CURRENT READING (B)	CORRECTION FACTOR(C)	CONSMPTION D= (B - A)* C	PRICE / SCM (E)	CONSUMPTION VALUE (F=E*D)	DISCOUNT (G)	TOTAL (INR) (H=F-G))
1	3403688790	31.12.2022	41140.00	44464.00	1.000	3324.00	51.04	169656.96	0.00	169656.96
TOTAL VALUE										169656.96

VAT	8482.85 INR
Arrears	99.70- INR
Returns	200.00 INR
Late Payment Charge (LPC)	6335.72 INR
TOTAL AMOUNT DUE (Before due date)	184575.83 INR

Note : 1. DD / Cheque without Business Partner No. will not be accounted for against your invoice & next invoice will show arrears.
2. Please mention your Name & Tel / Mobile No. on the back of the DD / Cheque

PAN : AAACI5076R
TIN No. : 07200216284 eff. from 5th April 1999
CIN No. : L23201DL1998PLC097614
Service Tax Regn. No. : AAACI5076RST001
GSTN : 07AAACI5076R1ZZ

(AuthorisedSignatory)

REMITTANCE SLIP(FOR OFFICIAL USE ONLY)
Please draw your Cheque/DD favouring "INDRAPRASTHA GAS LIMITED A/c Business Partner No 4100005146" And submit it at any branch of IDFC bank or to Deputy Manager, Marketing - commercial segment, IGL Bhawan, RK Puram sector - 9, Delhi.

Business Partner : 4100005146
Name : Mr. DELHI TECHNOLOGICAL UNIVERSITY-canteen
Received on:
Invoice No : 10003118819

Cash ☐ Receipt No : Date : Amount :

Cheque ☐ Demand Draft ☐ Cheque/DD No: Date : Amount: Bank Name:

If due date persists on Sunday / Gazetted Holiday,the next date should be treated as the due date.

INDRAPRASTHA GAS LIMITED

(A Joint Venture of GAIL (India) Ltd., BPCL & Govt. of NCT of Delhi)
Corporate Office : IGL BHAWAN, Plot No. 4, Community Centre, R.K.Puram,
Sector - 9, New Delhi - 110022

c/07

Retail Invoice/Bill of Supply

INVOICE

BUSINESS PARTNER NO: 4100005121

Guest House Incharge
DELHI TECHNOLOGICAL UNIVERSITY
SHAHBAD DAULATPUR
MAIN BAWANA ROAD, NEW DELHI
NEW DELHI -
Phone Number : 9540066948
TIN No. :
GSTN :
PAN :

Delhi Small Commercial Post PNGRB

Invoice No. : 100036236884
Invoice Date : 31.01.2023
Dispatch Date : 07.02.2023
Due Date : 22.02.2023
Disconnection Date : 28.02.2023
HSN code - 2711
Commodity-Natural Gas

RTGS Details
Beneficiary Party Name : Indraprastha Gas Ltd.
Bank A/C Number :IGLCOMZ4100005121
Bank IFSC Code : IDFB0010204
Bank Name : IDFC
Bank Address : CMS HUB Branch, Mumbai

Billed period : 01.01.2023 - 31.01.2023

S NO	METER NO	PREVIOUS DATE	PREVIOUS READING (A)	CURRENT READING (B)	CORRECTION FACTOR(C)	CONSMPTION D= (B - A)* C	PRICE / SCM (E)	CONSUMPTION VALUE (F=E*D)	DISCOUNT (G)	TOTAL (INR) (H=F-G))
1	ITR00167630	31.12.2022	285.13	296.32	1.020	11.41	51.04	582.42	0.00	582.42
TOTAL VALUE										582.40

VAT	29.12 INR
Arrears	922.16 INR
TOTAL AMOUNT DUE (Before due date)	1533.68 INR

Note : 1. DD / Cheque without Business Partner No. will not be accounted for against your invoice & next invoice will show arrears.
2. Please mention your Name & Tel / Mobile No. on the back of the DD / Cheque

PAN : AAACI5076R
TIN No. : 07200216284 eff. from 5th April 1999
CIN No. : L23201DL1998PLC097614
Service Tax Regn. No. : AAACI5076RST001
GSTN : 07AAACI5076R1ZZ

(AuthorisedSignatory)

REMITTANCE SLIP(FOR OFFICIAL USE ONLY)
Please draw your Cheque/DD favouring "INDRAPRASTHA GAS LIMITED A/c Business Partner No 4100005121" And submit it at any branch of IDFC bank or to Deputy Manager, Marketing - commercial segment, IGL Bhawan, RK Puram sector - 9, Delhi.

Business Partner : 4100005121
Name : Mr. DELHI TECHNOLOGICAL UNIVERSITY
Received on:
Invoice No : 100036236884

Cash ☐ Receipt No : Date : Amount :

Cheque ☐ Demand Draft ☐ Cheque/DD No: Date : Amount: Bank Name:

If due date persists on Sunday / Gazetted Holiday,the next date should be treated as the due date.

INDRAPRASTHA GAS LIMITED

(A Joint Venture of GAIL (India) Ltd., BPCL & Govt. of NCT of Delhi)
Corporate Office : IGL BHAWAN, Plot No. 4, Community Centre, R.K.Puram,
Sector - 9, New Delhi - 110022

C|06

Retail Invoice/Bill of Supply

INVOICE

BUSINESS PARTNER NO: 4100005123

Officer Incharge
DELHI TECHNOLOGICAL UNIVERSITY-Sister Ni
MAIN BAWANA ROAD SHAHABAD DAULATPUR
NEW DELHI - 110042
Phone Number : 9868053941
TIN No. :
GSTN :
PAN :

Delhi Small Commercial Post PNGRB

Invoice No. : 100036236886
Invoice Date : 31.01.2023
Dispatch Date : 07.02.2023
Due Date : 22.02.2023
Disconnection Date : 28.02.2023
HSN code - 2711
Commodity-Natural Gas

RTGS Details
Beneficiary Party Name : Indraprastha Gas Ltd.
Bank A/C Number :IGLCOMZ4100005123
Bank IFSC Code : IDFB0010204
Bank Name : IDFC
Bank Address : CMS HUB Branch, Mumbai

Billed period : 01.01.2023 - 31.01.2023

S NO	METER NO	PREVIOUS DATE	PREVIOUS READING (A)	CURRENT READING (B)	CORRECTION FACTOR(C)	CONSMPTION D= (B - A)* C	PRICE / SCM (E)	CONSUMPTION VALUE (F=E*D)	DISCOUNT (G)	TOTAL (INR) (H=F-G))
1	MTS80371 40031708	31.12.2022	6512.17	7197.91	1.000	685.74	51.04	34999.91	0.00	34999.91
									TOTAL VALUE	34999.91

VAT	1750.00 INR
Arrears	0.09 INR
Late Payment Charge (LPC)	286.55 INR
TOTAL AMOUNT DUE (Before due date)	37036.55 INR

Note : 1. DD / Cheque without Business Partner No. will not be accounted for against your invoice & next invoice will show arrears.
2. Please mention your Name & Tel / Mobile No. on the back of the DD / Cheque

PAN : AAACI5076R
TIN No. : 07200216284 eff. from 5th April 1999
CIN No. : L23201DL1998PLC097614
Service Tax Regn. No. : AAACI5076RST001
GSTN : 07AAACI5076R1ZZ

(AuthorisedSignatory)

REMITTANCE SLIP(FOR OFFICIAL USE ONLY)
Please draw your Cheque/DD favouring "INDRAPRASTHA GAS LIMITED A/c Business Partner No 4100005123" And submit it at any branch of IDFC bank or to Deputy Manager, Marketing - commercial segment, IGL Bhawan, RK Puram sector - 9, Delhi.

Business Partner : 4100005123
Name : Mr. DELHI TECHNOLOGICAL UNIVERSITY-Sister Ni
Received on:
Invoice No : 100036236886
Cash ☐ Receipt No : Date : Amount :
Cheque ☐ Demand Draft ☐ Cheque/DD No: Date : Amount: Bank Name:

If due date persists on Sunday / Gazetted Holiday the next date should be treated as the due date.

c/04

ENVIRONMENTAL ENGINEERING DEPARTMENT
DELHI TECHNOLOGICAL UNIVERSITY
SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110 042
Tel. No.: 011-27890035 Website: www.dce.edu

F.No/DTU/HOD/ENV/2022/648

Date: 27/10/2022

To,

The Chief Project Officer
DTU, Delhi-42

Subject: Report of analysis of drinking water used in DTU.

Please find herewith the report of analysis of water samples collected from DTU campus in response to letter no. DTU/EC/003248/22-23/Ele/6219; dated 26/09/2022.

S. No.	Parameter	Unit	Sample Characterization		BIS Standard For Drinking Water
			Sample 1 *	Sample 2 **	
1	pH		7.6	6.8	6.5 – 8.5
2	EC	µS/cm	610	30	NM
3	TDS	mg/l	300	10	2000
4	Salinity	PSU	0.48	0.02	NM
5	Total Hardness	mg/l	230	BDL	200
6	Calcium	mg/l	48	BDL	75
7	Magnesium	mg/l	182	BDL	30
8	Total Alkalinity	mg/l	260	10	200
9	Bi- Carbonate	mg/l	317	12	NM
10	Chloride	mg/l	96	20	250
11	Sodium	mg/l	552.5	202.9	NM
12	Potassium	mg/l	9.5	6.3	NM
13	Fluoride	mg/l	1.9	0.1	1.0
14	Sulphate	mg/l	210	6.6	200
15	Nitrate	mg/l	3.8	0.7	45

**Collected from Ground Water reservoir, DTU; **Collected from water cooler of VVS boys hostel, DTU; BDL: Below Detection Limit; NM: Not mentioned.*

27.10.22

(Prof. A. K. Haritash)
Head, Environmental Engineering Deptt.

Received by

Sign: 27/10/2022

Name

O/C

C/03

ENVIRONMENTAL ENGINEERING DEPARTMENT
DELHI TECHNOLOGICAL UNIVERSITY
SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110 042
Tel No.: 011-27871015 Website: www.dce.edu

F.No/DTU/HOD/ENV/2022/817 Date 27/12/2022

To,

The Chief Project Officer
DTU, Delhi-42

Subject: Report of analysis of drinking water used in DTU.

Please find herewith the report of analysis of water samples collected from DTU campus in response to letter no. DTU/EC/083248/22-23/Ele/6219, dated 12/12/2022.

S. No.	Parameter	Unit	Sample Characterization		BIS Standard For Drinking Water
			Sample 1 *	Sample 2 **	
1	pH		6.8	7.6	6.5 – 8.5
2	EC	µS/cm	1068	45	NM
3	TDS	mg/l	527	22	2000
4	Salinity	PSU	0.51	0.03	NM
5	Resistivity	KΩ	0.97	22.9	
6	Total Hardness	mg/l	232	BDL	200
7	Calcium	mg/l	49	BDL	75
8	Magnesium	mg/l	184	BDL	30
9	Total Alkalinity	mg/l	262	11	200
10	Bi- Carbonate	mg/l	318	12	NM
11	Chloride	mg/l	120	30	250
12	Sodium	mg/l	553	203	NM
13	Potassium	mg/l	9.6	6.2	NM
14	Fluoride	mg/l	1.9	0.1	1.0
15	Sulphate	mg/l	80	163	200
16	Nitrate	mg/l	3.85	0.79	45
17	Phosphate	mg/l			

**Collected from Ground Water reservoir, DTU; **Collected from water cooler of JCB boys hostel, DTU, BDL: Below Detection Limit; NM: Not mentioned*

27/12/22

(Prof. A. K. Haritash)
Head, Environmental Engineering Deptt.

Received by

Sign:

Name

23/12/2022

c/02

Engineering Cell
DELHI TECHNOLOGICAL UNIVERSITY

Shahbad Daulatpur, Bawana Road, Delhi – 110042
Telephone: 01127852188

F.No. DTU/Engg.Cell/003544/2022-23/Civil/3336-38 Date: 20.12.2022

To,

Chief Engineer (Other Projects),
P.W.D. (GNCTD) 13th Floor, M.S.O. Building,
IP Estate, New Delhi-110002

Subject: Development of exiting pond including construction of student activity centre at Delhi Technological University Campus, Bawana Road, Delhi.

Sir,

With reference to above subject it is brought to your kind notice that building and works committee of Delhi Technological University has approved the above work and decided to execute this work through PWD Delhi. Therefore, I have been directed by the Competent Authority to place the requisition for taking up the above said work.

Exiting pond inside the DTU main campus is filled up with waste and dirty water for the last several years. Water from the adjoining area is also percolating into the pond and creating water logging. Nearby area of the pond has already been developed with G+8 Academic Block and G+11 Boys Hostel. Therefore, premises of pond is required to be developed with provision of student activity centre for effective use of students and staff.

Scope of work includes following:

1. Development of exiting pond with provision of over flow management of water with aesthetic look.
2. Construction of student activity centre building G+3 with SPS structure of trapezoidal shape having facility for student activity, Yoga, Meditation and Gymnasium.
3. Minimum 3 meter wide pathway without any toe/boundary wall.
4. A mini water fall may be provided along sides of pond.
5. Necessary lighting arrangements in the pond area.

In view of above, it is requested to you direct the concerned engineer to take up the work at priority. It is also requested to prepare and submit the preliminary estimate of above work at the earliest. Necessary A/A & E/S shall be conveyed by the DTU as soon as the PE is received. An immediate action in the matter is requested please.

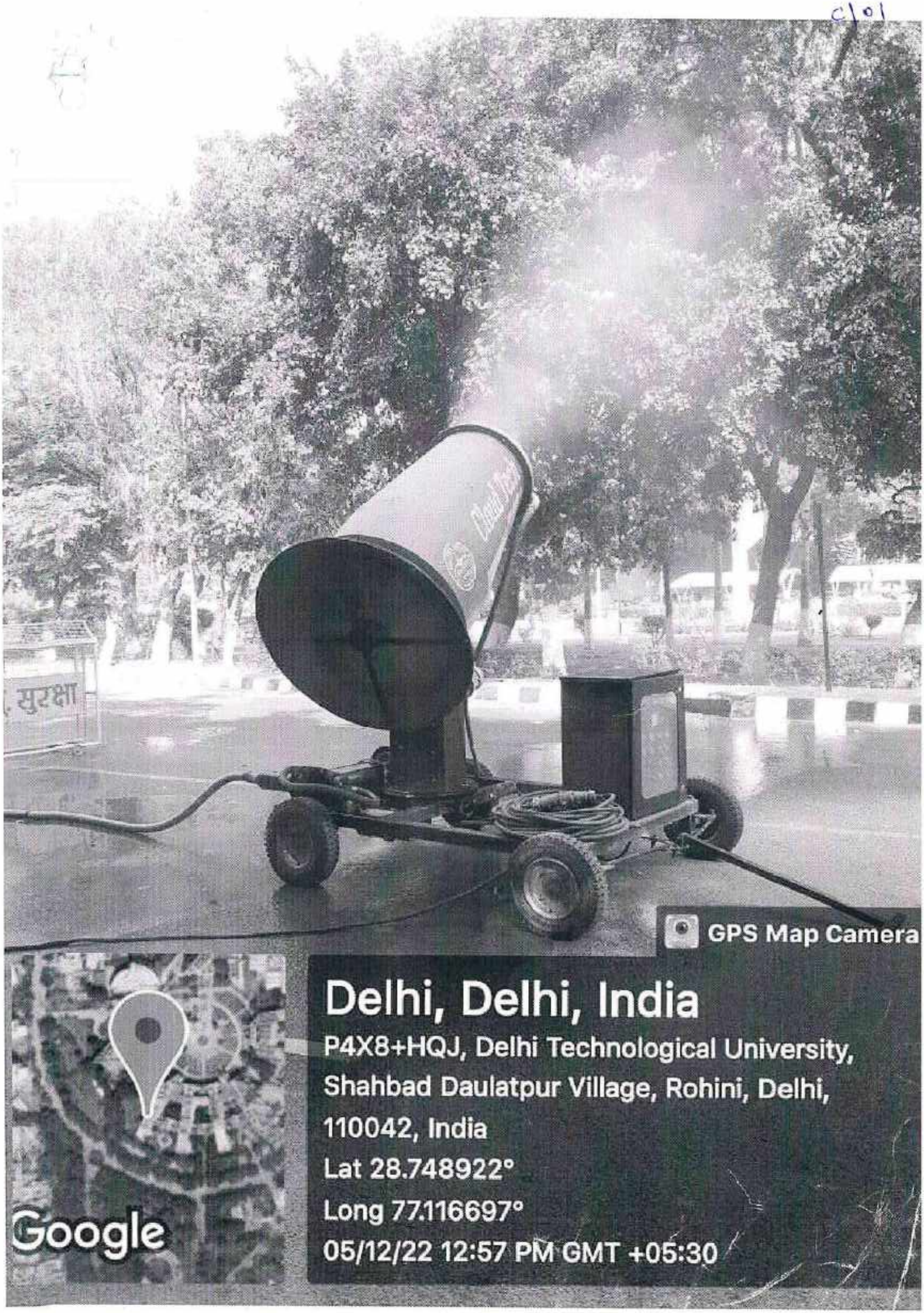
(Prof. Amit Srivastava)
Chief Project Officer

Copy to:

1. P.S. to Hon'ble V.C. for kind information to Hon'ble V.C., DTU. 20/12/22
2. Registrar, DTU for kind information. 20/12
3. Project Manager PWD, (Higher Education Project), PWD Lajpat Nagar-4 near Kendriya Vidyalaya, Andrews Ganj, New Delhi-110024.
4. Exective Engineer, Education Project Division-04, B-Block, 1st Floor, Vikas Shawan-II, Civil Lines, Delhi-110054.
5. Consultant (Civil), DTU.
6. AE (Civil), DTU.
7. Guard File.

O/C

(Prof. Amit Srivastava)
Chief Project Officer


सुरक्षा
GPS Map Camera
Delhi, Delhi, India
P4X8+HQJ, Delhi Technological University, Shahbad Daulatpur Village, Rohini, Delhi, 110042, India
Lat 28.748922°
Long 77.116697°
05/12/22 12:57 PM GMT +05:30
Google

DELHI TECHNOLOGICAL UNIVERSITY

(formerly Delhi College of Engineering)
Shahbad Daulatpur, Bawana Road, Delhi-110042

F. No. DTU/SP/Misc./2021-22/02/340 DATED: 08.02.2023

To,

Director, IQAC
Delhi Technological University

Subject: Regarding Green Audit Recommendaion-4

Sir,

In compliance of Green Audit Recommendation-04, please find enclosed a copy of Annual E-waste returned filed with Delhi Pollution Control Committee, Department of Environment, GNCTD for financial year 2021-22 which includes the list of e-waste material disposed of by DTU.

This is for your information and records please.

Dr. Pradeep Kr. Teotia
Asst. Registrar (S&P)

Encl : as above

DELHI TECHNOLOGICAL UNIVERSITY
(Formerly Delhi College of Engineering)
Shahbad Daulatpur: Bawana Road: Delhi – 110 042
Tel : +91-11-2787 1016, Fax : +91-11-2787 1023
www.dtu.ac.in,

Azadi ka Amrit Mahotsav

DTU/SP/E-waste/22-23/05/284/3237 Dated 6/12/2022

To
Sh R K Sharma (EE,WMC-III)
Delhi Pollution Control, Committee
Department of Environment, Govt of NCT of Delhi
4th& 5th Floor, ISBT Building, Kashmere Gate,
Delhi-06

Sub:-- Annual return under E-Waste (Management) Rules, 2016

With reference to office letter No DPCC/WMC-III/E-Waste/ 2022/4427 dated 18/10/22 regarding submission of annual return under E-Waste (Management) Rules,2016 for the year 2021-2022, Please find enclosed duly signed Form-3 with necessary details for further necessary action at your end.
Kindly acknowledge the receipt.

Prof. Madhusudan Singh
Registrar,DTU

S/L

FORM-3

[See rules 4(5), 5(5), 8(6), 9(4), 10(8), 11(9), 13(1) (xi), 13(2) (v), 13(3)(vii) and 13(4)(v)]

FORM FOR FILING ANNUAL RETURNS

[To be submitted by producer or manufacturer or refurbisher or dismantler or recycler by 30th day of June following the financial year to which that return relates].

Quantity in Metric Tonnes (MT) and numbers

1	Name and address of the producer or manufacturer or refurbisher or dismantler or recycler	Delhi Technological University, Shahbad Daulat Pur,Babana Road, Delhi-42		
2	Name of the authorized person and complete address with telephone and fax numbers and e-mail address	Registrar, Delhi Technological University, Shahbad Daulat Pur, Babana Road, Delhi-42 registrar@dtu.ac.in T. No 011-27294669		
3	Total quantity of e-waste collected or channelised to recyclers or dismantlers for processing during the year for each category of electrical and electronic equipment listed in the Schedule I (Attach list) by PRODUCERS			
	Details of the above	TYPE	QUANTITY	No.
3(A)*	BULK CONSUMERS : Quantity of e- waste:	As per list attached at Annexure-I		
3(B)*	REFURBISHERS : Quantity of e-waste :	---------	------N/A-----	----------
3(c)*	DISMANTLERS: i. Quantity of e-waste processed (Code wise); ii. Details of materials or components recovered and sold; iii. Quantity of e-waste sent to recycler; iv. Residual quantity of e-waste sent to Treatment , Storage and Disposal Facility.	---------	----- N/A-----	----------
3(D)*	RECYCLERS: i. Quantity of e-waste processed (Code wise); ii. Details of materials recovered and sold in the market; iii. Details of residue sent to treatment, storage and Disposal Facility.	---------	------N/A-----	----------
4	Name and full address of the destination with respect to 3(A)-3(D) above	As per list attached at Annexure-I		
5	Type and quantity of materials segregated or recovered from e-waste of different codes as applicable to 3(A)-3(D)	Type	Quantity	

Place_____

Date_____

Asst. Registrar
Store & Purchase
,DTU

DELHI TECHNOLOGICAL UNIVERSITY
(Formerly Delhi College of Engineering)
Shahbad Daulatpur: Bawana Road: Delhi – 42

Annexure-1

Details of E-waste disposed of in F.Y. 2021-22

S No	Description	Qty.	Mode of disposal	Firm name & address
1	Empty /used Toner Cartridge	2000 Nos	Through auction on MSTC	**M/s Net Sales Scrap Merchant** Super Market Gala No 15, uttar shiv mumbra ,Thane
2	Pentium computers IV	28 Nos	Through auction on MSTC	**M/s Fiz Trading Company** Shop No 6 D/block Khanna Market Mayapuri, Ind. Area ,Delhi-64
3	Laser Printer	07 Nos		
4	Pendrives	04 Nos		
5	CD - Writer	01 No		
6	Wipro NetPower PC	01 No		
7	Pentium IV Computers	04 Nos		
8	Microprocessor application Trainer	10 Nos		
9	Pal Logic Design trainer kit with SW	02 Nos		
10	Microprocessor development kit	01 No		
11	Multimedia trainer kit	01 No		
12	PC BASED 48 Channel logic	01 No		
13	Micro Tutor 85 (8085)	01 No		
14	Data Logger with sensor	01 No		
15	PC interface design trainer	01 No		
16	Cpld Universal Trainer System	20 Nos		
17	8085 Microprosser Trainer kit with study card	20 Nos		
18	True RMS digital multimeter	02 Nos		
19	Robot set	01 No		
20	Scanner	01 No		
21	UPS (700 VA)	02 Nos	Through auction on MSTC	**M/s Ishan Industries** Khasra No 494/1, Vill-Fafunda OppMayur Industries , Hapur Road, Meerut,UP
22	Heat Convector	01 No		
23	Window AC 1.5 Tons	02 Nos		

Asst. Registrar
Store & Purchase
DTU

DELHI TECHNOLOGICAL UNIVERSITY

SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110 042
www.dtu.ac.in ,E-mail: ga@dtu.ac.in
Tel: + 91-11-2729 4673

F. No. DTU/G. A/38/2017-18/912/P/ 164

Dated: 03.02.2023

I.M. NOTE

This is with reference to meeting notice DTU/IQAC/2018-19/49/1014 dated 23.01.2023 to review the Green Audit recommendation at IQAC office. In this regard, it is submitted that the segregation of waste in the dustbin for bio degradable and non-biodegradable waste for recycling of waste & garbage is being monitored at the level of Housekeeping and Sanitary Supervisors.

Consultant (Gen. Admin.)

Dy. Registrar (Gen. Admin.)

Director, IQAC

Department of Biotechnology

Delhi Technological University

Dated 25.1.23

Action taken report for Green Audit agenda 10 as per DTU/IQAC/2018-19/49 dated 20.4.22. (DTU/IQAC/2019/61)

The biomedical waste generated in Department of Biotechnology is very minimal and infrequent and hence has been decided to be clubbed with the waste disposal of the University Health Centre. Possibilities regarding details of schedule of disposal are being deliberated in collaboration with OIC Health Centre and GA branch of the university.

ENVIRONMENTAL ENGINEERING DEPARTMENT
DELHI TECHNOLOGICAL UNIVERSITY
SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110 042
Tel. No.: 011-27890035 Website: www.dce.edu

F.No/DTU/HOD/ENV/2022/648

Date: 27/10/2022

To,

The Chief Project Officer
DTU, Delhi-42

Subject: Report of analysis of drinking water used in DTU.

Please find herewith the report of analysis of water samples collected from DTU campus in response to letter no. DTU/EC/003248/22-23/Ele/6219; dated 26/09/2022.

S. No.	Parameter	Unit	Sample Characterization		BIS Standard For Drinking Water
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2	EC	µS/cm	610	30	NM
3	TDS	mg/l	300	10	2000
4	Salinity	PSU	0.48	0.02	NM
5	Total Hardness	mg/l	230	BDL	200
6	Calcium	mg/l	48	BDL	75
7	Magnesium	mg/l	182	BDL	30
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10	Chloride	mg/l	96	20	250
11	Sodium	mg/l	552.5	202.9	NM
12	Potassium	mg/l	9.5	6.3	NM
13	Fluoride	mg/l	1.9	0.1	1.0
14	Sulphate	mg/l	210	6.6	200
15	Nitrate	mg/l	3.8	0.7	45

**Collected from Ground Water reservoir, DTU; **Collected from water cooler of VVS boys hostel, DTU; BDL: Below Detection Limit; NM: Not mentioned.*

27.10.22

(Prof. A. K. Haritash)
Head, Environmental Engineering Deptt.

Received by

Sign:

Name

27/10/2022

DELHI TECHNOLOGICAL UNIVERSITY

(FORMERLY DELHI COLLEGE OF ENGINEERING)

SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110042

Attendance sheet for a review meeting of Green Audit Recommendation held on 25th January 2023 at 10:30 AM in IQAC office, Civil Department, Third Floor, DTU

Sr. No.	Name	Contact no.	Signature
1.	Dr Asmita Das	9650806962	25/1/23
2.	Neeta Pandey	9868780900	25/1/23
3.	Mohit Tyagi	9996164464	
4.	Pradeep Yadav	9868053944	
5.	Rachana Garg	9971991063	25/1/23
6.	Dr. Anil Kumar	8810447121	
7.	Dr. Pradeep Teotia	07557693908	
8.	A.K. Haritash	9911710444	25.1.23
9.	Dr. Harikesh	8510007178	
10.			
11.			
12.			
13.			
14.			
15.			

DELHI TECHNOLOGICAL UNIVERSITY
(FORMERLY DELHI COLLEGE OF ENGINEERING)
SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110042

File No. DTU/IQAC/2018-19/49/1014 **Date: 23.01.2023**

MEETING NOTICE

A review meeting of Green Audit Recommendations is scheduled to be held on 25.01.2023 at 10:30 AM in IQAC office, Civil 3rd Floor. The meeting will be chaired by Director, IQAC. The following officers and faculty members are requested to attend the meeting.

1. Prof. Pravir Kumar HoD, Department of Biotechnology
2. Prof. Rachna Garg, Director Equal Opportunity Cell
3. Prof. Amit Srivastava, Chief Project Officer (CPO)
4. Prof. Anil Kumar Haritash, HoD, Department of Environmental Engineering
5. Dr. Anil Kumar, Deputy Registrar, Gen. Admn. Branch
6. Dr. Pradeep Teotia , Assistant Registrar Store & Purchase
7. Mr. Mohit Tyagi, A.E. Engineering Cell

All concerned officers and faculty members are requested to make it convenient to attend the meeting on aforesaid, date, time & venue.

Neeta 23/1/23
(Prof. Neeta Pandey)
Director, IQAC

File No. DTU/IQAC/2018-19/49/1014 **Date: 23.01.2023**

Copy to:-

1. PA to VC for kind information to Hon'ble VC.
2. PA to Registrar for kind information to Registrar.
3. Prof. Pravir Kumar HoD, Department of Biotechnology
4. Prof. Rachna Garg, Director Equal Opportunity Cell
5. Prof. Amit Srivastava, Chief Project Officer (CPO)
6. Prof. Anil Kumar Haritash, HoD, Department of Environmental Engineering
7. Dr. Anil Kumar, Deputy Registrar, Gen. Admn. Branch
8. Dr. Pradeep Teotia , Assistant Registrar Store & Purchase
9. Mr. Mohit Tyagi, A.E. Engineering Cell
10. Guard file.

23/01/2023
(Dr. Harikesh)
Dy-Coordinator, IQAC

ENVIRONMENTAL ENGINEERING DEPARTMENT
DELHI TECHNOLOGICAL UNIVERSITY
SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110 042
Tel. No.: 011-27890035 Website: www.dce.edu

No.: DTU/HOD/ENV/2022/301 Date: 26/07/2022

To,

The Director
IQAC, DTU

Sub: Action Taken on Agenda No. 1 & 9 of review of meeting of Green Audit.

With reference to your letter no. File No. DTU/IQAC/2018-19/49/892, dated 21/07/2022. Please find the action taken report in respect of for regular environmental monitoring in DTU Campus and installation of a dedicated ETP for wet labs of Department of Environmental Engineering.

Action Taken:

1. *Administrative approval for monitoring in DTU Campus have been taken from Competent Authority. We are looking for quotation from open market to conduct this monitoring. The departmental committee has been constituted by the HOD.*

2. *The spot quotation was collected from the open market to place the work order to the lowest (LI) bidder, but the Accounts Department advised to invite the bids through open tender/GeM. In this regard, the technical specification and with draft drawing have been submitted to Stores & Purchase Department and the file is in process.*

Submitted for your kind information

26.7.22
(Prof. A. K. Haritash)

(Prof. S. K. Singh)
Head, Deptt. of Env. Engg.

"EDUCATION REACHES TO YOU"

"शिक्षा आप के पास"

Lab on Wheels

Centre of Extension and Field Outreach

2nd Floor, Mechanical Engineering Department
Delhi Technological University

Bulletin

DTU is committed to take education to under-privileged sections of the society. If these sections cannot avail education then education must reach to them. With that vision DTU has started the project called "Lab on Wheels" with main focus

"EDUCATION REACHES TO YOU"
"शिक्षा आप के पास"

Facilities

Lab on Wheels is a customized fully fuctional bus having following facilities

- Computers
- 50 inches Smart TVs
- Laptop
- 3 D printer
- Common use printer
- Fully Wi-Fi enabled
- Fully Air conditioned
- Self Power enabled with backup Facilities

SCOPE

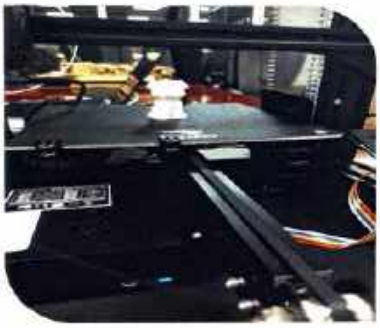
Lab on Wheels shall be visiting schools of Govt of NCT of Delhi for imparting educational and other social services to the students of various standards.
Apart from schools, the Lab on Wheels shall also be visiting good number of villages, community centres and other places of public use.

Resource Person

The resource person for these services will be the students of DTU who will be working under mentorship of faculty coordinator's and Centre for Extension and Field outreach.

Expected Outcome

It is expected that this project shall empower under privileged and diversified sections of the society to enhance their educational standard, digital literacy and learning skills. Through learning, this project shall also create business and job opportunities for habitants of adjacent residents of DTU and at large of Delhi.



Delhi Technological University

(Centre for Extension & Field Outreach)

Bawana Road, Delhi-110042

2021-22

7.1.6 Quality audits on environment and energy are regularly undertaken by the institution

7.1.6.1 The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following: 1. Green audit 2. Energy Audit 3. Environment audit 4. Clean and green campus recognitions/awards 5. Beyond the campus environmental promotional activites

A review of the Green Audit Recommendation was held to seek action taken required for administrative decision-making for future actions against 10 Green Audit recommendations as per the Audit. Also, a quotation for Energy Audit has been called and is presently under tendering process. Quality assurance tests for numerous energy-intensive equipment have been carried out. The ambient air quality audit was carried out in the University to gauge the level of air pollution in the University. Environmental Audit for 2022-23 is being planned. The University regularly audits its resources.

139/C

Delhi Technological University

(Estd. By Govt. of NCT of Delhi vide Act 6 of 2009)
(Formerly Delhi College of Engineering)

DTU/IQAC/2018-19/49/797 **Date: 20.04.2022**

A review meeting of Green Audit Recommendations was held on 07.04.2022 at 03:00 PM in IQAC office, Civil 3rd Floor. The meeting will be chaired by Director, IQAC. The following members were present during the meeting:-

1. Prof. Nirendra Dev, Director, IQAC, DTU
2. Prof. Pravir Kumar, HoD, Department of Biotechnology
3. Prof. Rachna Garg, Director Equal Opportunity Cell
4. Prof. Amit Srivastava, Chief Project Officer (CPO)
5. Dr. Rajeev Kumar Mishra, Assist. Professor, Department of Environmental Engineering
6. Sh. Anil Kumar, Deputy Registrar, Gen. Admn. Branch
7. Dr. Pradeep Teotia, Assistant Registrar Store & Purchase
8. Mr. Mohit Tyagi, A.E. Engineering Cell
9. Dr. Shilpa Pal, Associate Director, IQAC
10. Dr. Harikesh, Dy. Coordinator, IQAC

The Following 13 Green Audit Recommendations were discussed in detail and decision are as under:-

S. No.	File No.	File Subject	Details recommendation from 3rd Party
1	DTU/IQAC/ 2019/52	Green Audit Recommendation 1	It is recommended to evolve a procedure for regular environmental monitoring at least on quarterly basis and maintain all testing records by NABL.

Action Taken	SOP has been notified vide Notification No. DTU/IQAC/2019/52/3121 dated 08.01.2020.		
2	DTU/IQAC/ 2019/53	Green Audit Recommendation 2	The acoustic enclosures of Diesel Generators are required to be installed and maintain to ensure overall noise level during DG operations are meeting CPCB noise limits for DG sets-75Db.
Action Taken	A Proposal for procurement of new Generators is under process. The replacement of old DG set and condemnation is also in process. **Action: Executive Engineer**		
Decision	Replace the existing diesel generators with new diesel/gas based generators and check the viability of gas based generators. **Action: Executive Engineer**		
3	DTU/IQAC/ 2019/54	Green Audit Recommendation 3	It is recommended to initiate the segregation of waste on source and at collection point. The number of bins are required to be added with separate identification sign for biodegradable waste and non-biodegradable waste. The will ensure maximum recycling of waste generated from premise. Collection of waste must be done separately from different bins.
Action Taken	1. Work regarding collection of biodegradable and non-biodegradable waste from each house in the University campus has already been initiated by Housekeeping & Sanitation Staff. 2. In the campus, two types of dustbins (Green and Blue) have been installed and garbage is being collected in dry and wet manner. 3. At the resident level also, the same method has been asked to adopt by the resident of DTU, further to it, the housekeeping staff is also segregating wet and dry garbage. The tree leaves are being dumped into a pit and rest of the garbage is being sent outside the campus by the housekeeping agency. 4. Leaflets for the awareness among the residents and all the stakeholders of the university have been distributed as well as placed on the notice boards regarding segregation of garbage. **Action: Assistant Registrar (Gen. Admn.)**		

	5. The Process Collection of biodegradable and non-biodegradable waste from each house in the University (DTU Campus) has been maintained regularly. **Action: Executive Engineer**		
Decision	Regular monitoring should be done segregation of waste. Also the wet waste should go to waste to energy plant. **Action: Assistant Registrar (Gen. Admn.)**		
4	DTU/IQAC/ 2019/55	Green Audit Recommendation 4	The E-Auction process for Scrap Disposal specially hazardous and e-waste must be amended and required to be included the criteria for selection of vendors' basis on their authorization, from Delhi Pollution Control Committee in accordance with Hazardous and Other Waste (Management, Handling and Transboundary Movement) Rules, 2016 as amended & E-Waste Rules, 2016 as amended.
Action Taken	Store and Purchase section has auctioned e-waste material of five departments (i.e. Computer Science & Engineering, Environmental Engineering, Information Technology, Store Section and Physical Education) through **M/s MSTC**. An amount of **Rs. 4, 83,601 (Four Lakh eighty three thousand six hundred one)** has been earned against scrapped e-waste material. **Action: Store & Purchase department**		
Decision	The process of auction e-waste has been initiated and same maybe done as per requirement of departments. **Action: Store & Purchase department**		
5	DTU/IQAC/ 2019/56	Green Audit Recommendation 5	It is recommended to install water meters on all sources and maintain the daily inventory record of water meter and this can be used to maintain the monthly consumption of water in campus.
Action Taken	A separate pipeline of drinking water from Delhi Jal Board has been installed and cater the water demand of the University. **Action: Executive Engineer**		

6	DTU/IQAC/ 2019/57	Green Audit Recommendation 6	Only commercial non-subsidized cylinders are required to be used in canteen and hostels with manifold facility instead of connecting separately to all equipment units.
Action taken	Work has been completed by Indraprastha Gas Limited. **Action: Executive Engineer**		
Decision	Indraprastha Gas pipeline facilities should be extended to all hostels and canteens. **Action: Executive Engineer**		
7	DTU/IQAC/ 2019/58	Green Audit Recommendation 7	Drinking water monitoring on regular basis as per IS 10500-2012 is recommended at least on fortnightly basis.
Action Taken	Testing of drinking water is being performed on regular basis **Action: Executive Engineer**		
8	DTU/IQAC/ 2019/59	Green Audit Recommendation 8	Should consider some project related to composting or preparation of Briquettes which may be used as fuel in boilers and some other industries in Delhi NCR.
Action Taken	Presently one Ton capacity waste to Energy Plant has been installed, composting Pits are also maintained for horticulture leaves. **Action: Executive Engineer**		
Decision	The dry leaves and twigs should be decomposed using vermi- composting. **Action: Executive Engineer**		
9	DTU/IQAC/ 2019/60	Green Audit Recommendation 9	University should consider dedicated ETP for collection from all wet chemical labs for treatment of waste water.
Action Taken	The survey of wastewater generation was carried out by **M/S Perfect Enviro** during March, 2019. Post the survey work, the company could not carry it further owing to COVID -19 locked over/restrictions, and ongoing construction over the lab wing of Department. The company has again been contacted to carry the survey and submit a proposal and estimate for the installation of ETP for Wet Labs of Department of Environmental Engineering. The Department of Biotech and Chemistry will have to get separate ETP s installed since collection of wet-waste to a single ETP is not possible. (Considering the location of each departments)		

			Action: HoD, Env. Engg.
Decision	Environmental Engineering department will coordinate with department of Applied Chemistry, Biotechnology and Environmental Engineering for installation of ETP in all 03 departments. **Action: HoD, Env. Engg.**		
10	DTU/IQAC/ 2019/61	Green Audit Recommendation 10	The Biomedical Waste Management from health centres and Biotechnology department needs improvement with regular tie up of authorized vendor and frequency of disposal once in week time to avoid long storage of biomedical waste in campus.
Action Taken	The bio-waste management and collection of biomedical waste is being outsourced to Biotic Waste Solutions. Due to corona virus pandemic there were limited wet lab experiments performed in 2021-22 and hence no waste appropriate for specialized disposal was generated. However now with physical classes and wet lab experiments we are in the process of signing a new contract with **Biotic Waste Solutions** for the year 2022-23. **Action HoD, Biotechnology department**		
Decision	Inventory of biomedical to be prepared by Biotechnology department and implementation of decision will be done by department of Biotechnology with coordination of Health Centre. For this purpose faculty coordinator maybe deputed from BT Department. **Action HoD, Biotechnology department**		
11	Agenda No. 11	Maintenance of pond includes lining of the pond, clean supply of water and good habitat for the fishes in pond.	
Action Taken	Preliminary plan has been finalized work will be taken by **PWD Delhi**.		
Decision	Expedite the work of maintance of pond and work to be completed at the earliest. **Action: Executive Engineer**		
12	Agenda No. 12	Dust free campus	
Action Taken	Anti-smoke Gun, Plantation Trees, Sprinkler, used to make campus dust free. **Action: Executive Engineer**		
Decision	Smog gun are available for controlling air pollution in the University campus and maybe use as per the requirement.		

13	Agenda No. 13	Safety audit of the University
Action Taken	Safety audit of the University should be conducted by hiring a 3rd Party for conducting mock drill of earthquake and fire, necessary action should be done.	
Decision	Mock drill of earthquake and fire maybe conducted at the earliest. **Action: IQAC, Security officer and Executive Engineer**	

Nirendra Dev
20/04/2022
(Prof. Nirendra Dev)
Director, IQAC

DTU/IQAC/2018-19/49/ 797 **Date: 20.04.2022**

Copy to:-

1. PA to VC for kind information to Hon'ble Vice Chancellor
2. PA to Registrar
3. Prof. Nirendra Dev, Director, IQAC, DTU
4. Prof. Pravir Kumar, HoD, Department of Biotechnology
5. Prof. Rachna Garg, Director Equal Opportunity Cell
6. Prof. Amit Srivastava, Chief Project Officer (CPO)
7. Dr. Rajeev Kumar Mishra, Assist. Professor, Department of Environmental Engineering
8. Sh. Anil Kumar, Deputy Registrar, Gen. Admn. Branch
9. Dr. Pradeep Teotia, Assistant Registrar Store & Purchase
10. Mr. Mohit Tyagi, A.E. Engineering Cell
11. Dr. Shilpa Pal, Associate Director, IQAC
12. Dr. Harikesh, Dy. Coordinator, IQAC

Harikesh 20/04/2022

(Dr. Harikesh)
Dy. Coordinator, IQAC

ENVIRONMENTAL ENGINEERING DEPARTMENT
DELHI TECHNOLOGICAL UNIVERSITY
SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110 042
Tel. No.: 011-27890035 Website: www.dce.edu

F. NO./DTU/HODENV/2022/426

Date: 26/08/2022

NOTICE

An invited lecture on "Environmental Monitoring and Compliance in Industries; Opportunities and Challenges" will be delivered by Dr. S. Rajamohan, Managing Director, Enviro Care India Pvt. Ltd. On 29th August, 2022 from 1:00 PM to 2:00 PM in room no. TW_3FF_1. Interested faculty members, research scholars and students can make it convenient to attend.

26.8.22

(Prof. A. K. Haritash)
Head, Environmental Engineering Deptt.

Copy to:

1. Mr. BRG Robert to coordinate the arrangement in TW_3FF_1
2. Notice Board
3. Guard File

You are cordially invited to join

Seminar

on

Modern Pollution Abatement Techniques to Achieve Sustainability in Industries

August 5-6, 2022 at 1100 hrs

Chief Guest :

SHRI SURESH JAIN

National Organizing Secretary, Bharat Vikas Parishad

Guest of Honour :

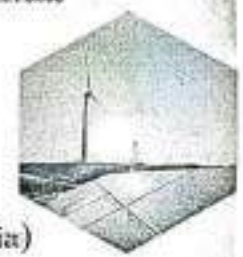
Dr S D Attri
DDG, IMD

Dr Prashant Gargava
Member Secretary, CPCB

Shri Dependra Pathak,IPS
Spl. Commissioner of Police (Law & Order), Delhi Police

Venue :

"Engineers Bhawan",
2, Bahadur Shah Zafar Marg, New Delhi-110002



Organizer :

The Institution of Engineers (India)
DELHI STATE CENTRE

In Association with :

Delhi Technological University

Perfact Group

R.S.V.P.

Prof (Dr) S K Singh, FIE
Chairman, IEI-DSC
Mob. 9891590903

(Spouse are cordially invited)

...lesh Sharma, MIE
...ary Secretary, IEI-DSC
...10214985
...@yahoo.co.in; ieidsc1@gmail.com

Programme

DAY 1, AUGUST 5, 2022

1000-1100 hrs	**REGISTRATION**	
1100-1330 hrs	**INAUGURAL SESSION**	
	Lighting of Lamp	
	Welcome Address	Prof (Dr) S K Singh, Chairman, The Institution of Engineers (India)
	Address by	Shri Praveen Bhargava, Chairman, Perfact Group
	Address by	Shri Dependra Pathak, IPS, Special Commissioner of Police (Law & Order), Delhi Police
	Guest of Honour	Dr Prashant Gargava, Member Secretary, CPCB
		Dr S D Attri, DDG, IMD
	Address by the Chief Guest	Shri Suresh Jain, National Organizing Secretary, Bharat Vikas Parishad
	Presentation of Momento	
	Vote of Thanks	Shri Rajesh Sharma, Honorary Secretary, IEI-DSC
1330-1430 hrs	**LUNCH**	
1430-1600 hrs	**TECHNICAL SESSION – I**	
	Session Chairman	Prof (Dr) S K Singh, Chairman, The Institution of Engineers (India)
	Moderator	Shri S Muthukumaran, Sr. Vice President, Perfact Group
	Speaker	**Prof Parag R Gogate**, Institute of Chemical Technology *Hydrodynamic cavitation based hybrid technologies for industrial wastewater treatment*
		Prof. Mukesh Khare, Emeritus Professor, Dept of Civil Engg, IIT Delhi
		Dr Majed I. I. Al-Sari, Affiliation in Palestine Environmental Specialist, JSC-H&B and Deputy Chairman, UAHR, Palestine *Organic Solid Waste Composting for Sustainable Agriculture: Experience from Palestine*
		Dr Parveen Dahiya, Professor, Amity University, Noida *Utilization of Fly ash in Agriculture for Sustainable Environment Management*
		Shri Nipun Bhargava, CDO, Perfact Group *Sustainable treatment of textile and dyeing wastewater using advanced oxidation processes based on technique*
		Ms Laveena Gupta, DTU *Temporal Variation Source Identification and Abatment Strategies for Fine Carbonaceous aerosols over Indo-Gangetic Plain*
1600-1730 hrs	**TECHNICAL SESSION II**	
	Session Chairman	**Dr. R B Lal**, Scientist 'E', MoEF & CC
	Moderator	**Shri Nipun Bhargava**, CDO, Perfact Group
	Speaker	**Shri Praveen Bhargava**, CEO, Pegasus Waste Management Pvt Ltd *Environmentally Sound Electrical and Electronic Waste Management Processes*
		Shri Indranil Sen, GSM (O&G), MECON Limited
		Dr. Harilash Anil Kumar, Professor, Department of Environmental Engineering, DTU *Affixation of advanced oxidation process standard of textile industries*
		Dr. Charu Rajput, Asst. Professor, Manav Rachna University *Zero waste management plant manufacturing and zero waste se irrigation in India*
		Ms. Rachna, DTU *Comparison of treatment processes for the treatment industrial wastewater*
		Ms. Mallika Vashist, DTU *Fluctuations in Calcium Carbonate And Shell Weights as the Indicator of Past Climate Changes*

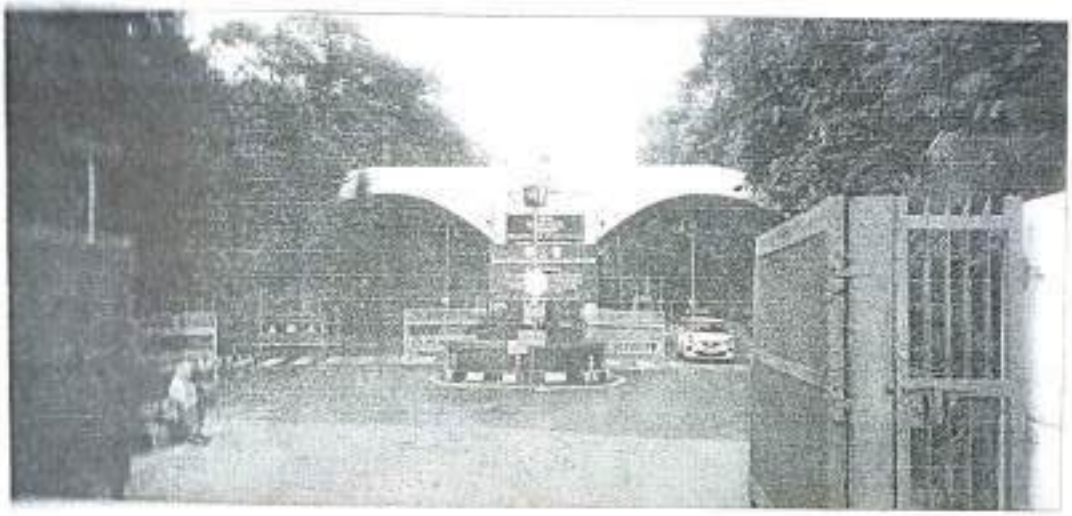
DAY 2, AUGUST 6, 2022

1030-1200 hrs	**TECHNICAL SESSION III**	
	Session Chairman	**Shri Sundeep**, Scientist 'F', MoEF&CC
	Moderator	**Dr. Anil Kumar**, Ex Director(Environment), Govt. of MOF & MS, DPCC
	Speaker	**Dr. N K P Yadav**, Former SDG, IEI & Former Director IEI-HD Cell Delhi *Vehicular Emissions – A Big Challenge to Global Warming and Climate Change*
		Shri Narendra Kumar Shantilal Jain, Vice President – Environment, Jubilant Ingrevia Ltd. *Technical and engineering challenges in achieving Regulation Norms for effluent treatment, emission control and waste management in chemical industries*
		Shri Neeraj Gulati, LMG Conglomerate Pvt Ltd *Journey of ZLD distillery concept and its maturation in our country*
		Shri Shailendra Kumar Singh, Director, Pollucon Technologies Limited *Living Sustainably in Harmony with Nature – Our contribution to our mother earth*
		Shri Sankalp Sonwar, Co-Founder, Offset Global Technology *Make Carbon Credits in India*
		Shri Rajesh Sharma, Honorary Secretary, IEI-DSC *A Smart Fire Detection System using IoT Technology*
1200-1245 hrs	**VALEDICTORY SESSION**	
1245-1315 hrs	**LUNCH**	

AMBIENT AIR QUALITY REPORT

FOR

DELHI TECHNOLOGICAL UNIVERSITY
AT
SHAHBAD, DAULATPUR, MAIN BAWANA ROAD,
DELHI-110042



PREPARED BY:

M/s PERFACT RESEARCHERS PVT. LTD
5TH FLOOR, NN MALL, MANGALAM PLACE
SECTOR-3, ROHINI, DELHI-85

1.0 INTRODUCTION:

1.1 About the University

Delhi Technological University (DTU) is a non-affiliating, teaching and research University at Delhi to achieve excellence in Science, Engineering, Technology, Management and Allied areas and matters connected therewith or incidental thereto. The University enables students to face the wide ranging changes taking place in the field of Science, Technology, Environment and Management. This includes innovation, design, development, Construction, Production, Managerial and entrepreneurial activities. The University lays great emphasis on assisting students in the development of national Character, Self-Confidence, leadership and fostering an ecosystem for creativity and imagination.

The institution was initially established as Delhi Polytechnic in 1941 to cater to the needs of Indian industries for trained technical manpower with practical experience and sound theoretical knowledge. The same was renamed as Delhi College of Engineering in 1965 and was further reconstituted as Delhi Technological University by the Government of NCT of Delhi in 2009. The university was recognized under Section 2 (f) and 12(b) by University Grants Commission under UGC Act, 1956 on 10.07.2009 and 17.12.2012 respectively. The University was awarded ISO 9001:2015 certification on 27.11.2018 Five B. Teach. Programs (Bio Technology, Computer Engineering, Civil Engineering and Electrical Engineering and Production and Industrial Engineering) were accredited by the National Board of Accreditation (NBA) on 26.07.2017. In the Year 2018, DTU was ranked 5th by Times and 7th by India Today respectively among all Engineering Institutions in India. The University, in 2019 has been ranked 34th, 47th and 71st in Engineering, University and Overall Categories respectively and National Institutional Ranking Framework (NIRF), Ministry of Human Resource Development (MHRD), Government of India.

This premier institution is globally well-known for its outstanding education, research and innovations. The university currently offers various inter-disciplinary and industry relevant programs in Science, Technology, Management, and Allied areas at both the undergraduate and postgraduate levels. The university has established a strong academia-industry interface and has collaborations with reputed research Organizations, industries and premier institutions.

2.0 AIR QUALITY MONITORING:

Ambient air quality monitoring is required to determine the existing quality of air, evaluation of the effectiveness of control measures and to identify areas in need of restoration and their prioritization. The study was conducted by Perfact Researchers Pvt. Ltd 10.02.2020 to 18.02.2020.

2.1 Objectives of Air Quality Monitoring:

- **Background Data**

In order to generate background data, air quality monitoring is conducted to assess existing levels of contamination and to assess possible effects of air contamination.

- **Air Quality Management**

To assess the present status to judge effectiveness of air pollution control strategies and long term management of air quality.

3.0 Sampling Stations

To select the air sampling locations, meteorological data with respect to temperature, relative humidity, wind speed and direction plays a vital role. Predominant wind direction plays an important role in determining location of monitoring stations. The monitoring station is located in an area that is Downwind from the source. Location of Air sampling stations is shown below:

Table 1

S.No.	Projects Name	Location
1	DTU, New Delhi	Near Girls Hostel
2	DTU, New Delhi	Near Admin Building
3	DTU, New Delhi	Near Boys Hostel
4	DTU, New Delhi	Admin block -back side
5	DTU, New Delhi	Near Sports Complex

4.0 Analytical methods followed for ambient air quality monitoring:

1. **Particulate Matter ($PM_{2.5}$): (USEPA Quality Assurance Handbook (Vol.II) Part II, Quality Assurance Guideline Document,2.12):** Particulate Matter ($PM_{2.5}$) was analyzed by Gravimetric Method. Particulate matter was collected on the 37 mm dia glass microfiber Filter Paper. $PM_{2.5}$ value is determined from the values of volume of air passed through Ambient Fine Dust Sampler.
2. **Particulate Matter (PM_{10}) (IS:5182 Part 23:2006):** Particulate Matter (PM_{10}) was carried out by Respirable Dust sampler as per IS: 5182(Part 23):2006. Particulate matter was collected on the GF/A Filter Paper. Particles with aerodynamics diameter less than the cut-point of the inlet are collected by the filter. The mass of these particles is determined by the difference in filter weight prior to and after sampling.
3. **Sulphur dioxide (SO_2) (IS: 5182; Part – II – 2001):** Sulphur dioxide is absorbed by aspirating a measured air sample through a solution of Potassium or sodium tetrachloromercurate, TCM. This procedure results in the formation of a dichloro sulphite mercurate complex. The Sulphite Ion produced during sampling is reacted with sulphamic acid, formaldehyde and pararosaniline to form an azo dye and then determined colorimetrically.
4. **Nitrogen Oxides (IS: 5182; Part – VI – 2006):** Nitrogen dioxide is collected by bubbling air through a sodium hydroxide- sodium arsenate solution to form a stable solution of sodium Nitrite. The Nitrite Ion Produced during sampling is reacted with hydrogen peroxide, Sulphanilamide and NEDA to form an azodye and then determined colorimetrically.

4.1 Outdoor Air Quality Results:-

Table 2

S No.	Projects Name	Location	Air Quality	Parameter	Result	Standard	Date
1	DTU, New Delhi	Near Girls Hostel	Outdoor Air Quality	PM2.5	123.5	60 µg/m3	10/07/2019
				PM10	334.7	100 µg/m3	

				SO2	2.4	80 µg/m3	
				NO2	29.7	80 µg/m3	
2	DTU, New Delhi	Near Admin Building	Outdoor Air Quality	PM2.5	240.1	60 µg/m3	11/02/2020
				PM10	385.0	100 µg/m3	
				SO2	4.5	80 µg/m3	
				NO2	37.1	80 µg/m3	
3	DTU, New Delhi	Near Boys Hostel	Outdoor Air Quality	PM2.5	177.5	60 µg/m3	12/02/2020
				PM10	350.7	100 µg/m3	
				SO2	3.5	80 µg/m3	
				NO2	30.6	80 µg/m3	
4	DTU, New Delhi	Admin block -back side	Outdoor Air Quality	PM2.5	156.1	60 µg/m3	18/02/2020
				PM10	423.1	100 µg/m3	
				SO2	3.2	80 µg/m3	
				NO2	45.4	80 µg/m3	
5	DTU, New Delhi	Near Sports Complex	Outdoor Air Quality	PM2.5	201.0	60 µg/m3	18/02/2020
				PM10	369.7	100 µg/m3	
				SO2	4.3	80 µg/m3	
				NO2	54.2	80 µg/m3	

Figure 1. Average results PM10 & PM2.5

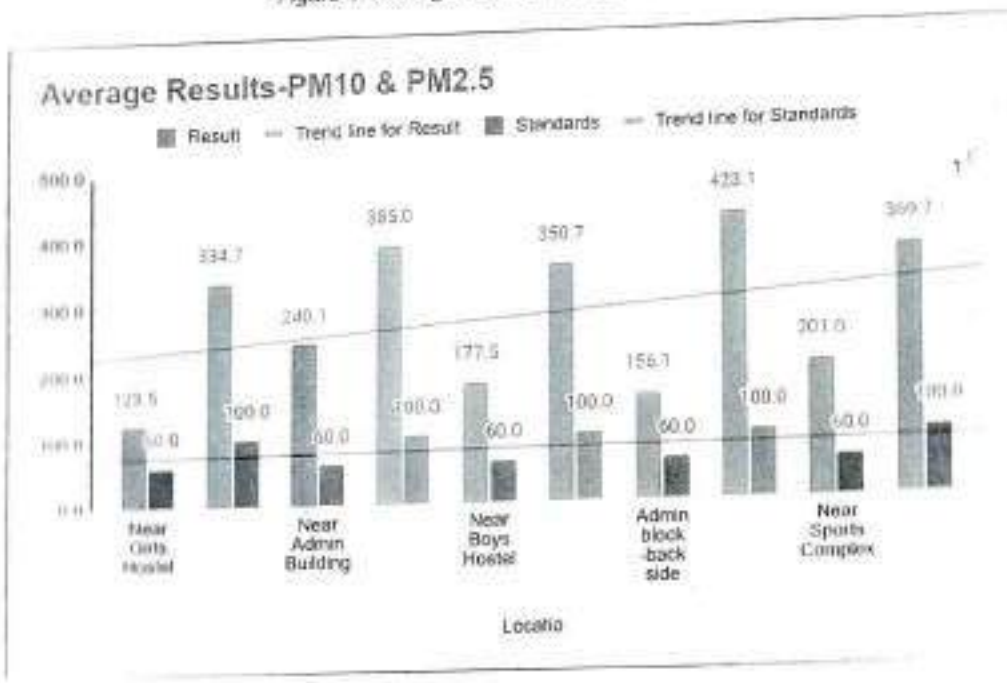
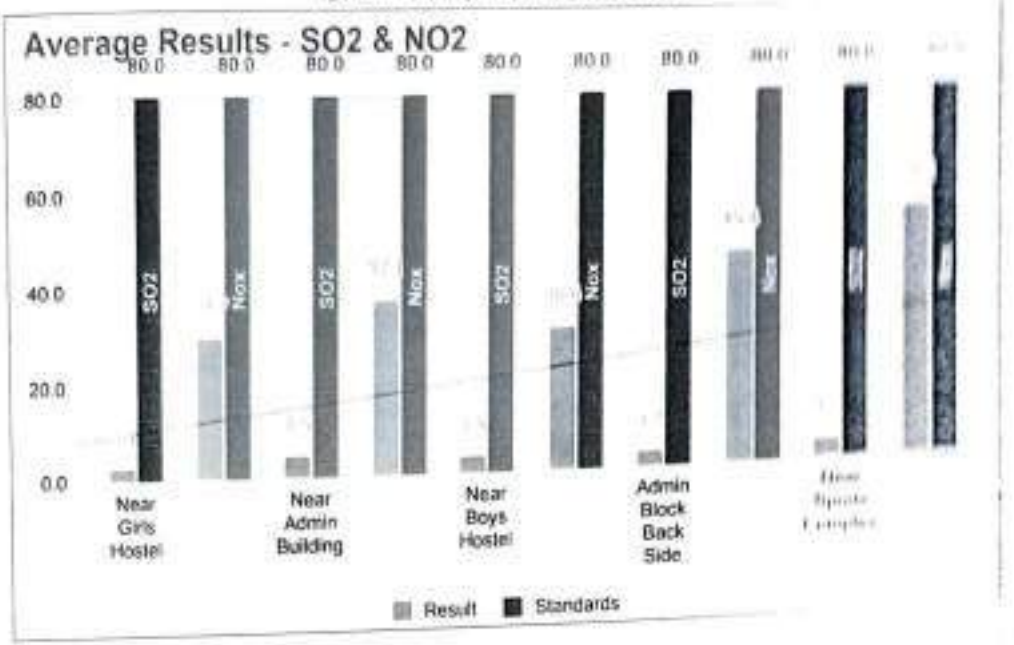


Figure 2 Average results SO2 & NO2



4.2 Results discussion and Interpretation:

This study was carried out in order to determine the Outdoor air quality of the [illegible] in university. Relative humidity, temperature, SO_2, NO_2, and particulate matter ($PM_{2.5}$, and PM_{10}) were taken into account as the parameters of Outdoor air quality measurements. The results obtained from the present work were interpreted by comparing them with the NATIONAL AMBIENT AIR QUALITY STANDARDS.

The relations between all parameters were statistically examined by [illegible] correlation. As a result, it was observed that results of PM_{10} and $PM_{2.5}$ are higher than the standards limit, due to Fugitive dust emission by vehicular movement and [illegible]

5.0 Indoor Air Quality Report:-

Table 3

S.No.	Projects Name	Location	Air Quality	Parameter	Result
1	DTU, New Delhi	Admin Building- Ground Floor	Indoor Air Quality	Temperature	
				Humidity	
				Air flow	
				PM10	
				PM2.5	
				SO2	
				NO2	
				CO	
				CO2	
				O2	
				N2	
				TVOC	
				O3	
				Formaldehyde	
				Total Fungal Count	
				Total Bacterial Count (Gram Positive)	
				Total Bacterial Count (Gram Negative)	
2	DTU, New Delhi	Library Lab- First Floor	Indoor Air Quality	Temperature	
				Humidity	
				Air flow	
				PM10	
				PM2.5	
				SO2	
				NO2	
				CO	
				CO2	

				O2	[illegible]
				N2	[illegible]
				TVOC	0.48
				O3	[illegible]
				Formaldehyde	[illegible]
				Total Fungal Count	[illegible]
				Total Bacterial Count (Gram Positive)	5.0
				Total Bacterial Count (Gram Negative)	7.8
3	DTU, New Delhi	Computer Room-First Floor	Indoor Air Quality	Temperature	11.5
				Humidity	72.0
				Air flow	Calm
				PM10	146.0
				PM2.5	128.0
				SO2	4.9
				NO2	20.4
				CO	2.00
				CO2	693.0
				O2	19.6
				N2	78.1
				TVOC	1.05
				O3	0.05
				Formaldehyde	0.069
				Total Fungal Count	16.0
				Total Bacterial Count (Gram Positive)	8.3
				Total Bacterial Count (Gram Negative)	17.1

5.1 Results discussion and Interpretation:

This study was carried out as the Problems of indoor air quality are [illegible] important risk factors for human health in both low- and middle- and high-[illegible] countries. Indoor air is also important because people spend a substantial [illegible] of their time in buildings.

Although there are numerous indoor air pollutants that can be spread [illegible] building, they typically fall into three basic categories: biological, chemical and [illegible] (1).

Biological

Excessive concentrations of bacteria, viruses, fungi,dust mites, animal dander, pollen may result from inadequate maintenance and housekeeping, poor inadequate humidity control,condensation, or water intrusion through [illegible] building envelope or flooding.Chemical Sources of chemical pollutants (gases or vapors)include emissions from products used in the building; (e.g., office equipment, furniture, wall and floor coverings; pesticides; and cleaning and consumer products), accidental spills of chemicals,products used during construction activities (e.g., adhesives and paints, and gases such as carbon monoxide, formaldehyde, and nitrogen dioxide,which are products of combustion.

Particle (Non-biological)

Particles are solid or liquid, non-biological, substances that are light enough to be suspended in the air. Dust, dirt, or other substances may be drawn into the building from outside. Particles can also be produced by activities that occur in the building, such as construction, sanding wood or drywall, printing,copying, and operating [illegible]

The suitable ambient air quality should be :

Comfort parameters

Temperature	-	18-26°C
Relative humidity	–	30% to [illegible]

ASHRAE 55-1992) Ventilation Parameters

CO_2	<5,000ppm
Oxygen	>21%

Pollutants / Contaminant Levels

PM10	< [illegible]

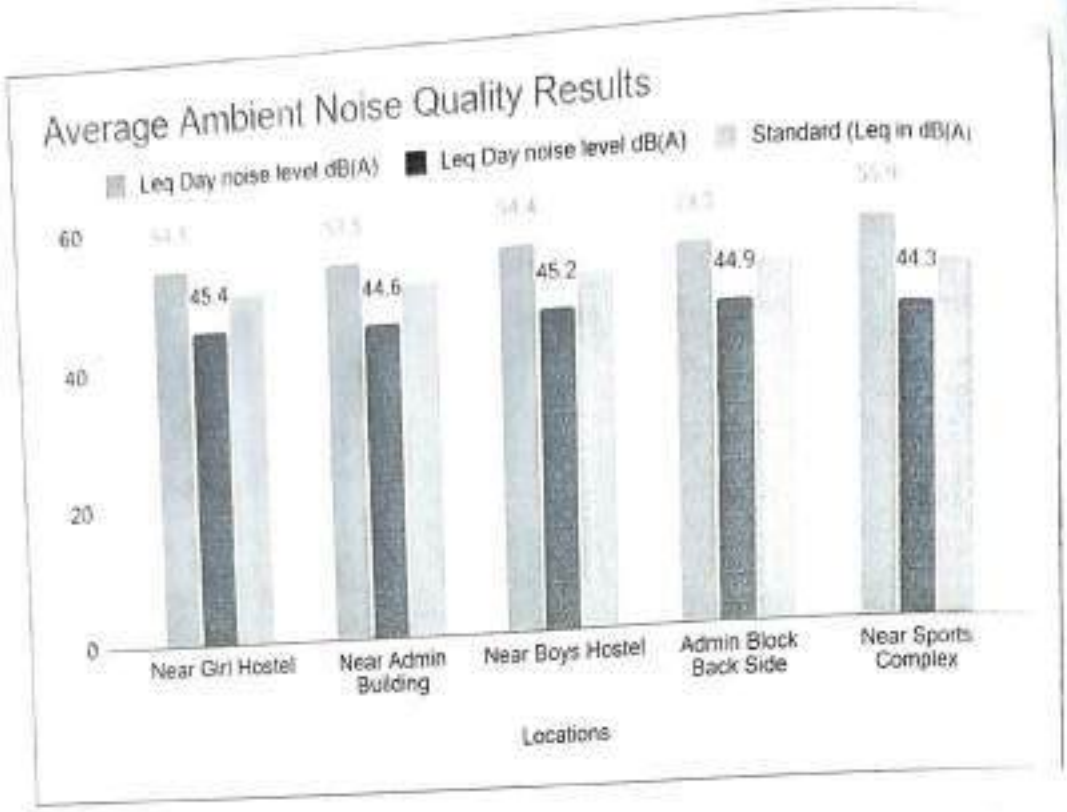
PM2.5	< 40µg/m_3
VOC	1 µg/m_3
CO	2000 µg/m_3
SO2	20 µg/m□
NO2	30 µg/m□
O_3	100 µg/m□
Formaldehyde	1 mg/m□
Benzene	5 µg/m□
Benzo(a)Pyrene	1ng/m□

6.0 Ambient Noise Results:

Table 4.

S. No.	Locations	Zone	Leq Day noise level dB(A)	Leq Night noise level dB(A)	Day time (6.00 A.M to 10.00P.M)	Night time (10.00 P.M to 6.00A.M)
					Standard (Leq in dB(A)	Standard (Leq in dB(A)
N1	Near Girl Hostel	Silent Zone	54.1	45.4	50	40
N2	Near Admin Building	Silent Zone	53.5	44.6	50	40
N3	Near Boys Hostel	Silent Zone	54.4	45.2	50	40
N4	Admin block -back side	Silent Zone	53.3	44.9	50	40
N5	Near Sports Complex	Silent Zone	55.9	44.3	50	40

Figure 3. Average results Ambient Noise Quality



6.1 Results discussion and Interpretation:

This study was carried out in order to determine the Noise level of the existing in university. The results obtained from the present work were interpreted by comparing them with the STANDARDS.

As a result, it was observed that Noise Values are higher than the standards limit, due to the vehicular movement at road.

7.0 Stack Emission (DG) & Source Noise :-

7.1 :Results of DG Stack Emission

Table 5

DTU, Delhi (DG Stack)	
Date	11.09.2020
Stack attached to (KVA)	320
Stack Diameter (m)	0.15
Stack Height (m)	5

Sample quantity PM (L)	898.06
Sample quantity Gases (L)	101.94
Stack Temp. (°C)	243
Stack velocity (m/s)	10.33
Flow rate (m3/Hr)	656.83
Particulate Matter (mg/NM3)	28.6
Sulphur dioxide (mg/NM3)	23.7
Oxides of Nitrogen (mg/NM3)	174.8
Flow rate (m3/s)	0.18
Flow Rate (m3/Hr)	656.83
Nozzle Flow (LPM)	19.62
Time of Sampling PM (min)	50.97

7.2 Source Noise:-

Table 6.

D.G Noise (500 KVA)	
S.NO-1	Sep 2020
Inside Lmin	104.8
InsideLmax	106.8
Inside Leq	103.2
Outside Lmin	88.4
OutsideLmax	94.8
Outside Leq	90.1
Insertion loss	13.1

Table 7.

D.G Noise (500 KVA)	
S.NO-2	Sep 2020
Inside Lmin	107.6
InsideLmax	110.2
Inside Leq	108.3

Outside Lmin	92.5
Outsidel max	94.8
Outside Leq	93.2
Insertion loss	15.1

Table 8

D.G Noise (320 KVA)	
S.NO-3	Sep 2020
Inside Lmin	101.8
InsideLmax	103.6
Inside Leq	102.3
Outside Lmin	86.6
OutsideLmax	89.8
Outside Leq	87.2
Insertion loss	15.1

Table 9

D.G Noise (320 KVA)	
S.NO-4	Sep 2020
Inside Lmin	99.8
InsideLmax	103.3
Inside Leq	101.2
Outside Lmin	90.5
OutsideLmax	94.3
Outside Leq	93.2
Insertion loss	8

Table 10

D.G Noise (320 KVA)	
S.NO-5	Sep 2020
Inside Lmin	100.4
InsideLmax	101.7
Inside Leq	101.4

Outside Lmin	88.4
OutsideLmax	92.4
Outside Leq	90.3
Insertion loss	11.1

Table 11

D.G Noise (250 KVA)	
S.NO-6	Sep 2020
Inside Lmin	100.5
InsideLmax	103.6
Inside Leq	101.9
Outside Lmin	91.1
OutsideLmax	94.7
Outside Leq	92.5
Insertion loss	9.4

7.3 Results discussion and Interpretation:

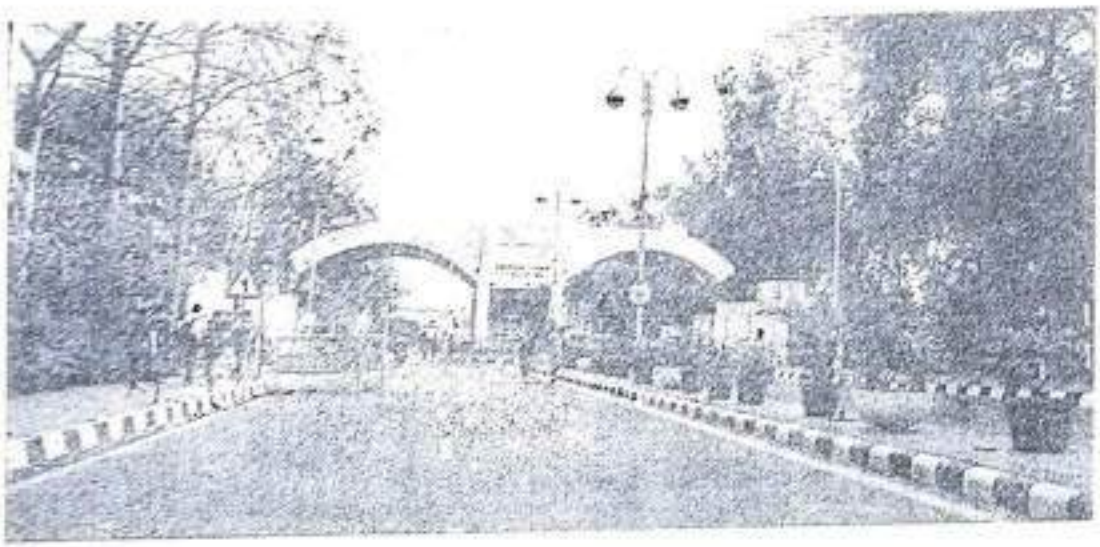
This study was carried out in order to determine the Insertion loss of the DG's installed at existing universities. The results obtained from the present work were interpreted by comparing them with the STANDARDS.
As a result, it was observed that Insertion loss should be minimum of 25 dB (A).

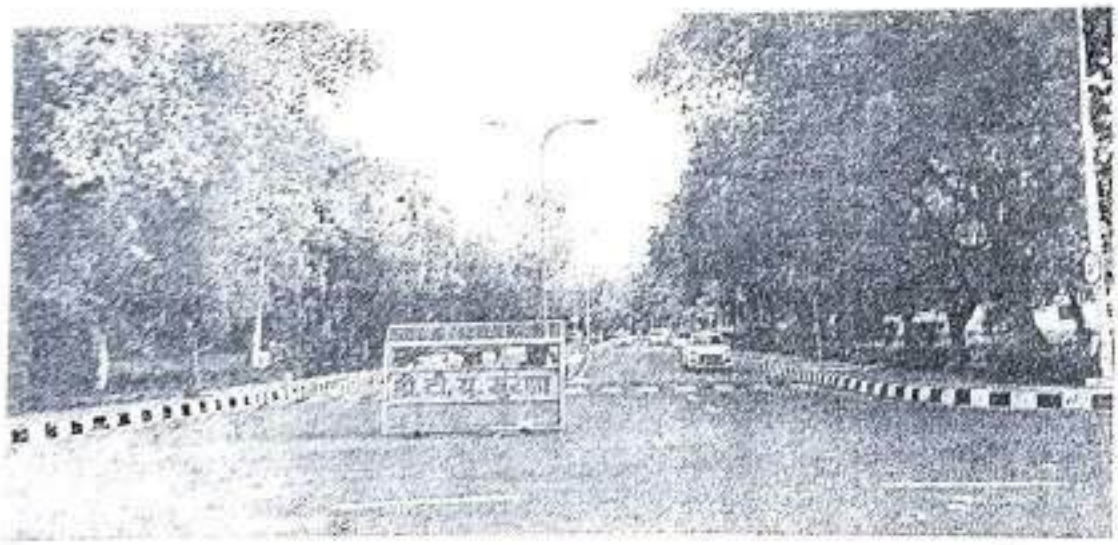
In order to attenuate or minimize the noise produced by the components of a diesel generator, the manufacturer should provide an acoustic enclosure.

ENVIRONMENT AUDIT REPORT

DELHI TECHNOLOGICAL UNIVERSITY

SHAHBAD DAULATPUR ROAD, ROHINI, DELHI - 110042





Strictly Confidential
For Addressee Only
Dr. Anil Haritash
Delhi Technological University, Delhi

Report for
ENVIRONMENT AUDIT
Delhi Technological University,
Shahbad Daulatpur Village
Rohini – 110042, Delhi

Report Date

April 25th, 2019

Submission by

Hitech Enviro Engineers & Consultants Pvt. Ltd.

A-1, Ground Floor
Kaushambi, Ghaziabad - 201010
Uttar Pradesh

CONTENTS

1.0 INTRODUCTION

The Environmental audit includes desktop review of the data and information provided by client, site visit for collecting first-hand information about various environmental aspects and reporting. The purpose of Environment/ Green Audit is to assess the current level of environmental issues, aspects and best practices along with identification of areas for further improvement so as the environmental impacts are minimized. A clean and healthy environment aids effective learning and provides a conducive learning environment for institutes. There are various efforts around the world to address environmental education issues.

Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system. Hence HEECPL has developed a compatible system by developing locally-applicable techniques.

A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis. Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance. This innovative scheme is user friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

2.0 ACKNOWLEDGEMENT

HEECPL is pleased to present this report on the Environment Audit for Delhi Technological University, Rohini. This review was carried out on April 8th, 2019 by HEECPL team. All the details captured in this report are based on the site visits conducted at university and based on the information collected from on-site team members and other staff including administration, teaching staff and clerical staff. The objective of this exercise was to review various green practices being adopted at site, and other environmental aspects of premise to identify the gaps (if any) and suggest measures for further improvement. These included, but not limited to, checking conformance to applicable Environmental aspects in the premise in line with applicable regulatory requirements and best practices in industry determining the status of Environmental practices, technical aspects of building, maintenance services, existing environmental hazards, status of building related legal compliances and identification of potential risks and suggesting immediate control measures.

We would like to acknowledge & thank Mr. Anil Haritash and other staff members for their continuous support during this audit. HEECPL would like to acknowledge & thank to all other site team member with whose support; we were able to complete our onsite inspections & data collections as per schedule.

3.0 OVERVIEW OF INSTITUTE

Delhi Technological University initially established with the name – **Delhi Polytechnic** came into existence in the year **1941** to cater the needs of Indian industries for trained technical manpower with practical experience and sound theoretical knowledge. "75 years of Tradition of excellence in Engineering & Technology Education, Research and Innovations" **Delhi College of Engineering**, The institution was set up at historic Kashmiri Gate campus as a follow up of the Wood and Abott Committee of 1938. It comprised of a multi-disciplinary and multi-level institution offering wide ranging programmes in engineering, technology, arts and sculpture, architecture, pharmacy and commerce. The national diploma awarded by the institution was recognized as equivalent to degree level for the purposes of employment. In 1952 the college was affiliated with University of Delhi and started formal Degree level Programmes.

The erstwhile DCE has functioned from its historic Kashmere Gate Campus for almost 55 years and has shifted in 1996 to its lush green sprawling campus of 164 Acres at Bawana Road, adjoining Sector-17, Rohini, Delhi-42. Its shifting to new campus has added the dimension of research and caused innovations in plenty, which has received high national and international acclaim. As a Delhi Technological University it has the desired autonomy to excel and shape itself as a world class Technological University.

Google Earth Visuals of Delhi Technological University

4.0 AUDIT OBJECTIVES & SCOPE

A comprehensive audit program was evolved as an initial step for conducting Environment audit and roll-out of pre-audit documents. Pre-audit questionnaire update was obtained to get the preliminary information about the college and then actual onsite inspection was scheduled.

Detailed audit was carried out in line with the comprehensive audit program on April 8th, 2019 at college premise.

The purpose and focus of the audit was mainly to review all environmental aspects in college which included following:

1. Review of all environment related applicable legal requirements and other requirements to which organization subscribes. These includes regulatory compliance documents like statutory permissions / NOCs from statutory authorities, Pollution control board related norms, Emergency Preparedness Plan, and Spill Prevention Plan etc.
2. All environmental monitoring reports pertaining to air pollution, water pollution, noise pollution and status of results against applicable standards.
3. Examination of existing environmental management practices and procedures, including those associated with procurement and contracting activities.
4. Monitoring and review of all preventive maintenance of equipments connected with direct or indirect pollution.
5. Chemical management like storage, handling and use of chemicals, special arrangement for flammable chemical, and consumption tracking etc.
6. Waste management at site that includes storage and disposal, use of PPEs, hygiene conditions, any means of recycling through vendors. Hazardous waste and e-waste management and disposal in compliance with applicable norms.
7. Review of all critical areas and production processes in premise that has connection with environmental aspects and impacts.
8. Review of all the systems and processes in relation with environment that is part of environmental management system.
9. Review of environmental aspects including those associated with normal operating conditions, abnormal conditions including start-up and shut down, and emergency situations and accidents.
10. Review of overall environmental performance and practices of contractors and suppliers.
11. Review of extraction and distribution of raw material and natural resources. Distribution will include use and end life of product.

12. Evaluation of organization performance against the management objectives and targets in relation with environment.
13. Analyzing the awareness level in premise for environmental policy and objectives which includes competency, awareness and understanding of roles and responsibility.
14. Operational control of all those operations that are associated with its identified environmental aspects and to check that control is effective in reducing the adverse impact associated with them.
15. Evaluation of previous emergency situations and accidents and review of emergency preparedness and response plan.

5.0 AUDIT PARTICIPANTS & KEY STAKEHOLDERS

Below is list of key stakeholders of audit, apart from these, interactions were done with many other departments, hostels, canteen, hospital, STP and administration staff.

S.No.	Name & Designation
1	Dr. Anil Haritash
2	Mr. Pradeep
3	Chandra Prakash
4	Dr. Ram Singh
5	Dr. Asmita
6	Proff. Madan Mohan Tripathi
7	Dr. Neelam
8	All other Department Representatives

6.0 AUDITOR INFORMATION

Mumish Kumar & Rishi Katiyar; HEECPL, Ghaziabad

7.0 AUDIT METHODOLOGY

The following methodology was followed for successful completion of audit:

- Pre-audit questionnaire to take preliminary information about the site.
- On site audit activities starting with an opening meeting with site representatives.
- Verification of documents related to Environmental aspects.
- Inspection of the site premises and infrastructure.
- Taking photographic evidences of observations.
- One-on-one/ group discussion with ground staff, selected at random.
- Closing session with site-in-charge to share major findings.

7.1 AREAS COVERED IN AUDIT

- Main Gate
- Surroundings of university premise
- DG Yards / Substation Area
- Electrical Panels
- Drain lines
- Kitchen Areas
- Canteens
- All Building Structures
- Water Pond
- Hostels
- Conference Room
- Lobby Areas
- Chemistry & Biotech Labs
- Staircases
- Terrace
- Water Tanks
- Store Rooms
- Admin Areas
- Health Centers
- Stadiums

8.0 ENVIRONMENTAL FACTS OF COLLEGE PREMISE

8.1 Total Strength of Institute: 10,000 students

8.2 Facility Details relevant for Environmental Aspects

S.	Facility	Status
1	Total Area	165 Acres
2	Play Ground	Yes, Stadiums in Campus
3	Kitchen	Yes Available in hostels & common canteen
4	Toilets	Available in all building
5	Garbage Dump	Designated Garbage yard near main gate
6	Laboratory	Environment Lab, Chemistry Lab & Biotechnology Lab
7	Canteen	Yes Available (100 seating capacity)
8	Open Air Theatre	Mini- 100, Main – 2000 capacity
9	Hostels	Boys Hostel – 8, Girls Hostel – 5, Transit Hostel - 1
10	Water Pond	Artificial Open Wetland structure
11	Bore-Wells	5 Bore wells at different locations
12	Sewage Treatment Plant (STP)	Recently erected and to be commissioned
13	Others (Specify)	NA

8.3 Level of disturbance from different sources in the institute:

Scale – 1-9 (9 is highest)

Sr.	Source of Disturbance	Result
1	Municipal dump yard	1
2	Garbage heap	2
3	Public Convenience	2
4	Sewer Line	2
5	Stagnant Water	1
6	Open Drainage	1
7	Industry – Mention the type	1 No Industry nearby
8	Bus / Railway Station	2
9	Market / Shopping Complex / Public Halls	1

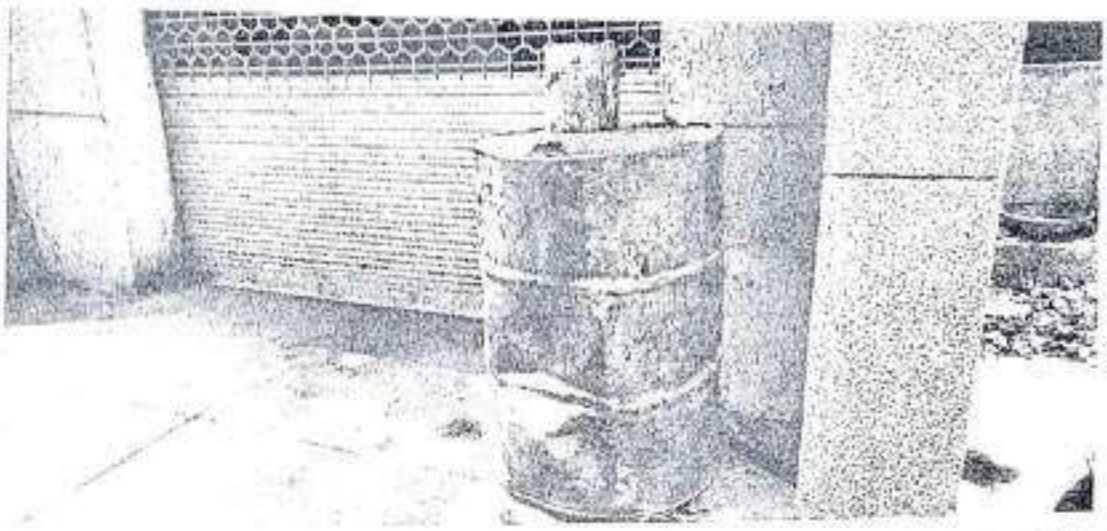
Overall campus is very peaceful, lush green and minimum disturbance from any outside factor.

8.4 Type of Waste Generated from Premise:

Non Hazardous Waste – Daily garbage, canteen waste, carton papers, plastic and civil construction waste generated from premise on regular basis. The regular collection is done by Municipal Corporation for further dispose of at dumping site. There is designated garbage yard inside premise for the same.

Manual segregation is done to ensure maximum recycling at garbage yard near main gate

Hazardous Waste – Hazardous waste is generated from DG maintenance from different substation areas. Different capacity DG set is installed in premise for power back up in 5 substations. This waste is regularly collected by vendor finalized by University scrap sale process selected by online tender scheme; stored temporarily at site in drums.



Electronic Waste – Electronic Waste is generated from various departments and administration buildings, same is stored in scrap yard inside the campus only. The electronic waste is stored currently at site. There is process for disposal of e-waste and other waste via E-Auction process. Last e-waste disposal was done to HP – Computer and Laptop manufacturer directly.

Designated Junk yard in the campus for all types of scrap disposed through e-auction process

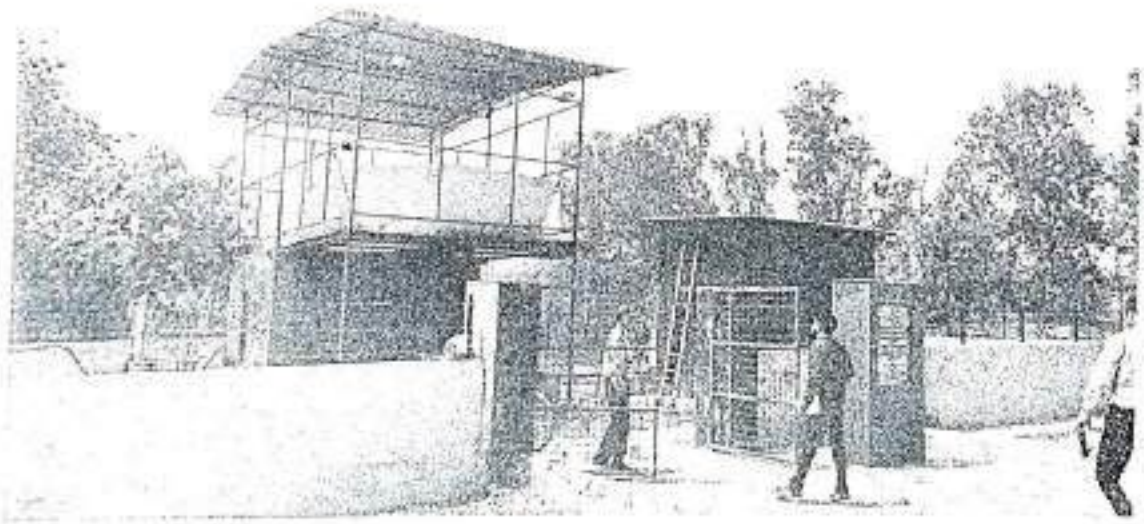
9/C

8.5 Waste Management Initiatives in Premise:

S.	Waste Management Type	Initiative
1	Composting	Organic Waste to Energy Plant (4 m^3/day) and 1 TPD
2	Recycling	Yes, Manual segregation at garbage yard and multicolor bins in campus to promote segregation at source. Recycling is also promoted through association with **Jagruti Foundation** who collect all recyclable paper waste and provide A4 size paper reams used in office work.
3	Reuse	Yes, Reuse promoted at department level, wherever feasible
4	Others (Please Specify)	NA

8.6 **Organic Waste to Energy Plant**

University got installed and commissioned 1 TPD waste to energy plant at Delhi Technological University to process 1 TPD of waste and can generate Biogas of 100-120 Nm3/day producing 50-100 KWH/ day of Net Electricity and 150 Kg of Compost.



Waste to Energy Plan in DTU campus near water pond area

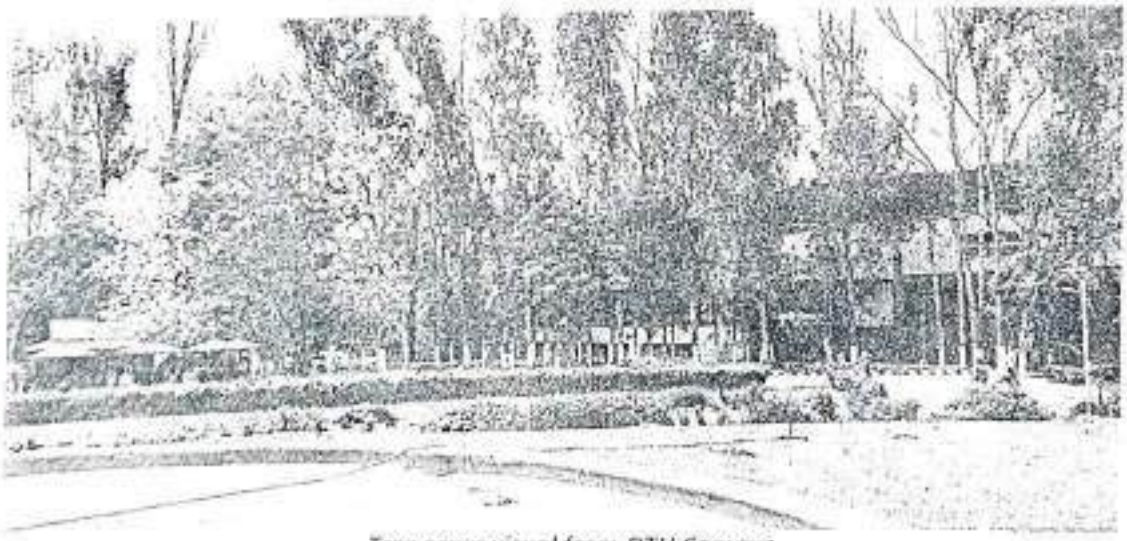
The process of e-auction need to be amended with inclusion of clauses for authorized vendors for collection of hazardous and e-waste generated in premise. Along with same, storage of hazardous and

e-waste in campus needs improvement in the form of labelling, pucca floor, bonding, secondary containment and quantity details to be displayed.

8.7 Tree Census of DTU

The campus has lush green coverage with approximately 5000 number of trees and same quantity of shrubs. Highlights of varieties of trees are shown in below table:

Sr.	Type of Plant
1	*Magnifera indica*
2	*Syzygium cumini*
3	*Saraca asoca*
4	*Ailanthus altissima*
5	*Bombax ceiba*
6	*Ficus religiosa*
7	*Dalbergia sissoo*
8	*Azadirachta indica*
9	*Ficus virens*
10	*Ficus benghalensis*
11	*Neolamarckia cadamba*
12	*Thevetia peruviana*
13	*Alstonia scholaris*
14	*Bauhinia variegate*
15	*Eucalyptus globulus*
16	*Bougainvillea glabra*
17	*Coma indica*
18	*Psidium guajava*
19	*Butea monosperma*
20	*Terminalia arjuna*
21	*Melia azedarach*
22	*Lagerstroemia indica*
23	*Delonix regia*



Tree cover visual from DTU Campus

8.8 Energy Usage in Premise

Sr.	Sources	Usage
1	Electricity Consumption in Lighting	CFL & LED Lighting
2	Diesel in DG Sets	Regular DG Maintenance by Outsourced vendor
3	LPG Gas	Used in Canteen and Hostels for cooking
4	Air conditioning	Available in different buildings

Contract Demand – 2750 kW
Sanctioned Load – 4256 kW

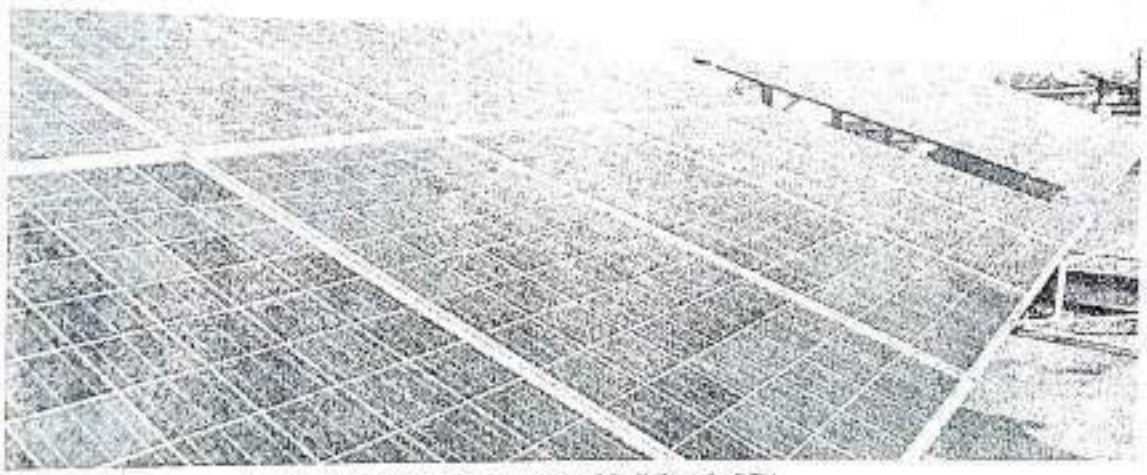
Latest Energy Consumption – 275760 KWH

8.9 Energy Saving Initiatives

Energy saving initiatives are currently limited to optimum use of lighting and connected equipment by following timely pattern of switching off and on.

8.10 Alternate Energy Sources in Premise

Institute has taken initiative for installing solar panels for alternative energy source. Delhi Technological University has installed solar plant for 472 KW power generation. All the building structure terrace are covered with solar panels and generated power is supplied to connected grid.



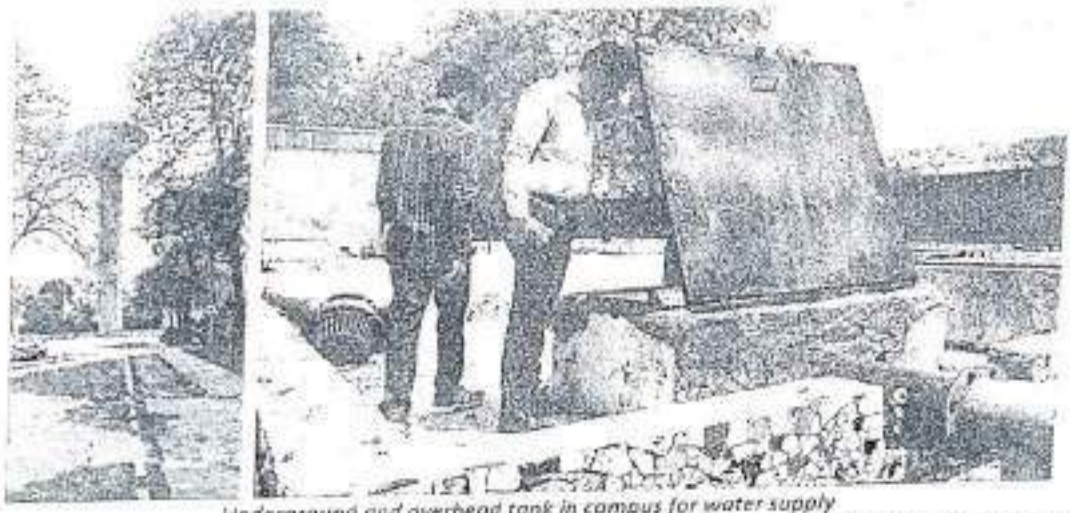
Solar Panels installed on terrace of Buildings in DTU

8.11 Energy Conservations in Computers & Other Equipment:

The power saving mode is active on computers and all the computers and other equipment has settings for the same to ensure minimum energy consumption in case of not using them.

8.12 Water Consumption in Campus:

The water consumption in institute is for domestic use only. All the water is consumed in washrooms for flushing and hand wash by students and staff. Small amount of water is used in canteen for preparation of tea and minor snacks. The water meters are not installed in premise for capturing the consumption, and there is no details available currently as water consumption inventory is not maintained.



Underground and overhead tank in campus for water supply

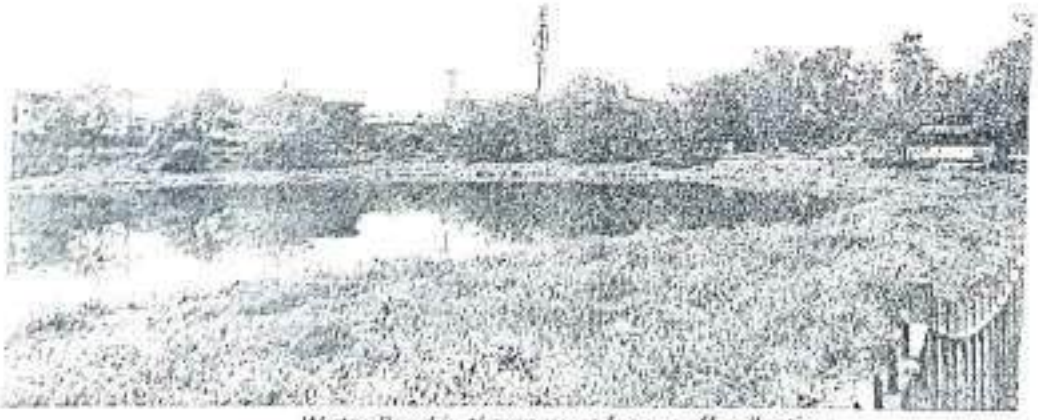
Overhead water tank is filled 3 times daily at different interval and time period. One time filling of tank makes 2,26,000 liter of water. There is no water testing evident for domestic supply but the team is using direct chemical dosing.

8.13 Water Conservation Initiatives:

There are no water conservation initiatives reported currently in premise.

8.14 Rainwater Harvesting System:

There is no rainwater harvesting system maintained in the premise as observed during site walkthrough. But there is large water pond for runoff collection and ground water recharging similar to artificial wetland in the campus.



Water Pond in the campus for runoff collection

8.15 Awareness about Environmental Laws:

During audit walkthrough, the awareness level of environmental laws related different environmental aspects of institute was checked. The site team is not much aware about applicable environmental laws. There should be listing of all environmental laws that is normally applicable to institutes at various levels.

9.0 OBSERVATIONS & RECOMMENDATIONS:

1) Environmental monitoring of various parameters are done currently by internal labs on random basis which includes – Ambient Air Monitoring, Stack Emission Monitoring, Noise level monitoring. These reports are available at various places in departments.

Recommendation 1: It is recommended to evolve a procedure for regular environmental monitoring at least on quarterly basis and maintain all testing records by NABL / Delhi Pollution Control Committee (DPCC) approved laboratory.

2) The noise level in DG set during operation is higher than prescribed limits due to absence of acoustic enclosures in DG Sets.

Recommendation 2: The acoustic enclosures of Diesel Generators are required to be installed and maintain to ensure overall noise level during DG operations are meeting CPCB noise limits for DG sets – 75dB.

3) Segregation of Wastes types in different bins are not followed. There are two types of bins kept at various places but there is no separate collection of dry waste, wet waste, biodegradable waste and non-biodegradable waste. All wastes are collected in common garbage bags only for further disposal.

Green and Blue Color Bins for Biodegradable and Non-Biodegradable Waste in campus

Recommendation 3: It is recommended to initiate the segregation of waste on source and at collection point. The number of bins are required to be added with separate identification sign for biodegradable waste and non-biodegradable waste. This will ensure maximum recycling of waste generated from premise. Collection of waste must be done separately from different bins.

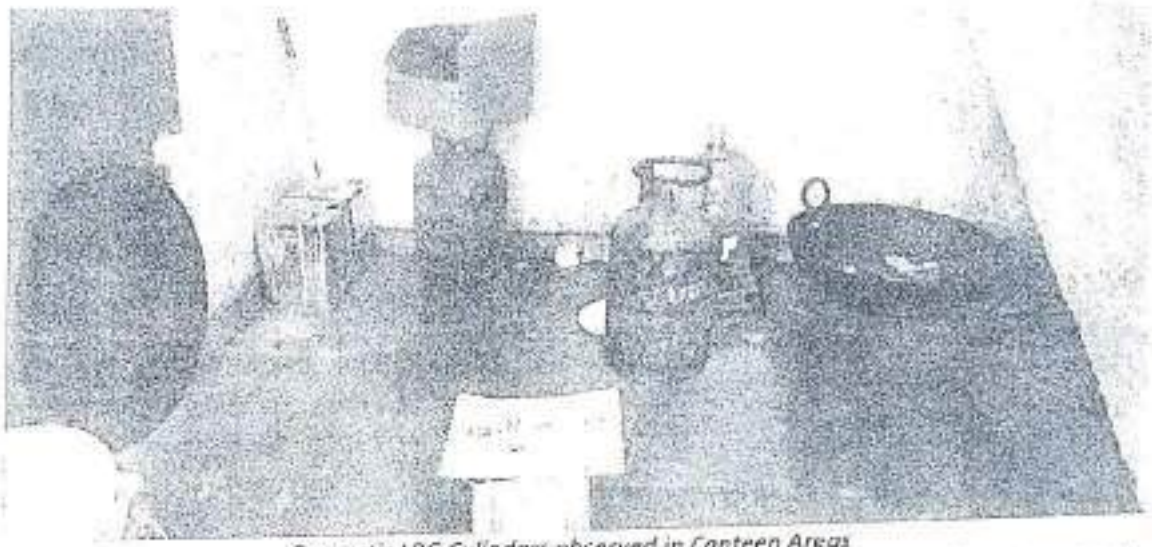
4) E-Auction process for disposal of hazardous and e-waste doesn't include any legal references and selection of vendors are not done in accordance with their authorization from Delhi Pollution Control Committee.

Recommendation 4: The E-Auction Process for Scrap Disposal specially hazardous and e-waste must be amended and required to be included the criteria for selection of vendors basis on their authorization from Delhi Pollution Control Committee in accordance with Hazardous and Other Waste (Management, Handling and Transboundary Movement) Rules, 2016 as amended & E-Waste Rules, 2016 as amended.

5) Water meters are not installed in premise at any source of water in campus. There is no record of water consumption available.

Recommendation 5: It is recommended to install water meters on all sources and maintain the daily inventory record of water meter and this can be used to maintain the monthly consumption of water in campus.

6) Domestic cylinders of LPG are in use at various places inside campus as observed in canteen and hostel areas.



Domestic LPG Cylinders observed in Canteen Areas

Recommendation 6: Only commercial non-subsidized cylinders are required to be used in canteen and hostels with manifold facility instead of connecting separately to all equipment units.

7) There is no testing of supply water done as observed at various placed inside campus. Only chlorine dosing is done to water.

Recommendation 7: Drinking water monitoring on regular basis as per IS 10500 – 2012 is recommended at least on fortnightly basis.

8) Lot of dry leaves & twigs are currently being dumped with the garbage. These leaves and twigs have high calorific value and may be used as fuel.
Recommendation 8: To utilize the organic dry waste, university should consider some project related to composting or preparation of Briquettes which may be used as fuel in boilers and some other industries in Delhi NCR.

9) There is no Effluent Treatment Plant (ETP) for Biotechnology and Chemistry labs and the chemical discharge is entering into common sewage discharge.
Recommendation 9: University should consider dedicated ETP for collection from all wet chemical labs for treatment of waste water.

10) Health Centre and Biotechnology Department are currently generating Biomedical Waste but there is regular vendor for disposal of biomedical waste from campus. Biotechnology department is currently disposing in 3-4 months to authorized vendor.
Recommendation 10: The Biomedical Waste Management from health centers and Biotechnology department needs improvement with regular tie up of authorized vendor and frequency of disposal once in week time to avoid long storage of biomedical waste in campus.

END OF REPORT

DISCLAIMER

This report is confidential and is intended for the sole use of the person or persons to whom it is addressed and neither the whole nor any part of this report may be included in any published document without HEECPL & Delhi Technological University's written approval of the form and context in which it may appear which can be given only after written approval. This document contains selected information provided by the site team to assist the recipient in making an ... [illegible] ... to proceed with further investigation. While the information included herein is believed to be accurate and ... [illegible] ... to delivery of this Report neither the consultants nor the clients make any representations or warranties, expressed or implied, as to the accuracy or completeness of such information.

QUOTATION

Customer Details

Delhi Technical University,
Main Campus,
North Shahbad, Daulatpur,
Delhi - 110042

Quotation No.: EMEP/DTU/QN/2021-22/0705
Enquiry No.:
Date: Tuesday, July 13, 2021

Kind Attn: **Bimal Jain, Executive Engineer**
Email: eecwildtu@gmail.com
Ref: **Quotation for Energy Audit of E&M Installations at Delhi Technical University**

We are please to give our best offer for following services of your above mentioned project

Sl #	DESCRIPTION	UNIT	QTY	RATE (INR)	AMOUNT (INR)
	Energy Audit of following E&M installations at Delhi Technical University and submission of report thereafter for implementation	JOB	1	₹ 300,000.00	₹ 300,000.00
1	432 KWp Grid-Connected Roof top Solar Power Plant				
2	Centralised AC Plant of 330 TR (3X110 TR) capacity.				
3	Inter connected Grid sub-stations with DG Sets of 500 KVA/320 KVA/250 KVA capacities				
4	Solar Water Heating Systems				
5	Water pumping with 4X30 HP pumps and distribution system				
6	Fire Fighting System				
7	Lifts				
8	Street Lighting				
9	Building Lighting				
					₹ 300,000.00

INR. THREE LACS ONLY

NOTE:

I. Payment terms & conditions shall be as under-

1. 80% payment shall be paid by the department after conducting Energy Auditing of installations from Sr. No. 1 to 9.
2. 20% after submission of the Report.

II. The Energy Auditing shall be completed within a period of 60 days.

III. The Energy Audit shall be conducted by an Energy Auditor duly Certified and Accredited by Bureau of Energy Efficiency (BEE).

IV. GST will be charged as per actual.

Hope you will find above reasonable and will give a chance to work with you.

For EMEP Consultancy Services Pvt. Ltd.

EMEP Consultancy Services Pvt. Ltd.

Er. Ramesh Chand
Principal Consultant

Date: Tuesday, July 13, 2021

FIRE DRILL: DISASTER MANGEMENT


photo by DTU student


photo by DTU student


photo by DTU studio


photo by DTU studio

STEPS AGAINST SPREAD OF COVID-19


photo by DTU studio


STOP
THE SPREAD
As per the Governmental Mandate
NO ENTRY
WITHOUT MASK
photo by DTU studio

2020-21

7.1.6	The institution's initiatives to preserve and improve the environment and harness energy are confirmed through the following: 1. Green audit 2. Energy Audit 3. Environment audit 4. Clean and green campus recognitions/awards 5. Beyond the campus environmental promotional activities	**A review of the Green Audit Recommendation was held to seek action taken required for administrative decision-making for future actions against 10 Green Audit recommendations as per the Audit. Quotation for Energy Audit has been called. Quality assurance tests for numerous energy-intensive equipment have been carried out. The last environmental audit was carried out in 2019 due to the ongoing COVID-19 pandemic Environmental Audit for 2020-21 was not carried out. Yet, for gauging the present scenario of the environment at DTU, an Environmental Audit is being planned.**

Delhi Technological University

(Estd. by Govt. of NCT of Delhi vide Act 6 of 2009)
(Formerly Delhi College of Engineering)

-13-

DTU/IQAC/2018-19/49 Date : 17.02.2020

A review meeting of Green Audit Recommendations was held on 22.01.2020 at 11:00 am in Room No. 307, 2nd Floor, Administrative Block, Delhi Technological University. The following members were present during the meeting:-

1. Prof. Yogesh Singh, Vice Chancellor, DTU
2. Prof. M.M. Tripathi, Director, IQAC, DTU
3. Prof. Jaigopal Sharma, HoD, Department of Biotechnology
4. Prof. S.G. Warkar, HoD, Department of Applied Chemistry
5. Dr. Shilpa Pal, Associate Director, IQAC, DTU
6. Sh. Rajesh Birok, OIC, Health Centre
7. Sh. Bimal Jain, Executive Engineer, Engineering Cell, DTU
8. Dr. Rajeev Mishra, Assistant Professor, Department of Environmental Engineering, DTU
9. Sh. Madhuresh Jha, Section Officer, Gen. Admn. Branch, DTU

The following 10 Green Audit Recommendations were discussed in detail and decisions are as under:-

S. No.	File No.	File Subject	Detail recommendation from 3rd party
1	DTU/IQAC/ 2019/52	Green Audit Recommendation I	It is recommended to evolve a procedure for regular environmental monitoring at least on quarterly basis and maintain all testing records by NABL/Delhi Pollution Control Committee (DPCC) approved laboratory.
Action taken	SOP has been notified vide Notification No. DTU/IQAC/2019/52/3121 dated 08.01.2020.		
Decision	Necessary action to be taken for quarterly monitoring from approved laboratories. **Action : HoD, Env. Engg. and Dr. Rajeev Kumar Mishra**		
2	DTU/IQAC/ 2019/53	Green Audit Recommendation 2	The acoustic enclosures of Diesel Generators are required to be installed and maintain to ensure overall noise level during DG operations are meeting CPCB noise limits for DG sets-75Db.
Decision	The following action should be taken: - 1. Stacks/Suitable enclosures to be installed around existing diesel generators in the University campus. 2. Replace the existing diesel generators with gas based generators one by one when the replacement is required. 3. New generators which will be purchased as per requirement should be gas based generator. **Action : Executive Engineer**		

	DTU/IQAC/ 2019/54	Green Audit Recommendation 3	It is recommended to initiate the segregation of waste on source and at collection point. The number of bins are required to be added with separate identification sign for biodegradable waste and non-biodegradable waste. This will ensure maximum recycling of waste generated from premise. Collection of waste must be done separately from different bins.
Decision	Immediate action should be taken for collection of biodegradable and non-biodegradable waste from each house in the University campus. **Action: Assistant Registrar (Gen. Admn.) & Executive Engineer**		
4	DTU/IQAC/ 2019/55	Green Audit Recommendation 4	The E-Auction process for Scrap Disposal specially hazardous and e-waste must be amended and required to be included the criteria for selection of vendors basis on their authorization, from Delhi Pollution Control Committee in accordance with Hazardous and Other Waste (Management, Handling and Transboundary Movement) Rules, 2016 as amended & E-Waste Rules, 2016 as amended.
Decision	The E-Auction for scrap disposal is already done and agency is in place. For disposal of hazardous material, action may be initiated by the departments which are creating hazardous waste (Applied Chemistry & Biotechnology). For the auction of e waste, Store & Purchase department is requested to initiate the process. The process should be completed within 03 months of time. **Action: Store & Purchase department**		
5	DTU/IQAC/ 2019/56	Green Audit Recommendation 5	It is recommended to install water meters on all sources and maintain the daily inventory record of water meter and this can be used to maintain the monthly consumption of water in campus.
Decision	A separate pipeline of drinking water from Delhi Jal Board has been approved by the BoM. Rs. 53 crore is being deposited to Delhi Jal Board for providing the drinking water supply to DTU. Water meters will be installed to maintain the daily inventory record of water. **Action : Executive Engineer**		
6	DTU/IQAC/ 2019/57	Green Audit Recommendation 6	Only commercial non-subsidized cylinders are required to be used in canteen and hostels with manifold facility instead of connecting separately to all equipment units.
Action taken	Proposal has been sent to IGL for necessary action. Monitoring should be undertaken for expediting the process. **Action : Executive Engineer**		
7	DTU/IQAC/ 2019/58	Green Audit Recommendation 7	Drinking water monitoring on regular basis as per IS 10500-2012 is recommended at least on fortnightly basis.
Decision	Testing of drinking water is being performed on regular basis. **Action : Executive Engineer**		

	DTU/IQAC/ 2019/59	Green Audit Recommendation 8	To utilize the organic dry waste, university should consider some project related to composting or preparation of Briquettes which may be used as fuel in boilers and some other industries in Delhi NCR.
Decision	A shredder is in the process of purchase to shred the dry leaves and twigs so that it can be used in the waste to energy plant /bio composting. **Action : Executive Engineer**		
9	DTU/IQAC/ 2019/60	Green Audit Recommendation 9	University should consider dedicated ETP for collection from all wet chemical labs for treatment of waste water.
Decision	Environmental Engineering department will coordinate with department of Applied Chemistry, Biotechnology and Environmental Engineering for installation of ETP in all 03 departments. **Action : HoD, Env. Engg. and Dr. Rajeev Kumar Mishra**		
10	DTU/IQAC/ 2019/61	Green Audit Recommendation 10	The Biomedical Waste Management from health centers and Biotechnology department needs improvement with regular tie up of authorized vendor and frequency of disposal once in week time to avoid long storage of biomedical waste in campus.
Decision	Inventory of biomedical to be prepared by Biotechnology department and implementation of the decision will be done by department of Biotechnology with coordination of Health Centre. **Action : HoD, Biotechnology department**		

The following new agenda are taken up in the meeting: -

S. No.	Agenda no.	Detailed Recommendation
11	Agenda No. 11	Maintenance of pond includes lining of the pond, clean supply of water and good habitat for the fishes in the pond.
Decision	For properly maintaining the pond in the University campus, necessary action should be taken. **Action : HoD, Biotechnology department & Executive Engineer**	
12	Agenda No. 12	Dust free campus
Action taken	Smog gun has been procured for controlling air pollution in the University campus.	
Decision	To make DTU as DUST FREE CAMPUS initiatives should be taken. **Action : HoD, Env. Engg.**	
13	Agenda No. 13	Safety audit of the University
Decision	Safety audit of the University should be conducted by hiring a 3rd party. For conducting mock drill of earthquake and fire, necessary action should be done. **Action : HoD, Civil Engg. Department, Security Officer & Executive Engineer**	

The minutes are approved with the approval of the Vice Chancellor for circulation to the members.

Shilpa Pal 26/2/2020

(Dr. Shilpa Pal)
Associate Director, IQAC

Copy to:-

1. PA to VC for kind information to Hon'ble Vice Chancellor.
2. Prof. S.K. Singh, HoD, Department of Environmental Engineering.
3. Prof. Jaigopal Sharma, HoD, Department of Biotechnology.
4. Prof. S.G. Warkar, HoD, Department of Applied Chemistry.
5. Prof. Nirendra Dev, HoD, Department of Civil Engineering.
6. Prof. M.M. Tripathi, Director, IQAC.
7. Sh. Rajesh Birok, OIC, Health Centre.
8. Security Officer.
9. Sh. Bimal Jain, Executive Engineer, Engineering Cell.
10. Dr. Rajeev Kumar Mishra, Assistant Professor, Department of Environmental Engineering.
11. Assistant Registrar, Gen. Admn. Branch.

DELHI TECHNOLOGICAL UNIVERSITY

(FORMERLY DELHI COLLEGE OF ENGINEERING)

SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110042

File No. DTU/IQAC/Green Audit/ 594 **Date: 29.07.2021**

To,

HoD, Civil Engineering,
Executive Engineering,
Security Officer

Sub: Action Taken on Agenda No 13 of review meeting of Green Audit.

Dear Sir,

This is with reference to review meeting of Green Audit Recommendations held on 22nd January 2020 under the Chairmanship of Hon'ble Vice Chancellor. The following decision were taken in the meeting and new agenda item No. 13

Decision Agenda No. 13: "Safety audit of the University should be conducted by hiring a 3rd party. For conducting mock drill of earthquake and fire, necessary action should be done"

You are requested to take the action and submitted the Action Taken Report in IQAC office.

Nirendra Dev
29/07/2021

(Prof. Nirendra Dev)
Director, IQAC

DELHI TECHNOLOGICAL UNIVERSITY

(FORMERLY DELHI COLLEGE OF ENGINEERING)
SHAHBAD DAULATPUR, BAWANA ROAD, DELHI-110042

File No. DTU/IQAC/Green Audit/595 **Date: 29.07.2021**

To,

Prof. Rachna Garg,
Director
Equal Opportunity Cell

Sub: Action Taken Report on Item Number 3.12 of 3rd meeting of IQAC.

Dear Madam,

This is with reference 3rd meeting of Internal Quality Assurance Cell (IQAC) held on September, 2019 under the Chairmanship of Hon'ble Vice Chancellor. The following decision was taken in the meeting regarding agenda item No. 3.12.

Decision 3.12: "IQAC took the development of record and approved the proposal. IQAC also suggested conducting audit within 01 year. Equal Opportunity Cell will conduct disability audit and submit the report to IQAC".

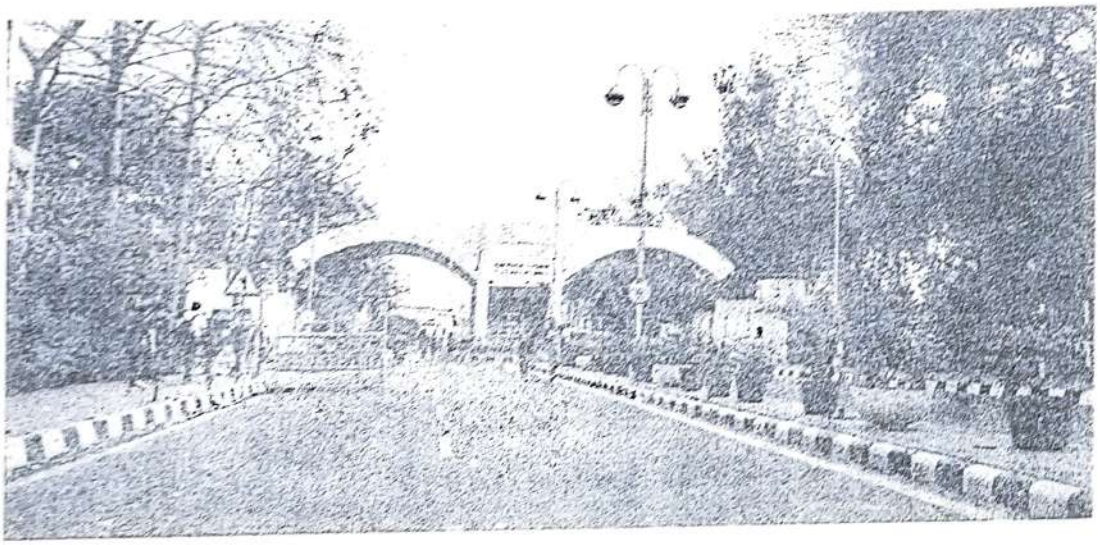
You are requested to take the action and submitted the Action Taken Report in IQAC office.

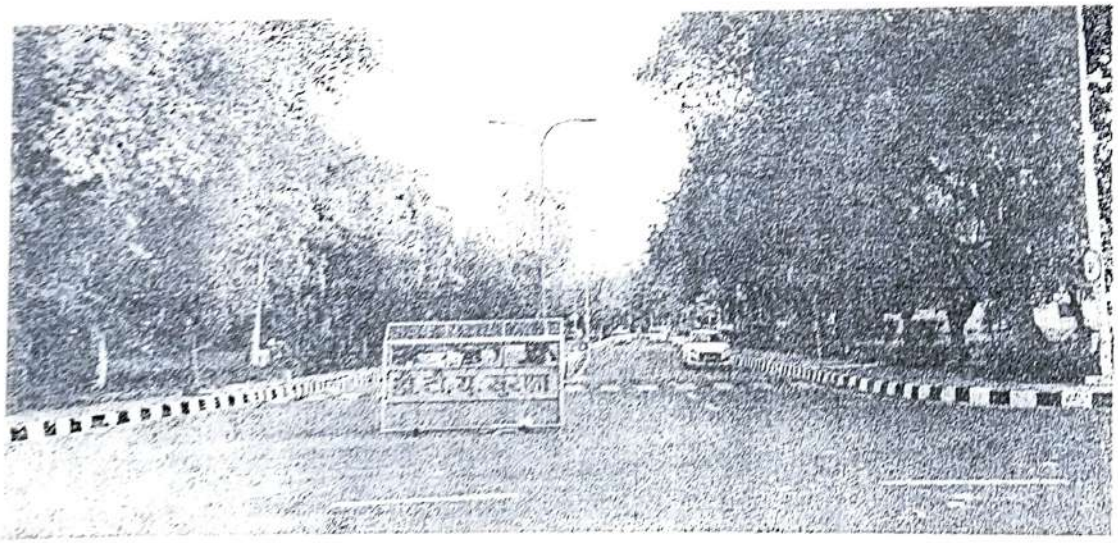
Nirendra Dev
29/07/2021
(Prof. Nirendra Dev)
Director, IQAC

ENVIRONMENT AUDIT REPORT

DELHI TECHNOLOGICAL UNIVERSITY

SHAHBAD DAULATPUR ROAD, ROHINI, DELHI - 110042





Strictly Confidential

For Addressee Only

Dr. Anil Haritash
Delhi Technological University, Delhi

Report for
ENVIRONMENT AUDIT
Delhi Technological University,
Shahbad Daulatpur Village
Rohini – 110042, Delhi

Report Date

April 25th, 2019

Submission by

Hitech Enviro Engineers & Consultants Pvt. Ltd.

A-1, Ground Floor
Kaushambi, Ghaziabad - 201010
Uttar Pradesh

Prepared By
[illegible]
EHS Consultant & Advisor
Auditor – ISO 14001, OHSAS 18001 & ISO 45001

CONTENTS

1.0 INTRODUCTION

The Environmental audit includes desktop review of the data and information provided by client, site visit for collecting first-hand information about various environmental aspects and reporting. The purpose of Environment/ Green Audit is to assess the current level of environmental issues, aspects and best practices along with identification of areas for further improvement so as the environmental impacts are minimized. A clean and healthy environment aids effective learning and provides a conducive learning environment for institutes. There are various efforts around the world to address environmental education issues.

Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system. Hence HEECPL has developed a compatible system by developing locally-applicable techniques.

A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis. Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance. This innovative scheme is user-friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

2.0 ACKNOWLEDGEMENT

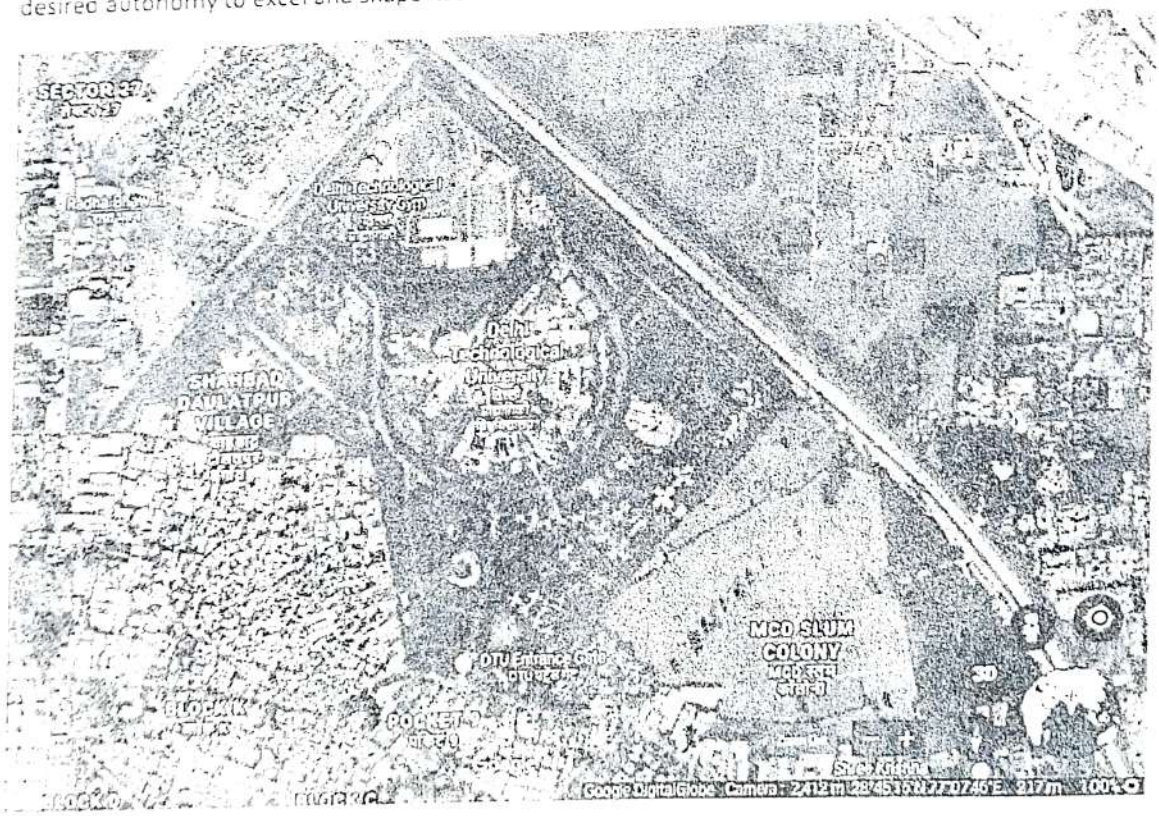
HEECPL is pleased to present this report on the Environment Audit for Delhi Technological University, Rohini. This review was carried out on April 8th, 2019 by HEECPL team. All the details captured in this report are based on the site visits conducted at university and based on the information collected from on-site team members and other staff including administration, teaching staff and clerical staff. The objective of this exercise was to review various green practices being adopted at site, and other environmental aspects of premise to identify the gaps (if any) and suggest measures for further improvement. These included, but not limited to, checking conformance to applicable Environmental aspects in the premise in line with applicable regulatory requirements and best practices in industry determining the status of Environmental practices, technical aspects of building, maintenance services, existing environmental hazards, status of building related legal compliances and identification of potential risks and suggesting immediate control measures.

We would like to acknowledge & thank Mr. Anil Haritash and other staff members for their continuous support during this audit. HEECPL would like to acknowledge & thank to all other site team member with whose support; we were able to complete our onsite inspections & data collections as per schedule.

3.0 OVERVIEW OF INSTITUTE

Delhi Technological University initially established with the name – **Delhi Polytechnic** came into existence in the **year 1941** to cater the needs of Indian industries for trained technical manpower with practical experience and sound theoretical knowledge. "75 years of Tradition of excellence in Engineering & Technology Education, Research and Innovations" **Delhi College of Engineering**, The institution was set up at historic Kashmiri Gate campus as a follow up of the Wood and Abott Committee of 1938. It comprised of a multi-disciplinary and multi-level institution offering wide ranging programmes in engineering, technology, arts and sculpture, architecture, pharmacy and commerce. The national diploma awarded by the institution was recognized as equivalent to degree level for the purposes of employment. In 1952 the college was affiliated with University of Delhi and started formal Degree level Programmes.

The erstwhile DCE has functioned from its historic Kashmere Gate Campus for almost 55 years and has shifted in 1996 to its lush green sprawling campus of 164 Acres at Bawana Road, adjoining Sector-17, Rohini, Delhi-42. Its shifting to new campus has added the dimension of research and caused innovations in plenty, which has received high national and international acclaim. As a Delhi Technological University it has the desired autonomy to excel and shape itself as a world class Technological University.



Google Earth Visuals of Delhi Technological University

4.0 AUDIT OBJECTIVES & SCOPE

A comprehensive audit program was evolved as an initial step for conducting Environment audit and roll-out of pre-audit documents. Pre-audit questionnaire update was obtained to get the preliminary information about the college and then actual onsite inspection was scheduled.

Detailed audit was carried out in line with the comprehensive audit program on April 8th, 2019 at college premise.

The purpose and focus of the audit was mainly to review all environmental aspects in college which included following:

1. Review of all environment related applicable legal requirements and other requirements to which organization subscribes. These includes regulatory compliance documents like statutory permissions / NOCs from statutory authorities, Pollution control board related norms, Emergency Preparedness Plan, and Spill Prevention Plan etc.
2. All environmental monitoring reports pertaining to air pollution, water pollution, noise pollution and status of results against applicable standards.
3. Examination of existing environmental management practices and procedures, including those associated with procurement and contracting activities.
4. Monitoring and review of all preventive maintenance of equipments connected with direct or indirect pollution.
5. Chemical management like storage, handling and use of chemicals, special arrangement for flammable chemical, and consumption tracking etc.
6. Waste management at site that includes storage and disposal, use of PPEs, hygiene conditions, any means of recycling through vendors. Hazardous waste and e-waste management and disposal in compliance with applicable norms.
7. Review of all critical areas and production processes in premise that has connection with environmental aspects and impacts.
8. Review of all the systems and processes in relation with environment that is part of environmental management system.
9. Review of environmental aspects including those associated with normal operating conditions, abnormal conditions including start-up and shut down, and emergency situations and accidents.
10. Review of overall environmental performance and practices of contractors and suppliers.
11. Review of extraction and distribution of raw material and natural resources. Distribution will include use and end life of product.

12. Evaluation of organization performance against the management objectives and targets in relation with environment.
13. Analyzing the awareness level in premise for environmental policy and objectives which includes competency, awareness and understanding of roles and responsibility.
14. Operational control of all those operations that are associated with its identified environmental aspects and to check that control is effective in reducing the adverse impact associated with them.
15. Evaluation of previous emergency situations and accidents and review of emergency preparedness and response plan.

5.0 AUDIT PARTICIPANTS & KEY STAKEHOLDERS

Below is list of key stakeholders of audit, apart from these, interactions were done with many other departments, hostels, canteen, hospital, STP and administration staff.

Sr.	Name of Participant
1	Dr. Anil Haritash
2	Mr. Pradeep
3	Chandra Prakash
4	Dr. Ram Singh
5	Dr. Asmita
6	Proff. Madan Mohan Tripathi
7	Dr. Neelam
8	All other Department Representatives

6.0 AUDITOR INFORMATION

Munish Kumar & Rishi Katiyar; HEECPL, Ghaziabad

7.0 AUDIT METHODOLOGY

The following methodology was followed for successful completion of audit.

- Pre-audit questionnaire to take preliminary information about the site
- On site audit activities starting with an opening meeting with site representatives.
- Verification of documents related to Environmental aspects.
- Inspection of the site premises and infrastructure.
- Taking photographic evidences of observations.
- One-on-one/ group discussion with ground staff, selected at random.
- Closing session with site-in-charge to share major findings.

7.1 AREAS COVERED IN AUDIT

- Main Gate
- Surroundings of university premise
- DG Yards / Substation Area
- Electrical Panels
- Drain lines
- Kitchen Areas
- Canteens
- All Building Structures
- Water Pond
- Hostels
- Conference Room
- Lobby Areas
- Chemistry & Biotech Labs
- Staircases
- Terrace
- Water Tanks
- Store Rooms
- Admin Areas
- Health Centers
- Stadiums

8.0 ENVIRONMENTAL FACTS OF COLLEGE PREMISE

8.1 Total Strength of Institute: 10,000 students

8.2 Facility Details relevant for Environmental Aspects

Sr.	Facility	Status
1	Total Area	165 Acres
2	Play Ground	Yes, Stadiums in Campus
3	Kitchen	Yes Available in hostels & common canteen
4	Toilets	Available in all building
5	Garbage Dump	Designated Garbage yard near main gate
6	Laboratory	Environment Lab, Chemistry Lab & Biotechnology Lab
7	Canteen	Yes Available (100 seating capacity)
8	Open Air Theatre	Mini- 100, Main – 2000 capacity
9	Hostels	Boys Hostel – 8, Girls Hostel – 5, Transit Hostel - 1
10	Water Pond	Artificial Open Wetland structure
11	Bore-Wells	5 Bore wells at different locations
12	Sewage Treatment Plant (STP)	Recently erected and to be commissioned
8	Others (Specify)	NA

8.3 Level of disturbance from different sources in the institute:

Scale – 1-9 (9 is highest)

Sr.	Source of Disturbance	Result
1	Municipal dump yard	1
2	Garbage heap	2
3	Public Convenience	2
4	Sewer Line	2
5	Stagnant Water	1
6	Open Drainage	1
7	Industry – Mention the type	1 No Industry nearby
8	Bus / Railway Station	2
9	Market / Shopping Complex / Public Halls	1

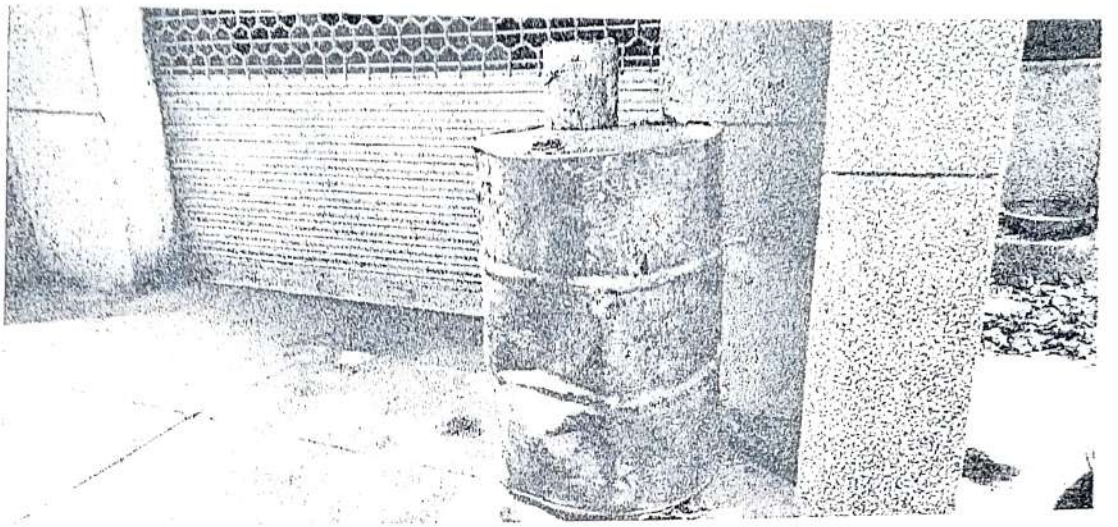
Overall campus is very peaceful, lush green and minimum disturbance from any outside factor.

8.4 Type of Waste Generated from Premise:

Non Hazardous Waste – Daily garbage, canteen waste, carton papers, plastic and civil construction waste generated from premise on regular basis. The regular collection is done by Municipal Corporation for further dispose of at dumping site. There is designated garbage yard inside premise for the same.

Manual segregation is done to ensure maximum recycling at garbage yard near main gate

Hazardous Waste – Hazardous waste is generated from DG maintenance from different substation areas. Different capacity DG set is installed in premise for power back up in 5 substations. This waste is regularly collected by vendor finalized by University scrap sale process selected by online tender scheme; stored temporarily at site in drums.



Electronic Waste – Electronic Waste is generated from various departments and administration buildings, same is stored in scrap yard inside the campus only. The electronic waste is stored currently at site. There is process for disposal of e-waste and other waste via E-Auction process. Last e-waste disposal was done to HP – Computer and Laptop manufacturer directly.

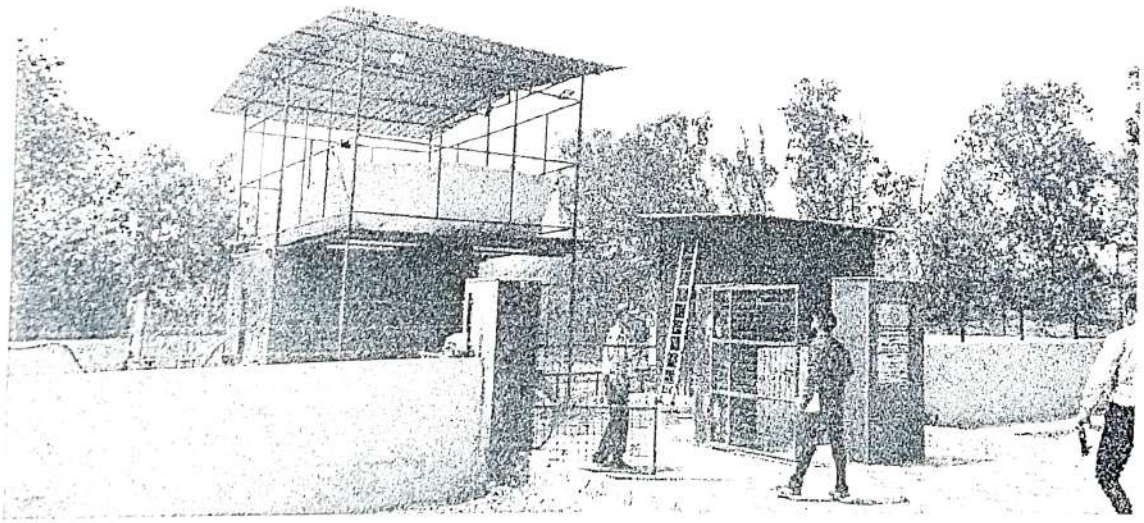
Designated Junk yard in the campus for all types of scrap disposed through e-auction process

8.5 Waste Management Initiatives in Premise:

Sr.	Waste Management Type	Initiative
1	Composting	Organic Waste to Energy Plant (4 m^3/day) and 1 TPD
2	Recycling	Yes, Manual segregation at garbage yard and multicolor bins in campus to promote segregation at source. Recycling is also promoted through association with **Jagruti Foundation** who collect all recyclable paper waste and provide A4 size paper reams used in office work.
3	Reuse	Yes, Reuse promoted at department level, wherever feasible
4	Others (Please Specify)	NA

8.6 Organic Waste to Energy Plant

University got installed and commissioned 1 TPD waste to energy plant at Delhi Technological University to process 1 TPD of waste and can generate Biogas of 100-120 Nm3/day producing 50-100 KWH/ day of Net Electricity and 150 Kg of Compost.



Waste to Energy Plan in DTU campus near water pond area

The process of e-auction need to be amended with inclusion of clauses for authorized vendors for collection of hazardous and e-waste generated in premise. Along with same, storage of hazardous and

e-waste in campus needs improvement in the form of labelling, pucca floor, bunding, secondary containment and quantity details to be displayed.

8.7 Tree Census of DTU

The campus has lush green coverage with approximately 5000 number of trees and same quantity of shrubs. Highlights of varieties of trees are shown in below table:

Sr.	Type of Plant
1	*Magnifera indica*
2	*Syzygium cumini*
3	*Saraca asoca*
4	*Ailanthus altissima*
5	*Bombax ceiba*
6	*Ficus religiosa*
7	*Dalbergia sissoo*
8	*Azadirachta indica*
9	*Ficus virens*
10	*Ficus benghalensis*
11	*Neolamarckia cadamba*
12	*Thevetia peruviana*
13	*Alstonia scholaris*
14	*Bauhinia variegate*
15	*Eucalyptus globulus*
16	*Bougainvillea glabra*
17	*Cama indica*
18	*Psidium guajava*
19	*Butea monosperma*
20	*Terminalia arjuna*
21	*Melia azedarach*
22	*Lagerstroemia indica*
23	*Delonix regia*

Tree cover visual from DTU Campus

8.8 Energy Usage in Premise

Sr.	Sources	Usage
1	Electricity Consumption in Lighting	CFL & LED Lighting
2	Diesel in DG Sets	Regular DG Maintenance by Outsourced vendor
3	LPG Gas	Used in Canteen and Hostels for cooking
4	Air conditioning	Available in different buildings

Contract Demand – 2750 kW
Sanctioned Load – 4256 kW

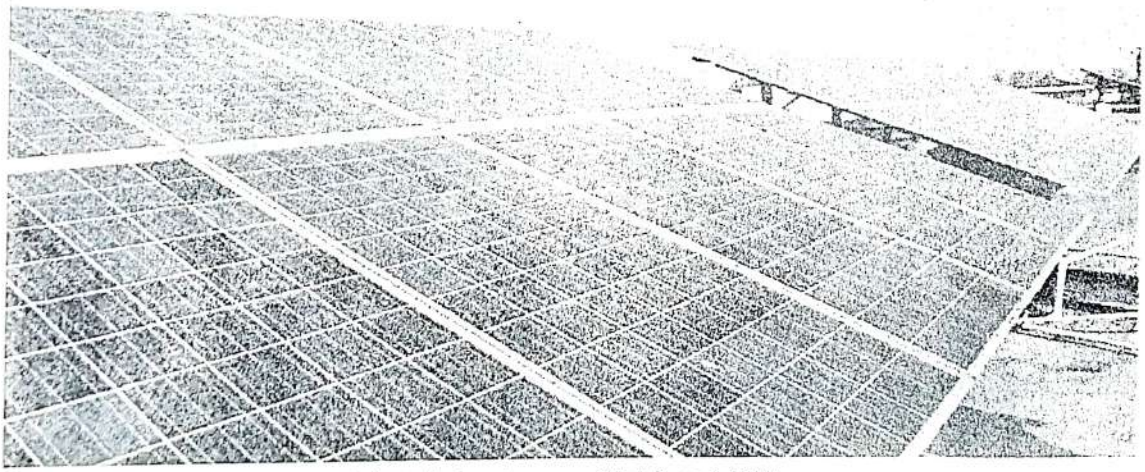
Latest Energy Consumption – 275760 KWH

8.9 Energy Saving Initiatives

Energy saving initiatives are currently limited to optimum use of lighting and connected equipment by following timely pattern of switching off and on.

8.10 Alternate Energy Sources in Premise

Institute has taken initiative for installing solar panels for alternative energy source. Delhi Technological University has installed solar plant for 472 KW power generation. All the building structure terrace are covered with solar panels and generated power is supplied to connected grid.



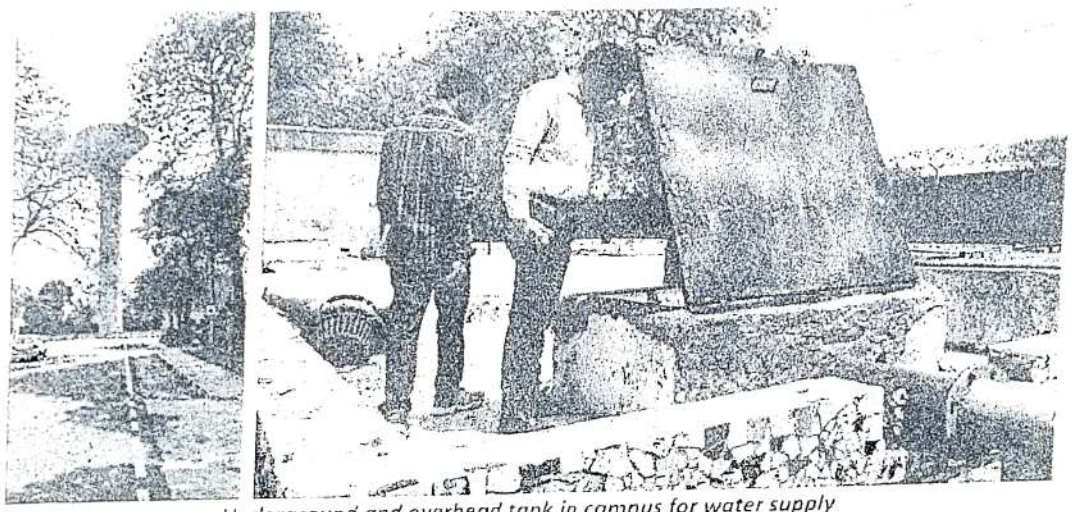
Solar Panels installed on terrace of Buildings in DTU

8.11 Energy Conservations in Computers & Other Equipment:

The power saving mode is active on computers and all the computers and other equipment has settings for the same to ensure minimum energy consumption in case of not using them.

8.12 Water Consumption in Campus:

The water consumption in institute is for domestic use only. All the water is consumed in washrooms for flushing and hand wash by students and staff. Small amount of water is used in canteen for preparation of tea and minor snacks. The water meters are not installed in premise for capturing the consumption, and there is no details available currently as water consumption inventory is not maintained.



Underground and overhead tank in campus for water supply

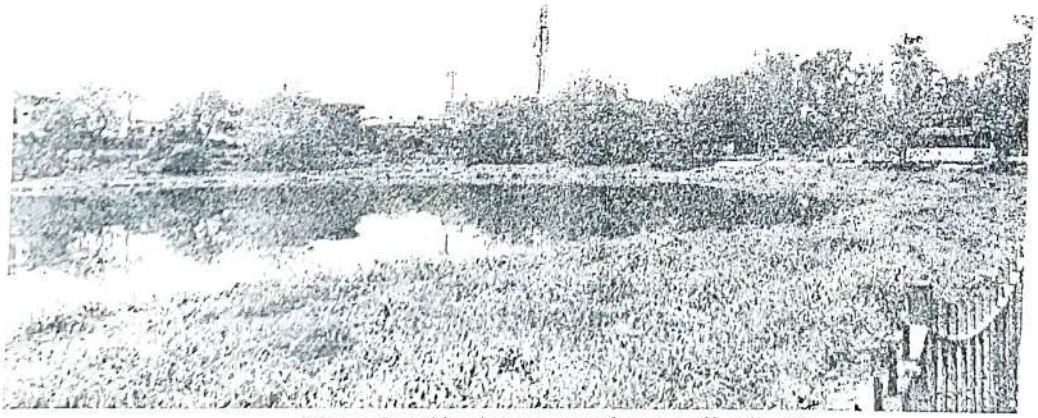
Overhead water tank is filled 3 times daily at different interval and time period. One time filling of tank makes 2,26,000 liter of water. There is no water testing evident for domestic supply but the team is using direct chemical dosing.

8.13 Water Conservation Initiatives:

There are no water conservation initiatives reported currently in premise.

8.14 Rainwater Harvesting System:

There is no rainwater harvesting system maintained in the premise as observed during site walkthrough. But there is large water pond for runoff collection and ground water recharging similar to artificial wetland in the campus.



Water Pond in the campus for runoff collection

8.15 Awareness about Environmental Laws:

During audit walkthrough, the awareness level of environmental laws related different environmental aspects of institute was checked. The site team is not much aware about applicable environmental laws. There should be listing of all environmental laws that is normally applicable to institutes at various levels.

9.0 OBSERVATIONS & RECOMMENDATIONS:

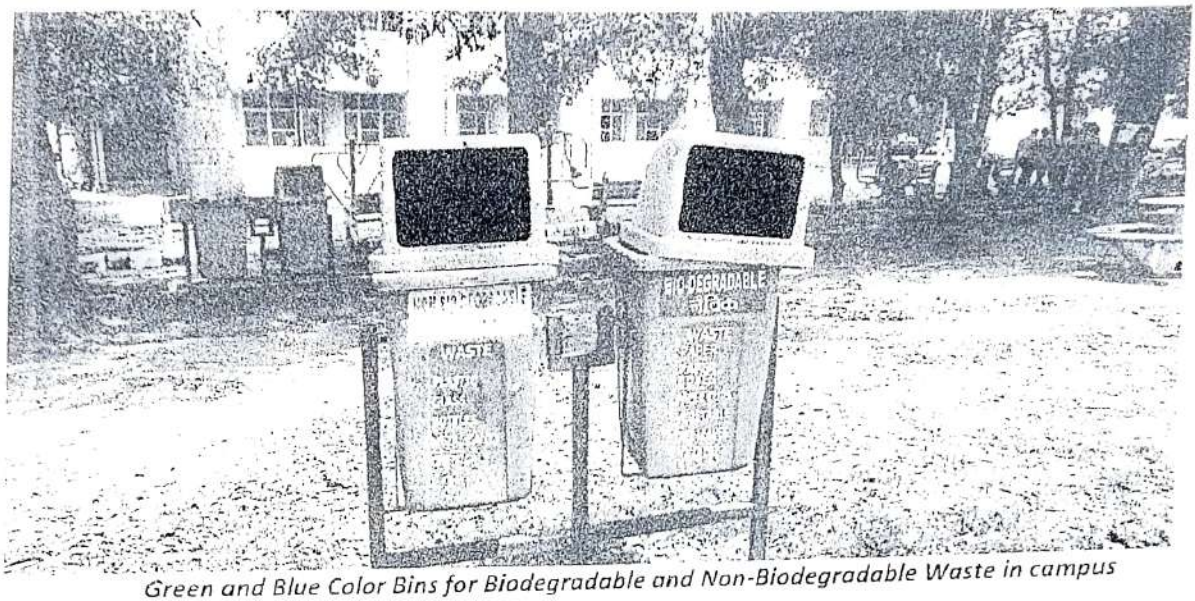
1) Environmental monitoring of various parameters are done currently by internal labs on random basis which includes – Ambient Air Monitoring, Stack Emission Monitoring, Noise level monitoring. These reports are available at various places in departments.

Recommendation 1: It is recommended to evolve a procedure for regular environmental monitoring at least on quarterly basis and maintain all testing records by NABL / Delhi Pollution Control Committee (DPCC) approved laboratory.

2) The noise level in DG set during operation is higher than prescribed limits due to absence of acoustic enclosures in DG Sets.

Recommendation 2: The acoustic enclosures of Diesel Generators are required to be installed and maintain to ensure overall noise level during DG operations are meeting CPCB noise limits for DG sets – 75dB.

3) Segregation of Wastes types in different bins are not followed. There are two types of bins kept at various places but there is no separate collection of dry waste, wet waste, biodegradable waste and non-biodegradable waste. All wastes are collected in common garbage bags only for further disposal



Green and Blue Color Bins for Biodegradable and Non-Biodegradable Waste in campus

Recommendation 3: It is recommended to initiate the segregation of waste on source and at collection point. The number of bins are required to be added with separate identification sign for biodegradable waste and non-biodegradable waste. This will ensure maximum recycling of waste generated from premise. Collection of waste must be done separately from different bins.

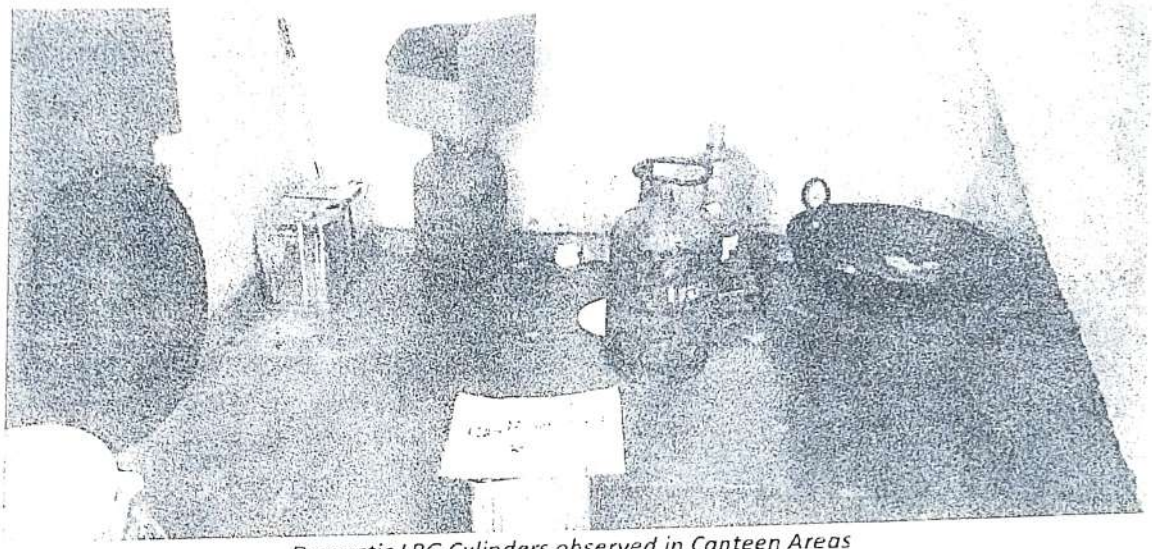
4) E-Auction process for disposal of hazardous and e-waste doesn't include any legal references and selection of vendors are not done in accordance with their authorization from Delhi Pollution Control Committee.

Recommendation 4: The E-Auction Process for Scrap Disposal specially hazardous and e-waste must be amended and required to be included the criteria for selection of vendors basis on their authorization from Delhi Pollution Control Committee in accordance with Hazardous and Other Waste (Management, Handling and Transboundary Movement) Rules, 2016 as amended & E-Waste Rules, 2016 as amended.

5) Water meters are not installed in premise at any source of water in campus. There is no record of water consumption available.

Recommendation 5: It is recommended to install water meters on all sources and maintain the daily inventory record of water meter and this can be used to maintain the monthly consumption of water in campus.

6) Domestic cylinders of LPG are in use at various places inside campus as observed in canteen and hostel areas.



Domestic LPG Cylinders observed in Canteen Areas

Recommendation 6: Only commercial non-subsidized cylinders are required to be used in canteen and hostels with manifold facility instead of connecting separately to all equipment units.

7) There is no testing of supply water done as observed at various placed inside campus. Only chlorine dosing is done to water.

Recommendation 7: Drinking water monitoring on regular basis as per IS 10500 – 2012 is recommended at least on fortnightly basis.

8) Lot of dry leaves & twigs are currently being dumped with the garbage. These leaves and twigs have high calorific value and may be used as fuel

Recommendation 8: To utilize the organic dry waste, university should consider some project related to composting or preparation of Briquettes which may be used as fuel in boilers and some other industries in Delhi NCR.

9) There is no Effluent Treatment Plant (ETP) for Biotechnology and Chemistry labs and the chemical discharge is entering into common sewage discharge.

Recommendation 9: University should consider dedicated ETP for collection from all wet chemical labs for treatment of waste water.

10) Health Centre and Biotechnology Department are currently generating Biomedical Waste but there is regular vendor for disposal of biomedical waste from campus. Biotechnology department is currently disposing in 3-4 months to authorized vendor.

Recommendation 10: The Biomedical Waste Management from health centers and Biotechnology department needs improvement with regular tie up of authorized vendor and frequency of disposal once in week time to avoid long storage of biomedical waste in campus.

11c

END OF REPORT

I/N

40/C

Engineering Cell, DTU

F.NO: DTU/Engg. Cell/003061/2021-22/Electrical

Subject: - Supply, Installation, Testing & Commissioning of Diesel Generator sets 250, 320 and 500KVA, DTU campus, Delhi

Proposal: - As green audit recommendation review held on 20/01/2019 for acoustic enclosure of diesel generator one required to be installed & maintain the noise level during operation DG set to meet CPCB noise limit for DG set is 75db. At substation nos. 1, 2, 3 and 04 the DG Sets has been installed almost 25 year back and its needed urgent replacement due to wear & tear and ageing. It some faults may occurs in future time, it may not be advisable to repair because these DG Sets beyond economically worthy for repair purpose. Looking upon the future aspect and the importance of load feeded by this DG Sets. It is desirable to replace it with new one. Having ACB mounted AMF panel DG Sets in place of conventional contactor it suitable for load and safety point of view.
Following is the scope of the work: -

a) Replacement of DG sets along with the AMF panels as use more than their life.

Codal Formalities: -

a) Proposed work is being carried out from OEM.
b) Item being procured are available with GeM
c) Payment will be released only after execution of jobs.

Financial implication: - Rs.17,714,364/- (Rupees One Crore Seventy-Seven Lakh Fourteen Thousand Three Hundred Sixty-Four Only).
inclusive of GST.

Debitable Head account: - 5.4 - N.G.F. – Facilities and Service Charges - Machinery & Equipment, Furniture etc.

Approval: - In view of the above, Hon'ble Vice Chancellor may be requested to accord Expenditure sanction of Rs.17,714,364/- (Rupees One Crore Seventy-Seven Lakh Fourteen Thousand Three Hundred Sixty-Four Only).for DG sets mentioned above substations in DTU.

Submitted please.

30/12/2021
Pradeep Yadav
J.E. (Electrical)

9461/EE
3/1/2022

Executive Engineer

Sir Pradeep JE (E)
Pl. discuss
3/01/2022

4(2

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VILL: RAMPUR JATTAN
NAHAN ROAD
KALA AMB-H.P
India 173030
Tel - +91 1702 238760
www.bluestarindia.com

QUALITY ASSURANCE

TEST CERTIFICATE

Certificate No	:1500\040008812696
Certificate Date	:13.01.2020
Machine Serial No.	:MSA00014
Material Code	:BO-IC318YBTUB
Description	:1.5T R32 3STR YB CU INVSAC ODU IHD(MFG)
Month/Year of Manufacturing	:DEC-2019

Serial Number of Critical Components

No. of Compressors	:1
Sr. No. of Compressor C1	:%52RPE1T3KEDN
No. of Motors	:1
Sr. No. of Motor M1	:08|01|000|FMQ|20191029|001864|9A05|YKT-5

Test Conducted	**Results**
Gross Leak Test @350 PSIg	:PASS
Evacuation	:PASS
Charging	:PASS
Fine Leak Test	:PASS
Safety Test	
Earth contact Test ≤ 0.1 Ohm	:PASS
High Voltage Test (1.0KV AC)	:PASS
Insulation Resistance Test (500V DC)	:PASS
Leakage current Test ≤ 3.5mA	:PASS
General Run Test	
Voltage(V)	:
Current(A)	:
Power()	:
Visual Inspection	:No Abnormalities
Noise Test	:No Abnormal noise
Vibration	:No undue vibrations
Date of Acceptance	:13.01.2020

All test parameters found satisfactory. Hence Unit is passed.

Approved By
Manager
Quality Assurance
Blue Star Limited.

TC Printed By
E072319
Lakshay Gupta
06.01.2022-17:17:11

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42 9

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QUALITY ASSURANCE

TEST CERTIFICATE

Certificate No	:1500\040008950998
Certificate Date	:11.02.2020
Machine Serial No.	:BTA00191
Material Code	:BI-IC318YBTUB
Description	:1.5T R32 3STR YB CU INVSAC IDU IHD(MFG)
Month/Year of Manufacturing	:FEB-2020

Serial Number of Critical Components

No. of Motors		:1
Sr. No. of Motor	M1	:08|01|000|HHN|20191022|022082|1A05|YKFG-

Test Conducted	**Results**
Gross Leak Test @350 PSIg	:PASS
Evacuation	:PASS
Charging	:PASS
Fine Leak Test	:PASS
Safety Test	
Earth contact Test ≤ 0.1 Ohm	:PASS
High Voltage Test (1.0KV AC)	:PASS
Insulation Resistance Test (500V DC)	:PASS
Leakage current Test ≤ 3.5mA	:PASS
General Run Test	
Voltage(V)	:228.880
Current(A)	:0.260
Power(KW)	:0.0510
Visual Inspection	:No Abnormalities
Noise Test	:No Abnormal noise
Vibration	:No undue vibrations
Date of Acceptance	:11.02.2020

All test parameters found satisfactory. Hence Unit is passed.

Approved By
Manager
Quality Assurance
Blue Star Limited.

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QUOTATION

Customer Details

Delhi Technical University,
Main Campus,
North Shahbad, Daulatpur,
Delhi - 110042

Quotation No.: EMEP/DTU/QN/2021-22/0705
Enquiry No.:
Date: Tuesday, July 13, 2021

Kind Attn: **Bimal Jain, Executive Engineer**
Email: eecivildtu@gmail.com
Ref: **Quotation for Energy Audit of E&M Installations at Delhi Technical University**

We are please to give our best offer for following services of your above mentioned project

Sl #	DESCRIPTION	UNIT	QTY	RATE (INR)	AMOUNT (INR)
	Energy Audit of following E&M installations at Delhi Technical University and submission of report thereafter for implementation	JOB	1	₹ 300,000.00	₹ 300,000.00
1	432 KWp Grid-Connected Roof top Solar Power Plant				
2	Centralised AC Plant of 330 TR (3X110 TR) capacity.				
3	Inter connected Grid sub-stations with DG Sets of 500 KVA/320 KVA/250 KVA capacities				
4	Solar Water Heating Systems				
5	Water pumping with 4X30 HP pumps and distribution system				
6	Fire Fighting System				
7	Lifts				
8	Street Lighting				
9	Building Lighting				
INR. THREE LACS ONLY					**₹ 300,000.00**

NOTE:

I. Payment terms & conditions shall be as under-

1. 80% payment shall be paid by the department after conducting Energy Auditing of Installations from Sr. No. 1 to 9.
2. 20% after submission of the Report.

II. The Energy Auditing shall be completed within a period of 60 days.

III. The Energy Audit shall be conducted by an Energy Auditor duly Certified and Accredited by Bureau of Energy Efficiency (BEE).

IV. GST will be charged as per actual.

Hope you will find above reasonable and will give a chance to work with you.

For EMEP Consultancy Services Pvt. Ltd.

EMEP Consultancy Services Pvt. Ltd.

Er. Ramesh Chand
Principal Consultant

Date: Tuesday, July 13, 2021

2020-19

HITECH ENVIRO
ENGINEERS & CONSULTANTS PVT. LTD.
360° Pollution Management

ENVIRONMENT AUDIT REPORT

DELHI TECHNOLOGICAL UNIVERSITY

SHAHBAD DAULATPUR ROAD, ROHINI, DELHI - 110042

Strictly Confidential

For Addressee Only

Dr. Anil Haritash
Delhi Technological University, Delhi

Report for
ENVIRONMENT AUDIT
Delhi Technological University,
Shahbad Daulatpur Village
Rohini – 110042, Delhi

Report Date

April 25th, 2019

Submission by

Hitech Enviro Engineers & Consultants Pvt. Ltd.

A-1, Ground Floor
Kaushambi, Ghaziabad - 201010
Uttar Pradesh

Prepared By:
Munish Kumar
Sr. EHS Consultant & Advisor
Qualified Lead Auditor – ISO 14001, OHSAS 18001 & ISO 45001

CONTENTS

1.0 INTRODUCTION

The Environmental audit includes desktop review of the data and information provided by client, site visit for collecting first-hand information about various environmental aspects and reporting. The purpose of Environment/ Green Audit is to assess the current level of environmental issues, aspects and best practices along with identification of areas for further improvement so as the environmental impacts are minimized. A clean and healthy environment aids effective learning and provides a conducive learning environment for institutes. There are various efforts around the world to address environmental education issues.

Environmental Management Systems (EMS) is very popular in the industrial sector, but the general belief is that EMS is something pertaining to industries only. Other parts of the world have started adopting compatible environmental management systems either voluntarily or for promoting standards by external certification. International environmental standards do not suit the existing Indian educational system. Hence HEECPL has developed a compatible system by developing locally-applicable techniques.

A very simple indigenized system has been devised to monitor the environmental performance of educational institutions. It comes with a series of questions to be answered on a regular basis. Environmental conditions may be monitored from angles that are relevant to Indian requirements, without stress on legal issues or compliance. This innovative scheme is user-friendly and totally voluntary. The environmental monitoring system helps the institution to set environmental examples for the community and to educate young learners. It can be adapted to urban and / or rural situations.

2.0 ACKNOWLEDGEMENT

HEECPL is pleased to present this report on the Environment Audit for Delhi Technological University, Rohini. This review was carried out on April 8th, 2019 by HEECPL team. All the details captured in this report are based on the site visits conducted at university and based on the information collected from on-site team members and other staff including administration, teaching staff and clerical staff. The objective of this exercise was to review various green practices being adopted at site, and other environmental aspects of premise to identify the gaps (if any) and suggest measures for further improvement. These included, but not limited to, checking conformance to applicable Environmental aspects in the premise in line with applicable regulatory requirements and best practices in industry determining the status of Environmental practices, technical aspects of building, maintenance services, existing environmental hazards, status of building related legal compliances and identification of potential risks and suggesting immediate control measures.

We would like to acknowledge & thank Mr. Anil Haritash and other staff members for their continuous support during this audit. HEECPL would like to acknowledge & thank to all other site team member with whose support; we were able to complete our onsite inspections & data collections as per schedule.

3.0 OVERVIEW OF INSTITUTE

Delhi Technological University initially established with the name – **Delhi Polytechnic** came into existence in the **year 1941** to cater the needs of Indian industries for trained technical manpower with practical experience and sound theoretical knowledge. "75 years of Tradition of excellence in Engineering & Technology Education, Research and Innovations" **Delhi College of Engineering**, The institution was set up at historic Kashmiri Gate campus as a follow up of the Wood and Abott Committee of 1938. It comprised of a multi-disciplinary and multi-level institution offering wide ranging programmes in engineering, technology, arts and sculpture, architecture, pharmacy and commerce. The national diploma awarded by the institution was recognized as equivalent to degree level for the purposes of employment. In 1952 the college was affiliated with University of Delhi and started formal Degree level Programmes.

The erstwhile DCE has functioned from its historic Kashmere Gate Campus for almost 55 years and has shifted in 1996 to its lush green sprawling campus of 164 Acres at Bawana Road, adjoining Sector-17, Rohini, Delhi-42. Its shifting to new campus has added the dimension of research and caused innovations in plenty, which has received high national and international acclaim. As a Delhi Technological University it has the desired autonomy to excel and shape itself as a world class Technological University.

Google Earth Visuals of Delhi Technological University

4.0 AUDIT OBJECTIVES & SCOPE

A comprehensive audit program was evolved as an initial step for conducting Environment audit and roll-out of pre-audit documents. Pre-audit questionnaire update was obtained to get the preliminary information about the college and then actual onsite inspection was scheduled.

Detailed audit was carried out in line with the comprehensive audit program on April 8th, 2019 at college premise.

The purpose and focus of the audit was mainly to review all environmental aspects in college which included following:

1. Review of all environment related applicable legal requirements and other requirements to which organization subscribes. These includes regulatory compliance documents like statutory permissions / NOCs from statutory authorities, Pollution control board related norms, Emergency Preparedness Plan, and Spill Prevention Plan etc.
2. All environmental monitoring reports pertaining to air pollution, water pollution, noise pollution and status of results against applicable standards.
3. Examination of existing environmental management practices and procedures, including those associated with procurement and contracting activities.
4. Monitoring and review of all preventive maintenance of equipments connected with direct or indirect pollution.
5. Chemical management like storage, handling and use of chemicals, special arrangement for flammable chemical, and consumption tracking etc.
6. Waste management at site that includes storage and disposal, use of PPEs, hygiene conditions, any means of recycling through vendors. Hazardous waste and e-waste management and disposal in compliance with applicable norms.
7. Review of all critical areas and production processes in premise that has connection with environmental aspects and impacts.
8. Review of all the systems and processes in relation with environment that is part of environmental management system.
9. Review of environmental aspects including those associated with normal operating conditions, abnormal conditions including start-up and shut down, and emergency situations and accidents.
10. Review of overall environmental performance and practices of contractors and suppliers.
11. Review of extraction and distribution of raw material and natural resources. Distribution will include use and end life of product.

12. Evaluation of organization performance against the management objectives and targets in relation with environment.
13. Analyzing the awareness level in premise for environmental policy and objectives which includes competency, awareness and understanding of roles and responsibility.
14. Operational control of all those operations that are associated with its identified environmental aspects and to check that control is effective in reducing the adverse impact associated with them.
15. Evaluation of previous emergency situations and accidents and review of emergency preparedness and response plan.

5.0 AUDIT PARTICIPANTS & KEY STAKEHOLDERS

Below is list of key stakeholders of audit, apart from these, interactions were done with many other departments, hostels, canteen, hospital, STP and administration staff.

Sr.	Name of Participant
1	Dr. Anil Haritash
2	Mr. Pradeep
3	Chandra Prakash
4	Dr. Ram Singh
5	Dr. Asmita
6	Proff. Madan Mohan Tripathi
7	Dr. Neelam
8	All other Department Representatives

6.0 AUDITOR INFORMATION

Munish Kumar & Rishi Katiyar; HEECPL, Ghaziabad

7.0 AUDIT METHODOLOGY

The following methodology was followed for successful completion of audit.

- Pre-audit questionnaire to take preliminary information about the site
- On site audit activities starting with an opening meeting with site representatives.
- Verification of documents related to Environmental aspects.
- Inspection of the site premises and infrastructure.
- Taking photographic evidences of observations.
- One-on-one/ group discussion with ground staff, selected at random.
- Closing session with site-in-charge to share major findings.

7.1 AREAS COVERED IN AUDIT

- Main Gate
- Surroundings of university premise
- DG Yards / Substation Area
- Electrical Panels
- Drain lines
- Kitchen Areas
- Canteens
- All Building Structures
- Water Pond
- Hostels
- Conference Room
- Lobby Areas
- Chemistry & Biotech Labs
- Staircases
- Terrace
- Water Tanks
- Store Rooms
- Admin Areas
- Health Centers
- Stadiums

8.0 ENVIRONMENTAL FACTS OF COLLEGE PREMISE

8.1 Total Strength of Institute: 10,000 students

8.2 Facility Details relevant for Environmental Aspects

Sr.	Facility	Status
1	**Total Area**	165 Acres
2	**Play Ground**	Yes, Stadiums in Campus
3	**Kitchen**	Yes Available in hostels & common canteen
4	**Toilets**	Available in all building
5	**Garbage Dump**	Designated Garbage yard near main gate
6	**Laboratory**	Environment Lab, Chemistry Lab & Biotechnology Lab
7	**Canteen**	Yes Available (100 seating capacity)
8	**Open Air Theatre**	Mini- 100, Main – 2000 capacity
9	**Hostels**	Boys Hostel – 8, Girls Hostel – 5, Transit Hostel - 1
10	**Water Pond**	Artificial Open Wetland structure
11	**Bore-Wells**	5 Bore wells at different locations
12	**Sewage Treatment Plant (STP)**	Recently erected and to be commissioned
8	**Others (Specify)**	NA

8.3 Level of disturbance from different sources in the institute:

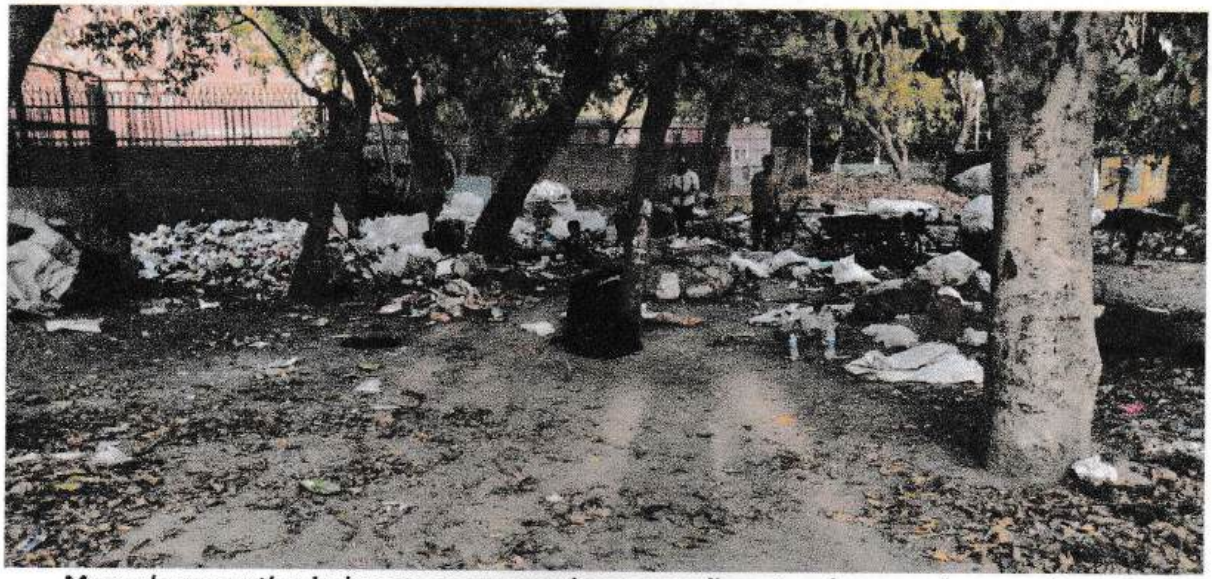
Scale – 1-9 (9 is highest)

Sr.	Source of Disturbance	Result
1	Municipal dump yard	1
2	Garbage heap	2
3	Public Convenience	2
4	Sewer Line	2
5	Stagnant Water	1
6	Open Drainage	1
7	Industry – Mention the type	1 No Industry nearby
8	Bus / Railway Station	2
9	Market / Shopping Complex / Public Halls	1

Overall campus is very peaceful, lush green and minimum disturbance from any outside factor.

8.4 Type of Waste Generated from Premise:

Non Hazardous Waste – Daily garbage, canteen waste, carton papers, plastic and civil construction waste generated from premise on regular basis. The regular collection is done by Municipal Corporation for further dispose of at dumping site. There is designated garbage yard inside premise for the same.



Manual segregation is done to ensure maximum recycling at garbage yard near main gate

Hazardous Waste – Hazardous waste is generated from DG maintenance from different substation areas. Different capacity DG set is installed in premise for power back up in 5 substations. This waste is regularly collected by vendor finalized by University scrap sale process selected by online tender scheme; stored temporarily at site in drums.

Electronic Waste – Electronic Waste is generated from various departments and administration buildings, same is stored in scrap yard inside the campus only. The electronic waste is stored currently at site. There is process for disposal of e-waste and other waste via E-Auction process. Last e-waste disposal was done to HP – Computer and Laptop manufacturer directly.

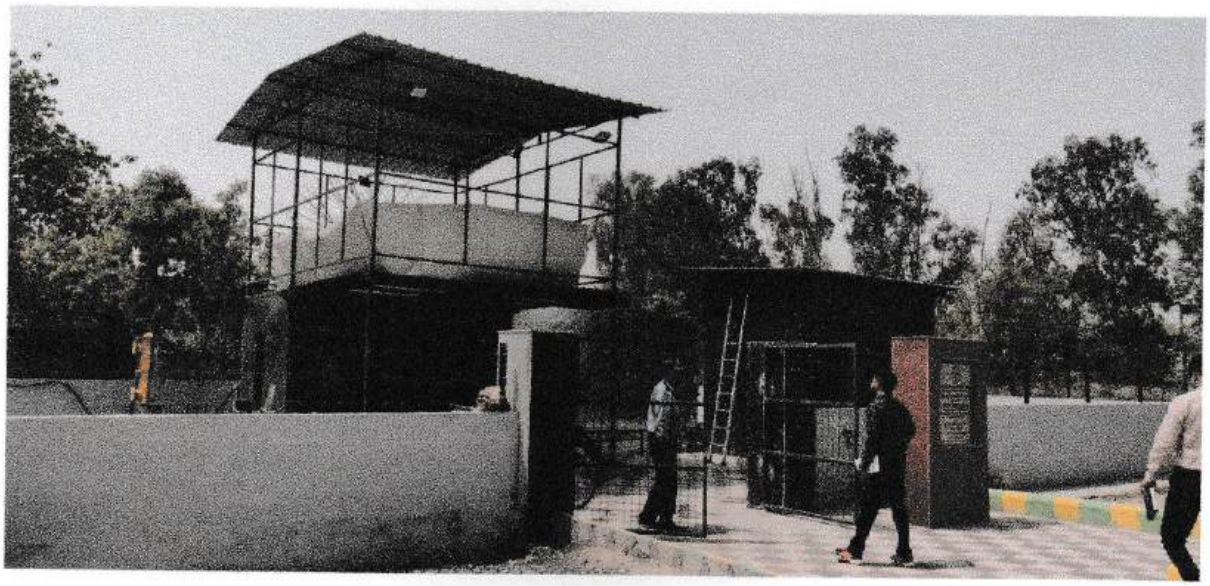
Designated Junk yard in the campus for all types of scrap disposed through e-auction process

8.5 Waste Management Initiatives in Premise:

Sr.	Waste Management Type	Initiative
1	Composting	Organic Waste to Energy Plant (4 m^3/day) and 1 TPD
2	Recycling	Yes, Manual segregation at garbage yard and multicolor bins in campus to promote segregation at source. Recycling is also promoted through association with **Jagruti Foundation** who collect all recyclable paper waste and provide A4 size paper reams used in office work.
3	Reuse	Yes, Reuse promoted at department level, wherever feasible
4	Others (Please Specify)	NA

8.6 Organic Waste to Energy Plant

University got installed and commissioned 1 TPD waste to energy plant at Delhi Technological University to process 1 TPD of waste and can generate Biogas of 100-120 Nm3/day producing 50-100 KWH/ day of Net Electricity and 150 Kg of Compost.



Waste to Energy Plan in DTU campus near water pond area

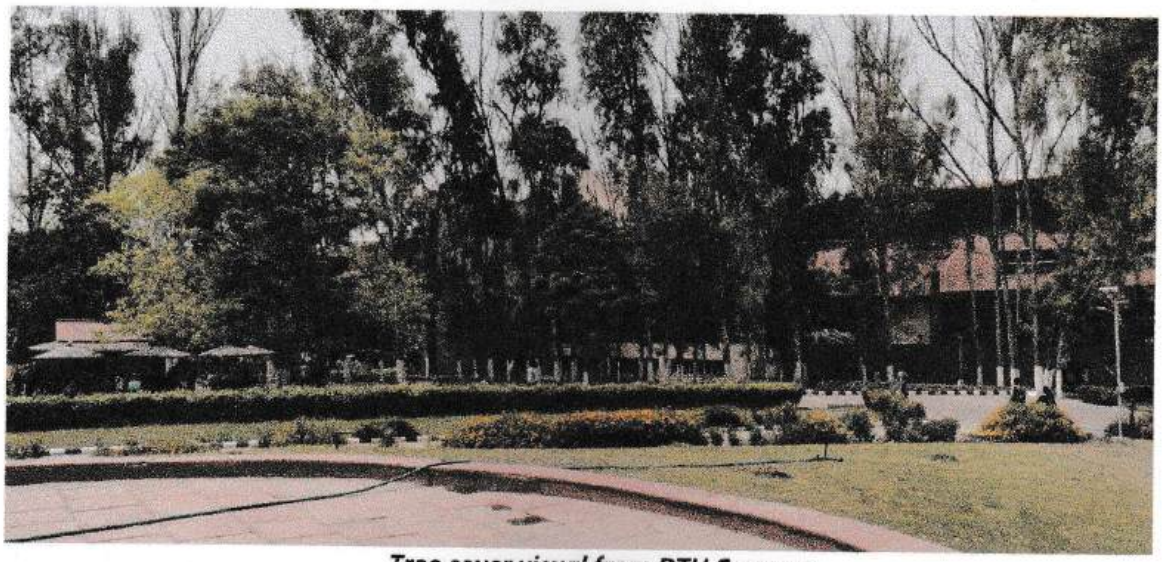
The process of e-auction need to be amended with inclusion of clauses for authorized vendors for collection of hazardous and e-waste generated in premise. Along with same, storage of hazardous and

e-waste in campus needs improvement in the form of labelling, pucca floor, bunding, secondary containment and quantity details to be displayed.

8.7 Tree Census of DTU

The campus has lush green coverage with approximately 5000 number of trees and same quantity of shrubs. Highlights of varieties of trees are shown in below table:

Sr.	Type of Plant
1	*Magnifera indica*
2	*Syzygium cumini*
3	*Saraca asoca*
4	*Ailanthus altissima*
5	*Bombax ceiba*
6	*Ficus religiosa*
7	*Dalbergia sissoo*
8	*Azadirachta indica*
9	*Ficus virens*
10	*Ficus benghalensis*
11	*Neolamarckia cadamba*
12	*Thevetia peruviana*
13	*Alstonia scholaris*
14	*Bauhinia variegate*
15	*Eucalyptus globulus*
16	*Bougainvillea glabra*
17	*Cama indica*
18	*Psidium guajava*
19	*Butea monosperma*
20	*Terminalia arjuna*
21	*Melia azedarach*
22	*Lagerstroemia indica*
23	*Delonix regia*



Tree cover visual from DTU Campus

8.8 Energy Usage in Premise

Sr.	Sources	Usage
1	Electricity Consumption in Lighting	CFL & LED Lighting
2	Diesel in DG Sets	Regular DG Maintenance by Outsourced vendor
3	LPG Gas	Used in Canteen and Hostels for cooking
4	Air conditioning	Available in different buildings

Contract Demand – 2750 kW
Sanctioned Load – 4256 kW

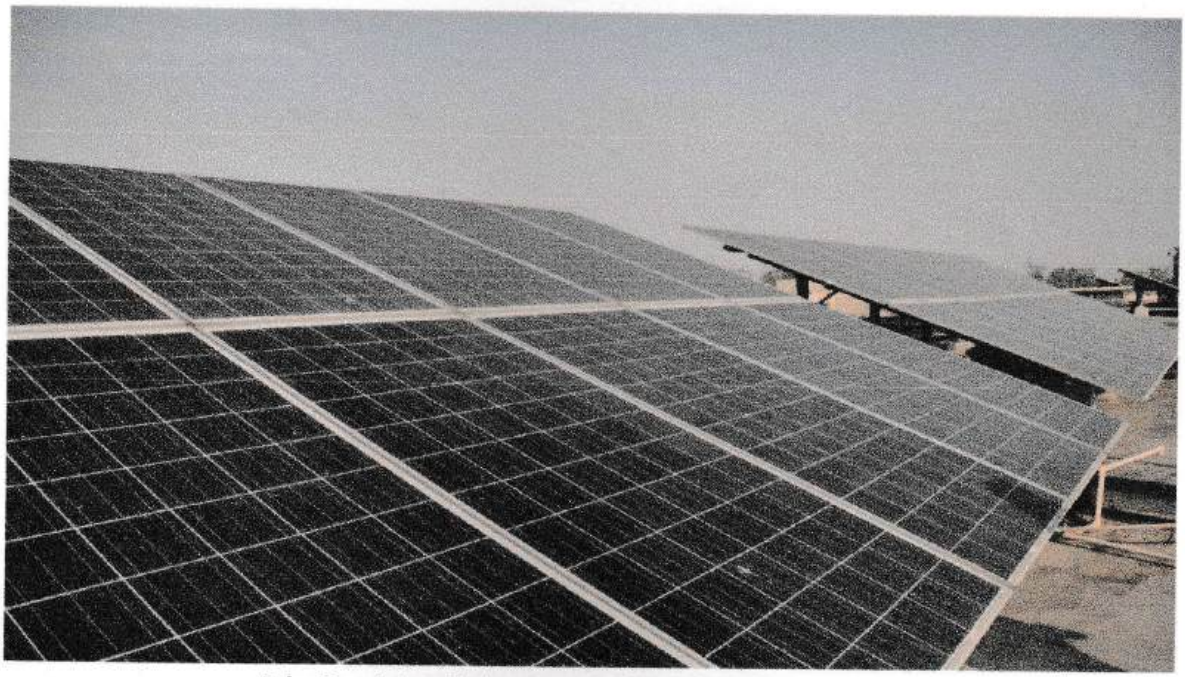
Latest Energy Consumption – 275760 KWH

8.9 Energy Saving Initiatives

Energy saving initiatives are currently limited to optimum use of lighting and connected equipment by following timely pattern of switching off and on.

8.10 Alternate Energy Sources in Premise

Institute has taken initiative for installing solar panels for alternative energy source. Delhi Technological University has installed solar plant for 472 KW power generation. All the building structure terrace are covered with solar panels and generated power is supplied to connected grid.



Solar Panels installed on terrace of Buildings in DTU

8.11 Energy Conservations in Computers & Other Equipment:

The power saving mode is active on computers and all the computers and other equipment has settings for the same to ensure minimum energy consumption in case of not using them.

8.12 Water Consumption in Campus:

The water consumption in institute is for domestic use only. All the water is consumed in washrooms for flushing and hand wash by students and staff. Small amount of water is used in canteen for preparation of tea and minor snacks. The water meters are not installed in premise for capturing the consumption, and there is no details available currently as water consumption inventory is not maintained.

Underground and overhead tank in campus for water supply

Overhead water tank is filled 3 times daily at different interval and time period. One time filling of tank makes 2,26,000 liter of water. There is no water testing evident for domestic supply but the team is using direct chemical dosing.

8.13 Water Conservation Initiatives:

There are no water conservation initiatives reported currently in premise.

8.14 Rainwater Harvesting System:

There is no rainwater harvesting system maintained in the premise as observed during site walkthrough. But there is large water pond for runoff collection and ground water recharging similar to artificial wetland in the campus.

Water Pond in the campus for runoff collection

8.15 Awareness about Environmental Laws:

During audit walkthrough, the awareness level of environmental laws related different environmental aspects of institute was checked. The site team is not much aware about applicable environmental laws. There should be listing of all environmental laws that is normally applicable to institutes at various levels.

9.0 OBSERVATIONS & RECOMMENDATIONS:

1) Environmental monitoring of various parameters are done currently by internal labs on random basis which includes – Ambient Air Monitoring, Stack Emission Monitoring, Noise level monitoring. These reports are available at various places in departments.

Recommendation 1: It is recommended to evolve a procedure for regular environmental monitoring at least on quarterly basis and maintain all testing records by NABL / Delhi Pollution Control Committee (DPCC) approved laboratory.

2) The noise level in DG set during operation is higher than prescribed limits due to absence of acoustic enclosures in DG Sets.

Recommendation 2: The acoustic enclosures of Diesel Generators are required to be installed and maintain to ensure overall noise level during DG operations are meeting CPCB noise limits for DG sets – 75dB.

3) Segregation of Wastes types in different bins are not followed. There are two types of bins kept at various places but there is no separate collection of dry waste, wet waste, biodegradable waste and non-biodegradable waste. All wastes are collected in common garbage bags only for further disposal

Green and Blue Color Bins for Biodegradable and Non-Biodegradable Waste in campus

Recommendation 3: It is recommended to initiate the segregation of waste on source and at collection point. The number of bins are required to be added with separate identification sign for biodegradable waste and non-biodegradable waste. This will ensure maximum recycling of waste generated from premise. Collection of waste must be done separately from different bins.

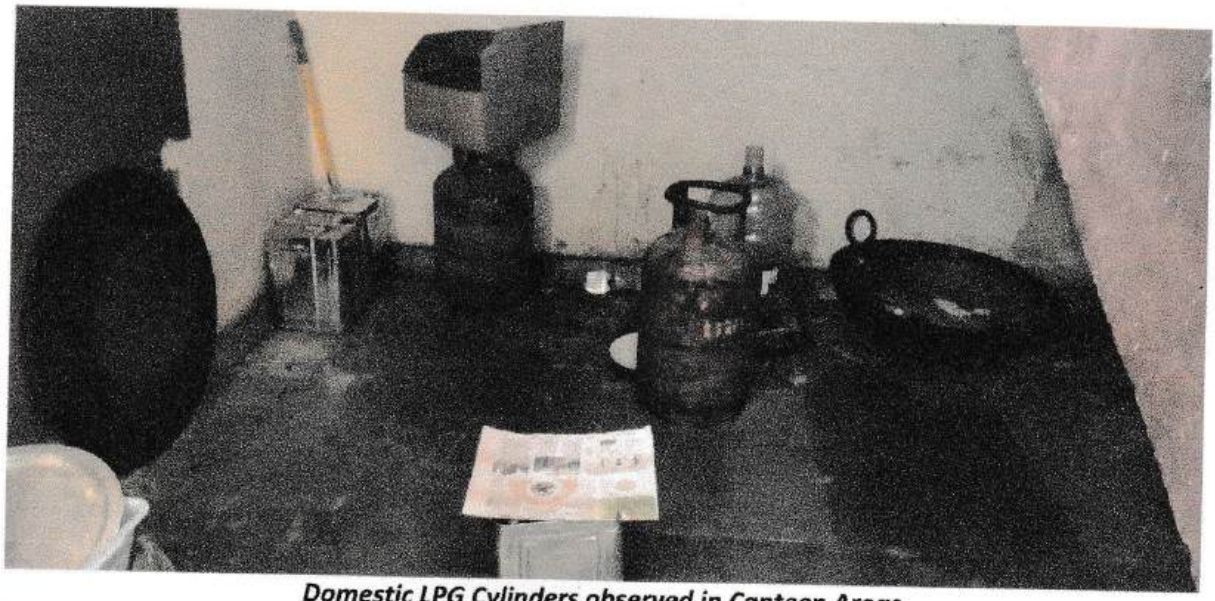
4) E-Auction process for disposal of hazardous and e-waste doesn't include any legal references and selection of vendors are not done in accordance with their authorization from Delhi Pollution Control Committee.

Recommendation 4: The E-Auction Process for Scrap Disposal specially hazardous and e-waste must be amended and required to be included the criteria for selection of vendors basis on their authorization from Delhi Pollution Control Committee in accordance with Hazardous and Other Waste (Management, Handling and Transboundary Movement) Rules, 2016 as amended & E-Waste Rules, 2016 as amended.

5) Water meters are not installed in premise at any source of water in campus. There is no record of water consumption available.

Recommendation 5: It is recommended to install water meters on all sources and maintain the daily inventory record of water meter and this can be used to maintain the monthly consumption of water in campus.

6) Domestic cylinders of LPG are in use at various places inside campus as observed in canteen and hostel areas.



Domestic LPG Cylinders observed in Canteen Areas

Recommendation 6: Only commercial non-subsidized cylinders are required to be used in canteen and hostels with manifold facility instead of connecting separately to all equipment units.

7) There is no testing of supply water done as observed at various placed inside campus. Only chlorine dosing is done to water.

Recommendation 7: Drinking water monitoring on regular basis as per IS 10500 – 2012 is recommended at least on fortnightly basis.

8) Lot of dry leaves & twigs are currently being dumped with the garbage. These leaves and twigs have high calorific value and may be used as fuel

Recommendation 8: To utilize the organic dry waste, university should consider some project related to composting or preparation of Briquettes which may be used as fuel in boilers and some other industries in Delhi NCR.

9) There is no Effluent Treatment Plant (ETP) for Biotechnology and Chemistry labs and the chemical discharge is entering into common sewage discharge.

Recommendation 9: University should consider dedicated ETP for collection from all wet chemical labs for treatment of waste water.

10) Health Centre and Biotechnology Department are currently generating Biomedical Waste but there is regular vendor for disposal of biomedical waste from campus. Biotechnology department is currently disposing in 3-4 months to authorized vendor.

Recommendation 10: The Biomedical Waste Management from health centers and Biotechnology department needs improvement with regular tie up of authorized vendor and frequency of disposal once in week time to avoid long storage of biomedical waste in campus.

10.0 CONCLUSION

This audit involved extensive consultation with all the site team, interactions with key personnel on wide range of issues related to Environmental aspects. The audit has identified several observations for making the university premise more environment friendly. The recommendations are also mentioned with observations for university team to initiate actions.

The audit team opines that the overall university campus is maintained well from environmental perspective and lot of best practices in the form of lush green cover, waste to energy plant, open water pond, segregation initiatives etc. There are few observations which needs attention like empanelment of biomedical waste vendor (already in process), installation of water meters, maintaining consumption pattern, installation of acoustic enclosures, environmental monitoring and its records, and changes in E-Auction process.

The auditor recommends preparing an action plan for all observation and responsibilities must be assigned to implementation team to ensure focus and timely closure of all the observations. The next step for the site should be preparing an action tracker for regular follow ups of the observations till closure.

END OF REPORT

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