

Name of Presenter: AJAY PAGARE



PRESENT AFFILIATION	Designation: Manager, Environment (HSSE) Organization Name: Bharat Petroleum Corporation Limited Mumbai Refinery (BPCL MR) Section Head: Mr. Sunil Raut, DGM (Environment)
AREAS OF INTEREST	<ul style="list-style-type: none"> ✓ More than 10 Years of experience in Petroleum Refining. ✓ Area of exposure: Refinery Operations & Environment ✓ Unit exposure: CDU-3, NHGU, BBU Units & Currently Environment.
ACHEIVEMENTS	<ul style="list-style-type: none"> ✓ Qualified ISO 14000 lead auditor ✓ Developed Environment Dashboard in co-ordination with CS&S Team. ✓ Silver Green CO rating, ZWL Certification for BPCL MR ✓ Accolades & Awards such as Grow Care/Green Tech International /ET Ascent National /Golden Peacock Environment Awards in last one year

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PROJECT DETAILS

Project Title :	<u>'Near Zero Waste To Landfill Certification through M/s Intertek USA'</u>
Trigger of the project:	This project has been conceived at level of Senior management, Middle management & Operating level.
Uniqueness of the project:	<ul style="list-style-type: none"> • “Zero Waste” philosophy is one that can be effectively implemented and verified for eliminating and/or minimizing waste being generated in the process and disposed into landfills. • Credibility and visibility of an organization’s efforts to improve its environmental impact • Responsible waste management has become expectations of stakeholders. • Sustainability efforts such as waste diversion from landfills are important steps to demonstrate environmental stewardship.
Date of commencement:	09 th Mar-2021 (PO placed)
Date of completion of project:	21 st Mar-2022 (Certification Date)

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Major milestones of project accomplishment vis-à-vis initial mapping of project road map

- Although, absolute “zero” waste being generated and disposed by any organization is nearly impossible, Intertek’s approach is to provide certifications for the following categories:
 - ✓ Zero Waste to Landfill – at least 99% diversion rate
 - ✓ Near Zero Waste to Landfill – between 95% and 99% diversion rates
 - ✓ Advanced Waste Diversion – from 85% to below 95% diversion rates
- Initial Certification includes
 - ✓ All type of waste generation & disposal data of MR Compilation and waste diversion calculations
 - ✓ Collection of documents/certificates/undertakings from recyclers/vendors
 - ✓ Virtual verification of data & document and gap assessment by M/s Intertek
 - ✓ Two days offsite audit at BPCL MR followed by Two days site visit at MR & MWML
- Finally, BPCL Mumbai Refinery received ‘Near Zero Waste to Landfill’ certification for diverting more than 95% waste from landfill valid for three years.
- Annual surveillance audits to verify ongoing implementation of the waste management practices

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- **Measure and indicate savings through project implementation on Energy; Water; Carbon and Toxicity and therefore a picture of cost benefit :**
 - Not Applicable for this project
- **List gains on productivity /downtime / cycle time reduction:**
 - Not Applicable for this project

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- **People/society benefits:** Reduction in hazardous waste landfill minimizes environmental and health impact.
- **Moral /motivation:** Third party verification lends credibility to green claims, providing assurance to organizations and stakeholders.
- **Skill up-gradation:** Proactive approach leads to improvement in waste management.
- **Attitude shift/development:** Certification process helped to change approach towards disposal of waste and act differently. It gives motivation for strengthening effective waste management by exploring possibility of recycle/reuse.

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- **Replication potential and progress of project assimilation cross functional / within group companies**

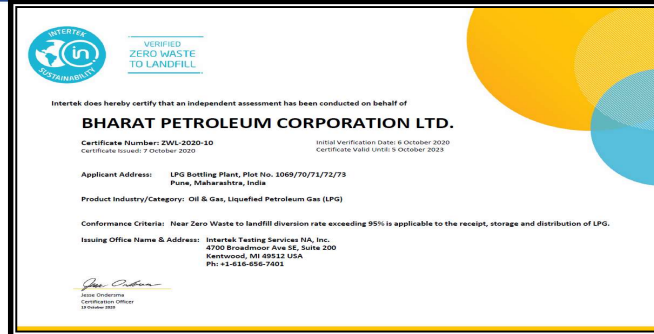
- It can be replicated in Oil & Gas Industries, Petrochemical Complexes, Pharmaceutical Complexes, Rubber/Tyre/Chemical/ Paint and other Industries wherever Hazardous/Non Hazardous/Biomedical waste/other waste are. being handled.

- **Evidence on where and when implemented with photos before/after:** - Certificate
- **What next for spreading benefits?** -Target is to reach landfill diversion upto 99% to achieve ZWL



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- **Steps initiated:** Oil Marketing depots of BPCL organization have been certified with Zero Waste to Landfill (ZWL) certificate for diverting more than 99% waste from landfill. Other BPCL group of Refineries at Kochi & Bina are also approaching for ZWL certification



- **Achievement sharing mode :** Forum like Corporate and Refinery Broadcast, Corporate Website, Annual Sustainability Report
- **Other knowledge sharing platforms:** Social Media like Corporate Facebook page, Twitter handle, LinkedIn page etc.



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Type of Challenge	Challenges faced	Brief on countering
Technical	Nil	Nil
Administrative	Collection of valid documents like CTO, Undertaking from vendors registered with BPCL Mumbai Refinery for disposal activity	Follow up with CPO, vendors, guidance to vendors
Maintenance related	Nil	Nil

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- **Environment parameter: energy/water/carbon/toxicity and emission**
 - ✓ It reduces waste going to landfill to reduce impact on water bodies/ground water and ecosystem.
 - ✓ It helps in Greenhouse gas reduction, energy efficiency.
 - ✓ Synergy with Continual Improvement Initiatives
- **Comparison on Men/Material/Methods/Technology/ Measurement:**
 - ✓ Promotes Circular Economy
 - ✓ Meet customer demand for sustainable business practices
 - ✓ Stronger Brand Identity
 - ✓ Reduced Legal Exposure



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- **Practicing the '7 r's' lifestyle** (recycle, refuse, reduce, reuse, repair, recover and regift/refurbish/repurpose)
- **Waste to energy**
- **To develop** waste management process, procedures and reporting of programs



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Top ten best practices which will form the core of approach for +1 and +2 year



- Proper identification of waste
- Proper segregation of hazardous and non hazardous waste
- Proper labelling and storage
- Documentation and accounting
- Recycle, reuse
- Possible treatment for reduction of its impact on ecosystem
- Assurance audit of disposal facilities
- Tracking of waste transportation
- Optimization of no of trips for reduction in scope 3 emissions
- Waste to Energy at disposal facilities

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Major learnings from the project implementation



- Effective Waste management
- Improvement in procurement policy
- Enhancement in sensitivity about Environmental impact
- Enhancement in stewardship
- Improvement in brand image
- Enhancement in credibility amongst Stakeholders
- Use of Digital tools for data monitoring and report generation

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THANK YOU

