

Environmental Monitoring Report

**for Redevelopment and
Enhanced Oil Recovery (EOR)
Programme**

October 2024 ~ March 2025

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Table 1: List of Acronyms

Acronym	Definition
ALARM	Advancing Life and Regenerating Motherland
API	American Petroleum Institute
Bcf	Billion Cubic Feet
BHA	Bottom-Hole Assembly
CSR	Corporate Social Responsibility
DNA	Deoxyribonucleic Acid
DWQS	Drinking Water Quality Standard
ECC	Environmental Compliance Certificate
ECD	Environmental Conservation Department
EIA	Environmental Impact Assessment
EMoR	Environmental Monitoring Report
EMP	Environmental Management Plan
EOR	Enhanced Oil Recovery
ERP	Emergency Response Plan
ETA	Estimated Time Arrival
GOCS	Gas and Oil Collecting Station
HoDs	Head of Departments
HSG	Health and Safety Guidance
HSE	Health, Safety and Environment
IFC	International Finance Corporation
ISO	International Standard Organization
KPIs	Key Performance Indicators
LPG	Liquefied Petroleum Gas
MEDEVAC	Medical Evacuation
MFO	Mann Field Office
MMbbbls	One Million Barrels of Oil
MOGE	Myanmar Oil and Gas Enterprise
MONREC	Ministry Of Natural Resources and Environmental Conservation
MYO	MPRL E&P Yangon Office
NEQEG	National Environmental Quality (Emission) Guidelines
PCC	Performance Compensation Contract
PPE	Planning and Production Engineering
PSD	Process Shut-Down
RO	Reverse Osmosis
SLC	Superior Low Clay
SMC	Sludge Management Compound
WMC	Waste Management Compound

1. Executive Summary

After founded in 1996, MPRL E&P has become a key player in Myanmar's energy sector, with proven expertise in onshore and offshore exploration and production. Our success is driven by a commitment to integrity, transparency, and ethical conduct, along with a strong focus on social and environmental responsibility. We prioritize fostering a positive work environment that encourages learning, growth, and empowerment, enabling our employees to actively contribute to the company's success. Honesty and accountability remain central to our mission as we continue to uphold our social and environmental obligations.

This tenth environmental monitoring report provides a comprehensive overview of the environmental activities and progress achieved between October 2024 and March 2025. It marks the second report issued after the first extension of the Environmental Compliance Certificate (ECC). The report covers key data on monitoring activities, enhancements in environmental measures as outlined in the Environmental Management Plan (EMP), and assessments of air, noise, soil, surface water, and groundwater quality. These efforts were conducted in collaboration with the Magway regional Environmental Conservation Department (ECD). Additionally, the report highlights waste disposal initiatives, the successful implementation of the EMP and its eight sub-plans, as well as the challenges encountered during daily operations.

Key Highlights within the monitoring periods (October 2024 to March 2025)

Environmental Performance

In reference to the letter from the ECD (Director General's Office) dated 27-09-2024, the regional ECD (Magway) informed us that MONREC has temporarily exempted our missing EMoRs for the periods of October 2020 – March 2021 and April 2021 – September 2021.

From January 22 to 24, 2025, MPRL E&P, in collaboration with the regional Environmental Conservation Department (ECD), conducted an Environmental Monitoring Survey in compliance with the approved Environmental Impact Assessment (EIA) and Environmental Compliance Certificate (ECC). The survey covered key baseline sampling points near our operations, excluding Z4GW1 in Shwewargone ward, which was converted into a waste disposal well. Additionally, sampling at the tube well near injection well #132 was not possible due to recent flooding. Despite security and logistical challenges, the survey was successfully completed at the nearest accessible locations.

On December 19, 2024, the assistant director of the regional Environmental Conservation Department (ECD), Magway, led an inspection tour of Mann Field in connection with our submitted 9th EMoR. Prior to the inspection, the HSE manager

and CSR field representative provided a presentation on the company's environmental and social performance. The visit covered key locations, including the CSR mobile clinic in Letpantapin village, GOCS-2, the warehouse compound, the produced water injection site at well M-531, the mechanical workshop, the waste management compound, and the Seintalone mango plantation field.

From January 22 to 24, 2025, the Regional ECD (Magway) conducted the following monitoring activities:

- **Air and Noise Quality** monitoring at points Z3AQN and Z4AQN.
- **Soil Quality** monitoring at points Z3S1, Z3S2, Z4S1, and Z4S2.

Due to security concerns, Mann Field operations have been restricted to daytime with a reduced crew. As a result, Z3AQN, Z4AQN, Z3S1, Z3S2, Z4S1, and Z4S2 were selected for air, noise, and soil quality monitoring, as they are closest to ongoing operations. The remaining monitoring points are temporarily inaccessible due to security and logistical challenges. Monitoring at these locations will resume when conditions improve.

As part of our self-monitoring efforts, MPRL E&P conducted assessments of various water sources, including drinking water quality, discharged water from the MPRL E&P Base Camp, domestic water from the down-hole and mechanical workshop, hydro-test water from the warehouse, and groundwater near injection well M-132, in accordance with our predetermined schedule.

In response to the ECD's feedback on our submitted EMoRs, MPRL E&P compared and presented the monitoring results for air, noise, soil, surface water, and groundwater quality against the 2015 baseline data. The implementation of actions addressing the ECD's comments is detailed in Article 7.

In collaboration with the regional ECD (Magway) team, soil samples were collected from points Z3S1, Z3S2, Z4S1, and Z4S2 and tested at the regional ECD (Magway) laboratory. The results were satisfactory, remaining within the limits of the referenced Dutch Standard 2000.

The laboratory results for air, noise, water, and soil quality monitoring, along with details of our self-environmental monitoring activities, are provided in the Annex section. Explanations for any parameters exceeding guideline limits are included in their respective sections where necessary. Although tests were conducted for all available parameters, DOWA reported that certain water parameters could not be tested due to technical limitations at their facilities.

With approval from MOGE Management, disposed 183 B/bags of SLC fracturing sand in a safe, environmentally responsible, and compliant manner at the designated waste pit located south of waste compound. The task was successfully and safely completed by 16 February 2025, effectively mitigating potential health hazards for our employees and ensuring minimal environmental impact. It was conducted a site survey,

excavated, and prepared the waste pit (approximately 60ft L x 40ft W x 5ft Deep), referencing the SANTROL Proppants Material Safety Data Sheet (MSDS) to ensure safe and compliant operations. In accordance with IFC's Waste Management Guidelines, the field team covered the waste with one meter of clean subsoil and placed topsoil over the subsoil during the restoration process, ensuring the site was returned to its pre-condition state.

The HSE department regularly conducts monthly training sessions, as outlined in our training plan, to promote greater awareness of Health, Safety, and Environmental (HSE) practices among our workforce. These sessions leverage both internal and external resources, depending on availability. To foster a culture of safety and environmental responsibility, the training covers a variety of impactful topics, including "Catering with Care: Food and Workplace Safety Essentials," "E-Waste and E-Pollution," and "Air Pollution and Health Impacts."

We actively engage in discussions on ecosystem and biodiversity conservation, water conservation, energy conservation, waste segregation, and waste management during induction training for new hires and at regular safety meetings. These initiatives are designed to foster a comprehensive understanding of HSE principles across our organization.

All the formation water produced was 100% disposed into shut-in wells. The field operations continue to maintain the achievement of zero discharge of produced water since 24 August 2017.

MPRL E&P has successfully analyzed and measured nearly all parameters as pledged in the Environmental Impact Assessment (EIA) report, utilizing favorable conditions and laboratory facilities available in Myanmar.

MPRL E&P ensures transparency by sharing the authorized Environmental Impact Assessment (EIA) report and all environmental monitoring reports through various channels, including our website, government departments, public meeting venues, and project offices.

Our commitment to compliance remains unwavering. We continuously monitor and assess our operations to uphold the standards and obligations set forth in the Environmental Compliance Certificate (ECC) and EIA, ensuring alignment with all relevant regulations.

Social Performance

From October 2024 to March 2025, MPRL E&P's CSR Program continued our commitment to fostering inclusive growth, environmental stewardship, and community resilience in Mann Field Communities through a diverse range of social investment initiatives. These initiatives encompassed Community Infrastructure Development, Community Livelihood Development, Educational Partnership Program, Community Capacity Building, Community Healthcare Program, Community-led Waste Management Program, Operational Grievance Mechanism, Stakeholder Engagement, Corporate Philanthropy, and the MOGE Employee-Centered CSR Program.

Community Infrastructure Development: Key infrastructure projects included the installation of solar-powered water pumping systems in Kywe Cha and Aye Mya Villages and the construction of concrete road slabs in Auk Kyaung, Pauk Kone School, and Lay Eain Tan Village. Additionally, water wells and water supply systems were developed in Lay Eain Tan School and Kyar Kan Village, while Let Pan Ta Pin School received support for the Clean and Green School Project.

Community Livelihood Development: Through the Seed Bank Program, we supported local farmers in tomato cultivation, facilitated seed loan agreements, and monitored harvests of tomatoes, sunflowers, and chickpeas in collaboration with Seed Bank Committees.

Educational Partnership Program: Our scholarship program benefited 22 students, with seven scholars graduating from the State Agriculture and Livestock Institute (Pwint Phyu) and five from No.5 ITC (Magway). Additionally, we supported a three-month Motorcycle Mechanic Course, organized a three-week internship program at mobile clinics for three nurse aide trainees, and provided a grant-in-aid for a pig farming project. We also facilitated an information sharing session for Batch-13 applicants of No.5 ITC (Magway).

Community Capacity Building: We organized the Online English Learning Program at community centers in Aye Mya, Mann Kyoe, and Nan U, hosted an advanced art class at Aye Mya Community Center, and introduced a Summer Program for children and youth in Mann Field. Under the Summer Program, we implemented a basic computer class for youths, organized the ThuKhaMain summer school, and conducted a Training of Trainers (ToT) session for Community-based Education Facilitators (CEFs) for the ThuKhaMain summer school.

Community Healthcare Program: Through the Mobile Clinic Program, we provided free healthcare services to 20,976 patients across 715 clinic sessions as of March 2025. Additionally, we facilitated 99 eye surgeries at Minbu Hospital, including cataract, glaucoma, and corneal scraping procedures, at a total cost of MMK 30,237,400. We also conducted awareness sessions on reproductive health, birth spacing, and chickenpox prevention.

Community-led Waste Management Program: Our waste management initiatives included monitoring and supporting waste collection services and Trash Hero Minbu's cleanup activities in Mann Field Communities.

Operational Grievance Mechanism (OGM): During this period, five OGM cases were addressed, bringing the total number of complaints since September 2014 to 187. To commemorate the 10-year anniversary of the OGM and to further enhance community understanding and transparency regarding OGM practices, we organized the 'Celebrating 10 Years of OGM: A Night of Unity, Fun, and Family' event with 723 attendees.

Stakeholder Engagement: Our engagement efforts included the First Biannual CSR Progress Review Meeting for FY 2024-2025 with MOGE in Nay Pyi Taw, the Biannual CSR and HSE Progress Update Meeting with Mann Field Communities, and monthly community volunteer meetings. We also conducted community needs assessments for developing CSR work programs and the budget plan for Fiscal Year 2025-2026, delivered social performance management updates to the New Assistant Director of Environmental Conservation Department (ECD - Magway) and facilitated a mobile clinic visit. Additionally, periodic CSR Progress Reports and newsletters were published to ensure transparent communication.

Corporate Philanthropy: Our philanthropic contributions supported healthcare, religious, and cultural causes. Notable donations included an air conditioner for the Eye Specialist Outpatient Department at Minbu Hospital and Kahtain offerings to monasteries in Mann Field Communities.

MOGE Employee-Centered CSR Program: We also addressed the basic needs of MOGE employees and their families through our CSR Program by promoting well-being through educational aid, capacity building, vocational training, essential supplies, support for cultural and religious events, and healthcare services to ensure their long-term development. Under the MOGE Employee-Centered CSR Program, we contributed MMK 100 million from the Fiscal Year 2024-2025 CSR budget to support MOGE (Mann Field) employees, fostering positive stakeholder relations and contributing to the overall well-being of the MOGE (Mann Field) community.

Through these initiatives, we reaffirmed our commitment to sustainable development and social responsibility, ensuring that Mann Field Communities continue to benefit from long-term, impactful programs.



Environmental Monitoring Report

for Redevelopment and
Enhanced Oil Recovery (EOR)
Programme

October 2024 ~ March 2025

2. Project Description and Production Information

The Mann Field, discovered in 1970 by MOGE, currently includes 674 wells of which 290 were produced as of March 2025 while the remaining wells were shut in. The total produced oil and associated gas from the Production Enhancement Project is 16.28 MMbbls, including 10.36 MMbbls above the normal decline curve, and 18.63 Bcf gas as of March 2025.

2.1 Mann Field Operation Status

Under the PCC, MPRL E&P is undertaking a re-development operations activity of the Mann Field to improve the environmental performance of the operations.

The operation activity includes:

Infill well drillings – due to the current decline of the field, MOGE and MPRL E&P have been drilling infill wells in main Mann Field areas close to currently producing wells and outside of surrounding communities, however no infill well activity during the last six months.

Deepening Wells – to deepen tens to hundreds of feet from existing wellbore by drilling, no activity of deepening well during six months.

Chemical Treatment –to ensure that oil is maximized from the reservoir by using small amount of chemicals such as paraffin dispersant, paraffin inhibitor, and non-chemical GreenZyme. GreenZyme is a biological liquid enzyme that is not only harmless to any individual's health but also an environmentally friendly product.

Remedial and workover operations – maintain oil production by servicing such as swabbing, scraping and bailing of producing wells.

Improvement of Pumping Unit – pumping units will be / have been repaired to reduce the likelihood of spills in the surrounding areas.

Refurbishments of the Gas and Oil Collecting Stations (GOCS), Flow Pipes and Drain Pits – to ensure the health and safety to surrounding communities and reduce the risk of spills.

Rehabilitation of Shut-in Wells – sealing off shut-in wells to avoid contamination of surrounding and restoring surrounding areas to resemble their original state.

Re-perforations will be undertaken for better control of the well.

Development of Produced Water Management System – produced water will be injected into the shut-in wells.

2.2 Current Operations Summary

2.2.1 Remedial and Work Over Operations within 6 months

The following table shows the monitoring and tracking of the remedial and work-over operations activities within six months.

Table 2: Remedial and Work Over Operation Activities

No.	Service	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Total
		Frequency of Activities						
1	Bailing & Change Tubing	5	4	4	6	4	6	29
2	Bailing Inside Liner	1				1		2
3	Bump Valve & RSBV	3	6	1	2	6	2	20
4	Change all Tubing	1	1	1	2	1	3	9
5	Change Casing Protector							0
6	Change Casing Swedge						2	2
6	Change Wellhead		1					1
7	Check BHA and Change all Tubing	1			1			2
8	Check BHA, Bailing and Change Tubing			1		1		2
9	Clean out Bottom	2	2		1	3	4	12
10	Fishing	1	1		1	1	2	6
11	Injectivity Test		1					1
12	Isolation for 5-1/2" × 9-5/8" Annulus							0
13	Lower down PSD & Pump Service		2	1				3
14	Prepare for BHP/BHT Survey		2					2
15	Preparation for P-100 Operation							0
16	Pull Out Sucker Rod String					1		1
17	Pull Out Open Shoe Tubing String							0

No.	Service	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Total
		Frequency of Activities						
18	Pump Service	28	29	30	25	23	24	159
19	Reopen & Pumping Test		1	1				2
20	Raise Up PSD and Pump Service							0
21	Recover Sucker Rod & BHA	2				2	10	14
22	Replace Polished Rod Liner & Rotator				1			1
23	Retighten Wellhead							0
24	Reset Packer		1		1			2
25	Run in Sucker Rod String & PTP			1	2			3
26	Run in Injection String			1				1
27	Scrapping, Bailing & Change Tubing	3		3		3		9
28	Swabbing, Bailing & Change Tubing	1	2	2	7	1	4	17
29	Swabbing Test							0
30	Zone Combination							0
31	Zone Isolation	1	4		1			6
Total Serviced Wells (Monthly)		49	57	46	50	47	57	306

2.2.2 Mobile Power Generator Register Lists in Mann Field

The following Plant/ Equipment are being used in Mann Field.

Table 3: Mobile Power Generator List

No	Unit Name	Engine Type	Horse Power	Units
1	P-100	CAT-3408	365HP	1
2	P-82	CAT-3306	270HP	1
3	P-75	Cummins N855-P-236	235HP	1
4	P-70	Cummins N855-P-250	250HP	1
5	P-69	Cummins N855-P-250	250HP	1
6	P-65	Detroit 6V71	260HP	1
7	Tractors	KaSaLa	50HP	3
8	35Tons Tadano Crane	Nissan-RF8	340HP	1
9	416 Backhoe	CAT-4.236	85HP	1
10	950 Forklift	CAT-3304	160HP	1
11	966 Wheel Loader	CAT-3306	200HP	1
12	L-39 Forklift	Nissan – PE6	275HP	1
13	Grader	CAT-3306	200HP	1
14	D8K Dozer	CAT-D342	275HP	1
15	GD Mud Pump	CAT-3306	350HP	1
16	OPI Mud Pump	Detroit-8V92	365HP	1
17	JWS Mud Pump	Detroit-12V71	469HP	1
18	15PS King Power Swivel	CAT-3034(C6.6)	173HP	1
19	Power Pack	Deutz-F6L912	63HP	2
20	Welding Machine	Deutz-F3L912	25HP	2
21	Sullair Compressor	CAT-3054	85HP	1
22	55Tons Kato Crane	mitsubishi-8DC9 engine	320HP	1
23	Ford Ranger (2Q/6064)	Ford (TDCi engine)	2.2CC (150 HP)	1
24	Wire Line Unit	YAMAHA	10HP	1
25	Blue Truck	Cummins NTC-350	350HP	1
26	White Truck	Cummins NTC-350	350HP	1
27	Vehicle			25
28	Weed Cutting Machine	Honda	1.3 HP	3
29	Weed Cutting Machine	VHV	7.5 HP	1
30	Diesel Engine Water Pump	KEMAGE	4 HP	2
31	Denyo, Genset: DCA-400SPK-II	Komatsu Eng: SA6D140-A	480 HP	1

3. Environmental Management Organization

MPRL E&P is dedicated to allocating necessary resources for the execution and management of the EMP, which includes skilled human resources. The organizational structure responsible for environmental management and implementation of the EMP can be found in Table 4.

Table 4: Environmental Management Organization Roles and Responsibilities

Position	Responsibility
MPRL E&P	
Deputy Chief Executive Officer and Executive Director	Oversee and coordinate all activities on the Project; ultimately responsible for environmental issues. Ensure delivery by the asset of its environmental, and operational targets. Ensure effective communication with all stakeholders.
Field Operations Manager	Technical aspects of the Project include contractor supervision during operations. Responsible for the execution of the Emergency Response Plan including the Oil Spill Contingency Plan. The Field Operations Manager has control over strategic project aspects and interaction with subcontractor staff where project activities take place.
Construction Manager	Technical aspects of the Project including subcontractor supervision during Project implementation.
Assistant HSE Manager / Site HSE Officer	Ensuring in cooperation with the Environmental Officer, that the Project and subcontractors operate following applicable regulatory environmental requirements and plans. Monitor implementation of environmental protection measures, (on-behalf of Environmental Officer), and assist with technical input into oil spill requirements. The HSE Officer is monitoring the implementation of Health, Safety, and Environmental protection measures, including tracking, inspection, reporting, and assisting with technical input into emergency response procedures and implementation as per the EMP.
Community Liaison Officer	Liaise with local communities, farmers and government regulators on the Project's behalf. Implement environmental awareness and education programmes with communities.
Contractor	
Project Manager	Responsible for subcontractor technical performance and compliance
HSE Manager	Ensure that environmental regulatory requirements are met and that EMP requirements are properly implemented.

4. Highlights on HSE Key Performance Indicators

The Field Management team and HSE team have agreed to set up KPIs for the field operation team. The HSE KPIs are designed to enhance sustainability, maintain productivity, promote environmentally friendly operations, and support the wellbeing of both operational assets and the workforce. Integrating Health, Safety, and Environment (HSE) practices as a vital part of the field operation is a key aspect of sustaining continual improvement.

Achievement vs. Failure based on Set KPIs

To identify both performance attainment and opportunities for improvement, the field operation team's KPIs are continuously monitored throughout the fiscal year and reviewed at the end of the specified period. Despite challenging circumstances, the review shows that these KPIs were successfully achieved, reflecting the dedication and commitment of the field operation team.

For Fiscal Year 2024– 2025

We are pleased to announce that the Mann Field Production Enhancement Project successfully reached a remarkable milestone of 4 million Man-hours Without a Lost Time Accident (LTA) on 13 October 2024. Furthermore, as of 31 March 2025, we have achieved a total of 4,487,884 man-hours in our Mann Field operations without any LTA. This accomplishment reflects the continued dedication, commitment, and teamwork of our field team, with strong support from the MOGE team.

In terms of reactive performance, as previously mentioned, there were no Lost-Time Accidents during the fiscal year, and the total number of recordable cases also met the established KPI for the period.

As part of our proactive performance efforts, the field team received 8,409 CARE Cards between 01 April 2024 and 31 March 2025. The organization demonstrated significant progress, achieving over 100% of the annual target of 6,000 cards, reflecting strong engagement and commitment to safety and continuous improvement. We have analyzed trends in unsafe actions and conditions using data from submitted CARE cards and identified opportunities for further improvement. These achievements are made possible by the dedication of CARE Card submitters and the continued support from all Heads of Departments (HoDs) and the MOGE Team.

Due to the continual acceleration of operational activities, we are placing greater emphasis on training to enhance HSE knowledge and staff competency. All mandatory HSE training and awareness programs have been successfully implemented according to the planned schedule. (Refer to section 9.4 HSE Training).

To prevent accidents, protect workers, and ensure operations are conducted in line with industry standards, regulations, and internal procedures, as well as to maintain a

high level of safety and compliance, Permit to Work audits were conducted using a standardized checklist. These audits were completed 100 percent as per the plan.

As part of the HSE KPI audit and inspection, the HSE Annual Audit for the fiscal year 2024-2025 was successfully conducted during the period. The audit was coordinated with the field management team and involved selected members from Field Operations to enhance overall efficiency.

To ensure the safety of staff and assets, multiple inspections were carried out for Lifting Gear, Eye Wash Station, Fire Extinguishers and Wheeled Spill Kits. These inspections successfully met of the set target.

As part of MPRL E&P's commitment to fostering a positive HSE culture, several award programs have been established. The "Outstanding HSE Best Performance" award strengthens the HSE culture, the "Contribution Award in HSE Activity" recognizes nominated personnel for active participation, and the "Best Quality CARE Card Award" promotes ownership and helps prevent property damage and loss.

individual field workers also have HSE Key Performance Indicators (KPIs) established and regularly reviewed as part of their performance monitoring process.

As part of the environmental action plan's implementation, the field team maintained a 100% reinjecting record of disposal of produced water back into the shut-in well. Achieving such a record requires tremendous effort, including proper monitoring and maintenance of injection facilities, control and monitoring of critical data such as injection pressure, volume and rates, as well as the proper maintenance and servicing of injection wells.

Man-down and Stretcher Drill exercises were conducted at Mann Field to practice and assess the emergency team's response during a man-down situation, ensuring effective communication, timely medical intervention, and efficient evacuation.

To encourage the team's emergency response capabilities and assess their readiness, the Field Management team successfully conducted "Fire Drill" and "Chemical Spill Drill" at the Mann Field.

HSE Department organized the "Know Your Body" Healthy Campaign at MYO. The campaign aimed to raise awareness about the current health status of individuals, encourage improvements for a healthier lifestyle to enhance productivity, and promote a healthy and happy work environment.

The "Heat Stroke Awareness Campaign" was initiated in March 2025 at Mann Field to educate outdoor workers on preventive measures and first aid techniques for managing potential heat hazards in the workplace.

5. Environmental Management Plan

The Environmental Management Plan (EMP) aims to enforce compliance with the project's policies and fulfill the mitigation, monitoring, and other commitments outlined in the EIA Report. While the EMP serves as a broad framework document, it is intricately linked to various comprehensive management plans detailed below, each designed to set criteria for meeting specific environmental requirements.

The management plans, which were developed to ensure compliance with specific environmental elements, are described in detail in the EIA report. These plans outline the management and mitigation measures that must be implemented, the responsible parties and timeframe for implementation, and reporting requirements. MPRL E&P is currently implementing and monitoring these plans according to the schedule outlined in the EIA report.

- Waste Management Plan
- Emergency Response Plan (including Fire Risk Management Plan)
- Spill Response Plan
- Health and Hygiene Management Plan
- MEDEVAC Procedures
- Transportation Management Procedures
- Contractor's Environmental Management Plan(s)
- Environmental Monitoring Plan

5.1 Environmental Management System Framework

MPRL E&P's approach to environmental management is based on the ISO 14001 framework and incorporates internal policies, national regulations, and best practices from international sources. The company conducts regular environmental analysis and monitoring to ensure that its business activities have minimal negative impacts on the environment and the communities affected by its operations.

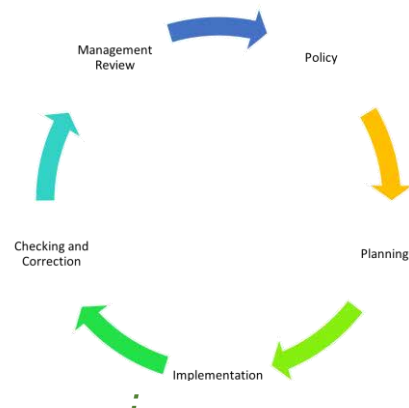


Figure 1: MPRL E&P Environmental Management System Framework

5.2 Waste Management Plan

The Waste Management Plan aims to effectively manage any surplus materials from the construction and operational activities in the Mann field, ensuring proper handling and disposal of waste.

The waste management plan aims to achieve the following objectives:

- Managing waste in a controlled and environmentally sound manner,
- Complying with all statutory and contractual requirements related to waste management,
- Recovering resources whenever possible and safe for re-use and recycling,
- Recording and tracking all generated waste appropriately.

The waste management plan has been implemented during the operation phases, dividing waste streams into four categories:

1. Hazardous recyclable,
2. Hazardous non-recyclable,
3. Non-hazardous recyclable, and
4. Non-hazardous non-recyclable.

The key steps in the waste management process are:

- Segregating waste into hazardous, general and recyclable categories using suitably labeled bins,
- Transporting bins/drums to approved disposal locations with the waste type clearly labeled on each one,
- Including each waste bin/drum sent on the backload manifest,
- Recording waste transportation in the waste database.

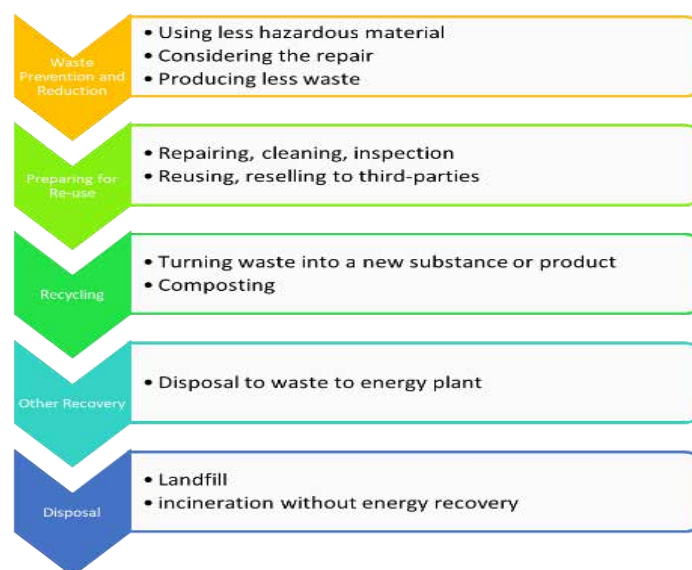


Figure 2: Waste Management Process

5.2.1 Monitoring on Waste Management Status

During the monitoring period of October 2024 to March 2025, the waste management compound facilities remain unchanged from previous monitoring periods.

Existing Solid Waste Management System

The solid waste management framework implemented by MPRL E&P primarily encompasses waste collection, segregation, and recycling, with a limited emphasis on the principles of the 3Rs (Reduce, Reuse, Recycle) that have been introduced.

At Mann field, waste segregation has been implemented, which involves sorting and separating waste based on its characteristics. The waste materials are segregated at the source by providing bins that are marked with universal symbols and labelled in both English and Burmese, and are coloured for storing waste as follows:

- **Green** – General Wastes,
- **Yellow** – Recycle Wastes,
- **Red** – Hazardous Wastes,
- **Black** – Non-Hazardous Wastes,
- **Blue** – Paper

Bins were placed in all locations, including GOCSs, offices, warehouses, workshops, construction sites, base camps, and clinics, for waste collection. The waste collection bins will not be allowed to overflow before they are emptied, and damaged waste storage receptacles will be promptly replaced. A sufficient number of bins were placed at each waste collection point for each type of waste, based on the expected variety and quantity of waste from that location.

Waste of any kind will not be stored permanently or for prolonged periods at the Waste Management Compound. The following procedure has been implemented for the temporary storage of all waste:

- The waste is properly stored in the designated area that is separated from storage areas for other materials/substances,
- The facilities are identified for each designated area, such as Recycle Area, Hazardous Area, etc.



Figure 3: 3Rs

5.2.2 Solid Waste Management in MPRL E&P

The management of waste is a crucial aspect of business operations, and all waste produced is recorded. MPRL E&P is monitoring and ensuring compliance with the National Environmental Quality (Emission) Guidelines and adhering to industry best practices.

Composting

Based on our self-monitoring records spanning six months from October 2024 to March 2025, the composting process has yielded approximately 1245 kg. of compost. While the process is notably rapid during summer, the composting bacteria do not function optimally under neutral conditions in the rainy season.



Figure 4: Composting of food waste at WMC

Recycling

At our facility, we collect and sell recyclable materials such as glass, paper, cardboard, plastic bottles, and materials to third-party vendors. To ensure proper recycling, these materials are separated from general waste during the collection process.

General Waste is collected from all areas within the Mann Field Operations and temporarily stored at the Waste Management Compound. Waste collection is carried out periodically every week using Jumbo big bags to reduce plastic bag usage, which can be reused multiple times. Additionally, the plastic bags used in the waste bins are also reused, except for the organic waste bin.



Figure 5: Segregated Recycle Waste at WMC

General Waste Storage in WMC



Figure 6: Waste Management Compound

After being re-sorted, packed and stored in the recycle waste storage area, the recycle materials are disposed of by an authorized third party.

The details of the type and quantity of recycle wastes have been registered using the 'Waste Register' form.

Recycle waste intended for disposal with an approved third-party vendor must be monitored using the “Waste Disposal Contractor Approval” form, which has been approved by the Field Operations Manager and/or the HSE Officer/ Environmental Officer.



Figure 7: Oil Contaminated Waste Stored at WMC

From October 2024 to March 2025, a total of 16,500 kg. of hazardous waste is collected from all work-related areas and is properly stored at the Waste Management Compound. The volume of hazardous waste collected was the highest amount in March 2025, with most of it being dry sludge from GOCSs. The dry sludge/ produced sand is temporarily stored at the Waste Management Compound, while the wet sludge is stored at the Sludge Management Compound.

5.2.3 Monitoring Data and Statistics

The Waste Statistics during the monitoring period from October 2024 to March 2025 are as follows:

Table 5: Monthly Waste Monitoring Record

Month	Hazardous Waste (kg.)	Non-hazardous Waste (kg.)	Composting (kg.)
October 2024	0	530	215
November 2024	0	490	190
December 2024	0	585	155
January 2025	1500	510	245
February 2025	3000	1921	250
March 2025	12000	505	190
Total	16500	4541	1245

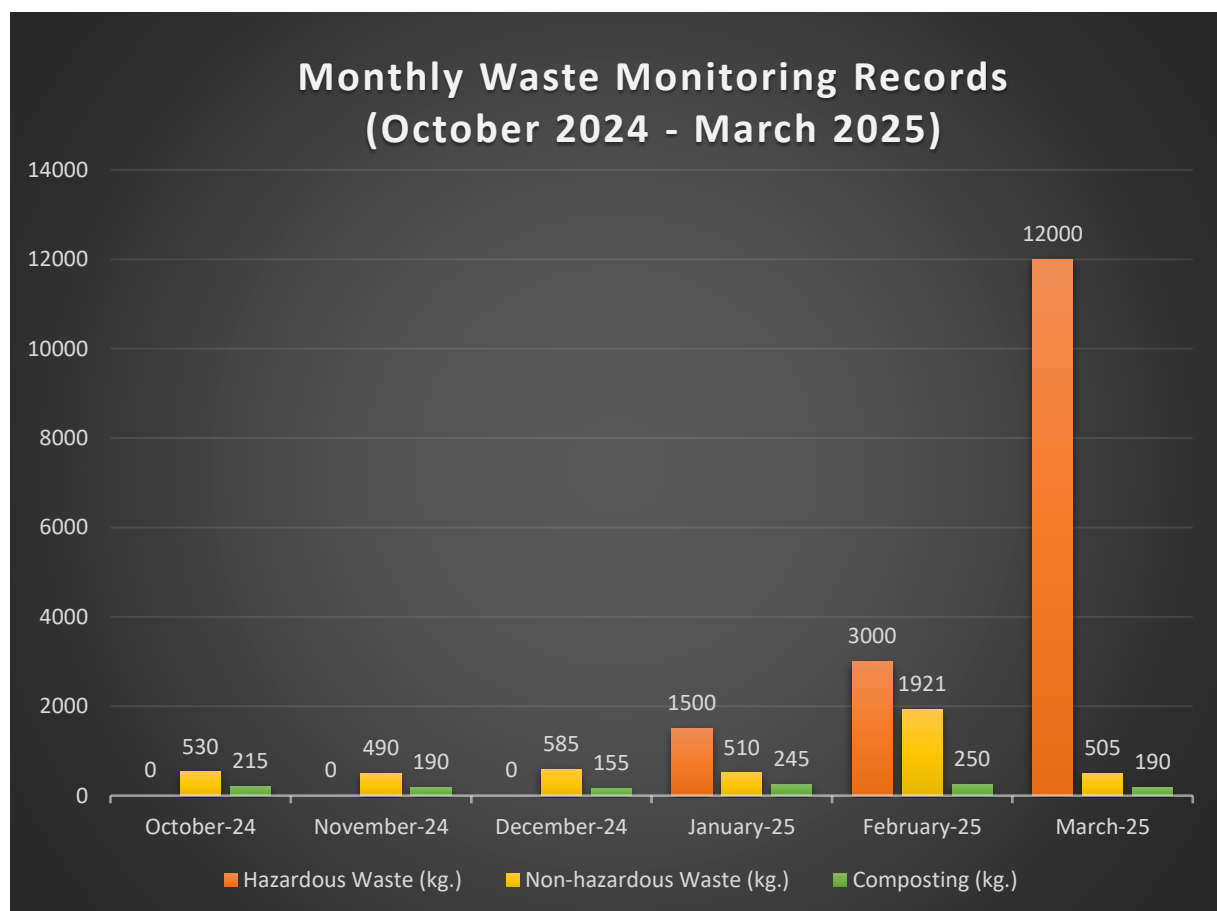
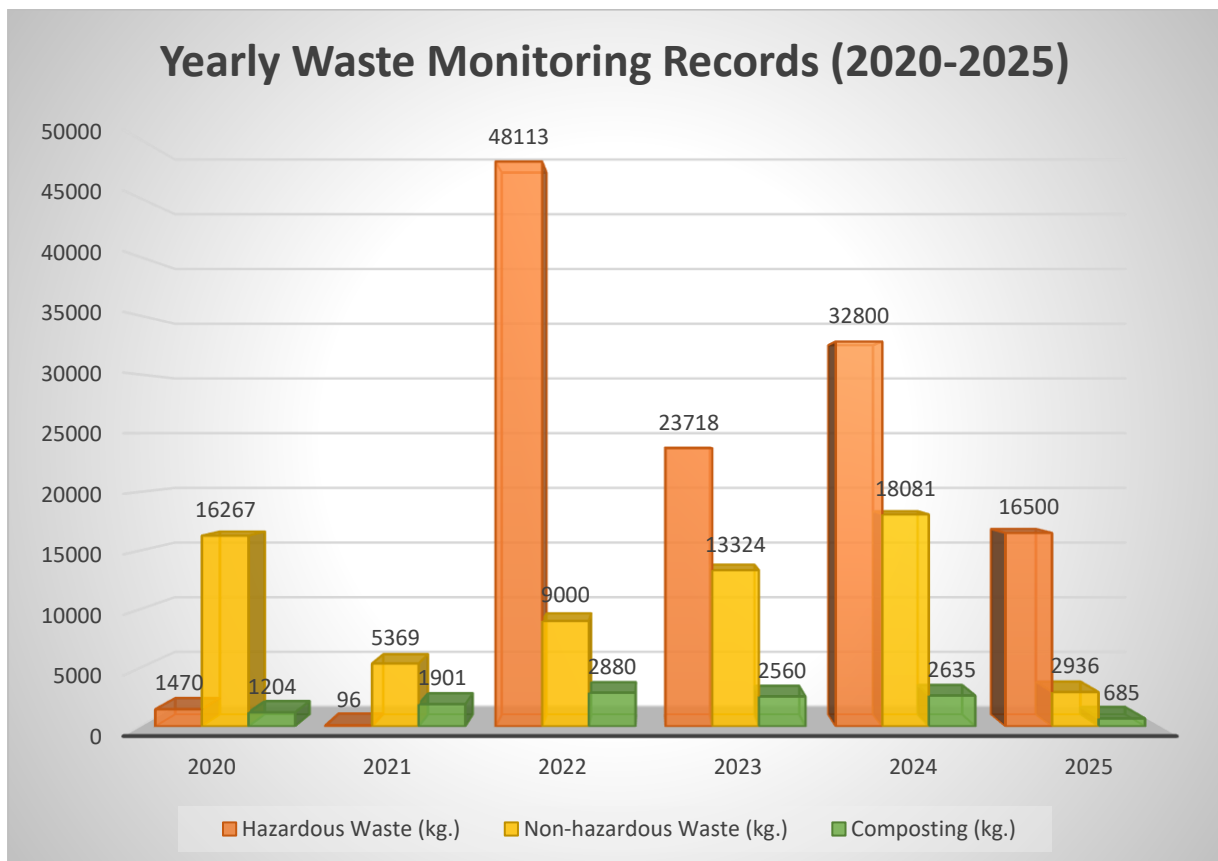


Figure 8: Monthly Waste Monitoring Records from Oct 2024 - Mar 2025

Table 6: Yearly Waste Monitoring Record

Year	Hazardous Waste (kg.)	Non-hazardous Waste (kg.)	Composting (kg.)
2020	1,470	16,267	1,204
2021	96	5,369	1,901
2022	48,113	9,000	2,880
2023	23,718	13,324	2,560
2024	32,800	18,081	2,635
2025	16,500	2,936	685


Figure 9: Yearly Waste Monitoring Record (2020 - 2025)

5.3 Emergency Response Plan

MPRL E&P will develop plans and procedures to identify potential environmental accidents, health and safety emergencies, and adverse environmental and social impacts that may arise. These plans will include, but not be limited to, the following measures:

- Notification procedures,
- An emergency response organization with personnel trained to fulfill their roles and responsibilities,
- Adequate and appropriate emergency response equipment readily available to respond to minor incidents,
- Capability to quickly request additional assistance.

MPRL E&P is responsible for managing and responding to emergencies arising from the Project activities in Mann Field. The emergency response plan (ERP) which also covers fire risk management, includes:

- Hierarchy of protection,
- Preparedness and planning for emergencies,
- Employee responsibilities,
- Emergency response procedures,
- Medical emergencies including medevac procedures,
- Natural Disasters (e.g. floods, cyclones, earthquakes) related emergencies,
- Fire and electrical related emergencies, and
- Any other emergency response plan is required by the Republic of the Union of Myanmar Authorities.

5.3.1 Emergency Response Plan Implementation and Progress

MPRL E&P has prepared emergency response plans for potential scenarios that may arise during field operations. These plans effectively communicate with staff at all levels of the operation and allocate responsibilities based on their respective roles.

Emergency response plans are reviewed and revised within predefined timeframes. In the event of an incident, the related emergency response plan is reviewed and revised as necessary.

Furthermore, regular training sessions are organized to ensure all personnel remain fully informed about emergency protocols, fostering a culture of safety and preparedness across the operation.

To improve the emergency readiness, to accessed the response of the responders and to familiarize the emergency procedure, a fire drill exercise was conducted at the Warehouse on 16 December 2024.



Figure 10: Emergency Response Drill Exercise

5.4 Spill Response Plan

MPRL E&P has developed spill response plans and procedures to identify and respond to potential spills and prevent or mitigate any adverse environmental and social impacts that may arise. The plans include but are not limited to:

- Spill control hierarchy,
- Control measures to prevent spills such as proper engineering design, handling, storage and transportation guidelines on hazardous materials,
- Spill response training,
- Spill response organization and procedures as well as spill response PPE and drill requirements.

5.4.1 Spill Response Plan Implementation and Progress

MPRL E&P has developed a comprehensive spill response plan, incorporating key risk control measures such as impermeable bases for facilities, segregated drainage systems, and oil sumps with interceptors. A zero-discharge wastewater recycling system reduces spill risks, while secondary containments are added to well sites, and the sludge compound is equipped to handle spill responses effectively.

Spill response drills are scheduled to enhance understanding of spill procedures and emergency protocols. These drills aim to clarify team responsibilities, improve practices, and raise awareness, ensuring a more efficient response to real spill incidents.

To evaluate response procedures in the event of a spill and ensure effective handling, the HSE Department conducted a chemical spill drill near the chemical warehouse on 27 February 2025. The drill was organized by Production Team Leaders in collaboration with the HSE team, who provided briefings to ensure all staff were well-informed and prepared for proper spill response.



Figure 11: Chemical Spill Response Drill Exercise

5.5 Health & Hygiene Management Plan

MPRL E&P has established a system to evaluate and manage risks associated with personal health and hygiene, and regularly assesses preventive measures that should be implemented.

MPRL E&P identified hazards as well as developed preventive and mitigation measures related to the health and hygiene of personnel working at Mann Field. The plan includes but is not limited to:

- Responsibility for implementation of the Health and Hygiene Management Plan,
- Identification, prevention, and responses to illnesses such as health-related illnesses and diseases such as those transmitted by insects and parasites,
- Pre-assignment immunization and health screening requirements,
- Preventive measures to avoid snake bites as well as sickness arising from general hygiene issues and travel to and from the Mann Field

5.5.1 Health & Hygiene Management Plan Implementation and Progress

MPRL E&P has established a comprehensive plan to evaluate and manage risks related to personal health and hygiene. The plan includes advice and resources provided by an on-site MPRL E&P doctor, as well as control measures to mitigate risks associated with diseases prevalent in the operational area.

Daily and weekly inspections and reporting are conducted to monitor these measures. Findings are reported and corrected accordingly. The plan is regularly assessed and updated to ensure its ongoing effectiveness.

Health and hygiene inspection for Office cleaner are conducted monthly in MYO office with dedicated checklists.

To raise awareness of individuals' current health status, encourage healthier lifestyles to boost productivity, and promote a positive work environment, the HSE Department organized the "Know Your Body" Healthy Campaign at MYO on October 2024.

The "Heat Stroke Awareness Campaign" was initiated in March 2025 at Mann Field to educate outdoor workers on preventive measures and first aid techniques for managing potential heat hazards in the workplace.





Figure 12: Weekly Camp Inspection

5.6 MEDEVAC Procedures

To address the challenges posed by the remote location of the Mann field and the time required for medical evacuations, MPRL E&P has developed specific procedures that must be followed in the event of a medical evacuation (MEDEVAC). To ensure the health and safety of all personnel, anyone rotating to work at the Mann field undergoes a thorough medical examination before being engaged, and these examinations are repeated at two-year intervals.

MPRL E&P will continue to provide information about the Mann field's conditions and remoteness to the medical examiner. The medical examiner will assess whether individuals are suitable for working at the Mann Field, taking into account the potential health and safety risks. Any information obtained during the medical examination will be kept confidential between the employee and the medical examiner, unless the employee provides express written permission to share the information with MPRL E&P. MPRL E&P is committed to providing medical evacuation (MEDEVAC) facilities to all personnel working on the MPRL E&P project in Mann Field, including sub-contracted personnel. This includes a field clinic located at the worker base camp, where emergency medical treatment can be provided by MPRL E&P's medical staff. In the event that additional medical support is required, MEDEVAC services are available to transport patients to appropriate medical facilities for further treatment.

5.6.1 MEDEVAC Procedure Implementation and Progress

To get all employees familiar with the medical emergency condition and to be able to handle per the set procedure, MEDEVAC drills are planned and conducted.

To practice and evaluate emergency team's response to a man-down situation, ensuring effective communication, timely medical intervention, and efficient evacuation, Man Down & Stretcher Drill Exercises were conducted on 06 October 2024.



Figure 13: Man-Down & Stretcher Drill Exercise



Figure 14: Heat Stress, Heat Stroke Campaign

5.7 Transportation Management Procedures

The Transportation Management Procedures aim to establish strict controls over traffic routes, speed limits, road safety requirements, vehicle loading and maintenance measures, as well as response procedures to traffic-related emergencies. These measures are implemented to ensure the safe and efficient transportation of personnel and equipment. The following management actions are covered under Transportation Management Procedures:

- Good practices on rest regime, timing routes and speed of driving,
- Safety rules related to MPRL E&P vehicles usage,

- Procedures for road risk assessment, and
- Procedures to rescue the driver and passenger(s) who fail to get to their check calls or destination by the ETA designated on the Journey Management Plan

5.7.1 Transportation Management Procedures Implementation and Progress

MPRL E&P has established a transport management procedure to control traffic routes, speed limits, road safety requirements, vehicle loading, and maintenance measures. The procedure also includes protocols for responding to traffic emergencies. To maintain high safety standards, MPRL E&P has outsourced transportation to its sister company, M&AS. M&AS follows the same safety rules and regulations as MPRL E&P regarding vehicle usage and practices good measures such as road risk assessments, rest regime, timing routes, speed of driving, and alcohol testing.



Figure 15: Safe Crew Change Activities

5.8 Contractor Environmental Management Plan(s)

The Project will sometimes require engaging contractors to carry out Project activities. The contractors are responsible for performing all work:

- In compliance with relevant national and international HSE legislation and regulations and with other requirements to which the project subscribes,
- In conformance with the Project's EMP, and
- By contractual technical and quality specifications

The Project will also provide a specification for environmental compliance and performance (through approved EIA and EMP and the associated plans) and, as a contractual requirement, the contractor will develop and provide to the Project its

specific management plans demonstrating how they intend to comply with the stipulated requirements.

Contractors must also provide documentation detailing their plans for:

- Implementing the measures required in the EIA and this EMP,
- Local content,
- Logistics,
- Community relations

The contractor management plans must conform to the requirements of the Project's overarching plans. Contractor plans will be reviewed and approved by MPRL E&P and incorporated into, and form part of, the Project's overall EMP.

Contractors will be required to self-monitor against their plan and the contractor's compliance with the plan will be routinely monitored by MPRL E&P directly or by third parties. Contractors will be required to submit regular reports of monitoring activities and the Project will review these regularly. An external assurance process will be conducted on an annual basis the results of which will be disclosed after the process.

As a contractual requirement, the subcontractors are required to provide sufficient resources to manage HSE aspects of the work to be performed. This includes providing resources to ensure compliance of next-tier subcontractors and a process for emergency stop-work orders in response to monitoring triggers.

5.8.1 Contractor Environmental Management Plan(s) Implementation

At Mann Field, there may be contractors engaged in activities such as providing MPRL E&P with manpower services, logistic services, catering services, machinery maintenance and repairing of machines and instruments for the field operations. M&AS is one of the companies involved in the MPRL E&P camp rules and fulfilled the environmental-related management plans, including waste management procedures. If there are any contractors or third-party monitoring teams working in the Mann Field, also required to respect and obey MPRL E&P HSE rules and policies.



Figure 16: Contractor Tool-box Talks

6. Environmental Monitoring Plan

The project will conduct monitoring activities to assess compliance with regulatory requirements and to evaluate the effectiveness of operational controls and other measures aimed at mitigating potential impacts.

As a minimum, the following monitoring of the physical environment will be undertaken:

Physical Environmental Monitoring:

- Ambient Air Quality,
- Noise,
- Groundwater Quality,
- Surface-water Quality,
- Soil Quality

In accordance with the EIA commitments, MPRL E&P has been regularly conducting environmental monitoring activities and submitting monitoring reports to the ECD bi-annually. This is the tenth monitoring report, and it follows the committed monitoring plan from the EIA Report, as stated in Table 8 of the Environmental and Social Monitoring Program (as shown in Table 8.3 of the EIA Report).

Ambient air quality and noise quality monitoring were conducted at Z3AQN and Z4AQN, water samples were collected at seven locations, and soil quality monitoring was carried out at Z3S1, Z3S2, Z4S1 and Z4S2. In addition to this, self-monitoring activities for water analysis were conducted and tested at ALARM lab and ISO Tech lab, and their results were covered in this report.

In addition, self-monitoring activities are involved depending on the management plans and operational control. Based on the activities, the following are stated in Table 7 as MPRL E&P's self-monitoring activities scheduled from Mann Field:

- Vent Gas Monitoring,
- Drinking-Water Monitoring,
- Discharged from Sewage Treatment System,
- Hydro-test Water Quality,
- Monitoring on Wastes

Table 7: MPRL E&P's Self-Monitoring Plan and Schedule

No.	Self-Monitoring Activities	Purpose of Monitoring	Locations	Parameters to be monitored	Frequency
1.	Vent Gas Monitoring	Regular monitor the amount of vent gas connection line, measuring with Echo meter.	All Vent Gas Wells	Methane, CH ₄	Monthly and Bi-Annual
2.	Hydrogen Sulfide (H ₂ S) Monitoring	To fulfill the obligation from the ECC and ensure the safety of operations & personnel living nearby.	All Operating Wells	H ₂ S(ppm), CO (ppm), O ₂ (%), and LEL%	Monthly and Bi-Annual
3	Drinking-Water Monitoring	Ensuring Safe Drinking Water for the health of personnel	MPRL E&P Base Camp	pH, Turbidity, Apparent Color, Hardness, Arsenic, Chloride, Lead, Total Dissolved Solids, Iron, Electrical Conductivity, Sulphate, Calcium, Magnesium, Nitrate-Nitrogen	Bi-Annual
4.	Discharged of Sewage Treatment System	To mitigate the pollution of soil and ground water, and environment	MPRL E&P Base Camp	pH, Temperature, TSS, BOD ₅ , COD, Total Phosphorous, Oil & Grease, Total Nitrogen, Turbidity, Electrical Conductivity, Total Coliforms	Bi-Annual
5.	Hydro-test Water Quality	to monitor the quality of water	Warehouse	BOD ₅ , COD, Chloride, Heavy Metals (Total), pH, Phenols, Sulfides, Total hydrocarbon content, Total suspended solids	Bi-Annual

No.	Self-Monitoring Activities	Purpose of Monitoring	Locations	Parameters to be monitored	Frequency
6.	Domestic water	to monitor the quality of water	Downhole Workshop & Mechanical Workshop	BOD ₅ , COD, Ammonia, Arsenic, Cadmium, Chlorine (Total residual), Chromium (hexavalent), Chromium (total), Copper, Cyanide (free), Cyanide (total), Fluoride, Heavy Metals (Total), Iron, Lead, Mercury, Nickel, Oil & Grease, pH, Phenols, selenium, Silver, Sulfides, Temperature increase, Total coliforms, Total phosphorous, Total suspended solids, Zinc	Bi-annual
7.	Ground water (Tube-well)	To monitor the quality of groundwater near wells of chemical treatment for EOR	Ko Win Maung & Ma Nyein (near #132)	pH, DO, Turbidity, Apparent Color, Alkalinity, Hardness, BOD ₅ , COD, total Nitrogen, total Phosphorous, Oil & Grease, TSS, E. coli, Total coliforms, Arsenic, Barium, Boron, Total Chromium, Flouride, Selenium, Uranium, Electrical Conductivity	Bi-annual
8.	Produced Water Monitoring	Zero discharge by injecting 100% to shut-in wells	All Operating Wells	produced volume and disposal volume	Daily
9.	Monitoring on Wastes	Implementing as per Waste Management Procedure	Waste Management Compound and Sludge Management Compound	General, Recyclable, Organic, Hazardous	Weekly

Table 8: Environmental and Social Monitoring Programme (Construction and Operation Phase)

Project Stage	Potential Impact	Parameters to be Monitored	Location	Measurements	Frequency	Responsibility
At least two weeks before the construction activities for baseline data collection.	Air Quality	NOx, SO ₂ , PM _{2.5} , PM ₁₀ , CO.	Z1AQN, Z2AQN, Z3AQN and Z4AQN, locations indicated on Table 5.1 and Figure 5.10	Sampling and analysis of ambient air pollutants to be conducted according to the guidelines of Myanmar NEQEG. Haz-Scanner EPAS Wireless Environmental Perimeter Air Station to be used for measurement.	Monthly monitoring for the first three months during both the construction and operation phase. After the three-month period, a review should be conducted to determine whether the collected data indicates an impact has occurred beyond what has been predicted within the EIA. Should no higher impacts be observed, monitoring can be reduced to a six-monthly or yearly programme. Should higher impacts be observed, monitoring should continue and appropriate actions be taken to alleviate the impacts with an aim to prevent any further impacts from occurring.	MPRL E&P HSE Coordinator
Construction and Operation		Check compliance with Myanmar National Environmental Quality (Emission) Guidelines (2015).				

Project Stage	Potential Impact	Parameters to be Monitored	Location	Measurements	Frequency	Responsibility
At least two weeks before the construction activities for baseline data collection.	Noise	Check compliance with Myanmar National Environmental Quality (Emission) Guidelines (2015)	Z1AQN, Z2AQN, Z3AQN and Z4AQN, locations indicated on Table 5.1 and Figure 5.10	24-hour noise monitoring using the portable sound meter (Lutron, SL-0423SD, unit: dB). Noise level (LAeq) measured and recorded at a ten-minute interval and averaged at an hourly and daily (i.e. 24-hour) interval.	As above	MPRL E&P HSE Coordinator
Construction and Operation						
At least two weeks before the construction activities for baseline data collection.	Groundwater Quality	In-situ measurements for transparency, temperature, pH, DO, turbidity, colour, alkalinity and hardness. Laboratory analysis of BOD ₅ , COD, Total Nitrogen, Total Phosphorus, Oil and grease, TSS, E. coli, Arsenic, Barium, Boron, Total Chromium, Fluoride, Selenium, Uranium	Z1GW, Z2GW, Z3GW and Z4GW, locations indicated on Table 5.11 and Figure 5.14	In-situ measurements for transparency, temperature, pH, DO, turbidity, colour, alkalinity and hardness. Laboratory analysis of BOD ₅ , COD, Total Nitrogen, Total Phosphorus, Oil and grease, TSS, E. coli, Arsenic, Barium, Boron, Total Chromium, Fluoride, Selenium, Uranium	As above	MPRL E&P HSE Coordinator
Construction and Operation						

Project Stage	Potential Impact	Parameters to be Monitored	Location	Measurements	Frequency	Responsibility
At least two weeks before the construction activities for baseline data collection.	Surface Water Quality	In-situ measurements for transparency, pH temperature, pH DO, turbidity, colour, alkalinity and hardness.	Z1SW, Z2SW, Z3SW and Z4SW, locations indicated on Table 5.7 and Figure 5.12	In-situ measurements for transparency, pH temperature, pH DO, turbidity, colour, alkalinity and hardness.	As above	MPRL E&P HSE Coordinator
Construction and Operation		Laboratory analysis of BOD ₅ , COD, Total Nitrogen, Total Phosphorus, Oil and grease, TSS, E. coli, Arsenic, Barium, Boron, Total Chromium, Fluoride, Selenium, Uranium		Laboratory analysis of BOD ₅ , COD, Total Nitrogen, Total Phosphorus, Oil and grease, TSS, E. coli, Arsenic, Barium, Boron, Total Chromium, Fluoride, Selenium, Uranium		
At least two weeks before the construction activities for baseline data collection.	Soil Quality	pH; Arsenic (As); Lead (Pb); Cadmium (Cd); Copper (Cu); Zinc (Zn); Manganese (Mn); and Iron (Fe). Comparison with the Dutch Standard 2000.	Z1S, Z2S, Z3S and Z4S, locations indicated on Table 5.13 and Figure 5.16	Follow sampling procedure, sample preservation and sample analysis recommended in Myanmar NEQEG. Laboratory analysis of pH; Arsenic (As); Lead (Pb); Cadmium (Cd); Copper (Cu); Zinc (Zn); Manganese (Mn); and Iron (Fe).	As above	MPRL E&P HSE Coordinator
Construction and Operation						

Project Stage	Potential Impact	Parameters to be Monitored	Location	Measurements	Frequency	Responsibility
Construction and Operation	Discharge of treated wastewater and runoff	<p>Check compliance with Myanmar National Environmental Quality (Emissions) Guidelines for site runoff and wastewater discharges (for BOD₅, COD, TSS, oil and grease, pH, total coliform bacteria, total nitrogen, total phosphorus) during construction.</p> <p>Check compliance with Myanmar National Environmental Quality (Emissions) Guidelines for Onshore Oil and Gas Development during operation.</p>	Treated wastewater discharge points at discharge points such as worker camps, GOCS, shut in wells.	<p>In-situ measurements for pH, temperature, dissolved oxygen (DO), electrical conductivity (EC), and turbidity.</p> <p>Laboratory analysis of BOD₅, COD, Total Suspended Solids, Total Nitrogen, Total Phosphorous, Oil and Grease</p>	As above	MPRL E&P HSE Coordinator

Project Stage	Potential Impact	Parameters to be Monitored	Location	Measurements	Frequency	Responsibility
Operation	Vented gas	Check compliance with Myanmar National Environmental Quality (Emissions) Guidelines for Onshore Oil and Gas Development during operation (H ₂ S)	Three vented gas location (randomly selected)	Real-time measurement	Monthly monitoring for the first three months during operation phase. After the three months' period, a review should be conducted to determine whether the collected data indicates an impact has occurred beyond what has been predicted within the EIA. Should no higher impacts be observed, monitoring can be reduced to a six-monthly or yearly programme. Should higher impacts be observed, monitoring should continue and appropriate actions be taken to alleviate the impacts with an aim to prevent any further impacts from occurring	MPRL E&P HSE Coordinator

7. Complying with ECC Commitments and Follow-up Actions

MPRL E&P is committed to implementing the activities and mitigation measures outlined in the approved Environmental Impact Assessment (EIA) Report and Environmental Compliance Certificate (ECC), specifically in Articles 5 (Environmental Management Plan) and 6 (Environmental Monitoring Plan). We will continue to deliver comprehensive Environmental Monitoring Reports at regular intervals, detailing our self-monitoring activities and implementations, even during challenging periods.

MPRL E&P upholds a solid alliance with both district and regional ECD offices, proactively incorporating and executing their proposed recommendations. Furthermore, we maintain continual communication with pertinent departments and authorities to guarantee timely responses as situations arise.

We had the opportunity to conduct a comprehensive assessment of environmental factors, including air quality, noise levels, and soil condition, in collaboration with the Environmental Conservation Department (Magway). This assessment covered multiple locations, namely Z3AQN, Z4AQN, Z3S1, Z3S2, Z4S1, and Z4S2.

For air and noise quality monitoring, we initially selected Z3AQN and Z4AQN due to their favorable conditions, including security for monitoring devices, a reliable power supply, and proximity to our field operations. As conditions improve, we intend to extend our monitoring activities to the remaining two areas.

To date, we have submitted a total of ten Bi-Annual Environmental Monitoring Reports to the Environmental Conservation Department. In addition to our collaboration with the ECD, we have actively engaged in self-monitoring activities, including water quality assessments at seven different locations. We remain dedicated to meeting our obligations and adhering to the planned monitoring schedule within the specified timeframe.

Looking ahead, we plan to conduct monitoring activities for air, noise, surface water, groundwater, and soil quality. The scheduling and implementation of these initiatives will be contingent on current socio-political conditions and security considerations.



Table 9: Implementation and Follow-up Actions on ECD's comments

ရက်စွဲ	၁၂-၆-၂၀၂၀
စာအမှတ်	အရည်အသွေး-၂/ဆစရ (၂၆/၂၀၂၀)
ဌာန	ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ညွှန်ကြားရေးမှူးချုပ်ရုံး၊ နေပြည်တော်
အကြောင်းအရာ	MPRL E&P Pte. Ltd မှ မကွေးတိုင်းဒေသကြီး၊ မန်းရေနံမြေတွင် အကောင်အထည်ဖော် ဆောင်ရွက်လျက်ရှိသည့် ကုန်းတွင်း ရေနံဖွံ့ဖြိုးတိုးတက်ရေးအစီအစဉ် (Redevelopment and Enhanced Oil Recovery - EOR Programme) ၏ ဒုတိယအကြိမ် ပတ်ဝန်းကျင်ဆိုင်ရာ စောင့်ကြည့်စစ်ဆေးမှုအစီရင်ခံစာ တင်ပြလာခြင်းနှင့်ပတ်သက်၍ အကြောင်းကြားခြင်း

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှု အခြေအနေ
(က)	လေထုအရည်အသွေးဆိုင်ရာ Parameter ဖြစ်သည့် SO ₂ ၏ ရလဒ်အား အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ် လွှတ်မှု) လမ်းညွှန်ချက်များ (NEQEGs) ၏ သတ်မှတ်ချက်အတွင်းရှိရေး စောင့်ကြပ်ကြည့်ရှု သွားရန်၊	<ul style="list-style-type: none"> - သတ်မှတ်ချက်အတွင်းရှိရေး စောင့်ကြပ် ကြည့်ရှုလျက် ရှိပါသည်။ - COVID-19 pandemic & Security Concern ကြောင့် စတုတ္ထနှင့် ပဉ္စမအကြိမ် အစီရင်ခံစာတွင် Third party monitoring survey မပြုလုပ်နိုင်ခဲ့ပါ။ ဆဌမ အကြိမ် အစီရင်ခံစာ မှစ၍ ထည့်သွင်း တိုင်းတာ စောင့်ကြပ်ကြည့်ရှုလျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှု အခြေအနေ
(ခ)	ပတ်ဝန်းကျင်စီမံခန့်ခွဲမှု အစီအစဉ်တွင် တိုင်းတာမည်ဟု ဖော်ပြပါရှိသော ရေထု အရည်အသွေး (မြေပေါ်ရေ၊ မြေအောက်ရေ) ဆိုင်ရာ Parameter များကို ပြည့်စုံစွာ တိုင်းတာရန်၊	<ul style="list-style-type: none"> - COVID-19 pandemic & Security Concern ကြောင့် စတုတ္ထနှင့် ပဉ္စမအကြိမ် အစီရင်ခံစာတွင် Third party monitoring survey မပြုလုပ် နိုင်ခဲ့ပါ။ တိုင်းတာသည့် အဖွဲ့အစည်း၊ ရရှိနိုင်သည့် စက်ပစ္စည်းအမျိုးအစား နှင့် ဓါတ်ခွဲခန်းအခြေအနေ တို့ပေါ်မူတည်၍ ပြည့်စုံစွာ တိုင်းတာနိုင်ရေး ကြိုးစား ဆောင်ရွက်လျက်ရှိပါသည်။ - နိုင်ငံအတွင်းရှိ ဓါတ်ခွဲခန်း များ၌ စစ်ဆေးနိုင်သည့် Parameter များအား စစ်ဆေး တိုင်းတာလျက် ရှိပါသည်။
(ဂ)	မြေပေါ်ရေအရည်အသွေးကို စောင့်ကြည့် စစ်ဆေးမှု အစီရင်ခံစာတွင် NEQEGs နှင့် နှိုင်းယှဉ်ထားပါသဖြင့် အိမ်နီးချင်းနိုင်ငံများ၏ မြေပေါ်ရေအရည်အသွေး သတ်မှတ်စံချိန် နှိုင်းယှဉ်ဖော်ပြရန်၊	<ul style="list-style-type: none"> - ဒုတိယအကြိမ် ပတ်ဝန်းကျင် စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ မှစတင်၍ နှိုင်းယှဉ် ဖော်ပြခဲ့ ပါသည်။ - COVID-19 pandemic & Security Concern ကြောင့် စတုတ္ထနှင့် ပဉ္စမအကြိမ် အစီရင်ခံစာတွင် Third party monitoring survey မပြုလုပ်နိုင်ခဲ့ပါ။ သတ္တမအကြိမ် မှစ၍ မြေပေါ်ရေ အရည်အသွေး စောင့်ကြည့်တိုင်းတာ စစ်ဆေးမှု ကို အခြေအနေ ပေးသည့်နေရာ (၄) ခု၌ မကွေးတိုင်းဒေသကြီး ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန နှင့် ပြန်လည် ပြုလုပ်နိုင်ခဲ့ပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှု အခြေအနေ
(ဃ)	ဆူညံသံ သက်ရောက်မှုကို အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ် မှု) လမ်းညွှန်ချက်များ၏ သတ်မှတ်ချက် အတွင်းရှိစေရေး ဆောင်ရွက်သွားရန်၊	<ul style="list-style-type: none"> - အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည် အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက် များ၏ သတ်မှတ်ချက် အတွင်းရှိစေရေး ဆောင်ရွက် ထားရှိပါသည်။ - COVID-19 pandemic & Security Concern ကြောင့် စတုတ္ထနှင့် ပဉ္စမအကြိမ် အစီရင်ခံစာတွင် Third party monitoring survey မပြုလုပ်နိုင်ခဲ့ပါ။ သတ္တမအကြိမ် စောင့်ကြည့်စစ်ဆေးမှု အစီရင်ခံစာ မှစ၍ မကွေးတိုင်းဒေသကြီး ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဦးစီးဌာနနှင့်အတူ နေရာ (၂) ခု၌ စောင့်ကြည့်တိုင်းတာ စစ်ဆေးမှု ပြုလုပ်နိုင် ခဲ့ပါသည်။
(င)	အတည်ပြုပြီး ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း အစီရင်ခံစာတွင် ဖော်ပြပါရှိသည့် ထိခိုက်မှု လျှော့ချမည့်နည်းလမ်းများအား လိုက်နာ ဆောင်ရွက်သွားရန်နှင့် စောင့်ကြည့် စစ်ဆေးမှု အစီရင်ခံစာတွင် ထည့်သွင်း ဖော်ပြ သွားရန်။	<ul style="list-style-type: none"> - လိုက်နာဆောင်ရွက်လျက်ရှိပါသည်။ စောင့်ကြည့် စစ်ဆေးမှု အစီရင်ခံစာတွင် ထည့်သွင်း ဖော်ပြ ထားပါသည်။



ရက်စွဲ	၇-၃-၂၀၂၃
စာအမှတ်	၅/ ထိန်းချုပ်/ စကရ (၀၁) (၄၂၂/၂၀၂၃)
ဌာန	ညွှန်ကြားရေးမှူးရုံး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ မကွေးတိုင်းဒေသကြီး၊ မကွေးမြို့၊
အကြောင်းအရာ	မင်းဘူးခရိုင်၊ မင်းဘူးမြို့နယ်၊ မန်းရေနံမြေအတွင်းရှိ Environmental Impact Assessment (EIA) အတည်ပြုပြီး MPRL E&P Pte. Ltd ၏ ရေနံပြန်လည်ဖွံ့ဖြိုးတိုးတက်ရေးအစီအစဉ် (Redevelopment and Enhanced Oil Recovery - EOR Programme) အတွက် (၂၀၂၀ ခုနှစ် ဧပြီလမှ စက်တင်ဘာလအထိ) ၊ (၂၀၂၁ အောက်တိုဘာလမှ ၂၀၂၂ မတ်လအထိ) နှင့် (၂၀၂၂ ဧပြီလမှ စက်တင်ဘာလအထိ) စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာ များနှင့် ပတ်သက်၍ အကြောင်းကြားခြင်း

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(က)	ကုမ္ပဏီမှ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ လိုက်နာ ဆောင်ရွက်မှု သက်သေခံလက်မှတ်၏ အပိုဒ် (B1) အရ အတည်ပြုအစီရင်ခံစာ ယေး (၈.၃) တွင် ဖော်ပြထားသော ကတိကဝတ်များအား အကောင်အထည်ဖော် ဆောင်ရွက်သွားရန်၊	- သတ်မှတ်ချက်အတွင်းရှိရေး စောင့်ကြပ် ကြည့်ရှုလျက် ရှိပါသည်။
(ခ)	ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေးများ တိုင်းတာစစ်ဆေးရာတွင် တိုင်းတာစစ်ဆေးမှု ရလဒ်များအပေါ်မူတည်၍ အကျိုးအကြောင်း ခိုင်လုံစွာ ဖော်ပြရန်၊	- (၆) လပတ် ပတ်ဝန်းကျင် စောင့်ကြပ် ကြည့်ရှုမှု အစီရင်ခံစာများတွင် ထည့်သွင်း တင်ပြလျက်ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(ဂ)	ကုမ္ပဏီမှ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ လိုက်နာ ဆောင်ရွက်မှု သက်သေခံလက်မှတ်၏ အပိုဒ် (C3) အရ စီမံကိန်း၏ လုပ်ဆောင်မှုများ၊ Sites (သို့) ဆိုးရွားသော ထိခိုက်မှုများ ပြောင်းလဲမှုရှိပါက ပြန်လည်ပြင်ဆင်ထားသည့် EMP အား စိစစ်နိုင်ရန် နှင့် အတည်ပြုနိုင်ရန် အတွက် ECD သို့တင်ပြသွားရန်၊	- စီမံကိန်း၏ လုပ်ဆောင်မှုများ/ ဆိုးရွားသော ထိခိုက်မှုများ ပြောင်းလဲမှု ရှိပါက တင်ပြသွားပါမည်။
(ဃ)	ထပ်မံတင်ပြမည့် စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာတွင် အတည်ပြုပြီး EIA အစီရင်ခံစာပါ အပိုဒ် (၈.၃) ပတ်ဝန်းကျင် စောင့်ကြပ်ကြည့်ရှုခြင်း အစီအစဉ်တွင် ဖော်ပြထားသည့်အတိုင်း လေထုအရည်အသွေး၊ ဆူညံသံ၊ မြေအောက်ရေအရည်အသွေး၊ မြေပေါ်ရေအရည်အသွေး နှင့် မြေဆီလွှာအရည်အသွေးတို့အား တိုင်းတာစစ်ဆေးသွားရန်၊ တိုင်းတာ စစ်ဆေးမှုရလဒ်များအား Baseline data များနှင့် နှိုင်းယှဉ်ဖော်ပြရန်နှင့် တိုင်းတာစစ်ဆေးမှု ရလဒ်များအား သတ်မှတ်စံချိန်စံညွှန်းအတွင်း ရှိစေရေး စီမံဆောင်ရွက်သွားရန်၊	- ပတ်ဝန်းကျင် စောင့်ကြပ်ကြည့်ရှုခြင်း အစီအစဉ်တွင် ဖော်ပြထားသည့် အတိုင်း တိုင်းတာစစ်ဆေးလျက် ရှိပါသည်။ - တိုင်းတာစစ်ဆေးသည့် အဖွဲ့အစည်း နှင့် တိုင်းတာသည့် စက်ပစ္စည်း၊ ဓါတ်ခွဲခန်းမှ တိုင်းတာနိုင်သည့် အခြေအနေ စသည်တို့ပေါ်မူတည်၍ ကျန်ရှိ parameter များကို တိုင်းတာ စစ်ဆေးနိုင်ရေး ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(င)	လေထု၊ ရေထု၊ မြေထု၊ ဆူညံသံ အရည်အသွေးများအား အတည်ပြုပြီး EIA အစီရင်ခံစာတွင် ပါရှိသည့် သတ်မှတ် Parameter များ၊ သတ်မှတ်နေရာများအတိုင်း တိုင်းတာသွားရန် နှင့် လုပ်ကွက်အတွင်း တိုင်းတာသည့်နေရာ၊ location point များနှင့် နမူနာ ကောက်ယူသည့်နေရာများအား Google Map ဖြင့်လည်းကောင်း၊ Layout plan ဖြင့်လည်းကောင်း ထည့်သွင်းဖော်ပြရန်နှင့် တိုင်းတာသည့် ရလဒ်များကို အချိန် ပါသည့် မှတ်တမ်းဓါတ်ပုံများနှင့်တကွ ဖော်ပြရန်၊	<ul style="list-style-type: none"> - ကိုဗစ်-၁၉ ရောဂါဖြစ်ပွားမှု၊ လုံခြုံရေးအခြေအနေ၊ ခရီးသွားလာ နိုင်မှုအခြေအနေ၊ တိုင်းတာ စစ်ဆေးသည့် အဖွဲ့အစည်း နှင့် တိုင်းတာသည့် စက်ပစ္စည်း၊ ဓါတ်ခွဲခန်းမှ တိုင်းတာနိုင်သည့် အခြေအနေ စသည်တို့ပေါ်မူတည်၍ ပတ်ဝန်းကျင် စောင့်ကြပ်ကြည့်ရှုခြင်း အစီအစဉ်ကို အကောင်အထည်ဖော် ဆောင်ရွက် လျက်ရှိပါသည်။ - လက်ရှိ ဒေသတွင်းအခြေအနေအရ တိုင်းတာနိုင်သည့် နေရာ အကန့် အသတ်ရှိသောကြောင့် နေရာအချို့တွင် သွားရောက် တိုင်းတာ စစ်ဆေးနိုင်မှု မရှိသေးပါ။
(စ)	လေထုအရည်အသွေးတိုင်းတာသည့် Data Result များအား Data Analysis ပြုလုပ်ရန်အတွက် အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များပါ သတ်မှတ်ထားသည့် အချိန်ကာလအတိုင်း တိုင်းတာထားသည့် ရလဒ်များအား Excel Form ဖြင့် ပြည့်စုံစွာ ထည့်သွင်းဖော်ပြရန်၊	- (၆) လပတ် ပတ်ဝန်းကျင်စောင့်ကြပ် ကြည့်ရှုမှု အစီရင်ခံစာများတွင် သတ်မှတ်ထားသည့် အချိန်ကာလ အတိုင်း ထည့်သွင်း တင်ပြလျက်ရှိပါသည်။
(ဆ)	ဂေဟစနစ်ထိန်းသိမ်းရေးအနေဖြင့် ပတ်ဝန်းကျင်ထိန်းလန်း စီမံပြုရေး အတွက် ထိန်းသိမ်းကာကွယ်ထားသော သဘာဝ ပေါက်ပင်များအား ကောင်းမွန်စွာ ရှင်သန်နိုင်ရေး၊ ပျက်စီးဆုံးရှုံးမှုများ မဖြစ်ပေါ်စေရေး ဂရုပြုဆောင်ရွက်သွားရန်၊	- ကောင်းမွန်စွာ ရှင်သန်နိုင်ရေး နှင့် ပျက်စီးဆုံးရှုံးမှုများ မဖြစ်ပေါ်စေရေး ဂရုပြု လိုက်နာ ဆောင်ရွက်လျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(ဇ)	လုပ်ငန်းတွင် မီးဘေးအန္တရာယ်ကာကွယ်ရေးအတွက် မီးသတ်ဦးစီးဌာန၏ လမ်းညွှန်ချက်များအတိုင်း အထူးအလေးထားလိုက်နာဆောင်ရွက်ရန်၊	- မီးသတ်ဦးစီးဌာန၏ လမ်းညွှန်ချက်များအတိုင်း အထူးအလေးထား လိုက်နာ ဆောင်ရွက်လျက် ရှိပါသည်။
(ဈ)	အတည်ပြုပြီး EIA အစီရင်ခံစာအား အများပြည်သူများ သိရှိနိုင်ရေး ကုမ္ပဏီ Website ကဲ့သို့သော အများပြည်သူများ သိရှိနိုင်မည့် နည်းလမ်းများအသုံးပြု၍ လွှင့်တင်ထားရှိရန်၊	- လိုက်နာ ဆောင်ရွက်လျက် ရှိပါသည်။
(ည)	အတည်ပြုပြီး အစီရင်ခံစာပါ ကတိကဝတ်များနှင့် ECC ပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များအား အလေးထား လိုက်နာဆောင်ရွက်သွားရန်၊	- အလေးထား လိုက်နာ ဆောင်ရွက် လျက် ရှိပါသည်။
(ဋ)	ကုမ္ပဏီအနေဖြင့် ဒေသခံပြည်သူတို့၏ ဆန္ဒနှင့် သဘောထားများကို အလေးထား လိုက်နာဆောင်ရွက်ရန်နှင့် စောင့်ကြပ်ကြည့်ရှုမှု လုပ်ငန်းစဉ်များကို ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဥပဒေ၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး နည်းဥပဒေများ၊ ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်း ဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များနှင့်အညီ ဆက်လက် အကောင်အထည်ဖော် ဆောင်ရွက်သွားရန်၊	- လိုက်နာ အကောင်အထည်ဖော် ဆောင်ရွက်လျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(၄)	စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာအား ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် (၁၀၉) နှင့်အညီ ရေးဆွဲပြုစု၍ အပိုဒ် (၁၀၈) နှင့်အညီ (၆) လလျှင် (၁) ကြိမ် ပုံမှန်အစီရင်ခံစာတင်ပြရန်။	- (၆) လ လျှင် တစ်ကြိမ် ပုံမှန် အစီရင်ခံစာတင်ပြလျက်ရှိပါသည်။

ရက်စွဲ	၇-၉-၂၀၂၃
စာအမှတ်	၅/ ထိန်းချုပ်/ စကရ (၀၁) (၁၈၆၀/၂၀၂၃)
ဌာန	ညွှန်ကြားရေးမှူးရုံး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ မကွေးတိုင်းဒေသကြီး၊ မကွေးမြို့
အကြောင်းအရာ	မကွေးတိုင်းဒေသကြီး၊ မင်းဘူးမြို့နယ်၊ မန်းရေနံမြေအတွင်းရှိ Environmental Impact Assessment (EIA) အတည်ပြုပြီး MPRL E&P Pte. Ltd ၏ ရေနံပြန်လည်ဖွံ့ဖြိုးတိုးတက်ရေးအစီအစဉ် (Re-development and Enhanced Oil Recovery - EOR Programme) အတွက် (၂၀၂၂ ခုနှစ်၊ အောက်တိုဘာလ မှ ၂၀၂၃ ခုနှစ်၊ မတ်လအထိ) တင်ပြလာသော (၆)လပတ် စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာနှင့်ပတ်သက်၍ အကြောင်းကြားခြင်း

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(က)	လေထုအရည်အသွေး တိုင်းတာထားသည့်ရလဒ်များအား အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (National Environmental Quality Emission Guideline - NEQEG) ပါ သတ်မှတ် Unit ဖြင့် ဖော်ပြရန်၊	- လေထုအရည်အသွေး တိုင်းတာထားသည့် ရလဒ်များအား NEQEG ပါ သတ်မှတ် Unit ဖြင့် ဖော်ပြလျက် ရှိပါသည်။
(ခ)	လုပ်ကွက်အတွင်းရှိ မြေအောက်ရေနှင့် တိုင်းတာ ဖော်ပြထားသော မြေပေါ်ရေအား ဝန်ထမ်းများ သောက်သုံးရေအဖြစ် အသုံးပြုပါက World Health Organization (WHO) ၏ Drinking Water Quality Guideline (2011) (သို့မဟုတ်) ကျန်းမာရေးဝန်ကြီးဌာနမှ ထုတ်ပြန်ထားသော National Drinking Water Quality Standard ဖြင့် နှိုင်းယှဉ်ဖော်ပြရန်၊	- လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(ဂ)	စွန့်ပစ်ရေ အရည်အသွေးတိုင်းတာမှုတွင် Total Coliform bacterial Biochemical Oxygen Demand (BOD)၊ Total Suspended Solid တန်ဖိုးတို့သည် သတ်မှတ်စံချိန် စံညွှန်းထက် ကျော်လွန်နေသည်ကို တွေ့ရှိရသဖြင့် ကျော်လွန်ရသည့် အကြောင်းရင်းအား ဖော်ပြရန်နှင့် သတ်မှတ်စံချိန်စံညွှန်းအတွင်းရှိစေရေး စီမံဆောင်ရွက် သွားရန်၊	- သတ်မှတ်စံချိန်စံညွှန်းထက် ကျော်လွန်ရသည့် အကြောင်းရင်းအား ပတ်ဝန်းကျင် စောင့်ကြပ် ကြည့်ရှုမှု အစီရင်ခံစာ ၏ သက်ဆိုင်ရာ ခေါင်းစဉ်အခန်းများတွင် ထည့်သွင်း ရှင်းလင်း တင်ပြ ထားရှိပါသည်။ သတ်မှတ်စံချိန် စံညွှန်းအတွင်း ရှိစေရေး စီမံဆောင်ရွက်လျက် ရှိပါသည်။
(ဃ)	မြေထုအရည်အသွေးတိုင်းတာမှုတွင် အတည်ပြုပြီး EIA အစီရင်ခံစာပါ သတ်မှတ် Parameter များအား ပြည့်စုံစွာ တိုင်းတာဖော်ပြရန်၊ လိုက်နာဆောင်ရွက်မည့် သတ်မှတ် Guideline ဖြင့် နှိုင်းယှဉ်ဖော်ပြရန်နှင့် Guideline အမည်အား ဖော်ပြရန်၊	- လိုက်နာ ဆောင်ရွက်လျက် ရှိပါသည်။
(င)	ပတ်ဝန်းကျင်အရည်အသွေးများ တိုင်းတာစစ်ဆေးရာတွင် တိုင်းတာစစ်ဆေးမှု ရလဒ်များအပေါ် မူတည်၍ အကျိုး အကြောင်းခိုင်လုံစွာ ဖော်ပြရန်နှင့် ပတ်ဝန်းကျင် အရည်အသွေး တိုင်းတာစစ်ဆေးမှု ရလဒ်များအား ဖော်ပြရာတွင် Unit များ မှန်ကန်စေရေး အလေးထား ဆောင်ရွက်ရန်၊	- အလေးထားလိုက်နာ ဆောင်ရွက်လျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(စ)	ဂေဟစနစ်ထိန်းသိမ်းရေးအနေဖြင့် ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးအတွက် ထိန်းသိမ်းကာကွယ်ထားသော သဘာဝ ပေါက်ပင်များအား ကောင်းမွန်စွာ ရှင်သန်နိုင်ရေး၊ ပျက်စီး ဆုံးရှုံးမှုများ မဖြစ်ပေါ်စေရေး ဂရုပြုဆောင်ရွက် သွားရန်၊	- ဂေဟစနစ် ထိန်းသိမ်းရေး အနေဖြင့် သဘာဝ ပေါက်ပင်များအပေါ် ကောင်းမွန်စွာ ရှင်သန်နိုင်ရေး နှင့် ပျက်စီးဆုံးရှုံးမှု မဖြစ်ပေါ်စေရေး ဂရုပြု ဆောင်ရွက်လျက် ရှိပါသည်။
(ဆ)	လုပ်ငန်းတွင် မီးဘေးအန္တရာယ်ကာကွယ်ရေးအတွက် မီးသတ် ဦးစီးဌာန၏ လမ်းညွှန်ချက်များအတိုင်း အထူးအလေးထား လိုက်နာဆောင်ရွက်ရန်၊	- မီးသတ် ဦးစီးဌာန၏ လမ်းညွှန်ချက်များအတိုင်း အထူးအလေးထား လိုက်နာ ဆောင်ရွက်လျက် ရှိပါသည်။
(ဇ)	တင်ပြလာသော စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာများနှင့် ပတ်သက်၍ လေထု၊ ရေထု၊ မြေထုအရည်အသွေးအပါအဝင် ပတ်ဝန်းကျင်အရည်အသွေး စောင့်ကြည့်တိုင်းတာမှု ရလဒ်များအရ သတ်မှတ်စံချိန်စံညွှန်းများထက် ကျော်လွန်မှု ရှိနေပါက အတည်ပြုပြီး EIA ပါ Mitigation Measure များ၊ ဆောင်ရွက်မည့် လုပ်ငန်းအစီအစဉ်များနှင့် စောင့်ကြပ် ကြည့်ရှုမှု အစီရင်ခံစာတွင် ဖော်ပြပါရှိသော တိုင်းတာစောင့်ကြည့်မည့် လုပ်ငန်းစဉ်များ အတိုင်း ဆက်လက် ဆောင်ရွက်သွားရန်နှင့် ထပ်မံတင်ပြမည့် စောင့်ကြပ် ကြည့်ရှုမှုအစီရင်ခံစာများတွင် ဆောင်ရွက်မည့် အစီအစဉ် များကို ထည့်သွင်းဖော်ပြရန်၊	- မှတ်သား လိုက်နာ ဆောင်ရွက် လျက်ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(ဈ)	ကုမ္ပဏီမှ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ လိုက်နာ ဆောင်ရွက်မှု သက်သေခံလက်မှတ် Environmental Compliance Certificate (ECC) ၏ အပိုဒ် (B1) အရ အတည်ပြုပြီး EIA အစီရင်ခံစာ၏ ဇယား (၈.၃) တွင် ဖော်ပြထားသော ကတိကဝတ်များအား အကောင် အထည်ဖော် ဆောင်ရွက်သွားရန်၊	- ဖော်ပြထားသော ကတိကဝတ်များအား လိုက်နာ အကောင်အထည်ဖော် ဆောင်ရွက်လျက် ရှိပါသည်။
(ည)	ကုမ္ပဏီမှ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဆိုင်ရာ လိုက်နာ ဆောင်ရွက်မှု သက်သေခံလက်မှတ် Environmental Compliance Certificate (ECC) ၏ အပိုဒ် (C3) အရ စီမံကိန်း၏လုပ်ဆောင်မှုများ၊ Sites (သို့) ဆိုးရွားသော ထိခိုက်မှုများ ပြောင်းလဲမှုရှိပါက ပြန်လည်ပြင်ဆင်ထားသည့် EMP အား စိစစ်နိုင်ရန်နှင့် အတည်ပြုနိုင်ရန်အတွက် ECD သို့ တင်ပြသွားရန်၊	- စီမံကိန်း၏ လုပ်ဆောင်မှုများ၊ ဆိုးရွားသော ထိခိုက်မှုများ ပြောင်းလဲမှုရှိပါက တင်ပြသွားမည် ဖြစ်ပါသည်။
(ဋ)	ကုမ္ပဏီအနေဖြင့် စာချုပ်သက်တမ်းပြီးဆုံးပါက MOGE ထံ ပြန်လည် အပ်နှံသည့်အချိန်တွင် EIA Procedure အပိုဒ် (၁၀၂) နှင့် အပိုဒ် (၁၀၆) တို့အား အလေးထား လိုက်နာ ဆောင်ရွက်သွားရန်၊	- လိုက်နာ ဆောင်ရွက်သွားမည် ဖြစ်ပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(၄)	ရေနံပြန်လည်ဖွံ့ဖြိုးတိုးတက်ရေးအစီအစဉ် (Re-development and Enhanced Oil Recovery - EOR Programme) အတွက် ခွင့်ပြုမိန့်တွင် လိုက်နာရမည့် စည်းကမ်းချက်များအတိုင်း အကောင်အထည်ဖော် ဆောင်ရွက်သွားရန်၊	- ခွင့်ပြုမိန့်ပါ လိုက်နာရမည့် စည်းကမ်းချက်များအတိုင်း အကောင်အထည်ဖော် ဆောင်ရွက်လျက် ရှိပါသည်။
(၅)	EIA Procedure အပိုဒ်(၁၀၆)အရ စီမံကိန်းအဆင့်အားလုံးတွင် ဆိုးကျိုးသက်ရောက်မှုအားလုံးအတွက် စီမံကိန်းနှင့် ဆက်စပ်ဆောင်ရွက်မှုများအား မိမိကိုယ်မိမိ ဘက်စုံ စောင့်ကြပ် ကြည့်ရှုစစ်ဆေးခြင်းကို စဉ်ဆက်မပြတ် လက်တွေ့ဆောင်ရွက်ရမည့်အပြင် သက်ဆိုင်ရာ ဥပဒေများ၊ နည်းဥပဒေများ၊ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း နှင့် စံချိန်စံညွှန်းများ၊ ပတ်ဝန်းကျင် ထိန်းသိမ်းရေးဆိုင်ရာ လိုက်နာဆောင်ရွက်မှုသက်သေခံလက်မှတ်ပါ စည်းကမ်းချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှု အစီအစဉ်ပါ အချက်များကို အလေးထား လိုက်နာဆောင်ရွက်သွားရန်၊	- အလေးထား လိုက်နာ ဆောင်ရွက်လျက် ရှိပါသည်။
(၆)	EIA Procedure အပိုဒ် (၁၀၇) အရ လုပ်ငန်းစီမံကိန်း၏ ပျက်ကွက်မှု တစ်ခုခုကြောင့် အန္တရာယ်ဖြစ်စေနိုင်သော ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှု ဖြစ်နိုင်သည့်ကိစ္စ (သို့မဟုတ်) သယံဇာတ နှင့် သဘာဝပတ်ဝန်းကျင်	- သိရှိလိုက်နာ ဆောင်ရွက် သွားပါမည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
	ထိန်းသိမ်းရေးဝန်ကြီးဌာနက အမြန်သိရှိရန် လိုအပ်သည့် ကိစ္စကို (၂၄) နာရီအတွင်းလည်းကောင်း၊ အခြားကိစ္စများ အားလုံးတွင် ယင်းဖြစ်စဉ် ဖြစ်ရပ်ကို စတင်သိရှိသည့်အချိန်မှ (၇) ရက်အတွင်းတွင်လည်းကောင်း၊ စီမံကိန်းလုပ်ငန်းပိုင်ရှင်မှ ဝန်ကြီးဌာနသို့ အသိပေးတင်ပြသွားရန်၊	
(ဏ)	အတည်ပြုပြီး EIA အစီရင်ခံစာပါအတိုင်း လိုက်နာ ဆောင်ရွက်မှုနှင့် ပတ်သက်၍ ဆောင်ရွက်တိုးတက်မှု အခြေအနေအား (၆) လလျှင် (၁) ကြိမ် တင်ပြမည့် စောင့်ကြပ် ကြည့်ရှုမှုအစီရင်ခံစာများတွင် ပြည့်စုံစွာ ထည့်သွင်း ဖော်ပြသွားရန်၊	- စောင့်ကြပ် ကြည့်ရှုမှု အစီရင်ခံ စာများတွင် ပြည့်စုံစွာ ထည့်သွင်း တင်ပြလျက် ရှိပါသည်။
(တ)	EIA Procedure အပိုဒ် (၁၁၀) အရ စောင့်ကြပ် ကြည့်ရှုမှုအစီရင်ခံစာအား ဝန်ကြီးဌာနသို့ တင်ပြမည့် နေ့ရက်မှ (၁၀) ရက်အတွင်း အများပြည်သူ သိရှိနိုင်ရန် စီမံကိန်း၏ Website သို့မဟုတ် သင့်တော်သော နည်းလမ်းတစ်ရပ်ရပ်အသုံးပြု၍ အသိပေးထုတ်ပြန် ကြေညာရန် နှင့် ထုတ်ဖော်မည့် Website သို့မဟုတ် နေရာတို့ကို ထပ်မံတင်ပြမည့် စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ၌ ထည့်သွင်းဖော်ပြရန်၊	- တင်ပြပြီးစီးခဲ့သော စောင့်ကြပ် ကြည့်ရှုမှု အစီရင်ခံစာများကို အများပြည်သူ သိရှိနိုင်ရန် ကုမ္ပဏီ Website ၌ အသိပေးထုတ်ပြန် ထားပြီး ဖြစ်ပါသည်။ ထပ်မံတင်ပြမည့် စောင့်ကြပ် ကြည့်ရှုမှု အစီရင်ခံ စာများ၌လည်း ထုတ်ဖော်မည့် Website သို့မဟုတ် နေရာတို့ကို ထည့်သွင်းဖော်ပြ သွားပါမည်။



စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(ထ)	(၂၀၂၂ ခုနှစ်၊ အောက်တိုဘာလမှ ၂၀၂၃ ခုနှစ်၊ မတ်လအထိ) တင်ပြလာသော စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာအား စိစစ် အကြောင်းကြားမည့် အချက်များ အပြင် (ယခင် စောင့်ကြပ် ကြည့်ရှုမှုအစီရင်ခံစာများအပေါ် စိစစ် ပြန်ကြားချက်များအား ဆက်လက်လိုက်နာ ဆောင်ရွက်သွားရန်နှင့် ထပ်မံတင်ပြမည့် စောင့်ကြပ် ကြည့်ရှုမှု အစီရင်ခံစာတွင် ဆောင်ရွက် ထားရှိမှုများအား ထည့်သွင်း ဖော်ပြရန်၊	- စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ များတွင် ပတ်ဝန်းကျင် ထိန်းသိမ်းရေး ဦးစီးဌာန၏ စိစစ် ပြန်ကြားချက်များအား လိုက်နာ ဆောင်ရွက် ထားရှိမှု အခြေအနေများကို ထည့်သွင်း တင်ပြလျက် ရှိပါသည်။
(၃)	အတည်ပြုပြီး အစီရင်ခံစာပါ ကတိကဝတ်များနှင့် ECC ပါ လိုက်နာဆောင်ရွက်ရမည့်အချက်များအား အလေးထား ဆောင်ရွက်သွားရန်၊	- အတည်ပြုပြီး အစီရင်ခံစာပါ ကတိကဝတ်များနှင့် ECC ပါ လိုက်နာဆောင်ရွက်ရမည့်အချက်များအား အလေးထား လိုက်နာ ဆောင်ရွက်လျက် ရှိပါသည်။
(ခ)	ကုမ္ပဏီအနေဖြင့် ဒေသခံပြည်သူတို့၏ ဆန္ဒနှင့် သဘောထားများကို အလေးထားလိုက်နာ ဆောင်ရွက်သွားရန်နှင့် စောင့်ကြပ်ကြည့်ရှုမှု လုပ်ငန်းစဉ် များကို ပတ်ဝန်းကျင်ထိခိုက်မှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း၊ အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ နှင့်အညီ ဆက်လက် အကောင်အထည်ဖော် ဆောင်ရွက်သွားရန်၊	- ဒေသခံပြည်သူတို့၏ ဆန္ဒနှင့် သဘောထားများကို အလေးထား လိုက်နာ ဆောင်ရွက်လျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(န)	စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာအား ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်း ဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် (၁၀၉) နှင့်အညီ ရေးဆွဲပြုစု၍ အပိုဒ် (၁၀၈) နှင့်အညီ (၆) လလျှင် (၁) ကြိမ် ပုံမှန် အစီရင်ခံစာတင်ပြရန်၊	<ul style="list-style-type: none"> - ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဦးစီးဌာန သို့ စောင့်ကြပ် ကြည့်ရှုမှု အစီရင်ခံစာ ကို (၆) လလျှင် တစ်ကြိမ် ပုံမှန် အစီရင်ခံ တင်ပြလျက် ရှိပါသည်။

ရက်စွဲ	၃၁-၁၀-၂၀၂၄
စာအမှတ်	၅/ ထိန်းချုပ်/ စကရ (၀၁) (၂၆၉၀/၂၀၂၄)
ဌာန	ညွှန်ကြားရေးမှူးရုံး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ မကွေးတိုင်းဒေသကြီး၊ မကွေးမြို့။
အကြောင်းအရာ	ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း (Environmental Impact Assessment - EIA) အတည်ပြုပြီး MPRL E&P Pte. Ltd ၏ ရေနံပြန်လည်ဖွံ့ဖြိုးတိုးတက်ရေးအစီအစဉ် (Re-development and Enhanced Oil Recovery - EOR Programme) အတွက် သတ္တမအကြိမ် တင်ပြလာသော စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ (၂၀၂၃ ခုနှစ်၊ ဧပြီလ ၄ ၂၀၂၃ ခုနှစ်၊ စက်တင်ဘာလအထိ) နှင့်ပတ်သက်၍ အကြောင်းကြားခြင်း
ရည်ညွှန်းချက်	(၁) သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန၊ ပြည်ထောင်စုဝန်ကြီးရုံး၏ ၇-၂-၂၀၁၉ ရက်စွဲပါ စာအမှတ် (သစ်တော) ၃(၂)/၁၆(ဃ) (၅၃၆/၂၀၁၉) (၂) မကွေးတိုင်းဒေသကြီး ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ညွှန်ကြားရေးမှူးရုံး၏ ၈-၃-၂၀၂၄ ရက်စွဲပါ စာအမှတ် ၅/ထိန်းချုပ်/စကရ (၀၁) (၅၆၈/၂၀၂၄) (၃) ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ညွှန်ကြားရေးမှူးချုပ်ရုံး၏ ၂-၁၀-၂၀၂၄ ရက်စွဲပါ စာအမှတ်၊ အရည်အသွေး-၂/ဆစရ(၁၇၅၆/၂၀၂၄)

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(က)	မြေအောက်ရေ အရည်အသွေး စောင့်ကြည့်တိုင်းတာခြင်းနှင့် ပတ်သက်၍ Biological Oxygen Demand (BOD), Total Dissolved Solids (TDS), Total Coliforms, Total Fecal Coliforms, Manganese (Mn),	သောက်သုံးရေအဖြစ် အသုံးပြုပါက စနစ်တကျ သန့်စင်ခြင်း၊ ကျိုချက်ခြင်းများ ပြုလုပ်ရန်

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
	Sulphate (SO ₄) စသည့် parameter များနှင့် မြေပေါ်ရေအရည်အသွေး စောင့်ကြည့်တိုင်းတာခြင်းနှင့်ပတ်သက်၍ Z4SW1 နှင့် Z4SW2 တည်နေရာများ၏ Total Suspended Solid (TDS), Biological Oxygen Demand (BOD) စသည့် parameter များ၏ တိုင်းတာရလဒ်များသည် နှိုင်းယှဉ်ဖော်ပြထားသည့် စံချိန်စံညွှန်းများထက် ကျော်လွန် နေသောကြောင့် သောက်သုံးရေအဖြစ် အသုံးပြုပါက စနစ်တကျ စီမံဆောင်ရွက်ပြီး အသုံးပြုပါရန်၊	ရပ်ရွာလူထုနှင့် တွေ့ဆုံသည့် အခမ်းအနားများတွင် ထည့်သွင်း အသိပေး ပြောကြားလျက် ရှိပါသည်။
(ခ)	စွန့်ပစ်ရေအရည်အသွေး စောင့်ကြည့်တိုင်းတာမှုနှင့် ပတ်သက်၍ Biological Oxygen Demand (BOD) နှင့် Total Coliform bacteria စသည့် parameter များ၏ တိုင်းတာရလဒ်များသည် နှိုင်းယှဉ်ဖော်ပြထားသည့် စံချိန်စံညွှန်းများထက် ကျော်လွန် နေသောကြောင့် အတည်ပြုပြီး EIA အစီရင်ခံစာပါ လျှော့ချမည့် အစီအစဉ်များ နှင့်အညီ ဆောင်ရွက်ပြီး ပတ်ဝန်းကျင်ညစ်ညမ်းမှုများ မဖြစ်ပေါ်စေရေး စနစ်တကျ စီမံဆောင်ရွက်ပါရန်၊	ပတ်ဝန်းကျင်ညစ်ညမ်းမှုများ မဖြစ်ပေါ်စေရေး စနစ်တကျ စီမံဆောင်ရွက် လျက်ရှိပါသည်။
(ဂ)	လုပ်ငန်းဆောင်ရွက်ခြင်းမှ ထွက်ရှိသော စွန့်ပစ်ရေများအား ပြင်ပသို့ တိုက်ရိုက် စွန့်ပစ်ခြင်းမပြုရန်၊ စွန့်ထုတ်မည်ဆိုပါက အမျိုးသား ပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (National Environmental Quality Emission Guidelines - NEQEGs) ပါ စွန့်ထုတ်အရည်အဆင့် သတ်မှတ်ချက်များနှင့်အညီ သန့်စင်ပြီးမှ	စွန့်ပစ်ရေများအား ပြင်ပသို့ တိုက်ရိုက် စွန့်ပစ်ခြင်း မပြုလုပ်ပါ။ သန့်စင်ပြီးမှ စွန့်ထုတ်လျက်ရှိပြီး စွန့်ပစ်ရေကြောင့် ပတ်ဝန်းကျင်ညစ်ညမ်းမှုများ မဖြစ်ပေါ်စေရေး စနစ်တကျ စီမံဆောင်ရွက်လျက်ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
	စွန့်ထုတ်ရန်နှင့် စွန့်ပစ်ရေကြောင့် ပတ်ဝန်းကျင်ညစ်ညမ်းမှုများ မဖြစ်ပေါ်စေရေး စနစ်တကျ စီမံဆောင်ရွက်ပါရန်၊	
(ဃ)	လုပ်ငန်းတွင် မီးဘေးအန္တရာယ်ကာကွယ်ရေးအတွက် မီးသတ်ဦးစီးဌာန၏ လမ်းညွှန်ချက်များအတိုင်း အထူးအလေးထား လိုက်နာဆောင်ရွက်ရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။
(င)	လေထု၊ ရေထု၊ မြေထု အရည်အသွေးအပါအဝင် ပတ်ဝန်းကျင်အရည်အသွေး စောင့်ကြည့်တိုင်းတာမှု ရလဒ်များအရ သတ်မှတ်ချိန်ညွှန်းများထက် ကျော်လွန်မှု ရှိနေပါက အတည်ပြုပြီး EIA အစီရင်ခံစာပါ Mitigation Measure များ၊ ဆောင်ရွက်မည့် လုပ်ငန်းအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာတွင် ဖော်ပြပါရှိသော တိုင်းတာစောင့်ကြည့်မည့် လုပ်ငန်းစဉ်များအတိုင်း ဆက်လက် ဆောင်ရွက်သွားပါရန်နှင့် နောက်တစ်ကြိမ်တင်ပြမည့် စောင့်ကြပ်ကြည့်ရှုမှုအစီအရင်ခံစာများတွင် ဆောင်ရွက်မည့် အစီအစဉ်များကို ထည့်သွင်းဖော်ပြပါရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။
(စ)	စီမံကိန်းမှထွက်ရှိလာသည့် စွန့်ပစ်ပစ္စည်းများနှင့် ဘေးအန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်းများကြောင့် ပတ်ဝန်းကျင်ညစ်ညမ်းမှု မရှိစေရေးအတွက် အတည်ပြုပြီး EIA အစီရင်ခံစာပါ ဆောင်ရွက်မည့် အစီအစဉ်များနှင့်အညီ စနစ်တကျ စီမံဆောင်ရွက်သွားပါရန်နှင့် စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာတွင် ဆောင်ရွက်ထားရှိမှု အခြေအနေများအား မှတ်တမ်းဓါတ်ပုံများဖြင့် ထည့်သွင်းဖော်ပြပါရန်၊	စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာတွင် ဆောင်ရွက် ထားရှိမှု အခြေအနေများအား မှတ်တမ်းဓါတ်ပုံများဖြင့် ထည့်သွင်းဖော်ပြလျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(ဆ)	လူမှုရေးဆိုင်ရာ တာဝန်သိလုပ်ငန်းများ (Corporate Social Responsibility - CSR) အား အကောင်အထည်ဖော် ဆောင်ရွက်ရန်၊ စီမံကိန်းအနီးဝန်းကျင်ရှိ ဒေသခံပြည်သူများ၊ ဆက်စပ်ပတ်သက်သူများနှင့် စဉ်ဆက်မပြတ် တွေ့ဆုံ ဆွေးနွေးပြီး ၎င်းတို့၏ အကြံပြုချက်နှင့် လိုအပ်ချက်များအား အလေးထား ပေါင်းစပ်ဆောင်ရွက်သွားပါရန်နှင့် ဆောင်ရွက် ထားရှိမှုများအား နောက်တစ်ကြိမ်တင်ပြမည့် စောင့်ကြပ် ကြည့်ရှုမှုအစီရင်ခံစာတွင် မှတ်တမ်း ဓါတ်ပုံများ ပြည့်စုံစွာ ထည့်သွင်းဖော်ပြရန်၊	ဆောင်ရွက် ထားရှိမှုများအား စောင့်ကြပ် ကြည့်ရှုမှုအစီရင်ခံစာများတွင် မှတ်တမ်းဓါတ်ပုံများ ပြည့်စုံစွာ ဖြင့် ပုံမှန် ထည့်သွင်းဖော်ပြလျက် ရှိပါသည်။
(ဇ)	စီမံကိန်းနှင့်ပတ်သက်သည့် ပိုင်ရှင်ပြောင်းလဲခြင်း၊ အစီရင်ခံစာတွင် ဖော်ပြပါရှိသည့် လုပ်ငန်းထုတ်လုပ်မှု ပမာဏထက် ပိုမိုထုတ်လုပ်ခြင်း၊ လုပ်ငန်းလည်ပတ်မှု ဒီဇိုင်းများ ပြောင်းလဲခြင်း၊ လုပ်ငန်းတည်နေရာ ပြောင်းလဲခြင်း၊ လုပ်ငန်းရပ်ဆိုင်းခြင်း (သို့) ပိတ်သိမ်းခြင်း ပြုလုပ်မည်ဆိုပါက အဆိုပါလုပ်ငန်းများ ဆောင်ရွက်ခြင်းမပြုမီ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ ကြိုတင်၍ တင်ပြပါရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။
(ဈ)	အဆိုပါလုပ်ငန်းများအတွက် အတည်ပြုထားသော EIA အစီရင်ခံစာနှင့် အတည်ပြုအကြောင်းကြားစာပါ ကတိကဝတ်များနှင့် ECC ပါ လိုက်နာဆောင်ရွက်ရန် စည်းကမ်းချက်များအား သတ်မှတ်ကာလအတွင်း အချိန်မီပြီးစီးအောင် အကောင်အထည်ဖော် ဆောင်ရွက်ပါရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။



စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(ည)	အဆိုပါလုပ်ငန်းအတွက် သက်ဆိုင်ရာ ဌာနမှ ထုတ်ပေးထားသည့် ခွင့်ပြုမိန့်တွင် လိုက်နာရမည့် စည်းကမ်းများအတိုင်း အကောင်အထည်ဖော် ဆောင်ရွက်ပါရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။
(ဋ)	ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် (၁၀၆) အရ စီမံကိန်း အဆင့်အားလုံးတွင် ဆိုးကျိုးသက်ရောက်မှု အားလုံးအတွက် စီမံကိန်းနှင့် ဆက်စပ်ဆောင်ရွက်မှုများအား မိမိကိုယ်မိမိ ဘက်စုံ စောင့်ကြပ်ကြည့်ရှု စစ်ဆေးခြင်းကို စဉ်ဆက်မပြတ် လက်တွေ့ဆောင်ရွက်ရမည့်အပြင် သက်ဆိုင်ရာ ဥပဒေများ၊ နည်းဥပဒေများ၊ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းနှင့် စံချိန်စံညွှန်းများ၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဆိုင်ရာ လိုက်နာဆောင်ရွက်မှု သက်သေခံ လက်မှတ်ပါ စည်းကမ်းချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်ပါ အချက်များကို အလေးထား လိုက်နာဆောင်ရွက်ပါရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။
(ဌ)	ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် (၁၀၇) အရ လုပ်ငန်းစီမံကိန်း၏ ပျက်ကွက်မှုတစ်ခုခု ကြောင့် အန္တရာယ်ဖြစ်စေနိုင်သော ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှု ဖြစ်လာနိုင်သည့်ကိစ္စ (သို့မဟုတ်) သယံဇာတနှင့် သဘာဝ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေး ဝန်ကြီးဌာနက အမြန်သိရှိရန် လိုအပ်သည့်ကိစ္စကို (၂၄) နာရီအတွင်းလည်းကောင်း၊ အခြားကိစ္စများ	သိရှိ လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
	အားလုံးတွင် ယင်းဖြစ်စဉ်ဖြစ်ရပ်ကို စတင်သိရှိသည့်အချိန်မှ (၇) ရက်အတွင်း လည်းကောင်း စီမံကိန်းလုပ်ငန်းပိုင်ရှင်မှ ဝန်ကြီးဌာနသို့ အသိပေးတင်ပြသွားပါရန်၊	
(၃)	ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် (၁၁၀) အရ စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာအား ဝန်ကြီးဌာနသို့ တင်ပြသည့်နေ့ရက်မှ (၁၀) ရက်အတွင်း အများပြည်သူသိရှိနိုင်ရန် စီမံကိန်း၏ Website (သို့) သင့်တော်သော နည်းလမ်း တစ်ရပ်ရပ် အသုံးပြု၍ အသိပေးထုတ်ဖော် ကြေငြာပါရန်၊	ပုံမှန် အသိပေး ထုတ်ပြန် ကြေငြာ လျက်ရှိပါသည်။
(၄)	ECC ရရှိပြီးသော လုပ်ငန်းစီမံကိန်းများအနေဖြင့် ECC အား သက်တမ်းတိုးဆောင်ရွက်ရာတွင် လွယ်ကူချောမွေ့စွာ ဆောင်ရွက်နိုင်ရေး အတွက် စောင့်ကြပ်ကြည့်ရှုမှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၁၀၈) နှင့်အညီ (၆) လလျှင် (၁) ကြိမ် ရေးဆွဲပြုစု၍ သတ်မှတ်ကာလအတွင်း သတ်မှတ်အရေအတွက် ပြည့်မီအောင် ပုံမှန်အစီရင်ခံစာ တင်ပြပါရန်။	လုပ်ထုံးလုပ်နည်းနှင့်အညီ သတ်မှတ်အရေအတွက် ပြည့်မီအောင် ပုံမှန် အစီရင်ခံ တင်ပြလျက်ရှိပါသည်။

ရက်စွဲ	၃၁-၁၀-၂၀၂၄
စာအမှတ်	၅/ ထိန်းချုပ်/ စကရ (၀၁) (၂၆၈၉/၂၀၂၄)
ဌာန	ညွှန်ကြားရေးမှူးရုံး၊ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ မကွေးတိုင်းဒေသကြီး၊ မကွေးမြို့
အကြောင်းအရာ	ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်း (Environmental Impact Assessment - EIA) အတည်ပြုပြီး MPRL E&P Pte. Ltd ၏ ရေနံပြန်လည်ဖွံ့ဖြိုးတိုးတက်ရေးအစီအစဉ် (Re-development and Enhanced Oil Recovery - EOR Programme) အတွက် အဋ္ဌမအကြိမ် တင်ပြလာသော စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာ (၂၀၂၃ ခုနှစ်၊ အောက်တိုဘာလ ၄ ၂၀၂၄ ခုနှစ်၊ မတ်လအထိ) နှင့်ပတ်သက်၍ အကြောင်းကြားခြင်း
ရည်ညွှန်းချက်	<p>(၁) သယံဇာတနှင့် သဘာဝပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဝန်ကြီးဌာန၊ ပြည်ထောင်စုဝန်ကြီးရုံး၏ ၇-၂-၂၀၁၉ ရက်စွဲပါ စာအမှတ် (သစ်တော) ၃(၂)/၁၆(ဃ) (၅၃၆/၂၀၁၉)</p> <p>(၂) မကွေးတိုင်းဒေသကြီး ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ညွှန်ကြားရေးမှူးရုံး၏ ၁၆-၅-၂၀၂၄ ရက်စွဲပါ စာအမှတ် ၅/ထိန်းချုပ်/စကရ (၀၁) (၁၁၂၃/၂၀၂၄)</p> <p>(၃) ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန၊ ညွှန်ကြားရေးမှူးချုပ်ရုံး၏ ၃-၁၀-၂၀၂၄ ရက်စွဲပါ စာအမှတ်၊ အရည်အသွေး-၂/ဆစရ(၁၇၉၄/၂၀၂၄)</p>

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(က)	မြေအောက်ရေ အရည်အသွေး စောင့်ကြည့်တိုင်းတာခြင်းနှင့် ပတ်သက်၍ Biological Oxygen Demand (BOD), Total Dissolved Solids (TDS), Total Coliforms, Total Fecal Coliforms, Manganese (Mn), Sulphate	သောက်သုံးရေအဖြစ် အသုံးပြုပါက စနစ်တကျ သန့်စင်ခြင်း၊ ကျိုချက်ခြင်းများ ပြုလုပ်ရန်

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
	(SO ₄) စသည့် parameter များနှင့် မြေပေါ်ရေအရည်အသွေး စောင့်ကြည့်တိုင်းတာခြင်းနှင့်ပတ်သက်၍ Z4SW1 နှင့် Z4SW2 တည်နေရာများ၏ Total Suspended Solid (TDS), Biological Oxygen Demand (BOD) စသည့် parameter များ၏ တိုင်းတာရလဒ်များသည် နှိုင်းယှဉ်ဖော်ပြထားသည့် စံချိန်စံညွှန်းများထက် ကျော်လွန်နေသောကြောင့် သောက်သုံးရေအဖြစ် အသုံးပြုပါက စနစ်တကျ စီမံဆောင်ရွက်ပြီး အသုံးပြုပါရန်၊	ရပ်ရွာလူထုနှင့် တွေ့ဆုံသည့် အခမ်းအနားများတွင် ထည့်သွင်း အသိပေး ပြောကြားလျက် ရှိပါသည်။
(ခ)	စွန့်ပစ်ရေအရည်အသွေး စောင့်ကြည့်တိုင်းတာမှုနှင့် ပတ်သက်၍ Lead (Pb) နှင့် Total Coliform bacteria စသည့် parameter များ၏ တိုင်းတာရလဒ်များသည် နှိုင်းယှဉ်ဖော်ပြထားသည့် စံချိန်စံညွှန်းများထက် ကျော်လွန်နေသောကြောင့် အတည်ပြုပြီး EIA အစီရင်ခံစာပါ လျှော့ချမည့် အစီအစဉ်များ နှင့်အညီ ဆောင်ရွက်ပြီး ပတ်ဝန်းကျင်ညစ်ညမ်းမှုများ မဖြစ်ပေါ်စေရေး စနစ်တကျ စီမံဆောင်ရွက်ပါရန်၊	ပတ်ဝန်းကျင်ညစ်ညမ်းမှုများ မဖြစ်ပေါ်စေရေး စနစ်တကျ စီမံဆောင်ရွက် လျက်ရှိပါသည်။
(ဂ)	လုပ်ငန်းဆောင်ရွက်ခြင်းမှ ထွက်ရှိသော စွန့်ပစ်ရေများအား ပြင်ပသို့ တိုက်ရိုက် စွန့်ပစ်ခြင်းမပြုရန်၊ စွန့်ထုတ်မည်ဆိုပါက အမျိုးသားပတ်ဝန်းကျင်ဆိုင်ရာ အရည်အသွေး (ထုတ်လွှတ်မှု) လမ်းညွှန်ချက်များ (National Environmental Quality Emission Guidelines - NEQEGs) ပါ စွန့်ထုတ်အရည်အဆင့် သတ်မှတ်ချက်များ နှင့်အညီ သန့်စင်ပြီးမှ စွန့်ထုတ်ရန်နှင့် စွန့်ပစ်ရေကြောင့်	စွန့်ပစ်ရေများအား ပြင်ပသို့ တိုက်ရိုက် စွန့်ပစ်ခြင်း မပြုလုပ်ပါ။ သန့်စင်ပြီးမှ စွန့်ထုတ်လျက်ရှိပြီး စွန့်ပစ်ရေကြောင့် ပတ်ဝန်းကျင်ညစ်ညမ်းမှုများ မဖြစ်ပေါ်စေရေး စနစ်တကျ စီမံဆောင်ရွက်လျက်ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
	ပတ်ဝန်းကျင်ညစ်ညမ်းမှုများ မဖြစ်ပေါ်စေရေး စနစ်တကျ စီမံဆောင်ရွက်ပါရန်၊	
(ဃ)	လုပ်ငန်းတွင် မီးဘေးအန္တရာယ်ကာကွယ်ရေးအတွက် မီးသတ်ဦးစီးဌာန၏ လမ်းညွှန်ချက်များအတိုင်း အထူးအလေးထား လိုက်နာဆောင်ရွက်ရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။
(င)	လေထု၊ ရေထု၊ မြေထု အရည်အသွေးအပါအဝင် ပတ်ဝန်းကျင်အရည်အသွေး စောင့်ကြည့်တိုင်းတာမှု ရလဒ်များအရ သတ်မှတ်ချိန်စံညွှန်းများထက် ကျော်လွန်မှု ရှိနေပါက အတည်ပြုပြီး EIA အစီရင်ခံစာပါ Mitigation Measure များ၊ ဆောင်ရွက်မည့် လုပ်ငန်းအစီအစဉ်များနှင့် စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာတွင် ဖော်ပြပါရှိသော တိုင်းတာစောင့်ကြည့်မည့် လုပ်ငန်းစဉ်များအတိုင်း ဆက်လက် ဆောင်ရွက်သွားပါရန်နှင့် နောက်တစ်ကြိမ်တင်ပြမည့် စောင့်ကြပ်ကြည့်ရှုမှုအစီအရင်ခံစာများတွင် ဆောင်ရွက်မည့် အစီအစဉ်များကို ထည့်သွင်းဖော်ပြပါရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။
(စ)	စီမံကိန်းမှထွက်ရှိလာသည့် စွန့်ပစ်ပစ္စည်းများနှင့် ဘေးအန္တရာယ်ရှိ စွန့်ပစ်ပစ္စည်းများကြောင့် ပတ်ဝန်းကျင်ညစ်ညမ်းမှု မရှိစေရေးအတွက် အတည်ပြုပြီး EIA အစီရင်ခံစာပါ ဆောင်ရွက်မည့် အစီအစဉ်များနှင့်အညီ စနစ်တကျ စီမံဆောင်ရွက်သွားပါရန်နှင့် စောင့်ကြပ်ကြည့်ရှုမှု အစီရင်ခံစာတွင် ဆောင်ရွက်ထားရှိမှု အခြေအနေများအား မှတ်တမ်းဓါတ်ပုံများဖြင့် ထည့်သွင်းဖော်ပြပါရန်၊	စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာတွင် ဆောင်ရွက် ထားရှိမှု အခြေအနေများအား မှတ်တမ်း ဓါတ်ပုံများဖြင့် ထည့်သွင်းဖော်ပြလျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(ဆ)	လူမှုရေးဆိုင်ရာ တာဝန်သိလုပ်ငန်းများ (Corporate Social Responsibility - CSR) အား အကောင်အထည်ဖော် ဆောင်ရွက်ရန်၊ စီမံကိန်းအနီးဝန်းကျင်ရှိ ဒေသခံပြည်သူများ၊ ဆက်စပ်ပတ်သက်သူများနှင့် စဉ်ဆက်မပြတ် တွေ့ဆုံ ဆွေးနွေးပြီး ၎င်းတို့၏ အကြံပြုချက်နှင့် လိုအပ်ချက်များအား အလေးထား ပေါင်းစပ်ဆောင်ရွက်သွားပါရန်နှင့် ဆောင်ရွက် ထားရှိမှုများအား နောက်တစ်ကြိမ်တင်ပြမည့် စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာတွင် မှတ်တမ်းခါတ်ပုံများ ပြည့်စုံစွာ တည့်သွင်းဖော်ပြရန်၊	ဆောင်ရွက် ထားရှိမှုများအား စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာများတွင် မှတ်တမ်းခါတ်ပုံများ ပြည့်စုံစွာ ဖြင့် ပုံမှန် တည့်သွင်းဖော်ပြလျက် ရှိပါသည်။
(ဇ)	စီမံကိန်းနှင့်ပတ်သက်သည့် ပိုင်ရှင်ပြောင်းလဲခြင်း၊ အစီရင်ခံစာတွင် ဖော်ပြပါရှိသည့် လုပ်ငန်းထုတ်လုပ်မှု ပမာဏထက် ပိုမိုထုတ်လုပ်ခြင်း၊ လုပ်ငန်းလည်ပတ်မှု ဒီဇိုင်းများ ပြောင်းလဲခြင်း၊ လုပ်ငန်းတည်နေရာ ပြောင်းလဲခြင်း၊ လုပ်ငန်းရပ်ဆိုင်းခြင်း (သို့) ပိတ်သိမ်းခြင်း ပြုလုပ်မည်ဆိုပါက အဆိုပါလုပ်ငန်းများ ဆောင်ရွက်ခြင်းမပြုမီ ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာနသို့ ကြိုတင်၍ တင်ပြပါရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။
(ဈ)	အဆိုပါလုပ်ငန်းများအတွက် အတည်ပြုထားသော EIA အစီရင်ခံစာနှင့် အတည်ပြုအကြောင်းကြားစာပါ ကတိကဝတ်များနှင့် ECC ပါ လိုက်နာဆောင်ရွက်ရန် စည်းကမ်းချက်များအား သတ်မှတ်ကာလအတွင်း အချိန်မီဦးစီးအောင် အကောင်အထည်ဖော် ဆောင်ရွက်ပါရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
(ည)	အဆိုပါလုပ်ငန်းအတွက် သက်ဆိုင်ရာဌာနမှ ထုတ်ပေးထားသည့် ခွင့်ပြုမိန့်တွင် လိုက်နာရမည့် စည်းကမ်းများအတိုင်း အကောင်အထည်ဖော် ဆောင်ရွက်ပါရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။
(ဋ)	ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် (၁၀၆) အရ စီမံကိန်း အဆင့်အားလုံးတွင် ဆိုးကျိုးသက်ရောက်မှု အားလုံးအတွက် စီမံကိန်းနှင့် ဆက်စပ်ဆောင်ရွက်မှုများအား မိမိကိုယ်မိမိ ဘက်စုံ စောင့်ကြပ်ကြည့်ရှု စစ်ဆေးခြင်းကို စဉ်ဆက်မပြတ် လက်တွေ့ဆောင်ရွက်ရမည့်အပြင် သက်ဆိုင်ရာ ဥပဒေများ၊ နည်းဥပဒေများ၊ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်းနှင့် စံချိန်စံညွှန်းများ၊ ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လိုက်နာဆောင်ရွက်မှု သက်သေခံ လက်မှတ်ပါ စည်းကမ်းချက်များနှင့် ပတ်ဝန်းကျင် စီမံခန့်ခွဲမှုအစီအစဉ်ပါ အချက်များကို အလေးထား လိုက်နာဆောင်ရွက်ပါရန်၊	လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။
(ဌ)	ပတ်ဝန်းကျင် ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် (၁၀၇) အရ လုပ်ငန်းစီမံကိန်း၏ ပျက်ကွက်မှုတစ်ခုခု ကြောင့် အန္တရာယ်ဖြစ်စေနိုင်သော ပတ်ဝန်းကျင်အပေါ် သက်ရောက်မှု ဖြစ်လာနိုင်သည့်ကိစ္စ (သို့မဟုတ်) သယံဇာတနှင့် သဘာဝ ပတ်ဝန်းကျင်ထိခိုက်မှုများ ဝန်ကြီးဌာနက အမြန်သိရှိရန် လိုအပ်သည့်ကိစ္စကို (၂၄) နာရီအတွင်းလည်းကောင်း၊ အခြားကိစ္စ	သိရှိ လိုက်နာဆောင်ရွက်လျက် ရှိပါသည်။

စဉ်	အကြောင်းကြားစာပါ လိုက်နာဆောင်ရွက်ရမည့် အချက်များ	လိုက်နာဆောင်ရွက်ထားရှိမှုအခြေအနေ
	များအားလုံးတွင် ယင်းဖြစ်စဉ်ဖြစ်ရပ်ကို စတင်သိရှိသည့်အချိန်မှ (၇) ရက်အတွင်း လည်းကောင်း စီမံကိန်းလုပ်ငန်းပိုင်ရှင်မှ ဝန်ကြီးဌာနသို့ အသိပေးတင်ပြသွားပါရန်၊	
(၃)	ပတ်ဝန်းကျင်ထိခိုက်မှုဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း အပိုဒ် (၁၁၀) အရ စောင့်ကြပ်ကြည့်ရှုမှုအစီရင်ခံစာအား ဝန်ကြီးဌာနသို့ တင်ပြသည့်နေ့ရက်မှ (၁၀) ရက်အတွင်း အများပြည်သူသိရှိနိုင်ရန် စီမံကိန်း၏ Website (သို့) သင့်တော်သော နည်းလမ်း တစ်ရပ်ရပ် အသုံးပြု၍ အသိပေးထုတ်ဖော် ကြေငြာပါရန်၊	ပုံမှန် အသိပေး ထုတ်ပြန် ကြေငြာ လျက်ရှိပါသည်။
(ဇ)	ECC ရရှိပြီးသော လုပ်ငန်းစီမံကိန်းများအနေဖြင့် ECC အား သက်တမ်းတိုးဆောင်ရွက်ရာတွင် လွယ်ကူချောမွေ့စွာ ဆောင်ရွက်နိုင်ရေး အတွက် စောင့်ကြပ်ကြည့်ရှုမှု ဆန်းစစ်ခြင်းဆိုင်ရာ လုပ်ထုံးလုပ်နည်း (၁၀၈) နှင့်အညီ (၆) လလျှင် (၁) ကြိမ် ရေးဆွဲပြုစု၍ သတ်မှတ်ကာလအတွင်း သတ်မှတ်အရေအတွက် ပြည့်မီအောင် ပုံမှန်အစီရင်ခံစာ တင်ပြပါရန်။	လုပ်ထုံးလုပ်နည်းနှင့်အညီ သတ်မှတ်အရေအတွက် ပြည့်မီအောင် ပုံမှန် အစီရင်ခံ တင်ပြလျက်ရှိပါသည်။



Figure 17: Field Inspection of the Regional ECD (Magway) Team



Figure 18: Planted Trees Growth at GOCS-3 Compound



Figure 19: Environmental Quizzing to Basic Education Students on OGM at 10



Figure 20: Proper Disposal of Expired Frac Sand



Figure 21: Pumping Unit Fencing at M-56 and M-241



Figure 22: Constructed Concrete Pad and Additional Cellar at M-206



Figure 23: Containment of Diesel Storage Tank at Warehouse



Figure 24: Produced Water Pit Repairing at GOCS-4



Figure 25: HSE Awareness Notice Board



Figure 26: Annual HSE Auditing at Mann Field on January 2025



Figure 27: An Environment together with A Pumping Unit and Sunflower Field

8. Monitoring Survey & Activities

Throughout the monitoring period spanning from October 2024 to March 2025, each article provides an extensive account of the monitoring surveys and activities carried out. The following is a summary of the monitoring activities conducted:

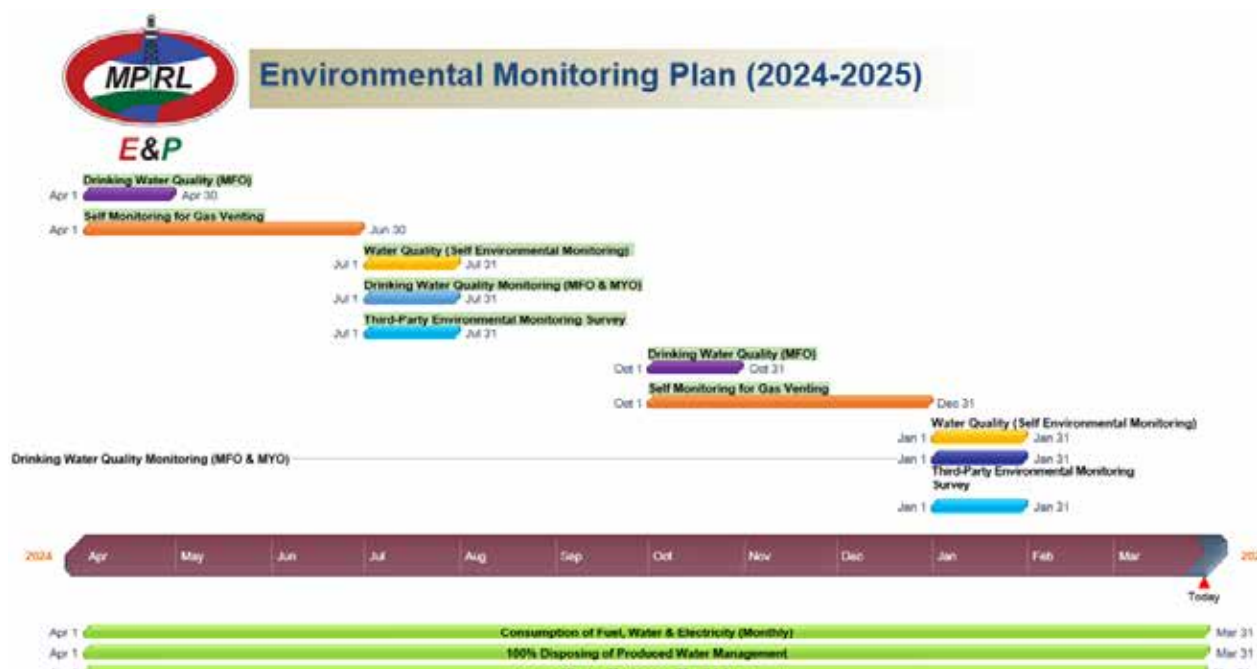


Figure 28: Timeline of Environmental Monitoring Plan (2024-25)

With the regional ECD (Magway) team, we conducted air and noise quality monitoring at Z3AQN and Z4AQN, soil quality monitoring at Z3S1, Z3S2, Z4S1, and Z4S2.

Monitoring activities are conducted as much as possible during these situations, and MPRL E&P remains highly committed to monitoring as an obligation and commitment from the ECC and EIA if the situations permit.

8.1 Ambient Air Quality Monitoring

Ambient air pollutants were sampled and analyzed in accordance with NEQEG guidelines, using the Haz-Scanner EPAS Wireless Environmental Perimeter Air Station. This portable meter records real-time data, including ambient air quality measurements and climatological data. Table 10 and table 11 provide the locations and parameters for air and noise quality monitoring.

Table 10: Ambient Air Quality Monitoring Stations

Monitoring Stations	GPS Coordinate	Sampling Date (Baseline)	Sampling Date (Monitoring)
Z1AQN	20° 19' 39.0" N 94° 49' 18.4" E	8 - 9 May 2015	-
Z2AQN	20° 15' 40.6" N 94° 50' 08.0" E	7 - 8 May 2015	-
Z3AQN	20° 13' 21.5" N 94° 51' 19.6" E	6 - 7 May 2015	22 - 23 January 2025
Z4AQN	20° 11' 41.9" N 94° 52' 32.4" E	6 - 7 May 2015	23 - 24 January 2025

Table 11: Air Quality Monitoring Parameters

Parameters	Unit	Method and Duration
Air Quality		In situ reading for 24 hours
Sulphur Dioxide (SO ₂)	µg/m ³	
Carbon Monoxide (CO)	ppm	
Nitric Oxide (NO)	µg/m ³	
Nitrogen dioxides (NO ₂)	µg/m ³	
Particulate Matter <2.5 µm (PM _{2.5})	µg/m ³	
Particulate Matter <10 µm (PM ₁₀)	µg/m ³	
Meteorological Data		
Relative Humidity (R.H)	%	
Temperature	°C	
Wind Speed	kph	
Wind Direction	-	

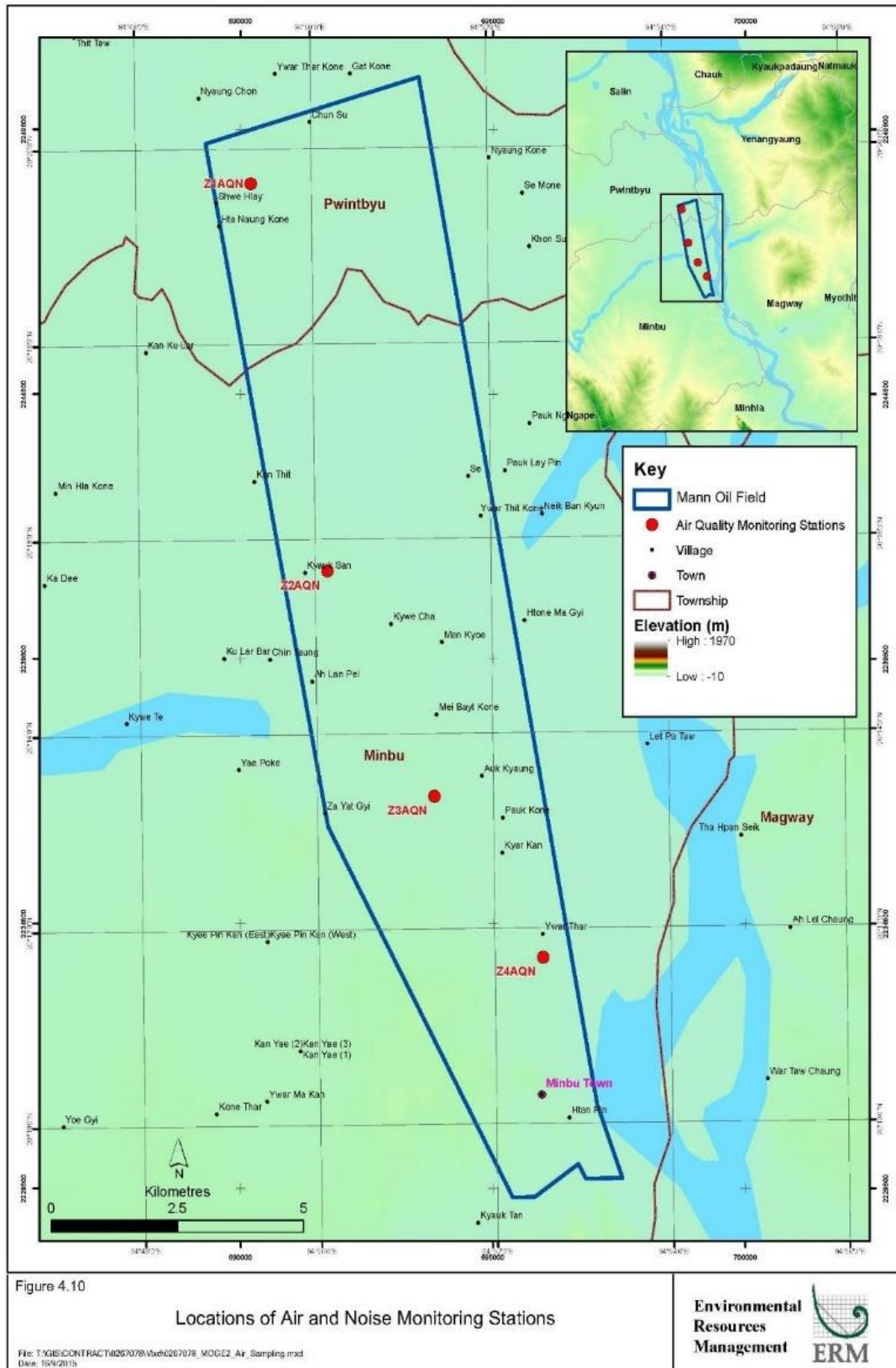


Figure 29: Locations of Air and Noise Monitoring Stations



Figure 30: Air and Noise Quality Monitoring at Z3AQN



Figure 31: Air & Noise Quality Monitoring at Z4AQN

Table 12: Summary of Air Quality Monitoring Results

Parameters	Monitoring Stations (Baseline May 2015)					Monitoring Stations (January 2025)			
	Z1AQN	Z2AQN	Z3AQN	Z4AQN	Z1AQN	Z2AQN	Z3AQN	Z4AQN	
CO (24 - hr)	160.38 µg/m ³	126.02 µg/m ³	57.28 µg/m ³	148.93 µg/m ³	-	-	197.0 µg/m ³	446.0 µg/m ³	
NO ₂ (1 - hr)	188.18 µg/m ³	188.18 µg/m ³	56.45 µg/m ³	169.36 µg/m ³	-	-	5.877 µg/m ³	13.4 µg/m ³	
NO	380.49 µg/m ³	85.92 µg/m ³	<12.27 µg/m ³	171.84 µg/m ³	-	-	46.4 µg/m ³	68.809 µg/m ³	
PM _{2.5} (24 - hr)	40 µg/m ³	30 µg/m ³	20 µg/m ³	30 µg/m ³	-	-	-	-	
PM ₁₀ (24 - hr)	50 µg/m ³	40 µg/m ³	40 µg/m ³	40 µg/m ³	-	-	48.51 µg/m ³	77.28 µg/m ³	
SO ₂ (10 min)	52.36 µg/m ³	78.54 µg/m ³	<26.18 µg/m ³	26.18 µg/m ³	-	-	0.0 µg/m ³	0.0 µg/m ³	
Hydrogen Sulfide (H ₂ S)	-	-	-	-	-	-	0.0 ppb	1.089 ppb	
Ozone (O ₃)	-	-	-	-	-	-	-	-	
Temp (°C)	30.7	29	31.5	27.1	-	-	-	-	
Relative Humidity (%)	61	61	56	55	-	-	52.66	49.84	
Wind Speed (m/s)	0	0.015	0.081	0.85	-	-	-	-	
Wind Direction	-	Southwest	Southeast	Southeast	-	-	-	-	

Assessment Criteria: National Environmental Emission Guideline Value				
	O ₃	NO ₂	PM _{2.5}	SO ₂
24 - hr	-	-	25 µg/m ³	20 µg/m ³
8 - hr	100 µg/m ³	-	-	-
1 - hr	-	200 µg/m ³	-	-
10 - min	-	-	-	500 µg/m ³

Due to security concerns, administrative and operational constraints, Mann Field operations are currently limited to daytime shifts with a limited crew. To optimize the monitoring station's accessibility and ensure reliable power supply and security, we selected Z3AQN and Z4AQN as the location for 24-hour Air and Noise Quality monitoring in collaboration with ECD (Magway) staff.

By Table 12, Summary of Air Quality Monitoring results at both the Z3AQN and Z4AQN during January 2025 indicate that all the parameters are within NEQEG standards except for the PM10 value at Z4AQN. Z4AQN is the point where away from field operations but near the community. The reasons for higher value of PM10 may be many reasons such as combustion of fossil fuels, dust from transportation and access roads, construction works, industrial, agriculture, residential energy use, open burning, etc. The monitoring results are attached and shown in Appendix A.

8.2 Noise Quality Monitoring

Table 13 presents the noise monitoring locations and land use. According to the Noise Quality Monitoring conducted by the regional ECD (Magway) at Z3AQN and Z4AQN, the LAeq value (dBA)a for both daytime and nighttime periods was found to be below the NEQEG limit. The comparison between the January 2025 Noise Quality Monitoring results and the 2015 baseline results is shown in Table 14 and Table 15.

Table 13: Noise Monitoring Stations

Monitoring Stations	GPS Coordinate	Description	Land-use
Z1AQN	20° 19' 39.0" N 94° 49' 18.4" E	Located at south western part of Pauk Su village, Pwint Phyu Township	Residential
Z2AQN	20° 15' 40.6" N 94° 50' 08.0" E	Located at south eastern part of Kyauk San village, near monestary compound	Residential
Z3AQN	20° 13' 21.5" N 94° 51' 19.6" E	In the MPRL E&P office compound, south of staff housing, Minnbu Township	Commercial
Z4AQN	20° 11' 41.9" N 94° 52' 32.4" E	Located at eastern part of Minnbu Township, close to the west bank of Ayeyarwady River	Bare ground

Table 14: Noise Quality Monitoring Results at Z3AQN

Receptor	One-hour LAeq (dBA) ^a			
	2015		January 2025	
	Daytime 07:00 - 22:00 (10:00 - 22:00 for public holidays)	Nighttime 22:00 - 07:00 (22:00 - 10:00 for public holidays)	Daytime 07:00 - 22:00 (10:00 - 22:00 for public holidays)	Nighttime 22:00 - 07:00 (22:00 - 10:00 for public holidays)
Residential, Institutional, educational	55	45	55	45
Industrial, commercial	70	70	70	70
Average Test Result	55	50	67.4	46.3

Table 15: Noise Quality Monitoring Results at Z4AQN

Receptor	One-hour LAeq (dBA) ^a			
	2015		January 2025	
	Daytime 07:00 - 22:00 (10:00 - 22:00 for public holidays)	Nighttime 22:00 - 07:00 (22:00 - 10:00 for public holidays)	Daytime 07:00 - 22:00 (10:00 - 22:00 for public holidays)	Nighttime 22:00 - 07:00 (22:00 - 10:00 for public holidays)
Residential, Institutional, educational	55	45	55	45
Industrial, commercial	70	70	70	70
Average Test Result	49	56	51	37.0

8.3 Soil Quality Monitoring

The baseline soil sampling locations are listed in table 16. The soil quality monitoring results provided by the regional ECD (Magway) indicated that all tested parameters are within the Dutch Standard 2000. The results are provided as shown in Table 17.

Table 16: Baseline soil sampling locations

Sampling Station	Replicate	Coordinates	Description	Baseline Sampling Date	Sampling Date
Z1S	1	20° 19' 45.30" N 94° 49' 13.99" E	at west of Pauk Su village, Pwint Phyu Township	6 - 9 May 2015	
	2	20° 19' 45.38" N 94° 49' 21.05" E	at Pauk Su village, Pwint Phyu Township	6 - 9 May 2015	
Z2S	1	20° 15' 41.70" N 94° 50' 8.41" E	in the paddy field located at the east of Kyauk San village, Minbu Township	6 - 9 May 2015	
	2	20° 15' 40.05" N 94° 50' 10.40" E	at east of Kyauk San village, Minbu Township	6 - 9 May 2015	
Z3S	1	20° 13' 22.04" N 94° 51' 19.59" E	in the compound of MPRL E&P office, Minbu Township	6 - 9 May 2015	22-Jan-25
	2	20° 13' 2.60" N 94° 51' 14.86" E	in the compound of MPRL E&P office, Minbu Township	6 - 9 May 2015	22-Jan-25
Z4S	1	20° 11' 41.31" N 94° 52' 39.20" E	near western bank of Ayeyarwady River, north of Minbu Town	6 - 9 May 2015	22-Jan-25
	2	20° 11' 45.77" N 94° 52' 38.30" E	near western bank of Ayeyarwady River, north of Minbu Town	6 - 9 May 2015	22-Jan-25

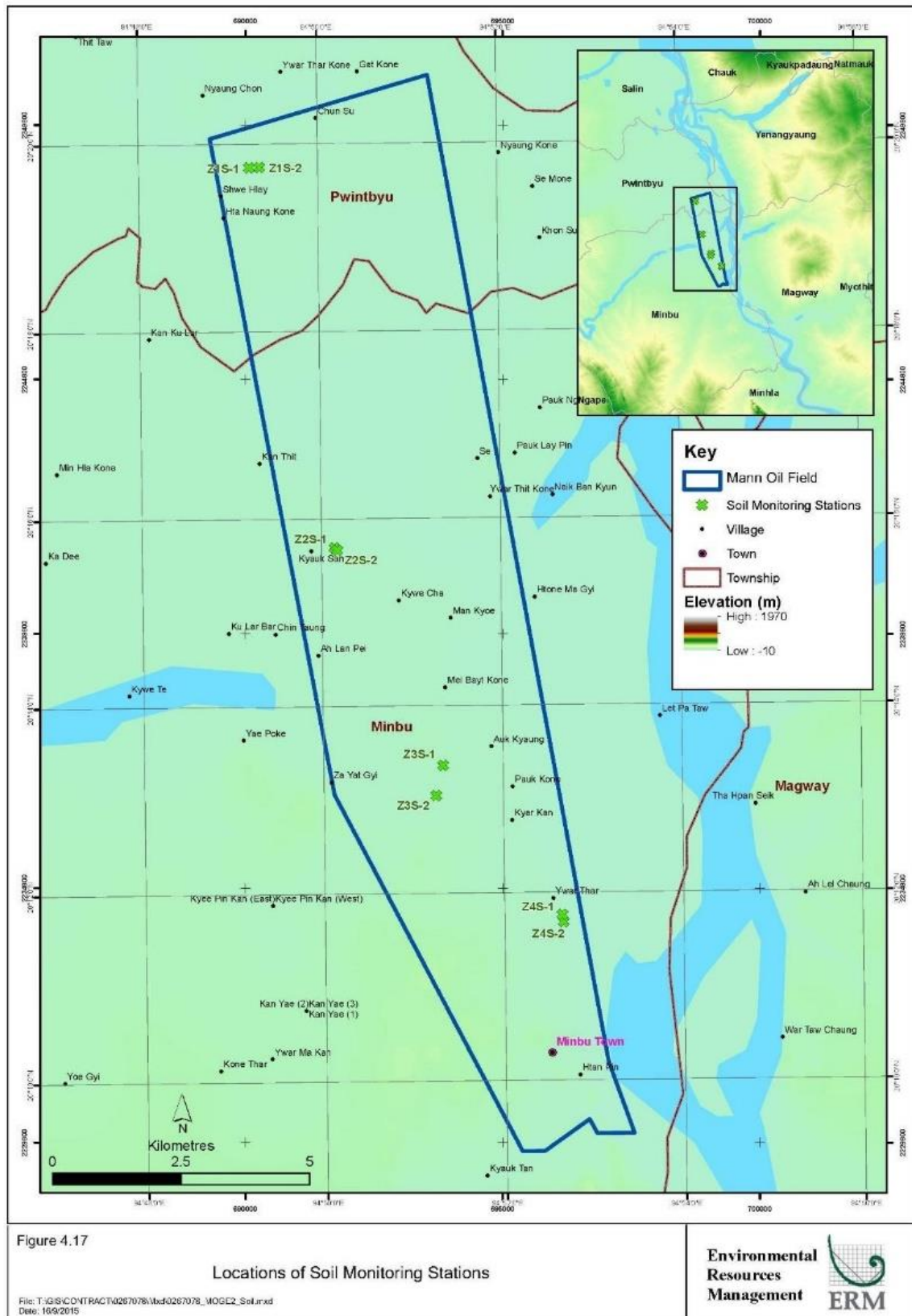


Figure 32: Location of Soil Monitoring



Figure 33: Soil Quality Monitoring at Z3S1, Z3S2, Z4S1, Z4S2

Table 17: Soil Quality Monitoring Results

Parameter	Unit	Baseline Data Sampling Station (May 2015)								Soil Analysis Result (January 2025)								Dutch Standard 2000
		Z1S1	Z1S2	Z2S1	Z2S2	Z3S1	Z3S2	Z4S1	Z4S2	Z1S1	Z1S2	Z2S1	Z2S2	Z3S1	Z3S2	Z4S1	Z4S2	
pH	-	6.8	6.8	6.7	6.7	6.8	6.8	6.9	6.9	-	-	-	-	6.9	6.52	6.73	7.75	-
Arsenic	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	0.005	0.008	0.007	0.004	55
Lead	mg/kg	115	120	135	130	120	124	137	135	-	-	-	-	8.705	17.99	25.47	21.17	530
Cadmium	mg/kg	0.009	0.008	0.009	0.007	0.007	0.007	0.006	0.007	-	-	-	-	1.039	0.563	0.435	0.47	12
Copper	mg/kg	105	99	110	115	90	95	85	88	-	-	-	-	11.11	9.837	27.43	24.39	800
Zinc	mg/kg	75	80	72	69	65	70	75	78	-	-	-	-	19.87	17.52	53.27	43.92	720
Manganese	mg/kg	30	32	38	35	28	25	31	30	-	-	-	-	10.4	10.6	9	5.8	500
Iron	mg/kg	4850	4790	4900	4930	4870	4950	4700	4690	-	-	-	-	17.8	11.6	15.5	6.8	-
Soil Texture	-	Silty clay	Silty clay	Silty Sand	Silty Sand	Silty Sand	Silty Sand	Sandy silt with minor clay	Sandy silt with minor clay	-	-	-	-	-	-	-	-	-
Soil Color	-	Grey	Grey	Yellowish Brown	Yellowish Brown	Yellowish Brown	Yellowish Brown	Yellowish Grey	Yellowish Grey	-	-	-	-	-	-	-	-	-

8.4 Surface Water Quality Monitoring

The surface water quality monitoring within the Project Area was carried out at two locations in January 2025. Details of the sampling locations were presented in Table 18.

Table 18: Surface Water Quality Monitoring Locations

Sampling Locations	Coordinate	Description	Sampling Date (Monitoring)
Z3SW1	20° 14' 46.51" N 94° 51' 0.27" E	Mann Chaung, near Kywegya village	23 January 2025
Z3SW2	20° 14' 45.74" N 94° 51' 1.87" E	Mann Chaung, about 50 m downstream of Z3SW1	23 January 2025
Z4SW1	20° 11' 41.31" N 94° 52' 41.11" E	Near west bank of Ayeyarwady river, Minbu Township	23 January 2025
Z4SW2	20° 11' 38.80" N 94° 52' 42.50" E	Ayeyarwady river, about 90 m downstream of Z4SW1	23 January 2025

By the collected water samples measuring results, all are under NEQEG (2015) standards except for the total suspended solids parameter. The reasons of exceeding guideline values may be from agriculture, mining and quarrying, deforestation, industrial discharges, etc.

The monitoring results of surface water in January 2025 as shown in Table 19.

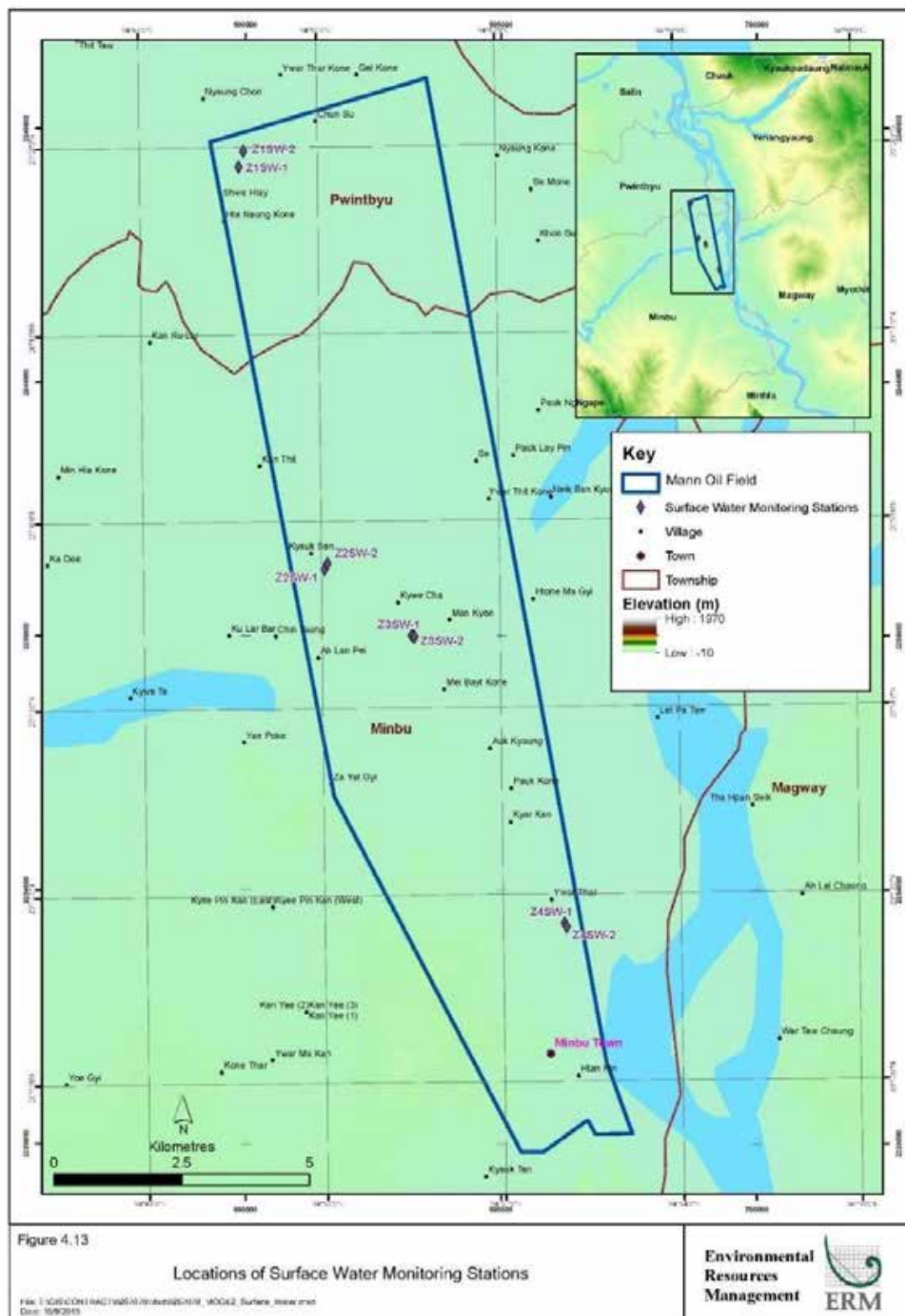


Figure 34: Locations of Surface Water Quality Monitoring



Figure 35: Surface Water Quality Monitoring at Z3SW1, Z3SW2, Z4SW1, and Z4SW2

Table 19: Surface Water Quality Monitoring Results

Item/ Sample Name	2015				2025 (January)				Vietnam Standard	NEQEG Standard
	Z3SW1	Z3SW2	Z4SW1	Z4SW2	Z3SW1	Z3SW2	Z4SW1	Z4SW2		
Date/ Time	6/5/15 (12:08)	6/5/15 (12:08)	6/5/15 (12:08)	6/5/15 (12:08)	23/1/25 (10:20)	23/1/25 (10:35)	23/1/25 (14:35)	23/1/25 (14:20)		
Weather	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	-	-
Transparency	High	High	Medium	Medium	-	-	-	-	-	-
Temperature Water (C)	37.66	37.62	31.55	31.18	25.0	25.0	25.0	25.0	-	-
pH	8.1	8.11	7.73	7.65	7.6	7.5	7.3	7.3	5.5-9	6-9
DO (mg/l)	11.33	11.52	7.12	7.15	6.2	6.6	6.0	6.2	≥2	-
EC (µs)	711.8	705.7	153	152.5	410	406	216	226	-	-
Turbidity (FNU)	7.1	7	25	43.7	50	55	225	170	-	-
Colour	5	10	45	55	25	40	110	90	-	-
Alkalinity	238	237	58	58	176	192	96	48	-	-
Hardness	144	150	58	50	138	142	72	80	-	-
BOD5 (mg/l)	10	10	14	16	4.2	3.8	3.9	3.6	<25	30
COD (mg/l)	32	32	32	32	64	32	64	64	<35	125
Total Nitrogen (mg/l)	3	9	19	18	0.82	0.84	0.85	0.58	15	10
Total Phosphorous (mg/l)	0.047	0.051	0.071	0.031	0.98	1.41	1.62	1.56	-	2.0
Oil and grease (mg/l)	5	7	<1	<1	4	4	5	5	0.3	10
TSS (mg/l)	7	13	124	138	66	61	279	192	80	50
E.Coli (CFU/100ml)	-	-	-	-	0	0	0	0		
Arsenic (mg/l)	-	-	-	-	0	0	0	0		
Barium (mg/l)	-	-	-	-	-	-	-	-		
Boron (mg/l)	-	-	-	-	0.23	0.24	0.26	0.21		
Total Chromium (mg/l)	-	-	-	-	-	-	-	-		
Fluoride (mg/l)	-	-	-	-	0	0	0	0		
Selenium (mg/l)	-	-	-	-	-	-	-	-		
Uranium (mg/l)	-	-	-	-	-	-	-	-		

8.5 Groundwater Quality Monitoring

The groundwater quality monitoring was conducted at three existing residential wells (dug wells and drilled/ tube wells) in the Project Area. The sampling locations are presented in Table 20.

Table 20: Groundwater Quality Monitoring Locations

Sampling Locations	Coordinate	Description	Sampling Date (Monitoring)
Z3GW1	20° 15' 5.35" N 94° 50' 54.52" E	Tube well in Kywegya village, Minbu Township	23 January 2025
Z3GW2	20° 15' 6.44" N 94° 50' 53.77" E	Tube well in Kywegya village, Minbu Township	23 January 2025
Z4GW1	20° 11' 37.92" N 94° 52' 29.67" E	Well in Shwe War Gone Ward, Minbu Township	-
Z4GW2	20° 11' 29.50" N 94° 52' 27.85" E	Well in Shwe War Gone Ward, Minbu Township	23 January 2025

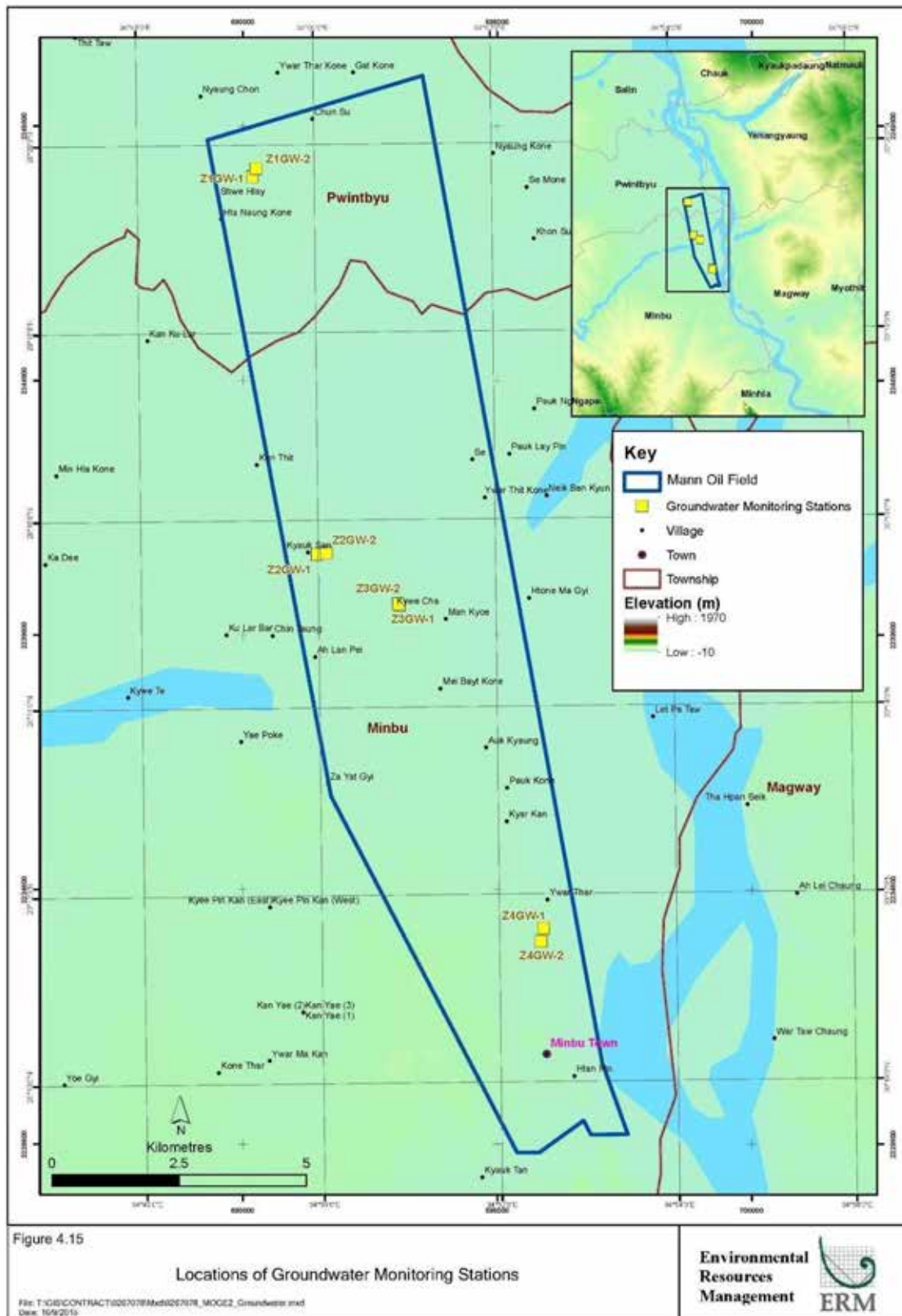


Figure 36: Groundwater Quality Monitoring Locations



Figure 37: Groundwater Sampling at Z3GW1, Z3GW2, and Z4GW2

The results of groundwater quality monitoring are summarized in Table 21.

Table 21: Result Summary of Groundwater Quality Monitoring

Item/ Sample Name	2015						2025 (January)				WHO Drinking Water Quality Standard (2011)
	Z3GW1	Z3GW2	Z4GW1	Z4GW2	Z3GW1	Z3GW2	Z3GW1	Z3GW2	Z4GW1	Z4GW2	
Date/ Time	6/5/15 (11:04)	6/5/15 (11:30)	6/5/15 (14:32)	6/5/15 (14:58)	23/1/25 (10:10)	23/1/25 (09:40)	-	23/1/25 (14:50)	-	-	-
Weather	Sunny	Sunny	Sunny	Sunny	Sunny	Sunny	-	Sunny	-	Sunny	-
Transparency	High	High	High	High	-	-	-	-	-	-	-
Temperature Water (C)	36.12	37.57	31.77	31.67	25.0	25.0	-	25.0	-	25.0	-
pH	6.68	6.63	6.95	7.2	7.4	7.3	-	7.8	-	7.8	6.5-8.5
DO (mg/l)	2.9	2.29	1.44	3.41	6	6.2	-	6.2	-	6.2	-
EC (µs)	1498.3	1198.7	5060.4	7740.8	1710	1144	-	13040	-	13040	-
Turbidity (FNU)	4.9	4.6	0.5	1	79	14	-	7	-	7	-
Colour	5	10	Nil	Nil	60	5	-	0	-	0	-
Alkalinity	354	279	462	624	248	372	-	890	-	890	-
Hardness	246	222	539	639	108	292	-	1200	-	1200	-
BOD ₅ (mg/l)	10	14	8	10	3.2	3.4	-	3.1	-	3.1	3
COD (mg/l)	32	32	32	32	64	64	-	96	-	96	250
Total Nitrogen (mg/l)	4	73	4	63	0.51	0.68	-	0.85	-	0.85	-
Total Phosphorous (mg/l)	0.239	0.168	0.251	0.042	0.54	0.36	-	0.62	-	0.62	-
Oil and grease (mg/l)	<1	<1	<1	<1	3	3	-	3	-	3	10
TSS (mg/l)	<5	<5	5	<5	80	23	-	14	-	14	-
E.Coli (CFU/100 ml)	-	-	-	-	0	0	-	0	-	0	0
Arsenic (mg/l)	-	-	-	-	0	0	-	0	-	0	0.05
Barium (mg/l)	-	-	-	-	-	-	-	-	-	-	0.7
Boron (mg/l)	-	-	-	-	0.24	0.25	-	0.21	-	0.21	2.4
Total Chromium (mg/l)	-	-	-	-	-	-	-	-	-	-	0.05
Fluoride (mg/l)	-	-	-	-	0	0	-	0	-	0	1.5
Selenium (mg/l)	-	-	-	-	-	-	-	-	-	-	0.04
Uranium (mg/l)	-	-	-	-	-	-	-	-	-	-	0.03

8.6 Monitoring on Sludge Management Status

The Mann Field produces around 1800 BBL of produced water per day, which typically contains a mixture of inorganic compounds (such as dissolved salts, trace metals, suspended particles) and organic compounds (such as dispersed and dissolved hydrocarbons and organic acids). As a result of these compounds, produced water generates sludge. Improper discharge of this sludge can have potential impacts on the receiving environment, including soil, surface water, and groundwater, as well as community health, terrestrial, and aquatic ecological resources.

Dried sludge, weighing approximately 162 tons (estimated weight), is currently being stored temporarily at the Waste Management Compound and at the Sludge Management Compound (extended dried sludge storage shed).



Figure 38: Sludge Management Compound (SMC)

Currently, all the collected wet sludge is being stored properly in two concrete pits to ensure compliance with the NEQEG guideline levels for Onshore Oil and Gas Development. Any hazardous waste will be disposed of according to the commitments made in the ECC.

8.7 Monitoring on Produced Water Management Status

MPRL E&P to minimize environmental impact to Zero Discharge in produced water management. The team recording milestones on achievements of Zero Discharge on produced water management was implemented on 24 August 2017.

MPRL E&P is undertaking to inject all produced water (100%) into the shut-in wells by using 9 units of injection pumps to meet guideline levels in NEQEG for Onshore Oil and Gas Development.



Figure 39: Produced Water Injection into Shut-in Wells

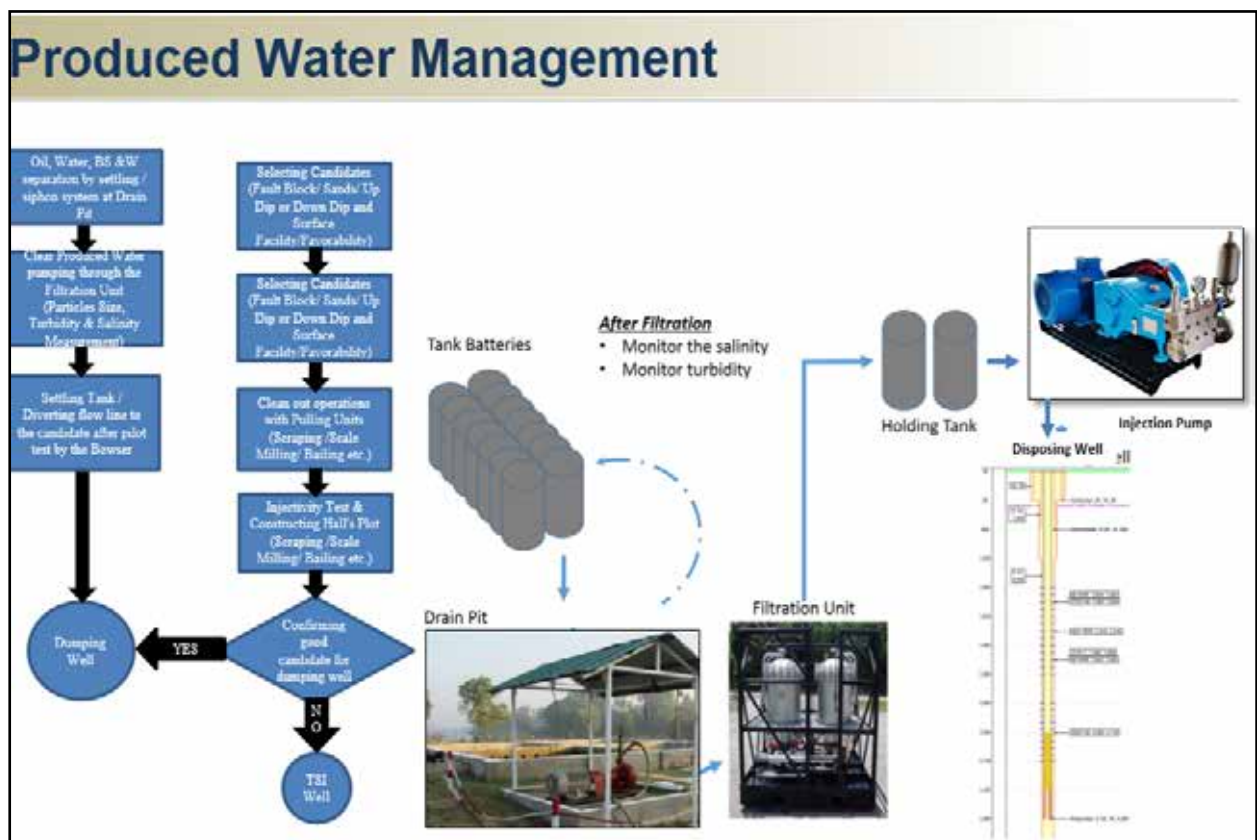


Figure 40: Produced Water Management Process

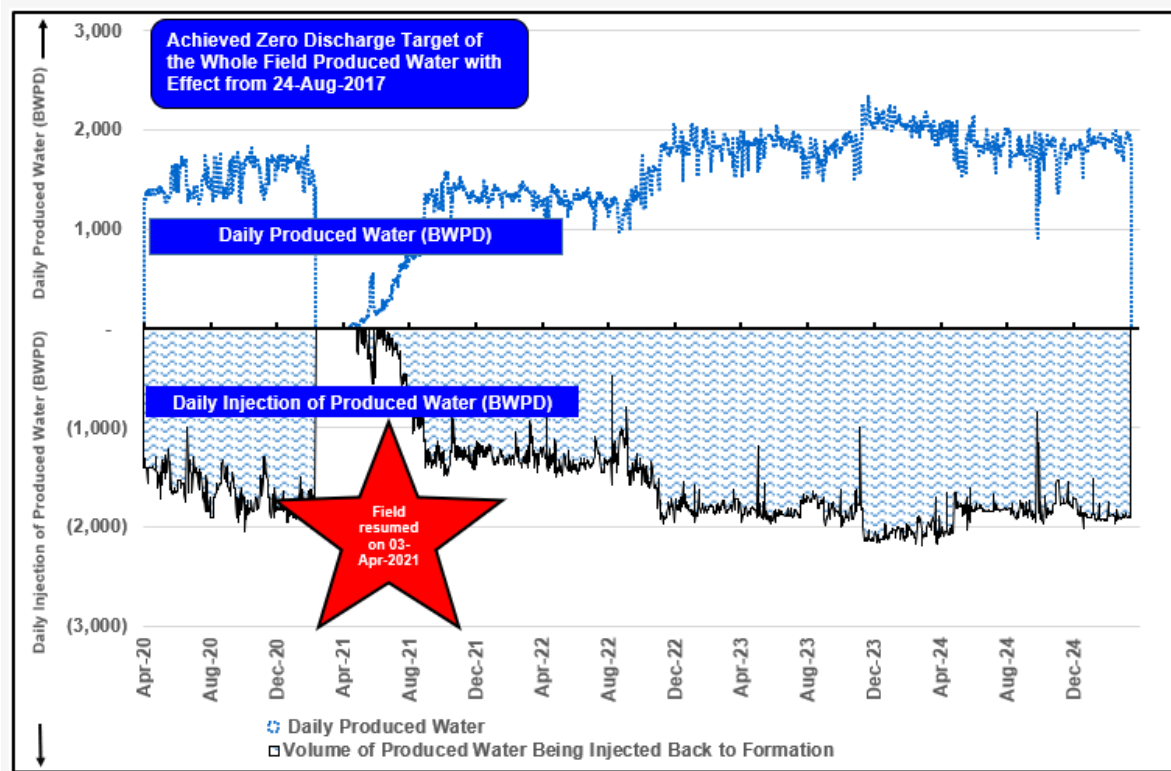


Figure 41: Produced Water Management

According to Table 8 in this report, as per Table 8.3 Environmental and Social Monitoring Program of the approved EIA report, it is committed to testing the wastewaters from the discharged points. However, all the produced water from the GOCS is being disposed of back into the formation and thus there is no discharge to the environment. Again, there is no discharge from the hydro test activities and also from shut-in wells.

Therefore, wastewater monitoring will be continued with the parameters committed in Table 8.3 of the approved EIA report on the treated discharged water of the base camp.

8.8 Monitoring on Discharge of Treated Wastewater and Runoff

MPRL E&P conducted self-monitoring activities to access the quality of discharged water from various sources, including domestic wastewater treated from Bio-filter water, hydro test water from warehouse, drinking water quality, domestic wastewater quality from Down-hole and Mechanical Workshop Zero Discharged Tank, and groundwater quality near the injection well. The monitoring was conducted according to the planned schedule.

8.8.1 Base Camp Water Discharge

Domestic-type wastewater and sewage are managed in the existing operational phase. Based on the camp water consumption monitoring results, approximately 8,000 liters of sewage and wastewater are generated per day from the base camp within the Mann Field, which can accommodate 60 – 80 workers.

Water consumption is monitored using water flow meters installed at the base camp, workshop, warehouse, and down-hole workshop. The team is also aware of the water consumption to minimize its volume.

Regular safety meetings and toolbox talks are held to raise awareness about water conservation, energy conservation, and water pollution among all crew members. Additionally, inspections are conducted to ensure that there are no leaks or wastage of water from pipelines and basins during routine camp inspections.



Figure 42: Regular Maintenance of Bio-filter by Third-party

Sanitary and domestic wastewater are managed in accordance with the mitigation plan. The following measures are in place:

- Sanitary wastewater is collected in septic holding tanks in the main camp, which are periodically serviced by a licensed firm. Currently, the wastewater is collected in a concrete pit, with no discharge outside.
- MPRL E&P has installed the wastewater treatment unit to treat sanitary wastewater in accordance with NEQEG guidelines. The field team monitors the discharge water parameters on a quarterly basis.
- Storm water run-off is directed to a pond to remove silt particles before being discharge via a storm drain.
- Surface runoff from potential sources of contamination is prevented.
- All discharge facilities and sediment control structures are regularly inspected and maintained to ensure proper and efficient operation, particularly during rainstorms. Deposited silt and grit are removed regularly.
- Runoff from areas without potential sources of contamination is minimized by reducing the area of impermeable surfaces and using vegetated swales and retention ponds to reduce the peak discharge rate.
- Oil-water separators and grease traps are constructed and maintained as appropriate at refueling facilities, workshops, parking areas, fuel storage, and containment areas.
- The location of the discharge point for treated sewage effluent into surface water is not confirmed based on the existing project design, but it will be located where there is adequate assimilative capacity of the surface waters.

8.8.2 Monitoring of Sewage Treatment System Water Quality

At Base Camp, we treated sewage discharge water using a bio-filter and collected it in a concrete tank. This water is now repurposed for watering the plants and controlling dust by spraying it on the ground.

During the month of January 2025, we collected water samples from the bio-filter treated system and sent them to ALARM and ISO Tech lab for testing. We monitored a total of eleven parameters and discovered that the results are under the NEQEG guideline.

The monitoring results are presented in Table - 22: Bio-filter outlet water quality monitoring (Sewage Treatment System).

Table 22: Bio-filter Outlet Water Quality Monitoring (Sewage Treatment System)

No	Quality Parameter	Units	Results (Jul 2023)	Results (Jan 2024)	Results (Jul 2024)	Results (Jan 2025)	NEQEG (2015)
1	BOD ₅	mg/l	62	12	32	33	50
2	COD	mg/l	107	21	56	128	250
3	Oil and Grease	mg/l	7	6	5	4	10
4	pH	S. U	7.7	7.5	7.6	7.4	6-9
5	Total Coliform Bacteria	MPN/100ml	>1100	>1100	80	40	400
6	Total Nitrogen	mg/l	2.4	3.2	3	2.6	-
7	Total Phosphorous	mg/l	3.2	1.4	<0.3	0.52	2
8	Total Suspended Solids (TSS)	mg/l	9	8	3	49	50
9	Turbidity	FNU	-	<5	8	60	-
10	Electrical Conductivity	µs	-	0.9	0.957	964	-
11	Dissolved Oxygen	mg/l	-	4.07	2.82	3	-

8.8.3 Hydro-test Water and Domestic Water

At the Mann field warehouse, the team previously conducted hydro tests on tubing in a designated pressure test area. However, the field team has since minimized water usage by implementing a recycling system that uses zero discharge recycled water for these tests.



Figure 43: Warehouse Tubular Section

8.8.4 Monitoring of Discharge Water from Warehouse (Tubular Section)



Figure 44: Warehouse Zero Discharge Tank and Drain line

- The hydro-test water monitoring schedule was carried out during the month of January 2025. The monitoring results revealed that all parameters complied with the NEQEG guidelines except for BOD5 value and Total Suspended Solid value. BOD5 value exceeding may be many reasons such as using of organic additives in hydrotesting, residual contaminants, source of water quality, etc. Total suspended solid value may high due to rust, scale, metal oxides, or sediment from aging pipelines, introducing particulate matter into the wastewater.

The monitoring results are presented in Table – 23: Monitoring of Discharge Water from Warehouse (Tubular Section).

Table 23: Discharge Water from Warehouse (Tubular Section)

No	Quality Parameter	Units	Results (Jul 2023)	Results (Jan 2024)	Results (Jul 2024)	Results (Jan 2025)	NEQEG (2015)
1	BOD ₅	mg/l	64	13	21	36	25
2	Arsenic	mg/l	0.005	0.005	0.01	0	-
3	Cadmium	mg/l	0.01	ND	ND	<0.01	-
4	COD	mg/l	110	20	32	96	125
5	Chromium (Hexavalent)	mg/l	0.109	<0.02	<0.02	0.155	-
6	Copper	mg/l	ND	ND	ND	0	-
7	TSS	mg/l	33	22	35	240	35
8	Chloride	mg/l	141	15	20.32	140	600
9	Lead	mg/l	ND	0.15	ND	<0.1	-
10	Mercury	mg/l	-	0.006	0.006	0.001	-
11	Nickel	mg/l	ND	ND	0.2	0.34	-
12	pH	S. U	7.2	7.5	7.7	7.3	6-9
13	Phenols	mg/l	<0.1	<0.1	<0.1	<0.1	0.5
14	Silver	mg/l	≤0.002	-	-	-	-
15	Sulfide	mg/l	<0.04	0.04	0.04	0.24	1
16	Zinc	mg/l	<0.02	<0.02	<0.02	0	-
17	Vanadium	mg/l	≤0.002	-	-	-	-

Down-hole Workshop: Down-hole tools servicing, cleaning, inspection, pressure testing and the cleaning process with steam are carried out in the Down-hole Workshop. The used water is disposed of at the zero discharge pits to preserve the environment.

8.8.5 Monitoring of Discharge Water from Down-Hole Workshop

During the monitoring period from October 2024 to March 2025, water quality monitoring was conducted for the discharge of water from the equipment maintenance workshop (Down-hole Workshop) into the ZERO Discharge Tank. In January 2025, we monitored a total of twenty-nine parameters, and all of them complied with the NEQEG, except for mercury and total suspended solids. The types of activities conducted in the workshop can have a significant impact on water quality. Reasons for high mercury value may be by the industrial processes and contaminated equipment etc. Total suspended solids value may be high due to particles from equipment cleaning, poor filtration or settling efficiency, dirt or dust from workshop operations, corrosion and wear of metal parts, etc.



Figure 45: Down-hole Workshop

The water used in the daily operation of the down-hole workshop was collected in a concrete tank via a drain line and reused for recycling, thus avoiding discharge to the environment.

The monitoring results are described in the following Table – 24: Discharge Water from Equipment Maintenance Workshop (Down-hole Workshop).

Table 24: Discharge Water from Down-hole Workshop

No	Quality Parameter	Units	Results (Jul 2023)	Results (Jan 2024)	Results (Jul 2024)	Results (Jan 2025)	NEQEG (2015)
1	BOD ₅	mg/l	112	14	37	24	50
2	Ammonia	mg/l	36	0.2	3	1.86	10
3	Arsenic	mg/l	0.005	0.01	0.01	0	0.1
4	Cadmium	mg/l	ND	ND	ND	ND	0.1
5	COD	mg/l	180	25	65	64	250
6	Chlorine (Total Residual)	mg/l	<0.02	<0.02	<0.02	Nil	0.2
7	Chromium (Hexavalent)	mg/l	0.1	<0.02	<0.02	0.02	0.1
8	Chromium (Total)	mg/l	≤0.002	-	-	-	0.5
9	Copper	mg/l	ND	ND	ND	Nil	0.5
10	Cyanide (Free)	mg/l	<0.002	<0.01	<0.01	0.054	0.1
11	Cyanide (Total)	mg/l	0.002	-	-	-	1

No	Quality Parameter	Units	Results (Jul 2023)	Results (Jan 2024)	Results (Jul 2024)	Results (Jan 2025)	NEQEG (2015)
12	Fluoride	mg/l	0	0	0	0.8	20
13	Heavy Metals (Total)	mg/l	-	-	-	-	10
14	Iron	mg/l	0.46	0.35	0.36	0.35	3.5
15	Lead	mg/l	ND	0.2	ND	ND	0.1
16	Mercury	mg/l	-	0.006	0.002	0.04	0.01
17	Nickel	mg/l	ND	ND	ND	ND	0.5
18	Oil and Grease	mg/l	21	7	8	8	10
19	pH	S. U	7.5	7.5	7.6	7.4	6-9
20	Phenols	mg/l	<0.1	0.1	<0.1	<0.1	0.5
21	Selenium	mg/l	≤0.010	-	-	-	0.1
22	Silver	mg/l	≤0.002	-	-	-	0.5
23	Sulfide	mg/l	<0.04	<0.04	<0.04	0.313	1
24	Temperature increase	mg/l	26.8	25	26.2	25	<3
25	Total coliform bacteria	MPN/100 ml	>1100	>1100	40	16	400
26	Total Phosphorous	mg/l	0.8	1.1	2.6	1.92	2
27	Total Suspended Solids	mg/l	26	35	156	147	50
28	Zinc	mg/l	0.03	<0.02	<0.02	Nil	2
29	Vanadium	mg/l	≤0.002	-	-	-	-

Mechanical Workshop: pulling units, workover rigs, trucks, bulldozers, backhoes, tractors and pumps are serviced in the workshop, and large amounts of water are used in car washes and general cleaning. Water reclamation systems are employed in the workshop.

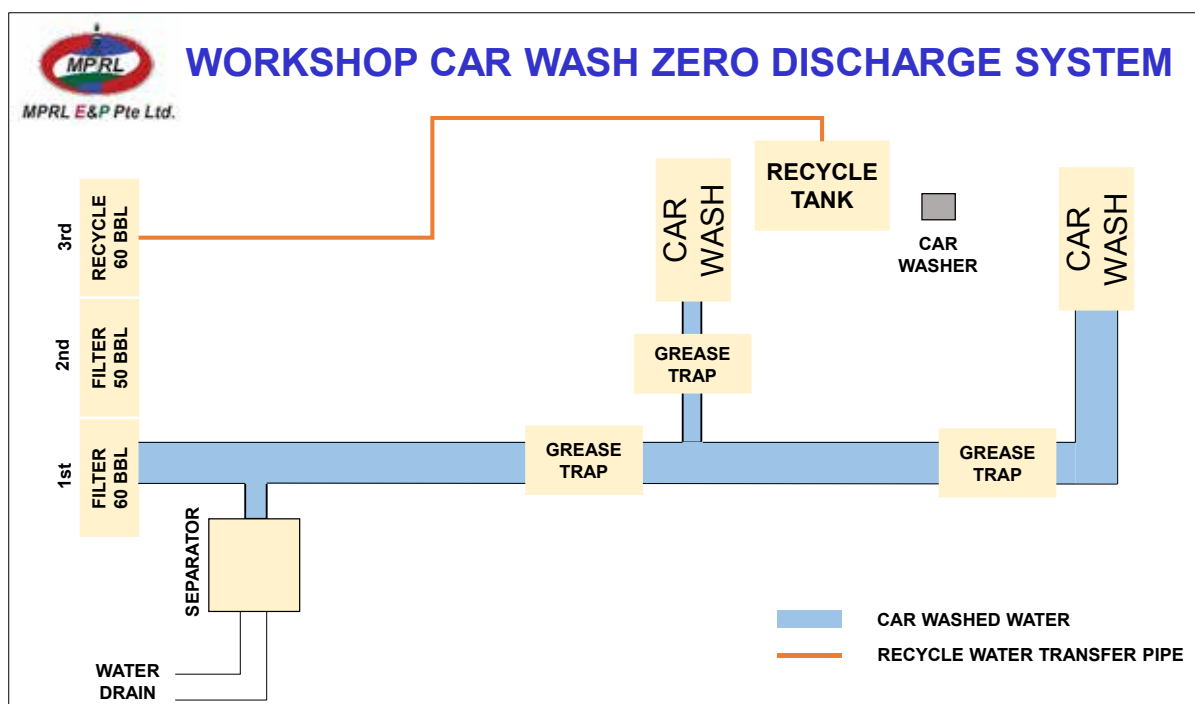


Figure 46: Recycle Water Usage System with Zero Discharge at Mechanical Workshop

8.8.6 Monitoring of Discharge Water from Mechanical Workshop

Vehicles and machine parts undergo maintenance and repair work at the mechanical workshop, and the water used in the workshop's daily operation is collected in a concrete tank and reused.

Monitoring for the domestic water quality from the equipment maintenance workshop (Mechanical Workshop) of the Zero Discharge Tank was conducted in January 2025. A total of 29 parameters were monitored, and among them, mercury and total suspended solids only exceeded the guideline values a little.

Reasons for high mercury value may be by the industrial processes and contaminated equipment etc. Total suspended solids value may be high due to particles from equipment cleaning, poor filtration or settling efficiency, dirt or dust from workshop operations, corrosion and wear of metal parts, etc.

The tested results of the monitoring are presented in Table – 25: Discharge water from Equipment Maintenance Workshop (Mechanical Workshop).

Table 25: Discharge Water from Mechanical Workshop

No	Quality Parameter	Units	Results (Jul 2023)	Results (Jan 2024)	Results (Jul 2024)	Results (Jan 2025)	NEQEG (2015)
1	BOD ₅	mg/l	43	26	28	32	50
2	Ammonia	mg/l	14	0.2	0.3	0.54	10

No	Quality Parameter	Units	Results (Jul 2023)	Results (Jan 2024)	Results (Jul 2024)	Results (Jan 2025)	NEQEG (2015)
3	Arsenic	mg/l	0.005	0.005	0.005	Nil	0.1
4	Cadmium	mg/l	ND	0.01	ND	ND	0.1
5	COD	mg/l	96	34	53	64	250
6	Chlorine (Total Residual)	mg/l	<0.02	<0.02	<0.02	Nil	0.2
7	Chromium (Hexavalent)	mg/l	0.08	<0.02	<0.02	0.08	0.1
8	Chromium (Total)	mg/l	≤0.002	-	-	-	0.5
9	Copper	mg/l	0.03	ND	ND	Nil	0.5
10	Cyanide (Free)	mg/l	<0.002	<0.01	<0.01	0.039	0.1
11	Cyanide (Total)	mg/l	0.008	-	-	-	1
12	Fluoride	mg/l	0	0	0	0.4	20
13	Heavy Metals (Total)	mg/l	-	-	-	-	10
14	Iron	mg/l	0.31	0.32	0.32	0.32	3.5
15	Lead	mg/l	ND	0.12	0.15	ND	0.1
16	Mercury	mg/l	-	0.006	0.001	0.05	0.01
17	Nickel	mg/l	ND	ND	ND	0.31	0.5
18	Oil and Grease	mg/l	8	6	6	6	10
19	pH	S. U	7	7.7	8.3	7.6	6-9
20	Phenols	mg/l	<0.1	<0.1	<0.1	<0.1	0.5
21	Selenium	mg/l	≤0.010	-	-	-	0.1
22	Silver	mg/l	≤0.002	-	-	-	0.5
23	Sulfide	mg/l	<0.04	<0.04	<0.04	0.303	1
24	Temperature increase	mg/l	26.8	24.9	25	25	<3
25	Total coliform bacteria	MPN/100 ml	>1100	460	30	12	400
26	Total Phosphorous	mg/l	1.2	1.6	0.2	1.82	2
27	Total Suspended Solids	mg/l	3	<0.02	28	60	50
28	Zinc	mg/l	0.02	<0.02	<0.02	Nil	2
29	Vanadium	mg/l	≤0.002	-	-	-	-

8.9 Use of Chemicals for EOR

During the EOR operation, chemicals will be injected into the wells to alter the property of oil for enhanced recovery in the EIA report. The chemicals that may be used for the Project included alkaline and polymers. The injection of chemicals into the well may cause groundwater contamination and indirectly affecting community health.

In Mann Field, MPRL E&P applied the GreenZyme® to inject to the formation that does not expose nor discharge to the environment. There is no environmental issue since the injection project had been conducted according to the standard operating procedure by protecting not to spill to the environment. According to the work program, MPRL E&P did not conduct the GreenZyme® treatment operation during this fiscal year 2024-25 and observing the result of previous year GreenZyme® treatment wells' result.

GreenZyme® is a biological liquid enzyme which is a kind of environmentally friendly fluid. It is a protein-based non-living catalyst, which facilitates the completion of biological reactions, to enhance crude oil recovery from most oil wells, both onshore and offshore. EOR GreenZyme® is produced by a proprietary process, which involves impregnating a high protein nutrient soup, with the DNA of selectively cultured microbes. The final product contains enzymes associated with the oil-eating microbe's DNA. Nearly all-living microbes are made inert at the end of the manufacturing process.

8.10 Monitoring of Camp Water Quality (Drinking Water Quality)



Figure 47: Collection of Drinking Water Sample from RO Drinking Water System

Access to safe drinking water is crucial for everyone's wellbeing, which is why a Reverse Osmosis (RO) drinking water system has been installed in the base camp. This system ensures that there is sufficient purified water available for staff members to use for drinking water and food preparation. To maintain the quality of water, the team conducts quarterly water quality monitoring, and the site doctor and HSE team perform hygiene inspections and audits according to the planned schedule. Regular service and maintenance are also scheduled and implemented to ensure that the RO system continues to function properly.

Monitoring Results of Drinking Water Quality

In January 2025, the drinking water quality of Mann Field Base Camp was tested at ALARM and ISO Tech labs. The results indicate that all parameters were below the Drinking Water Quality Standard (DWQS) 2019 and confirm that the water is safe to drink. However, taste and odor parameters were not available in the lab.

The results of the purified drinking water quality from RO system are described in Table 26: Drinking Water Quality Monitoring from MPRL E&P Base Camp (RO Outlet).

Table 26: Drinking Water Quality Monitoring from MPRL E&P Base Camp (RO Outlet)

No	Quality Parameter	Units	Results (Jul 2023)	Results (Jan 2024)	Results (Jul 2024)	Results (Jan 2025)	DWQS (2019)
1	pH	S. U	7.3	8.2	7	7.1	6.5-8.5
2	Turbidity	NTU	<5	<5	<5	1	5
3	Colour	TCU	0	1	0	Nil	15
4	Hardness	mg/l as CaCO ₃	6	41.77	12.8	2	500
5	Arsenic	mg/l	0.005	0.005	0	Nil	0.05
6	Chloride	mg/l	44	5	32	12	250
7	Lead	mg/l	ND	ND	ND	ND	0.01
8	Total Dissolved Solids (TDS)	mg/l	17	10	3	16	1000
9	Iron	mg/l	0.21	0.05	0.12	0.07	1
10	Sulphate	mg/l	6.5	<2	19.4	Nil	250
11	Manganese	mg/l	0.1	0.3	<0.2	0.02	0.4
12	Nitrate	mg/l	≤0.067	<0.5	0.25	0.4	50
13	Total Coliform Count	MPN/100ml	0	0	0	0	0
14	Total Fecal Coliform Count	MPN/100ml	0	0	0	0	0
15	Odor	Acceptable	1	NA	NA	-	-

8.11 Monitoring of Ground Water Quality Near the Injection Well

MPRL E&P did not perform the chemical flooding or injection processes on the wells, but instead initiated the enhanced oil recovery project by injecting produced water into the shut-in wells using injection pumps to maintain reservoir pressure.

As part of the Environmental monitoring plan, groundwater near the injection well was monitored bi-annually to assess any contamination or impact on the groundwater. There were two tube wells near shut-in well 132, named Ko Win Maung and Ma Nyein wells. The monitoring was conducted according to our self-monitoring plan, and the samples were tested at ALARM lab in January 2025. However, taste and odor parameters could not be tested due to the unavailability of labs. The monitoring results are presented in Tables 27 and 28.

Table 27: Groundwater Quality Monitoring near Injection Well 132 (Ko Win Maung)

No	Quality Parameter	Units	Results (Jul 2023)	Results (Jan 2024)	Results (Jul 2024)	Results (Jan 2025)	DWQS (2019)
1	pH	S. U	7.4	7.3	NA	7.3	6.5-8.5
2	Turbidity	FAU/NTU	<5	<5	NA	9	5
3	Colour	HU	42	1	NA	5	15
4	Hardness	mg/l as CaCO ₃	210	42.53	NA	204	500
5	TDS	mg/l	1320	910	NA	683	≤1000
6	Chloride	mg/l	141	43	NA	35	250
7	Total Coliforms	MPN/100ml	>1100	9	NA	5	0
8	Total Faecal Coliforms	MPN/100ml	93	0	NA	0	0
9	Arsenic	mg/l	0.005	0.005	NA	Nil	0.05
10	Iron	mg/l	0.36	0.31	NA	0.48	1
11	Lead	mg/l	ND	ND	NA	ND	0.01
12	Manganese	mg/l	0.5	1.8	NA	0.35	0.4
13	Sulfate	mg/l	837	449	NA	102	250
14	Nitrate	mg/l	0.493	2.1	NA	0.3	50
15	Odor	Acceptable	1	NA	NA	-	-

Table 28: Groundwater Quality Monitoring near Injection Well 132 (Ma Nyein)

No	Quality Parameter	Units	Results (Jul 2023)	Results (Jan 2024)	Results (Jul 2024)	Results (Jan 2025)	DWQS (2019)
1	pH	S. U	7.4	8	7.7	7.4	6.5-8.5
2	Turbidity	FAU/NTU	<5	<5	<5	12	5
3	Colour	HU	6	2	0	5	15
4	Hardness	mg/l as CaCO ₃	39	40.72	0.051	100	500
5	TDS	mg/l	1230	560	582	562	≤1000
6	Chloride	mg/l	111	58	28.3	50	250
7	Total Coliforms	MPN/100ml	0	0	3	6	0
8	Total Faecal Coliforms	MPN/100ml	0	0	0	0	0
9	Arsenic	mg/l	0.005	0.005	0.005	Nil	0.05
10	Iron	mg/l	0.26	0.21	0.31	0.52	1
11	Lead	mg/l	ND	0.1	ND	ND	0.01

No	Quality Parameter	Units	Results (Jul 2023)	Results (Jan 2024)	Results (Jul 2024)	Results (Jan 2025)	DWQS (2019)
12	Manganese	mg/l	0.3	2.3	<0.2	0.32	0.4
13	Sulfate	mg/l	348	399	84.1	84	250
14	Nitrate	mg/l	0.938	2.4	0.31	0.6	50
15	Odor	Acceptable	1	NA	NA	-	-

All the results at Ko Win Maung tubewell shown under the Drinking Water Quality Standard (2019), except for turbidity and total coliforms. The exceeding reasons of turbidity may be the natural factors such as soil erosion and geological conditions, anthropogenic activities, etc. The presence of total coliforms in tube well water analysis can be a sign of contamination, which could stem from various factors. Coliform bacteria are generally not harmful themselves, but their presence indicates that the water may be contaminated by pathogens, making it unsafe for consumption. Those may be contamination from surface water due to proximity to contamination sources, animal contamination, natural occurrence in the environment, etc.

At the Ma Nyein Well, all the results were shown to be under the Drinking Water Quality Standard (2019), except for turbidity and total coliforms. The exceeding reasons of turbidity may be the natural factors such as soil erosion and geological conditions, anthropogenic activities, etc. The presence of total coliforms in tube well water analysis can be a sign of contamination, which could stem from various factors. Coliform bacteria are generally not harmful themselves, but their presence indicates that the water may be contaminated by pathogens, making it unsafe for consumption. Those may be contamination from surface water due to proximity to contamination sources, animal contamination, natural occurrence in the environment, etc.



Figure 48: Tube Well of Ko Win Maung



Figure 49: Tube Well of Ma Nyein

8.12 Monitoring on Gas Venting

In accordance with the gas venting monitoring program, MPRL E&P's technical team utilizes an Echo Meter to monitor and measure gas volume. If the recorded gas volume substantially exceeds the previous measurement, an orifice meter is employed to validate the volume within a 24-hour timeframe. Once the gas volume is confirmed to be sufficient, the team connects to the gas line and channels the collected gas to the existing facility supplying gas lines to the LPG plant. Continuous monitoring indicates a reduction in well counts and vent gas volume. The team has effectively minimized the venting gas volume, achieving successful mitigation.

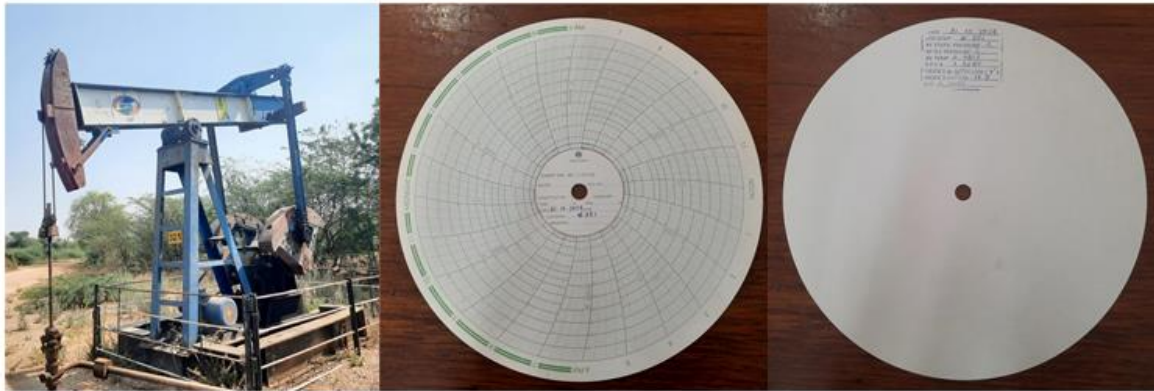
Location of the Gas Venting Wells

As per the planned monitoring program, the team randomly selected the six wells and measured by using an orifice meter on the wells as follows;

Table 29: Selected Gas Venting Wells Locations

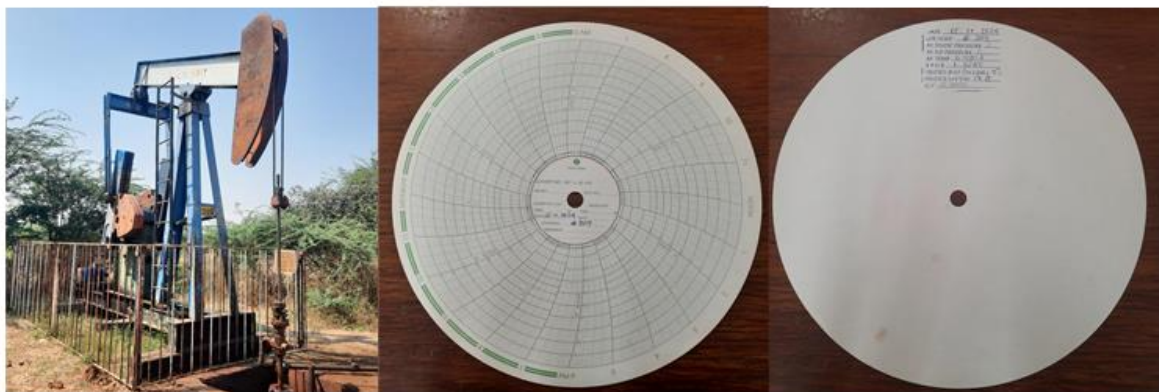
Well No	Location	Gas Volume	Date
M 321	N 20°13'21.63" E 94°51'17.53"	0 - MMCFD	31 Oct 2024
M 209	N 20°12'6.06" E 94°51'35.97"	0 - MMCFD	15 Nov 2024
M 338	N 20°13'50.7" E 94°51'0.82"	0 - MMCFD	05 Dec 2024
M 508	N 20°12'27.67" E 94°51'30.37"	0 - MMCFD	02 Jan 2025
M 517	N 20°11'49.49" E 94°51'35.8"	0 - MMCFD	03 Feb 2025
M 47	N 20°13'5.7" E 94°51'35.22"	0 - MMCFD	15 Mar 2025

Gas Volume Measurement (Orifice Meter) Well-321



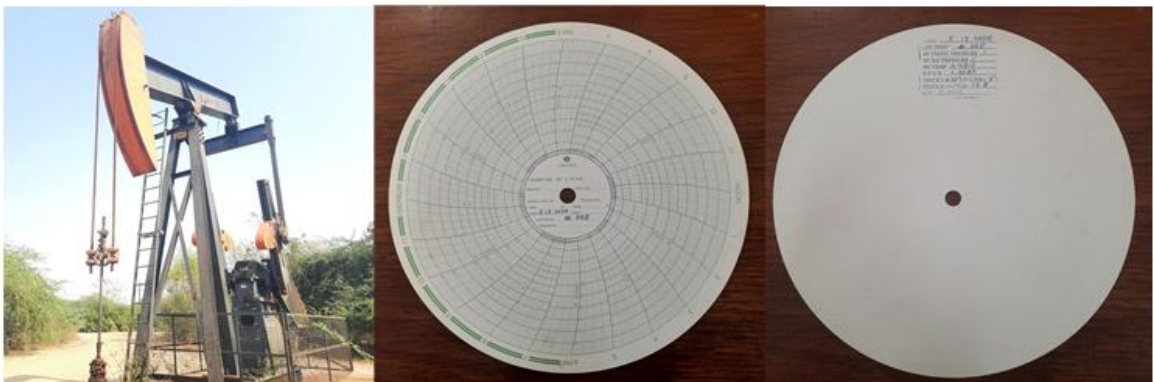
Date: 31 Oct 2024, Gas Volume – 0 MMCFD

Gas Volume Measurement (Orifice Meter) Well-209



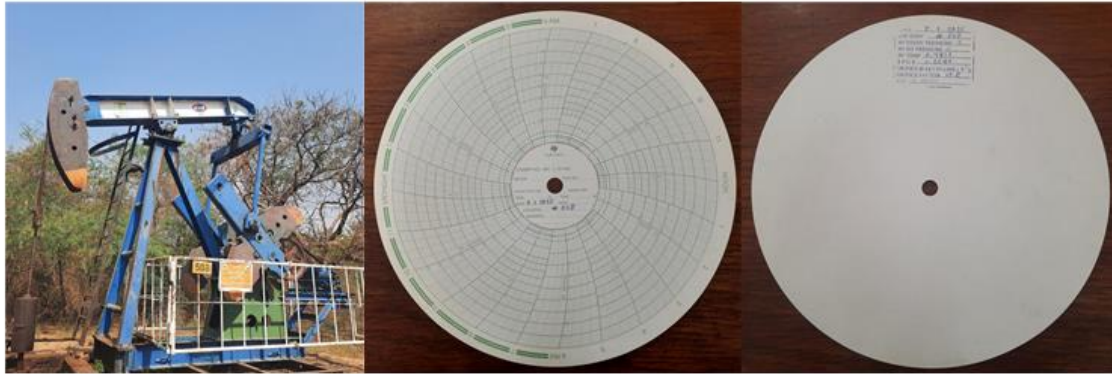
Date: 15 Nov 2024, Gas Volume – 0 MMCFD

Gas Volume Measurement (Orifice Meter) Well-338



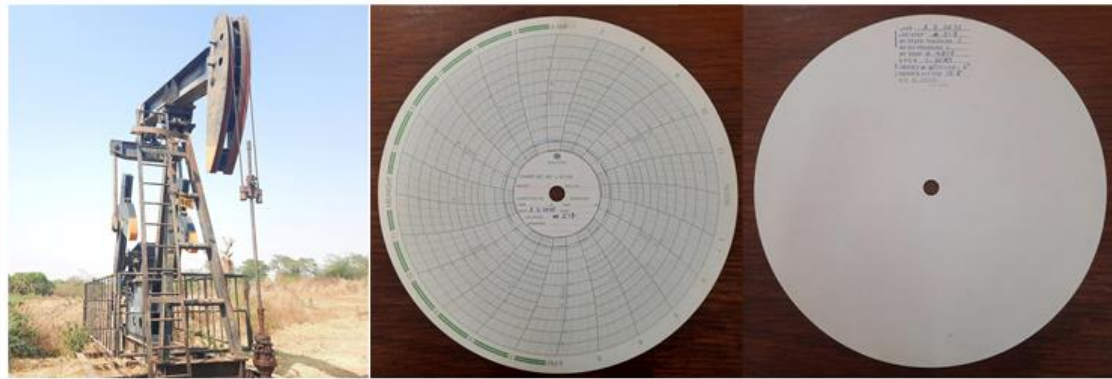
Date: 05 Dec 2024, Gas Volume – 0 MMCFD

Gas Volume Measurement (Orifice Meter) Well-508



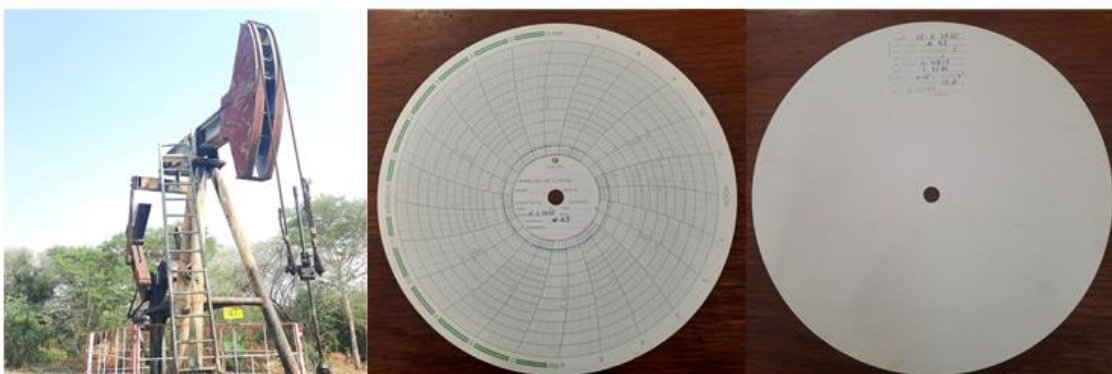
Date: 02 Jan 2025, Gas Volume – 0 MMCFD

Gas Volume Measurement (Orifice Meter) Well-517



Date: 03 Feb 2025, Gas Volume – 0 MMCFD

Gas Volume Measurement (Orifice Meter) Well-47



Date: 15 Mar 2025, Gas Volume – 0 MMCFD

Figure 50: Gas-Vented Wells and Vented Gas Volume Measurement Record

8.12.1 Monitoring of Hydrogen Sulphide (H₂S)

In accordance with our Environmental and Social Monitoring program and self-monitoring schedule, our HSE Officers monitored Hydrogen Sulphide (H₂S) levels on a monthly basis at randomly selected potential gas venting wells. From among these wells, we have provided detailed results for six (6) wells in Table 30.

Table 30: Monitoring Results of the Hydrogen Sulphide (H₂S)

Sr. No:	Location	Date	Measured Time Duration	H ₂ S (PPM)	CO (PPM)	O ₂ %	LEL %
1	M-404	26 November 2024	30 sec	0	0	20.9	0
2	M-507	8 December 2024	30 sec	0	0	20.9	0
3	M-517	11 January 2025	30 sec	0	0	20.9	0
4	M-362	21 February 2025	30 sec	0	0	20.9	0
5	M-351	13 February 2025	30 sec	0	0	20.9	0
6	M-634	3 March 2025	30 sec	0	0	20.9	0

H₂S levels are monitored using an in-house portable gas detector (VENTIS MX4 Gas Detector), which has been calibrated periodically as per plan. This equipment can monitor four (4) parameters. As a result of monitoring, no H₂S was detected, and the results for each well are listed in the above Table 30.

M-351



M- 404 (near Mann Field Main Gate)



M-507



Figure 51: H2S Monitoring Activities

9. Occupational Health and Safety Performance

Occupational Health and Safety System Framework

As a leading oil and gas exploration and production company, MPRL E&P is committed to prioritizing the health and safety of operation staff while minimizing its environmental impact. The company ensures that its health and safety management align with international standards such as HSG 65 and ISO 45001:2018, as well as relevant local regulations, international standards, and industry best practices, including API requirements. These efforts are consistently monitored and enhanced to maintain high performance and compliance.

9.1 HSE Statistics Pyramid

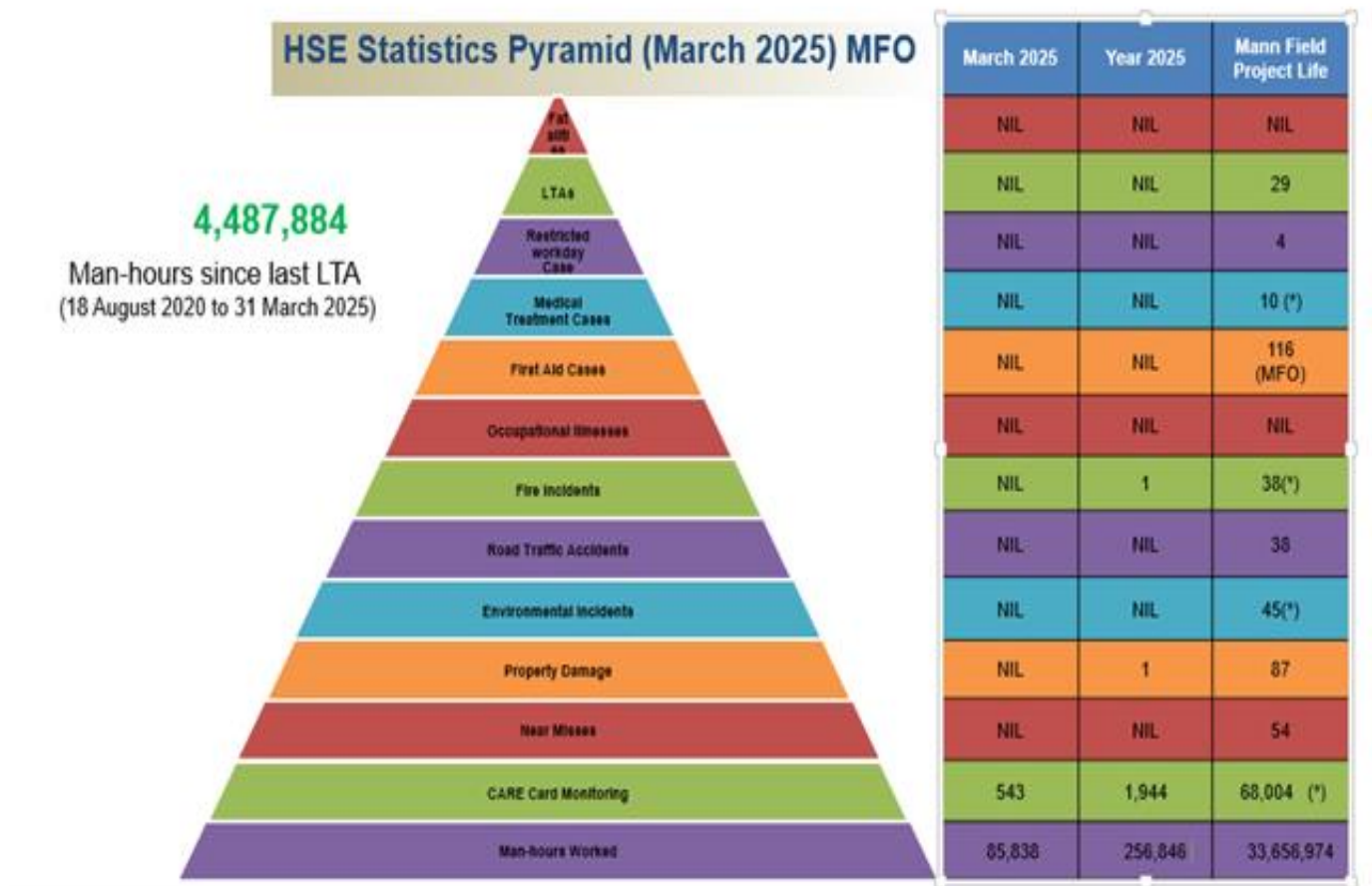
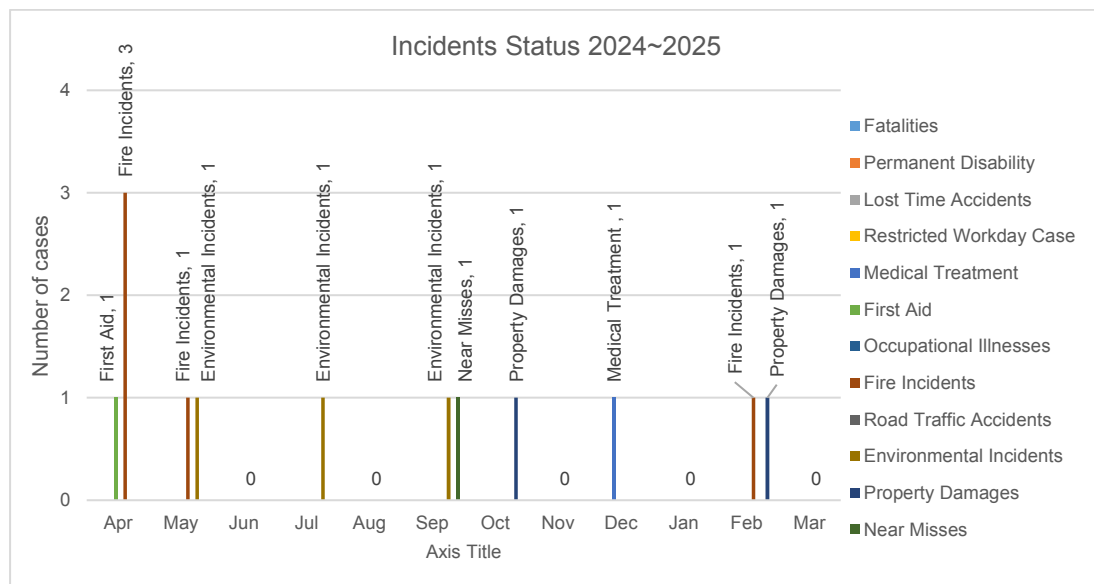


Figure 52: HSE Statistics Pyramid Up to 31 March 2025 Status

9.2 Incidents Status

In the fiscal year 2024-2025 (October 2024 to March 2025), Mann Field operations recorded a total of four incidents: two property damage cases, one fire incident and one medical treatment case. The total recordable cases remain within the KPI target of not exceeding four for 2024-2025.



9.3 HSE Audits & Inspection

Regular surprise alcohol tests are continuously conducted at Mann Field to maintain a dry field and ensure workers are not under the influence of alcohol while on duty. These tests aim to protect employee well-being, prevent incidents, and support safe and efficient oil field operations.

Regular Permit to Work (PTW) audits are conducted using a detailed checklist to ensure all hazardous work is safely managed, adheres to established procedures, and that safety measures are properly documented and implemented.

Weekly Cross-Inspections and Bi-Weekly Hazards Hunt Inspections are routinely conducted, covering pulling unit operations, GOCS stations, workshops, and warehouse areas. These inspections utilize checklists as part of our proactive approach to ensuring adherence to HSE standards and practices across critical operational areas, reinforcing our commitment to a safe and environmentally responsible work environment.

As a proactive measure for fire hazard prevention, priority actions have been taken to cut and clear bushes, dried trees, and leaves at the GOCS compounds and around 1M Tank Station.

Bi-annual earthing resistance tests were conducted at the Workshop, Warehouse, GOCS-2, Welding Shop at Special Project, and Base Camp to ensure compliance with electrical safety standards and maintain system integrity across these key facilities.

To prevent incidents and ensure the reliability of lifting operations, a thorough inspection of all lifting gear, hoisting, and handling equipment was carried out.

On 19 December 2024, the Environmental Conservation Department (ECD) team visited Mann Field as part of the 9th Environmental Monitoring Report (April–September 2024) submission.



Figure 53: Preventive Actions for Slip, Trip, and Fall Inspection Follow-up Actions

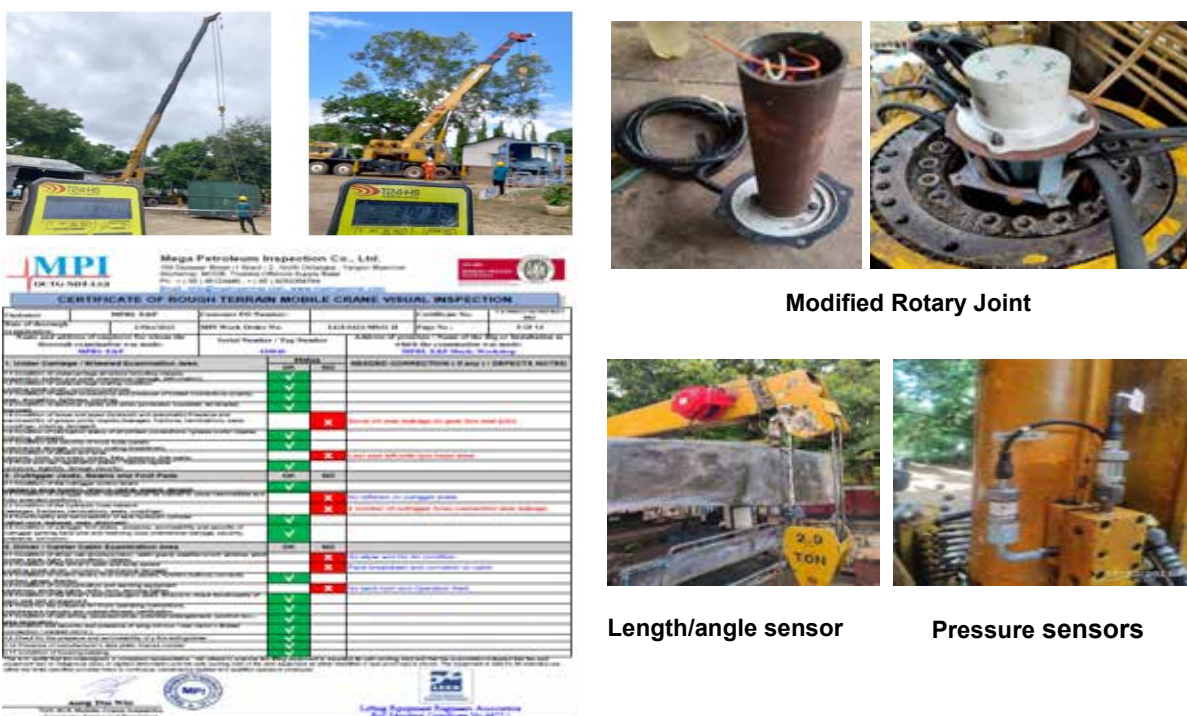


Figure 54: 35-T Crane (TADANO) Repairing & Recertification



Hydraulic Safety valve



Hook position



PTO sensor (above



Control Box



LCD monitor



Figure 55: 35-T Crane (TADANO) Repairing & Recertification



Figure 56: Prevention for Wildfire Hazard in November 2024



Figure 57: Prevention for Electrical Hazards

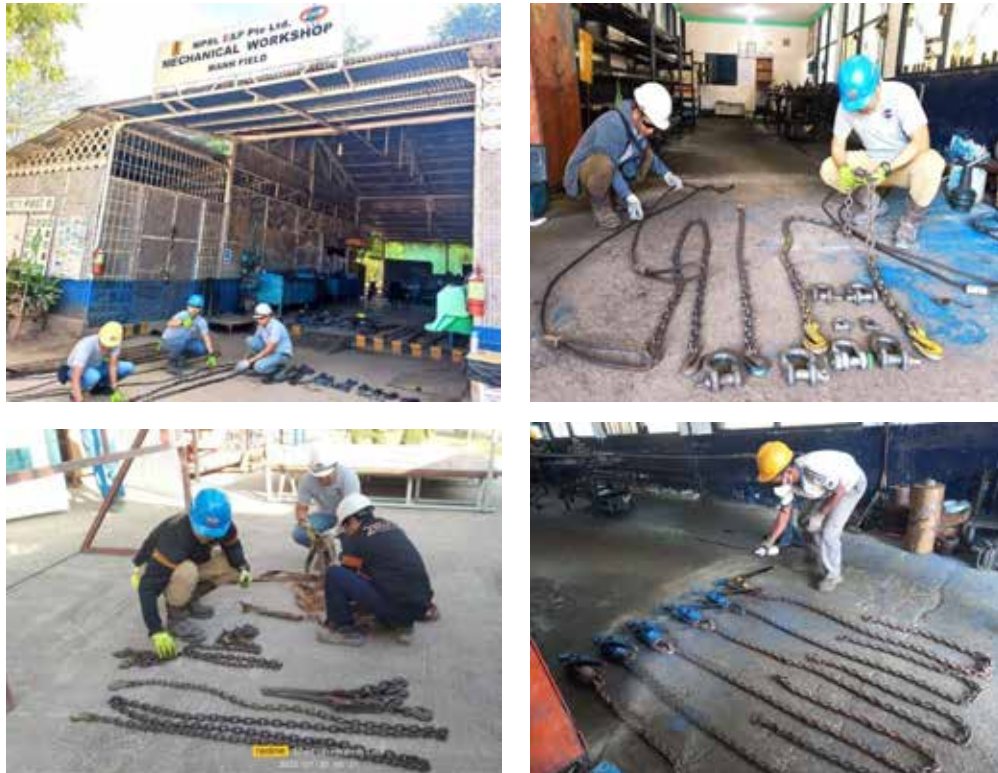


Figure 58: Lifting Gear, Hoisting & Handling Equipment Inspection and Colour Coding



Figure 59: Safety Barrier Equipment Maintenance and Inspection



Figure 60: Safety Barrier Equipment Maintenance and Inspection

9.4 HSE Training

To ensure personnel safety, environmental protection, and the financial sustainability of accelerated operations, HSE training has become a strategic priority. As activities intensify, the frequency and focus of HSE training have increased accordingly. Regular internal HSE knowledge-sharing sessions are conducted to strengthen the safety culture, enhance operational efficiency, and ensure the HSE team is well-equipped to manage challenges in a dynamic, safety-critical environment.

During the fiscal year 2024-2025 (October 24 ~ March 25), a total of 1,700 HSE training hours were achieved. Targeted training sessions were conducted to ensure workers' competencies align with operational needs. These included Year 2024 – 2025 (October 24 ~ March 25) HSE training as per follow:

Year 2024 – 2025 (October 24 ~ March 25)

- Basic Life Support First-Aid Training
- OHS & Environmental Policies Awareness Talks
- Defensive Driving Training
- Permit to Work System Refresher Training
- Highway Trip Awareness Training
- Building A Green Spirt by Example
- Medication Awareness Training
- Alcohol & Substance Abuse Policy
- Norovirus and Paramyxovirus (Mumps)
- CARE Card Refresher Training
- E-Waste and E-Pollution
- Anti-NMDA Receptor Encephalitis
- Safe Lifting and Slings Practices Training
- Know Your Body: Visceral Fat
- CPR Refresher Training
- First Aid and Stretcher Handling Training
- Emergency Warden Training
- Earthquake Response Procedure Training
- Air Pollution and Health Impact
- Health & Hygiene Awareness Session for Office Cleaners



Figure 61: Basic Life Support First Aid Training



Figure 62: OHS & Environmental Policies Awareness Talks



Figure 63: Defensive Driving Training



Figure 64: PTW Refresher & Awareness Training



Figure 65: High-way Trip Awareness Training for Transportation Team



Figure 66: Building a Green Spirit by Example



Figure 67: Medication Awareness



Figure 68: Alcohol & Substance Abuse Policy



Figure 69: Norovirus and Paramyxovirus (Mumps)



Figure 70: CARE Card Refresh Training



Figure 71: E-Waste & E-Pollution



Figure 72: Anti-NMDA Receptor Encephalitis



Figure 73: Safe Lifting and Slings Practices Training



Figure 74: Visceral Fat Loss

9.5 Effective Worker's Participation Towards HSE

MPRL E&P has fostered a strong safety culture by encouraging employees to report unsafe conditions or actions in the workplace. This proactive approach helps prevent accidents, reduce downtime, and lower costs through early intervention.

In recognition of outstanding safety participation, the “Best Quality CARE Card Award” was presented to both MPRL E&P and MOGE staff on a quarterly basis at Mann Field and MYO.

Additionally, to acknowledge safety-conscious employees for their dedication to health, safety, and environmental initiatives, “Contribution Awards in HSE Activity” were presented to deserving individuals and reinforcing the importance of safety in all operations.

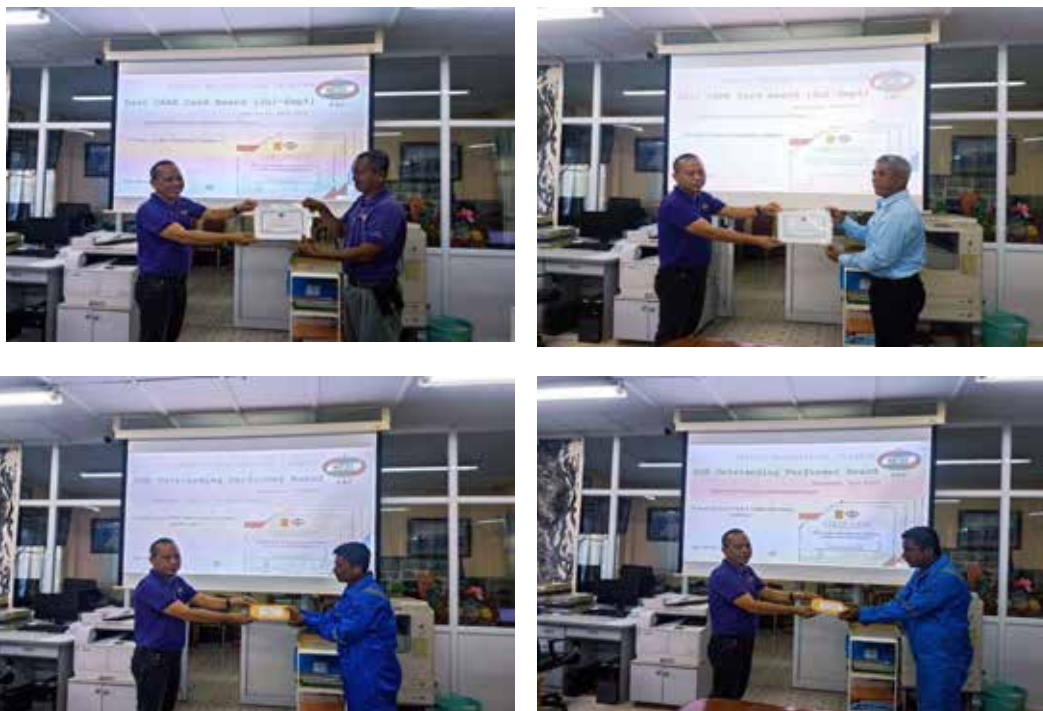
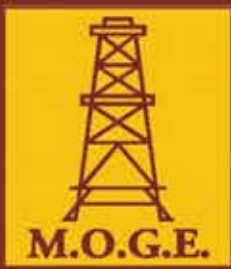


Figure 75: HSE Outstanding Performer Awarding



Figure 76: Best CARE Cards Awards



Shared Value:

**Contributing to Inclusive Growth
while Strengthening Competitive Advantage**



Social Performance Report

October 2024–March 2025



10. Corporate Social Responsibility

10.1 Progress Summary



At MPRL E&P, we remain steadfast in our commitment to corporate social responsibility (CSR), guided by principles of transparency, sustainability, and shared value creation. Over the past six months, from October 2024 to March 2025, we have diligently implemented a comprehensive suite of initiatives, designed to foster inclusive growth, promote environmental stewardship, and build long-term community resilience within Mann Field Communities. This report serves to highlight our key achievements, strategic interventions, and ongoing efforts to uphold our mission of responsible business practices and meaningful societal impact.

A key achievement during this reporting period was the significant improvement of community infrastructure in Mann Field Communities. To address water access

challenges, we installed solar-powered water systems, ensuring a reliable clean water supply. Additionally, road infrastructure upgrades, including concrete road construction, were implemented to improve accessibility. Water access and sanitation were further prioritized through well drilling and water infrastructure development. Throughout the planning and execution of these vital projects, community engagement remained a priority, with close collaboration among stakeholders to ensure sustainability and alignment with local needs.

Agriculture continues to be a fundamental cornerstone of livelihood in Mann Field Communities. Through our Seed Bank Program, we supported 38 farmers across 10.05 acres in tomato cultivation, yielding 92,000 visses despite adverse weather conditions. We facilitated seed loan agreements and conducted regular monitoring of tomato, sunflower, and chickpea harvests in collaboration with Seed Bank Committees, ensuring both food security for the communities and the adoption of sustainable farming practices for the future.

Recognizing that education and skills development are pivotal for the long-term prosperity of Mann Field Communities, we made significant investments in these areas. Over this Fiscal Year, we provided scholarships to 22 youth, supported their learning journey. We also celebrated the significant achievement of seven scholars who successfully graduated from the State Agriculture and Livestock Institute (Pwint Phyu), with two of these individuals qualifying for the entrance examination of Yezin University and an additional three securing employment opportunities within agricultural firms. Through these diverse initiatives, we have actively empowered local youth with essential education, vocational training, and strategic partnerships.

We further prioritized the building of community capacity through a range of targeted educational and recreational initiatives. Our Online English Learning Program (OELP) continued to provide primary school students with English language skills, while the advanced art class effectively enhanced the creative talents of young children in the community. The Summer Program, which included basic and advanced art classes, a basic computer class, and the ThuKhaMain summer school, was carefully designed to enhance the skills and knowledge of the young community members. Recognizing the growing importance of digital literacy, we initiated the ThuKhaMain mobile learning application for Grade-4 children, and a basic computer class for youth trainees, aiming to enrich their fundamental computer skills and improve their future employment opportunities.

Acknowledging the critical importance of community healthcare, we focused our efforts on enhancing the availability and quality of healthcare services within Mann Field Communities. During this period, we supported 132 elderly patients by facilitating critical eye surgeries, including cataract, glaucoma, and corneal scraping procedures, which have significantly improved their overall quality of life. Our Mobile Clinic Program continued to be a vital resource, delivering free healthcare services to an impressive 20,976 patients through a total of 715 clinic sessions. In addition to treatment, we also

prioritized preventative healthcare through health education initiatives, including Reproductive Health and Birth Spacing sessions as well as Chickenpox Awareness sessions, promoting preventative healthcare and knowledge dissemination.

Our commitment to environmental sustainability was reinforced through the ongoing support of community-led waste management initiatives and a robust collaboration with Trash Hero Minbu. We provided continuous monitoring and support for existing waste collection initiatives to ensure their ongoing efficiency and effectiveness in the community. Our partnership with Trash Hero Minbu facilitated numerous cleanup events over the past six months, providing essential cleanup equipment, necessary refreshments, and critical logistical support to ensure the success of these activities. Furthermore, we actively promoted community engagement in environmental stewardship through knowledge-sharing activities, effectively fostering eco-consciousness and environmental responsibility among the youth.

Effective grievance mechanism and proactive community engagement were clearly demonstrated through the successful resolution of five new OGM cases during this reporting period. We achieved an impressive 100% resolution rate for these new cases, bringing the total number of resolved cases to 187 since September 2014. To commemorate the 10-year anniversary of the OGM and to further enhance community understanding and transparency regarding OGM practices, we organized the “Celebrating 10 Years of OGM” event. Throughout this period, we maintained our sustained high performance in grievance resolution, ensuring the efficient and timely resolution of all received OGM cases.

We prioritized robust stakeholder engagement and transparent communication through a variety of strategic initiatives. This included organizing the First Biannual CSR Progress Review Meeting with representatives from MOGE in Nay Pyi Taw, as well as the First Biannual CSR and HSE Progress Update Meeting held in Minbu, both of which engaged numerous key stakeholders. Regular meetings were also conducted with local stakeholders to facilitate open dialogue and foster collaboration on various social investment initiatives. To maintain consistent and positive community relations, we held monthly community volunteer meetings. Additionally, we ensured comprehensive reporting through periodic CSR progress reports and corporate newsletters, reinforcing our dedication to transparency and accountability.

Our commitment to corporate philanthropy was evident in a range of initiatives aimed at enhancing the overall well-being of Mann Field Communities. Healthcare contributions, such as the donation of a CHIGO 2 HP air conditioner to the Eye Specialist Outpatient Department (OPD) at Minbu Hospital, improved patient comfort. Significant religious and cultural contributions, including Kahtain donations in Mann Field Communities, supported local traditions. Educational support, through the donation of books to the community centers, fulfilled community needs. These activities demonstrate our dedication to supporting the health, cultural, and educational needs of Mann Field Communities through targeted philanthropic efforts.

Finally, we continued our dedicated support for the employees of MOGE (Mann Field) and their families, with a strong focus on education, welfare, and capacity building. Our educational initiatives included funding for the maintenance and repair of Eain Yar Basic Education High School (Sub), provision of educational materials for employees' children, and allocations for vocational training, scholarships, and library upgrades. Employee welfare was prioritized through the distribution of essential food items and medical supplies to the MOGE (Mann Field) Clinic. Religious and cultural contributions were made through a donation for the Kahtain ceremony. Under the MOGE Employee-Centered CSR Program, we have contributed MMK 100 million from the Fiscal Year 2024-2025 CSR budget to support MOGE (Mann Field) employees. These activities reflect our unwavering commitment to fostering positive stakeholder relations and contributing to the overall well-being of the MOGE (Mann Field) community.

In conclusion, our social investment progress during this six-month period demonstrates our holistic and impactful approach to sustainable development. Through strategic investments, collaborative partnerships, and transparent communication, we continue to drive and meaningful impact in Mann Field Communities. Moving forward, we remain dedicated to fostering inclusive growth, upholding ethical practices, and delivering lasting value for all stakeholders.



10.2 Our Approach & Objectives

We recognize our business interacts with a range of material sustainability issue areas and governance of our approach to managing our potential and actual impacts is key to operating more sustainably. Building on strong foundations, we aspire to create social value for society that is purposeful, proactive, mutually beneficial and respectful. We commit to a number of sustainability frameworks, standards and initiatives and we disclose data both as required by law and according to the requirements of those frameworks, standards and initiatives.



Our social investment strategy prioritizes the areas where we believe our investments will have the biggest potential to multiply our impact and achieve sustainable results for the 14 communities living near our operations in Mann Field. Our social investment themes have been:

- Community infrastructure
- Education, sanitation and basic health
- Livelihood development and economic empowerment
- Capacity building and partnerships
- Critical human needs and disaster response



In this regard, we continue to apply the community-led approach to our community initiatives in Mann Field in order to promote inclusive and participatory decision-making, transparent and accountable village development, and strengthen grassroots level governance capacity.

At the department level, we are working to achieve the following goals which are ultimately tied to a set of Corporate Goals with regard to our Mann Field asset:

- Maintain a social license to operate from all key project stakeholders including community and regional government.
- Meet all legal requirements in compliance with the Myanmar EIA Procedures in Mann Field.
- Proactively build on our brand as a leading Myanmar national led upstream energy company to ensure both the government and general public are informed about the value we create as a business.

Our sustainability strategy is aligned with the UN Sustainable Development Goals, and we have an important role to play in supporting these ambitions. We can make the greatest contribution to six goals: Decent work and economic growth (Goal 8), Responsible consumption and production (Goal 12), Climate action (Goal 13), Life below water (Goal 14), Peace, justice and strong institutions (Goal 16) and Partnerships for the goals (Goal 17).



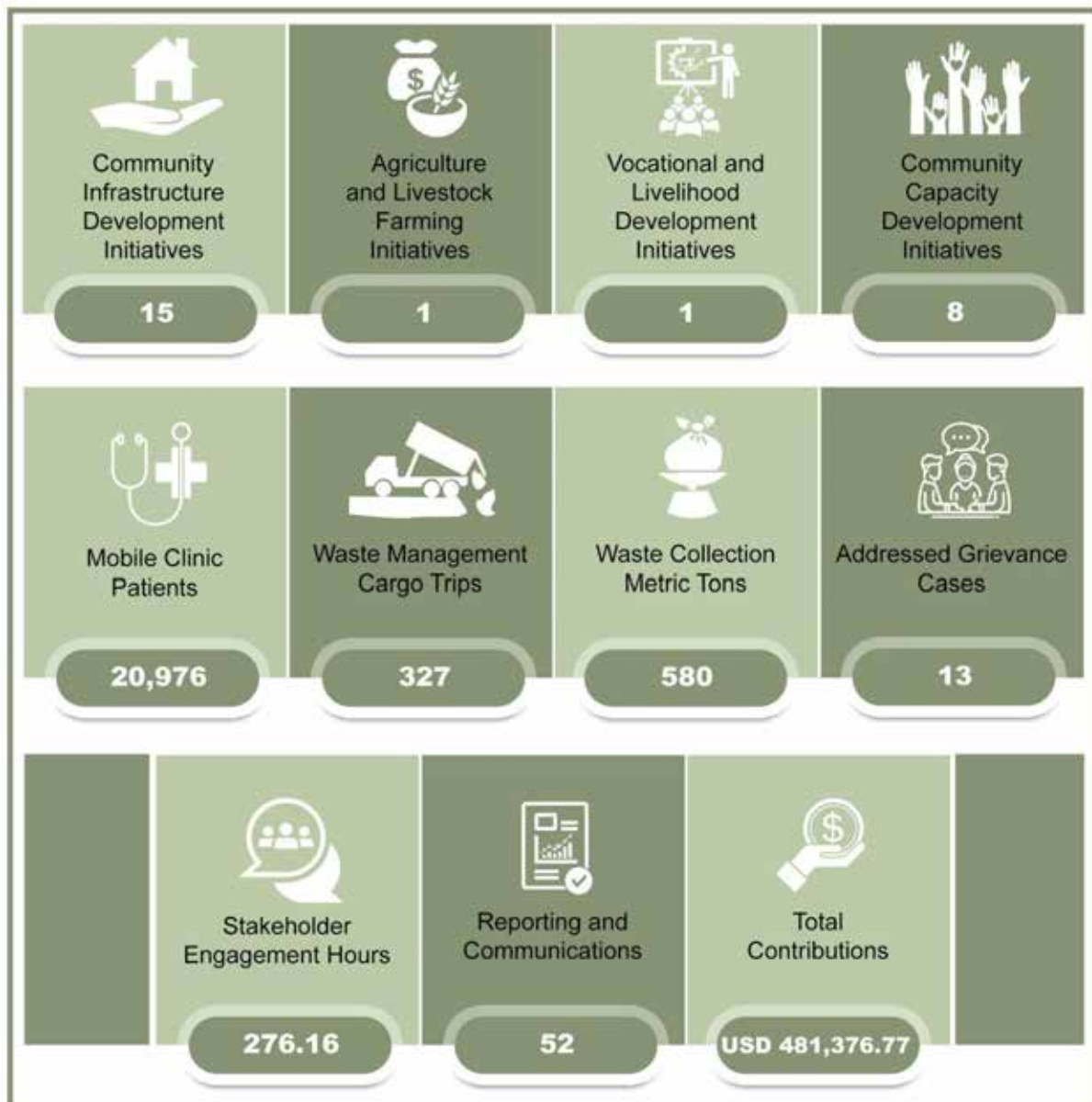
10.3 CSR Implementation Mechanism

MPRL E&P's CSR Team implements the interventions through a combination of direct action and partnerships with communities and both private and public organizations. Annually, CSR Team conducts multi-stakeholder needs assessments in Mann Field to develop the CSR work program. For the Fiscal Year 2024-2025, USD 243,835.00 has been budgeted for CSR initiatives at Mann Field. By the end of February 2025, we had spent USD 481,376.77.

The CSR work program outlines goals, rationales, timelines, and measurable parameters, with each intervention having our own key performance indicators. Pilot projects are designed and implemented to ensure community involvement, capacity building, and project sustainability. Technical knowledge transfer and input support are encouraged to modernize subsistence agriculture and livestock.



10.4 Community Investment Infographic for Fiscal Year 2024-2025



10.5 Key Performance Highlights

The following section outlines the key performance highlights for the second half of Fiscal Year 2024-2025 (October 2024-March 2025).

Key Highlights for the Month of October 2024

- Contributed MMK 1,700,000 to Let Pan Ta Pin School for necessary preparation and renovation for the Clean and Green School Project.
- Monitored the progress of tomato farming in Mann Field Communities.
- Organized the Online English Learning Program (OELP) for primary school students (Grades 3–5).
- Launched the advanced art class as a weekend activity for children in Mann Field.
- Provided free healthcare services to a total of 17,988 patients through 611 clinic sessions under the Mobile Clinic Program.
- Arranged transportation and necessary support for eye patients undergoing surgery at Minbu Hospital and completed eye surgeries for 33 elders.
- Donated a CHIGO 2 HP air conditioner to the Eye Specialist Outpatient Department (OPD) at Minbu Hospital.
- Continued to monitor regular waste collection services and supported Trash Hero Minbu cleanups in Mann Field.
- Organized the First Biannual CSR Progress Review Meeting for FY 2024-2025 with MOGE representatives in Nay Pyi Taw.
- Distributed Insight! Newsletter (Issue-40) and Doh Mann Myay Newsletter (Issue-14) to local stakeholders.
- Received one OGM case in the month of October 2024.
- Provided MMK 5,000,000 for the maintenance and repair of Eain Yar Basic Education High School (Sub), and MMK 3,000,000 for the provision of books and stationery to the children of MOGE employees.
- Monitored and updated MPRL E&P's website as a key communication channel.

Key Highlights for the Month of November 2024

- Completed installing the solar-powered water pumping systems in Kywe Cha and Aye Mya Villages.
- Monitored the maintenance of water filtration units at schools in Mann Field Communities.
- Organized a three-week internship program at mobile clinics for three nurse aide scholarship trainees.
- Conducted the advanced art class as a weekend activity for children in Mann Field Communities.
- Organized the Online English Learning Program (OELP) for primary school students at Mann Kyoe, Aye Mya, and Nan U Community Centers.
- Provided free healthcare services to a total of 18,577 patients through 631 clinic sessions under the Mobile Clinic Program.
- Facilitated transportation and assistance for 99 elder patients receiving eye surgeries at Minbu Hospital.
- Monitored the regular waste collection services and supported Trash Hero Minbu cleanups in Mann Field.
- Conducted community needs assessments for Fiscal Year 2025-2026 CSR work programs and budget planning.
- Organized the First Biannual CSR and HSE Progress Update Meeting with Mann Field Communities at Min Min Hotel in Minbu.
- Offered Kahtain donations of MPRL E&P to 27 monasteries in Mann Field Communities.
- Transferred MMK 35,000,000 to MOGE General Manager (Mann Field) to support MOGE (Mann Field) employees with rice and cooking oil as the second time.
- Monitored and updated MPRL E&P's website as a key communication channel.

Key Highlights for the Month of December 2024

- Completed the construction of a concrete road slab in Auk Kyaung Village.
- Initiated the construction of a concrete road slab and water drainage system at Pauk Kone School.
- Monitored the Clean and Green School Project at Let Pan Ta Pin School, and the maintenance of water filtration units and handwashing stations at schools in Mann Field.
- Provided scholarship support to youths in Mann Field Communities.
- Awarded a research grant for a pig farming project at SALI (Pwint Phyu).
- Conducted an advanced art class as a weekend activity for children in Mann Field Communities.
- Organized the Online English Learning Program (OELP) for primary school students at Mann Kyoe, Aye Mya, and Nan U Community Centers.
- Offered free healthcare services to 19,167 patients through 651 sessions under the Mobile Clinic Program.
- Monitored waste collection services and supported Trash Hero Minbu cleanups in Mann Field.
- Delivered a presentation on social management updates to the ECD (Magway) team and facilitated their visit to the Mobile Clinic in Lay Eain Tan Village.
- Distributed 2025 greeting cards and calendars to local stakeholders in Mann Field.
- Published Insight! Newsletter (Issue-41) and Doh Mann Myay Newsletter (Issue-15).
- Contributed MMK 22,750,000 to the MOGE Employee-Centered CSR Program in December 2024.
- Monitored and updated MPRL E&P's website as a key communication channel.

Key Highlights for the Month of January 2025

- Completed the construction of a concrete road slab and the installation of a water drainage system at Pauk Kone School.
- Monitored the progress of tomato and sunflower harvests in Mann Field Communities.
- Supported the graduation attendance of seven scholars at the State Agriculture and Livestock Institute (Pwint Phyu).
- Conducted monitoring and evaluation (M&E) activities for poultry broiler and pig farming projects at the State Agriculture and Livestock Institute (Pwint Phyu).
- Operated the Online English Learning Program (OELP) and the advanced art class for children in Mann Field Communities.
- Supplied furniture to Mobile Clinics at six locations in Mann Field Communities.
- Provided free healthcare services to 19,913 patients through 675 clinic sessions under the Mobile Clinic Program.
- Addressed two OGM cases in January 2025.
- Organized the OGM 10-year anniversary celebration campaign in Mann Field Communities.
- Published the OGM 10-year anniversary report and the OGM comic book on the MPRL E&P's website.
- Submitted the third-quarter M&E report for Fiscal Year 2024–2025.
- Monitored and updated MPRL E&P's website as a key communication channel.

Key Highlights for the Month of February 2025

- Completed the construction of a concrete road slab project at Lay Eain Tan Village.
- Provided water well drilling expenses, water pump and PVC pipes to Lay Eain Tan School.
- Monitored the progress of tomato, sunflower and chickpea harvests in Mann Field Communities.
- Provided scholarship support to youths in Mann Field Communities.
- Operated the Online English Learning Program (OELP) and the advanced art class for children in Mann Field Communities.
- Hosted closing ceremony of the advanced art class at Aye Mya Community Center.
- Announced the Summer Program, which includes art classes, a basic computer class, and the ThuKhaMain summer school for children and youths in Mann Field Communities.
- Provided free healthcare services to a total of 20,458 patients through 696 clinic sessions under the Mobile Clinic Program.
- Organized two sessions of 'Reproductive Health and Birth Spacing' awareness health talks in Mann Field.
- Monitored waste collection services and supported Trash Hero Minbu cleanups in Mann Field.
- Addressed two OGM cases in February 2025.
- Donated MMK 950,000 to MOGE General Manager (Mann Field) for the provision of medical supplies for the MOGE (Mann Field) Clinic.
- Monitored and updated MPRL E&P's website as a key communication channel.

Key Highlights for the Month of March 2025

- Completed the water well drilling project, including the installation of a water pump and PVC pipes at Lay Eain Tan School.
- Completed the water tank construction project and supervised water well drilling progress in Kyar Kan Village.
- Monitored the progress of tomato, sunflower and chickpea harvests in Mann Field Communities.
- Registered (19) applicants for Batch-13 of No.5 ITC (Magway) under the scholarship program.
- Supported the graduation of Batch-12 scholarship trainees from No.5 ITC (Magway) and organized an information-sharing session between Batch-12 graduates and Batch-13 applicants.
- Launched the basic computer class for youths and the ThuKhaMain summer school for children in Mann Field Communities and monitored the training progress.
- Conducted the ThuKhaMain Training of Trainers (ToT) session for three Community-based Education Facilitators (CEFs).
- Announced the selected candidates for the upcoming basic and advanced art classes.
- Distributed purchased books to Mann Kyoe and Nan U Community Centers through the book request program.
- Provided free healthcare services to 20,976 patients through 715 clinic sessions under the Mobile Clinic Program.
- Organized 'Health Education Talks on Chickenpox' before Mobile Clinic sessions.
- Monitored the regular waste collection services and supported Trash Hero Minbu cleanups in Mann Field.
- Conducted a knowledge-sharing and brainstorming session on trash classification with Trash Hero children from Auk Kyaung and Nann U Villages.
- Published Insight! Newsletter (Issue-42), Doh Mann Myay Newsletter (Issue-16) and Voluntary Principles on Security and Human Rights Report.
- Monitored and updated MPRL E&P's website as a key communication channel.

10.6 Social Performance Progress (October 2024-March 2025)

10.6.1 Community Infrastructure Development



MPRL E&P is committed to providing community infrastructure in Mann Field Communities at suitable locations, addressing current needs, and adapting to the evolving community requirements. The company's approach to community infrastructure development emphasizes enhancing local capacity through community involvement. This includes improving the efficiency of infrastructure planning, design, implementation, and maintenance, while also utilizing locally available resources whenever possible.

Achievements from October 2024 to March 2025

MPRL E&P's CSR Program continued our commitment to enhancing community infrastructure during the period of October 2024 to March 2025, focusing on water access, road improvements, and educational support within Mann Field Communities.

October 2024:

- Educational Support: Contributed MMK 1,700,000 to Let Pan Ta Pin School to facilitate essential preparations and renovations for their participation in the Minbu District-level Clean and Green School Project.
- Water Access Planning: Conducted site evaluations and compatibility assessments for solar-powered water pumping system installations in Aye Mya and Kywe Cha Villages, in collaboration with a solar supplier.
- Ongoing Maintenance: Monitored the maintenance of existing water filtration units provided by the CSR Program at schools within Mann Field Communities.

November 2024:

- Solar-Powered Water Systems Installed: Successfully installed solar-powered water pumping systems in Kywe Cha and Aye Mya Villages.
 - Kywe Cha Project: Total cost - MMK 6,006,100; MPRL E&P's contribution - MMK 5,606,100; Kywe Cha Community's contribution - MMK 400,000.
 - Aye Mya Project: Total cost - MMK 5,628,100; MPRL E&P's contribution - MMK 5,228,100; Aye Mya Community's contribution - MMK 400,000.
- Ongoing Maintenance: Continued monitoring the maintenance of water filtration units at schools in Mann Field Communities.

December 2024:

- Road Improvement: Completed the construction of a concrete road slab in Auk Kyaung Village to mitigate soil erosion in the rainy season.
 - Total project cost: MMK 3,618,150; MPRL E&P's contribution - MMK 3,318,150; Auk Kyaung Community's contribution - MMK 300,000.
- Project Recognition and Further Road Improvement: Installed donor plaques for the solar-powered water pumping projects in Kywe Cha and Aye Mya Villages. Initiated the construction of a concrete road slab and water drainage system at Pauk Kone School, in collaboration with the Special Project Team, to prevent soil erosion and improve the school's access road.
- Ongoing Maintenance and Educational Support: Continued monitoring water filtration unit maintenance and monitored the progress of Let Pan Ta Pin School's Clean and Green School Project, providing necessary support.

January 2025:

- Pauk Kone School Project Completion: Successfully completed the construction of concrete road slab and water drainage project at Pauk Kone School.
 - Total project cost: MMK 6,698,050; MPRL E&P's contribution - MMK 6,278,050; Pauk Kone Community's contribution - MMK 420,000.
- Ongoing Maintenance and Educational Support: Continued monitoring water filtration unit maintenance and oversaw the progress of Let Pan Ta Pin School's Clean and Green School Project.

February 2025:

- Road Improvement: Completed the construction of a concrete road slab in Lay Eain Tan Village.
 - Total project cost: MMK 5,927,500; MPRL E&P's contribution - MMK 5,223,500; Lay Eain Tan Community's contribution - MMK 704,000.
- Water Well Initiative: Initiated a water well drilling project at Lay Eain Tan School, including the provision of a water pump and PVC pipes, to address water scarcity and improve hygiene.
- Community Engagement: Engaged with the Special Project Team, Village Administrator, Village Development Committees, and Community Volunteers of Kyar Kan Village to plan a water well drilling and concrete water tank construction project.
- Ongoing Maintenance: Continued monitoring water filtration unit maintenance at schools in Mann Field Communities.

March 2025:

- Lay Eain Tan Water Well Completion: Successfully completed water well drilling project at Lay Eain Tan school. Provided water pump and PVC pipes.
 - Total project cost: MMK 3,338,000; MPRL E&P's contribution - MMK 2,988,000; Lay Eain Tan Community's contribution: MMK 350,000.
- Kyar Kan Water Project Advancement: Completed the construction of a water tank and monitored the progress of water well drilling in Kyar Kan Village.



Figure 77: Site Evaluation and Compatibility Assessment for Installing Solar-Powered Water Pumping Systems in Aye Mya and Kywe Cha Villages



Figure 78: Installing Solar-Powered Water Pumping System at Kywe Cha Village Existing Well



Figure 79: Installing Solar-Powered Water Pumping System at Aye Mya Village Existing Well



Figure 80: Installing Donor Plates for Solar-powered Water Pumping Projects at Kywe Cha and Aye Mya Villages



Figure 81: Monitoring Water Filtration Units and Handwashing Stations at Schools



Figure 82: Supporting Let Pan Ta Pin School for the Minbu District-level Clean and Green School Project



Figure 83: Constructing Concrete Road Slab at Auk Kyaung Village



Figure 84: Constructing Concrete Road Slab and Water Drainage System at Pauk Kone School



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Figure 85: Constructing Concrete Road Slab Project at Lay Eain Tan Village



Figure 86: Supporting Water Well Drilling, Water Pump and PVC Pipes to Lay Eain Tan School



Figure 87: Constructing Concrete Water Tank and Water Well Drilling at Kyar Kan Village

10.6.2 Community Livelihood Development



MPRL E&P is committed towards improving the life of Mann Field Communities and helping them achieve self-reliance. In addition, we conduct regular follow-up and support activities to ensure the goal is achieved. MPRL E&P's CSR Program undertakes focused interventions in agriculture, horticulture and livestock management. Such interventions have been designed to support the rural communities' livelihoods through increased agricultural and livestock production, improving household food security, alleviating poverty through better market participation as well as to improving farmers' access to resources, technologies, information and markets by characterizing and strengthening crop and livestock value chains.

Achievements from October 2024 to March 2025

MPRL E&P's CSR Program continued our efforts to enhance community livelihoods within Mann Field Communities through agricultural support and monitoring during the period of October 2024 to March 2025.

October 2024:

- Tomato Farming Monitoring: The CSR Team monitored the progress of tomato farming, supported by MPRL E&P's Seed Bank Program, involving 38 farmers cultivating 10.05 acres during the Fiscal Year 2024-2025.
- Weather Impact Assessment: Reported on the challenges faced by farmers due to heavy rains and adverse weather conditions, leading to plant damage and reduced fruit yield.

November 2024:

- Seed Loan Agreements: Facilitated the signing of seed loan agreements between Seed Bank Committees and farmers in Mann Field Communities.
- Continued Tomato Farming Monitoring: Continued monitoring the progress of tomato farming in Mann Field Communities.

December 2024:

- Tomato Farming and Harvesting Monitoring: Monitored the progress of tomato farming and harvesting activities within Mann Field Communities.

January 2025:

- Harvest Monitoring Expansion: Expanded monitoring to include both tomato and sunflower harvests, as part of the community livelihood development program.

February 2025:

- Comprehensive Harvest Monitoring: In collaboration with Seed Bank Committee members, conducted regular monitoring and maintained records on the progress of tomato, sunflower, and chickpea harvests.

March 2025:

- Seed Bank Program Monitoring: Continued monitoring the harvesting progress of tomatoes, sunflowers, and chickpeas under the Seed Bank Program, in partnership with Seed Management Committees.
- Tomato Harvest Yield and Market Analysis: Reported a total tomato harvest of 92,000 visses from the 38 farmers cultivating 10.05 acres. Market price fluctuations were noted, ranging from MMK 2,500 per viss in early January to MMK 500-MMK 250 per viss by March.





Figure 88: Monitoring Progress of Tomato, Sunflower and Chickpea Harvests in Mann Field Communities

10.6.3 Educational Partnership Program



MPRL E&P's CSR Program partners with governmental entities and training institutions to enhance technical and vocational skills in Mann Field Communities. MPRL E&P provides financial aid and support to disadvantaged students pursuing higher education, and as well as technical and vocational education and training (TVET). This support aims to improve employment prospects and empower youth to enter the job market or start businesses. The program includes formal agreements with TVET institutions for proper supervision and skill development, and emphasizes the importance of education and job training for community thriving.

Achievements from October 2024 to March 2025

MPRL E&P's CSR Program continued our commitment to educational development within Mann Field Communities through scholarship support, vocational training, and collaborative projects during the period of October 2024 to March 2025.

October 2024:

- Monthly Scholarship Disbursement: Provided monthly scholarship support to youth from Mann Field Communities.
- Scholarship Recipient Monitoring: Regularly monitored the training progress and attendance of scholarship recipients.

November 2024:

- Internship Program: Organized a three-week internship program at mobile clinics for three nurse aide trainees, facilitated by Dr. Kyaw Ye Htut, Site Doctor of MPRL E&P, providing practical training.

December 2024:

- Continued Scholarship Support: Continued providing scholarship support to youth in Mann Field Communities.
- Pig Farming Project Collaboration: Signed a Memorandum of Agreement (MoA) with the State Agriculture and Livestock Institute (SALI - Pwint Phyu) and provided MMK 4,200,000 to fund a pig farming project (project-based learning) for final-year students.
- Motorcycle Mechanic Scholarship: Provided scholarship support for a student from Let Pan Ta Pin Village to attend the Motorcycle Mechanic Course (Batch-1) at No.5 ITC (Magway).

January 2025:

- Graduation Support: Facilitated transportation and covered expenses for seven scholars to attend their graduation ceremony at the State Agriculture and Livestock Institute (SALI - Pwint Phyu), where they received their Diploma in Agriculture.
- Project Monitoring and Scholarship Announcement: Conducted monitoring and evaluation (M&E) for poultry broiler and pig farming projects at SALI (Pwint Phyu) and announced scholarship applications for Batch-13 at No.5 Industrial Training Center (ITC - Magway).

February 2025:

- Pig Farming Project Monitoring: Monitored the progress of the pig farming project at SALI (Pwint Phyu).

- Motorcycle Mechanic Course Completion: A scholarship recipient completed the Motorcycle Mechanic Course (Batch-1) at No.5 ITC (Magway).
- Batch-13 Scholarship Applications: Received scholarship applications for Batch-13 of No.5 ITC (Magway).

March 2025:

- Batch-13 Application Submission: Submitted application forms for 19 candidates from Mann Field Communities for Batch-13 of No.5 ITC (Magway).
- Batch-12 Graduation and Information Session: Supported the graduation of five students from Batch-12 of No.5 ITC (Magway) and facilitated an information-sharing session for Batch-13 applicants.
- Fiscal Year Scholarship Summary: Reported that 22 youths from Mann Field Communities received scholarships for livelihood and career development during the Fiscal Year 2024-2025. The CSR Program continued the support for scholarship recipients from Mann Field Communities:
 - Five students from No.5 Industrial Training Center (Magway)
 - Two students from Government Technical High School (Magway)
 - Seven students from State Agriculture and Livestock Institute (Pwint Phyu)
 - One student from University of Medicine (Magway)
 - Five students from Basic Nurse Aide and Pharmacist Aide Training Courses at Noble Lamp Training Centre (Magway)
 - One student from Motorcycle Mechanic Course at No.5 Industrial Training Center (Magway)
 - One student from Basic Education High School (Mei Bayt Kone).



Figure 89: Organizing a Three-week Internship Program at Mobile Clinics for Three Nurse Aide Scholarship Trainees



Figure 90: Providing Scholarship Support to Youth in Mann Field Communities



Figure 91: Providing Grant-in-aid for Pig Farming Project at State Agriculture and Livestock Institute (Pwint Phyu)



Figure 92: Supporting Graduation Attendance of Seven Scholars at State Agriculture and Livestock Institute (Pwint Phyu)



Figure 93: Completing Scholarship Support to Three-Month Motorcycle Mechanic Course at No.5 ITC (Magway)



Figure 94: Supporting Graduation Attendance of Five Scholarship Trainees at Batch-12 of No.5 ITC (Magway)



Figure 95: Organizing Information-Sharing Session for Batch-13 Applicants of No.5 ITC (Magway)

Case Study

Success Stories: How MPRL E&P's CSR Scholars Are Shaping Their Futures



Seven students from Mann Field have blossomed into promising agricultural professionals, a testament to their hard work and the transformative power of MPRL E&P's CSR Program.

In the Fiscal Year 2022-2023, MPRL E&P's CSR Program provided scholarships to seven students from Mann Field, enabling them to pursue their education at the State Agriculture and Livestock Institute (SALI-Pwint Phyu). With dedication and perseverance, all seven scholars—four men and three women—successfully passed their third-year final exams in 2024 and officially graduated with a Diploma in Agriculture on 10 January 2025.



Following their graduation, the scholars shared their academic experiences, current endeavors, and future aspirations in an interview. Here are their reflections:



Wai Wai Linn

“Among the seven scholarship recipients, Ma Chit Hnin Phyu and I achieved the required grades for Yezin Agricultural University and will sit for the entrance exam in October 2025. To prepare, I am reviewing past exam papers, seeking guidance from my teachers, and compiling study materials. If accepted, I am particularly interested in studying entomology and plant pathology. I am immensely grateful to MPRL E&P for their support throughout my educational journey and to my teachers at the institute for their invaluable guidance.”



Chit Hnin Phyu

“With MPRL E&P’s scholarship support, we earned a Diploma in Agriculture. My next goal is to pass the entrance exam for Yezin Agricultural University. If successful, I will enroll in the third-year undergraduate program in November 2025, leading to a Bachelor of Agricultural Science degree after three additional years of study. To future scholars from Mann Field, I encourage you to study hard and appreciate the scholarship opportunity provided by MPRL E&P—it is a stepping stone to a brighter future.”



Thida Aye

“I am truly grateful to MPRL E&P and SALI (Pwint Phyu) for their support. Over the past three years, I have experienced remarkable personal growth—not only in agricultural knowledge but also in social skills. The knowledge I have gained is both theoretical and practical, enabling me to share insights with local farmers. Now that I have earned my diploma, my next step is to pursue further education and secure a job in the agricultural sector.”

**Zayyar Phyto**

“At the institute, we gained valuable hands-on experience in growing various crops through fieldwork. Based on my experience, I highly recommend this institute to young men from Mann Field under MPRL E&P’s scholarship program. Graduating from this school significantly enhances job prospects—it is like having a meal ticket in hand. I am deeply grateful to MPRL E&P for their support in helping me obtain this opportunity. Currently, I am attending a Japanese language school and plan to work in Japan, applying my agricultural knowledge.”

**Kyaw Soe Lwin**

“We received MPRL E&P’s scholarship from our first year through graduation, which greatly supported our studies. Thanks to this, all seven of us found it relatively easy to transition into the workforce. Currently, I work at Mingalar Hinthar Company, where my responsibilities include distributing agricultural products to farmers, providing field prescriptions, and conducting practical work at the company’s experimental farms. My education made it easier to communicate with farmers and apply my knowledge. Once I gain more experience and capital, I plan to open my own agricultural supply store.”

**Hein Pyae Sone**

“Job opportunities for graduates from the State Agriculture and Livestock Institutes are quite promising. I chose to work at Mingalar Hinthar Company, where I serve as a field staff member. MPRL E&P’s scholarship has been a game-changer for young people like us who faced financial challenges in continuing education. The institute’s group learning approach has been particularly beneficial in my professional fieldwork. I am grateful for the support from MPRL E&P and the education provided by the institute, which has made my career path smoother.”



Zay Linn Aung

“After graduating, I joined Aka Yarzar, a company specializing in agricultural products. For graduates like us, job opportunities are plentiful in agricultural firms, particularly in roles involving farmer outreach and crop cultivation projects. While opportunities are available for both men and women, men often have an advantage due to travel requirements. I encourage future students to attend school regularly, follow the rules, and study diligently. The lessons learned at the institute are incredibly useful in real-life work, and job prospects are abundant for those willing to put in the effort.”



The success of these seven scholars underscores the profound impact of MPRL E&P's CSR Program in empowering young individuals through education. This scholarship has not only enabled them to complete their studies but has also paved the way for promising careers in agriculture. As these graduates embark on their respective paths—whether in further education, local agricultural enterprises, or international careers—their journeys serve as an inspiration for future generations. Their achievements exemplify the transformative power of education and reaffirm MPRL E&P's unwavering commitment to nurturing talent and fostering sustainable growth in Mann Field Communities.

10.6.4 Community Capacity Building



Capacity building and knowledge sharing sessions are essential components of MPRL E&P's CSR Program, aimed at fostering community mobilization of local resources and ensuring the successful and sustainable implementation of development projects. The key beneficiaries of these capacity building activities include Community Volunteers, Village Administrators, Village Development Committees, households, and schools. The focus of Community Capacity Building is to empower all community members to develop skills and competencies, enabling them to take greater control of their lives and contribute to inclusive local development. This approach not only promotes cohesion within communities but also enhances their resilience and ability to address economic and social challenges effectively.

Achievements from October 2024 to March 2025

MPRL E&P's CSR Program focused on enhancing community capacity through educational and recreational programs for children and youth in Mann Field Communities during the period of October 2024 to March 2025.

October 2024:

- Online English Learning Program (OELP): Continued the OELP for primary school students (Grades 3-5) at Mann Kyoe, Aye Mya, and Nan U Community Centers, with 41 students enrolled.
- Advanced Art Class Launch: Launched an advanced art class for children at Aye Mya Community Center, designed to provide specialized painting training to six trainees over 4.5 months.

November 2024:

- Advanced Art Class Monitoring: Continued monitoring the progress of the advanced art class at Aye Mya Community Center.
- OELP Continuation: Continued the OELP for primary school students at the three community centers.

December 2024:

- Advanced Art Class Monitoring: Continued monitoring the progress of the advanced art class.
- OELP Continuation: Continued the OELP for primary school students.

January 2025:

- Advanced Art Class Continuation: Continued the advanced art class at Aye Mya Community Center.
- OELP Continuation: Continued the OELP.
- Book Request Program: Launched a book request program for community centers and collected request forms.

February 2025:

- Advanced Art Class Completion: Organized the closing ceremony of the advanced art class, showcasing trainees' artwork, with 30 attendees.
- OELP Update: Continued the OELP, arranged a gathering for OELP students involved in the OGM anniversary role play, and announced a summer holiday pause.
- Summer Program Announcement: Announced the Summer Program, offering basic and advanced art classes, a basic computer class, and the ThuKhaMain summer school.

March 2025:

- Summer Program Trainee Selection: Conducted trainee selection and announced results for the Summer Program.
- ThuKhaMain Summer School Launch: Launched the ThuKhaMain summer school at Aye Mya Village Damayone, with 23 Grade-4 trainees enrolled.
- ThuKhaMain Facilitator Training: Arranged a Training of Trainers (ToT) session for Community-based Education Facilitators by the ThuKhaMain App Team.
- Basic Computer Class Launch: Launched a basic computer class for youth at Aye Mya Community Center, in collaboration with MCC Computer Training Center, with 15 trainees enrolled.
- Summer Program Monitoring: Continued to monitor the progress of the basic computer class and the ThuKhaMain summer school.





Figure 96: Organizing Advanced Art Class for Children at Aye Mya Community Center





Figure 97: Organizing the Closing Ceremony of Advanced Art Class at Aye Mya Community Center





Figure 98: Organizing Online English Learning Program (OELP) at Aye Mya, Mann Kyoe and Nan U Community Centers



Figure 99: Conducting a Gathering for OELP Students from OGM Story Role Play



Figure 100: Announcing Summer Program for Children and Youths in Mann Field



Figure 101: Organizing Basic Computer Class for Youth at Aye Mya Community Center



Figure 102: Organizing ThuKhaMain Summer School at Aye Mya Community Center

Case Study

MPRL E&P's CSR Program Launches Pilot Program with Innovative Mobile Learning App for Mann Field Students



MPRL E&P's CSR Program has taken a significant step toward enhancing educational opportunities for students in Mann Field Communities by introducing the ThuKhaMain app, a Myanmar educational mobile learning application. This app aligns with the Ministry of Education's basic education curriculum and offers a modern, engaging approach to learning for local students.

As part of its Community Capacity Building initiative for this Fiscal Year, MPRL E&P's CSR Team collaborated with representatives from the ThuKhaMain Offline Learning App to launch a summer program in March 2025. The initiative was initially piloted at Aye Mya Community Center, with Community Education Facilitators Daw Lai Lai Khaing and Daw Hsu Daiwei Tun providing dedicated support to ensure its success.

Senior CSR Officer Saw Eh Hsar Blute Htoo from the CSR & Communications Department shared insights about the program, "We have introduced the ThuKhaMain Offline Learning App as a summer program for this Fiscal Year. To start, we piloted the program at Aye Mya Community Center, focusing on third and fourth-grade students.

Through this initiative, students engage with video lessons projected on a screen, guided by a dedicated Community Education Facilitator. The facilitator supports

students by explaining lessons, assisting with homework, and ensuring an interactive learning experience.



Running from 15 March to 20 May 2025, the program spans approximately two months. We believe that this learning app provides a modern, technology-driven approach to education, making learning more engaging and accessible. Additionally, its offline functionality ensures that students can continue their studies without needing an internet connection.”

The ThuKhaMain Offline Learning App offers subject-specific lessons aligned with basic education standards, fostering independent learning through a person-centered approach. With expert-led instruction accessible via mobile or laptop—both online and offline—students can learn anytime, anywhere, reducing reliance on extracurricular textbooks. By integrating technology into education, MPRL E&P is enhancing digital learning accessibility for Mann Field students, equipping them with essential knowledge and skills to excel academically and shape a brighter future.



10.6.5 Community Healthcare Program



MPRL E&P's CSR Program launched the Mobile Clinic Program in September 2018 to offer primary healthcare to children, senior residents and disadvantaged individuals in Mann Field. MPRL E&P's two Camp Doctors volunteered their time to manage the clinic alongside a healthcare assistant and community volunteers. Despite a temporary closure in April 2020 due to the COVID-19 outbreak, the program resumed in February 2022 after a community survey, and expanded to five weekly clinic sessions across six central villages in July 2022. The program aims to enhance access to essential healthcare services and provide health education to underserved individuals in Mann Field Communities.

Achievements from October 2024 to March 2025

MPRL E&P's CSR Program continued to prioritize community healthcare through mobile clinics, eye health initiatives, and health education programs during the period of October 2024 to March 2025.

October 2024:

- Eye Health Program: Facilitated consent agreement signings and transportation for 33 elderly patients undergoing eye surgeries at Minbu Hospital.
- Mobile Clinic Program: Provided free healthcare services to 17,988 patients through 611 clinic sessions.

November 2024:

- Mobile Clinic Program: Provided free healthcare services to 18,577 patients through 631 clinic sessions.
- Eye Health Program: Facilitated 99 eye surgeries for elderly individuals from Mann Field Communities (96 cataract, 1 glaucoma, 2 corneal scraping), with a total cost of MMK 30,237,400. Provided transportation and necessary support for patients.

December 2024:

- Mobile Clinic Program: Provided free healthcare services to 19,167 patients through 651 clinic sessions.

January 2025:

- Mobile Clinic Program: Provided free healthcare services to 19,913 patients through 675 clinic sessions.
- Mobile Clinic Enhancement: Completed the provision of furniture (MMK 3,800,000) for six mobile clinic locations in Mann Field Communities, including tables, chairs, and other essential items.

February 2025:

- Mobile Clinic Program: Provided free healthcare services to 20,458 patients through 696 clinic sessions.
- Reproductive Health Education: Organized two sessions (one for men and one for women) of the Reproductive Health and Birth Spacing Health Talk for Mann Field Communities, conducted by Dr. Kyaw Ye Htut, Site Doctor of MPRL E&P, with 185 attendees.

March 2025:

- Mobile Clinic Program: Provided free healthcare services to 20,976 patients through 715 clinic sessions as of 23 March 2025.
- Health Education Sessions: Conducted health education sessions on chickenpox, conducted by Dr. Zay Yan Paing Thu, Junior Site Doctor of MPRL E&P, covering prevention, symptoms, and treatment options to raise community awareness.



Figure 103: Providing Furniture to Mobile Clinics at Six Locations in Mann Field Communities



Figure 104: Having Consent Agreements with Eye Surgery Patients in Mann Field





Figure 105: Performing Eye Surgeries for Mann Field Elders at Minbu Hospital



Figure 106: Organizing Mobile Clinic Program in Mann Field Communities

Number of Patients (21 February 2022 – 23 March 2025)

Village	Session	Male	Female	Total
Kyar Kan	147	940	3,522	4,462
Kywe Cha	145	1,189	3,228	4,417
Lay Eain Tan	147	1,046	3,395	4,441
Let Pan Ta Pin	148	888	3,152	4,040
Aye Mya	65	509	1,577	2,086
Nan U/ Auk Kyaung	63	359	1,171	1,530
Total	715	4,931	16,045	20,976

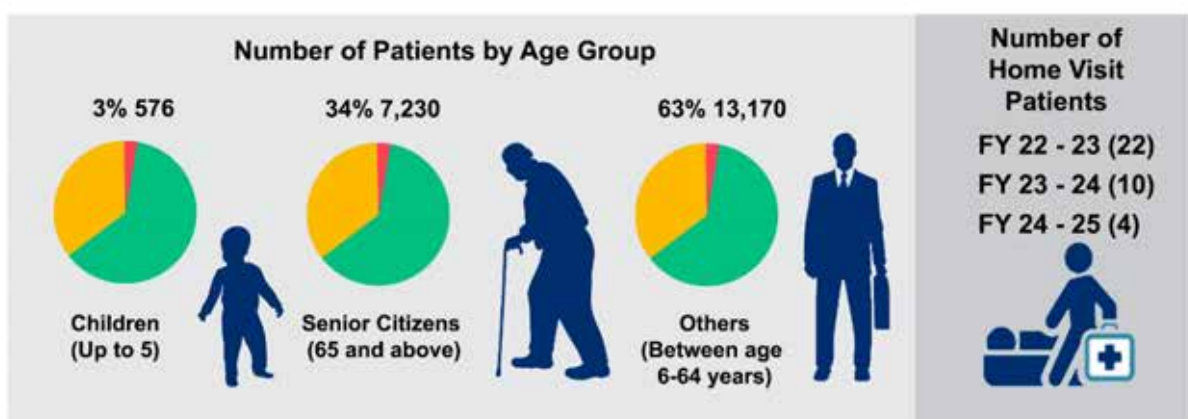
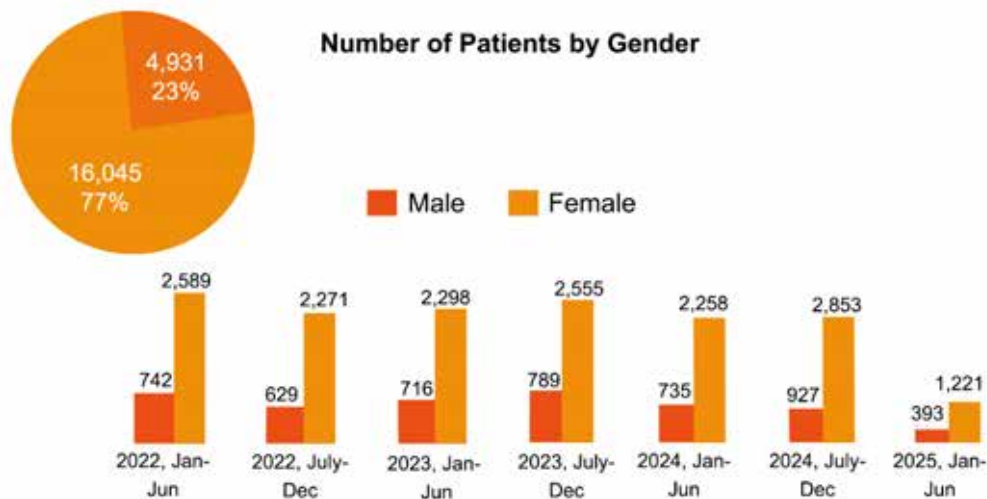


Figure 107: Statistics of Patients' Visit to Mobile Clinics around Mann Field





Figure 108: Conducting Reproductive Health and Birth Spacing Health Talk Sessions for Mann Field Communities



Figure 109: Organizing Health Education Sessions on Chicken Pox for Mann Field Communities

10.6.6 Community-led Waste Management Program



MPRL E&P supported the implementation of a community-led waste management initiative using a three-wheeled cargo bike in the Fiscal Year 2019-2020 in Mann Field Communities. The program involved community volunteers and village leaders to address the lack of access to municipal waste services in Mann Field. In the Fiscal Year 2020-2021, MPRL E&P's CSR Program upgraded the cargo bike to a larger waste collection vehicle to accommodate more villages and increased waste volumes. The present waste management program emphasizes regular operations and community participation for sustainability and aims to raise awareness and motivate collective actions for proper waste management and sustainable development.

Achievements from October 2024 to March 2025

MPRL E&P's CSR Program continued to support community-led waste management initiatives in Mann Field Communities, focusing on efficient waste collection and collaboration with Trash Hero Minbu, during the period of October 2024 to March 2025.

October 2024:

- Waste Collection Support: Organized a waste collection plan using a FAW truck due to heavy rainfall impacting landfill access, covering additional costs beyond community fees.
- Trash Hero Minbu Collaboration: Monitored community waste management efforts and supported Trash Hero Minbu's cleanup activities, with three cleanup events held in October.

November 2024:

- Waste Collection Monitoring: Monitored the waste collection service in Mann Field Communities and provided necessary support.
- Trash Hero Minbu Support: Supported two Trash Hero Minbu cleanup events and facilitated knowledge-sharing and painting activities.

December 2024:

- Waste Collection Monitoring: Monitored the waste collection service and provided support.
- Trash Hero Minbu Support: Supported four Trash Hero Minbu cleanup events.

January 2025:

- Waste Collection Monitoring: Monitored the waste collection service and provided necessary support.
- Trash Hero Minbu Support: Oversaw regular cleanup activities of Trash Hero Minbu, providing cleanup equipment and refreshments, supporting three cleanup events.

February 2025:

- Waste Collection Monitoring: Monitored the waste collection service and provided necessary support.
- Trash Hero Minbu Support: Supervised regular cleanup activities, supplying equipment and refreshments, supporting two cleanup events.

March 2025:

- Waste Collection Monitoring: Monitored the waste collection service and provided necessary support.

- Trash Hero Minbu Support and Education: Supported four Trash Hero Minbu cleanup events and facilitated a knowledge-sharing and brainstorming session on trash classification with 49 Trash Hero Children from Auk Kyaung and Nann U Villages.



Figure 110: Monitoring Waste Collection Services in Mann Field Communities

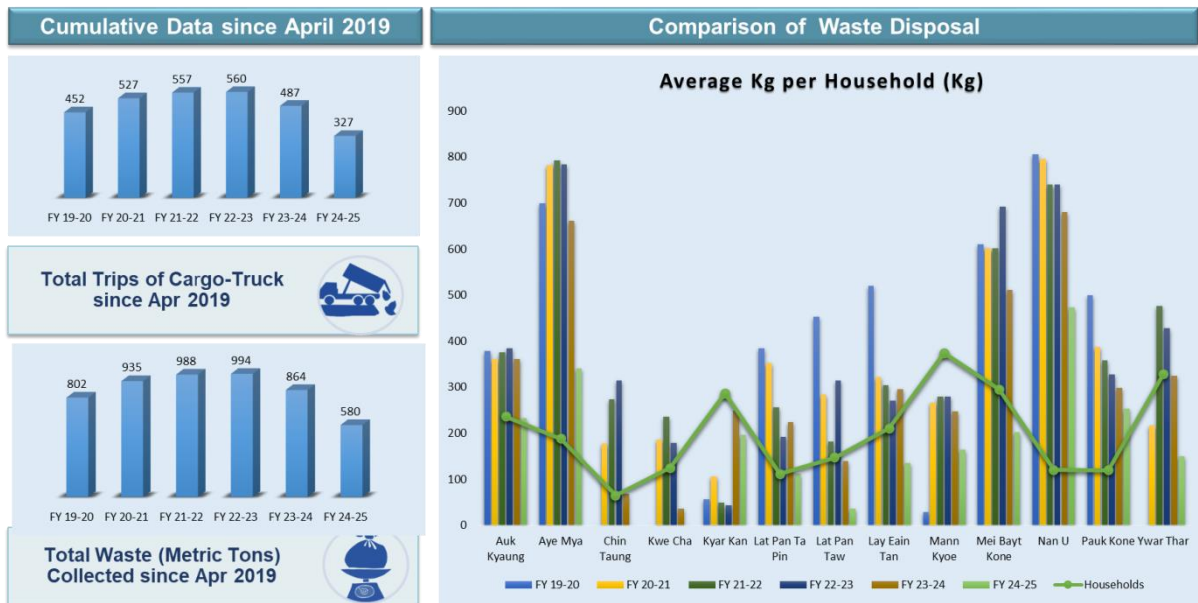


Figure 111: Comparison of Waste Disposal (Quarterly)





Figure 112: Organizing Trash Hero Minbu's Cleanup Activities in Mann Field



Figure 113: Conducting Knowledge Sharing, Painting and Brainstorming Activities at Trash Hero Minbu Chapter

10.6.7 Operational Grievance Mechanism (OGM)



MPRL E&P prioritizes host communities by fostering transparent information sharing and two-way communication channels to build trust and maintain a social license to operate. We have adopted a multi-stakeholder approach to create the Operational Grievance Mechanism (OGM) in Mann Field. This initiative, led by MPRL E&P, the host communities, and Myanmar Oil and Gas Enterprise (MOGE), represents the first of its kind in Myanmar. The OGM is a vital component that complements Mann Field Social Management Plan.

Achievements from October 2024 to March 2025

MPRL E&P's CSR Program continued to maintain and promote the Operational Grievance Mechanism (OGM) in Mann Field Communities, ensuring effective resolution of community concerns related to operations during the period of October 2024 to March 2025.

October 2024:

- OGM Case Received: Received one OGM case from Auk Kyaung Village regarding an oil pipeline leakage, bringing the total resolved cases since September 2014 to 183.

January 2025:

- OGM Cases Received: Received two OGM cases regarding water pipeline leakages from Auk Kyaung Village and Mei Bayt Kone Village, increasing the total cases to 185 since September 2014.
- OGM 10-Year Anniversary Celebration: Held an OGM awareness-raising campaign, "Celebrating 10 Years of OGM: A Night of Unity, Fun, and Family," commemorating a decade of OGM operation. Activities included food corners, face painting, storybook coloring, Q&A sessions, knowledge-sharing by the Field Operations and HSE Teams, OGM story play sessions, and a movie night, with 723 attendees, including 415 children.
- OGM Awareness Materials: Produced and distributed the "Early Warning and Effective Solutions" 10-year anniversary report, an OGM comic book, and a coloring book to further promote OGM awareness.

February 2025:

- OGM Cases Received: Received two OGM cases from Ywar Thar and Mei Bayt Kone Villages regarding the removal of old pipelines, bringing the total cases to 187 since September 2014, with all cases resolved.

March 2025:

- OGM Case Resolution: Resolved and closed a reopened OGM case from May 2024.
- OGM Summary: Reported a total of five new OGM cases received during the six-month period. All 187 OGM cases filed since September 2014 have been successfully addressed and resolved, through the collaborative efforts of MPRL E&P's Field Operations Team and MOGE Engineering Department. The CSR Team effectively closed these cases, ensuring that all key performance indicators (KPIs) were met.

Addressed Grievance Cases

- On 21 October 2024, Daw Htwe Yee from Auk Kyaung Village reported an oil pipeline leakage on her farmland. The leaking pipeline, which connects #185 and #41 to GOCS 2, required immediate repair. The case was reported by a community volunteer to PA-01 of the CSR Team, who promptly informed MPRL E&P's Field Operations Team. The Team met with the farmer and repaired the pipeline on the same day. The complainant expressed satisfaction with both the process and the outcome.
- On 17 January 2025, Daw Yin Mar Aye from Auk Kyaung Village reported an OGM case related to the repair water pipeline/ water supply. A leakage in the water pipeline connects GIP to the fire water pump in her farmland, resulting in difficulties in cultivating. She requested to inspect and repair it. The Community Volunteer reported the case to CSRA-02. CSRA-02 informed the case to MPRL E&P's Field Operations Team and MOGE. Following an inspection by MOGE's Engineering Department on 16 and 17 January 2025, the leakage was found and repaired on 17 January 2025. The case was closed on 17 January 2025. The complainant was satisfied with the process and the outcome.
- On 23 January 2025, U Tin Thaung from Mei Bayt Kone Village reported that water from #25 was overflowing into his farmland. He requested to inspect and repair it. The Community Volunteer reported the case to CSRA-02. CSRA-02 informed the case to MPRL E&P's Field Operations Team for inspection and further process. On 24 January 2025, CSR Staff and the Field Operations Team conducted an inspection. Excess water from the complainant's farmland was drained, and the water leakage hole was repaired. The case was closed on 24 January 2025. The complainant was satisfied with the process and outcome.
- On 03 February 2025, Daw Nyo from Ywar Thar Village reported an OGM case related to the unused pipeline from well #351 in her farmland causing difficulties in cultivating. She requested to inspect and remove it. The Community Volunteer reported the case to CSRA-02. CSRA-02 informed the case to MPRL E&P's Field Operations Team for inspection and further process. The Community Volunteer reported the case to CSRA-02. CSRA-02 informed the case to MPRL E&P Field Operations Team and the Team inspected the case and removed the pipeline. The complainant was satisfied with the process and the outcome.
- On 05 February 2025, U Nyunt Win from Mei Bayt Kone Village reported an OGM case concerning an unused water pipeline and an electrical pole near well #449, which were obstructing his farmland and making cultivation difficult. He requested to inspect and remove it. The Community Volunteer reported the case to CSRA-01. CSRA-01 informed the case to MPRL E&P's Field Operations Team and MOGE. Following the inspection from MOGE Engineering Department, the unused

water pipeline was removed. However, the electrical pole was found to be outside the cultivation area and was deemed necessary for future use, so it was left in place. The complainant was satisfied with the process and the outcome.

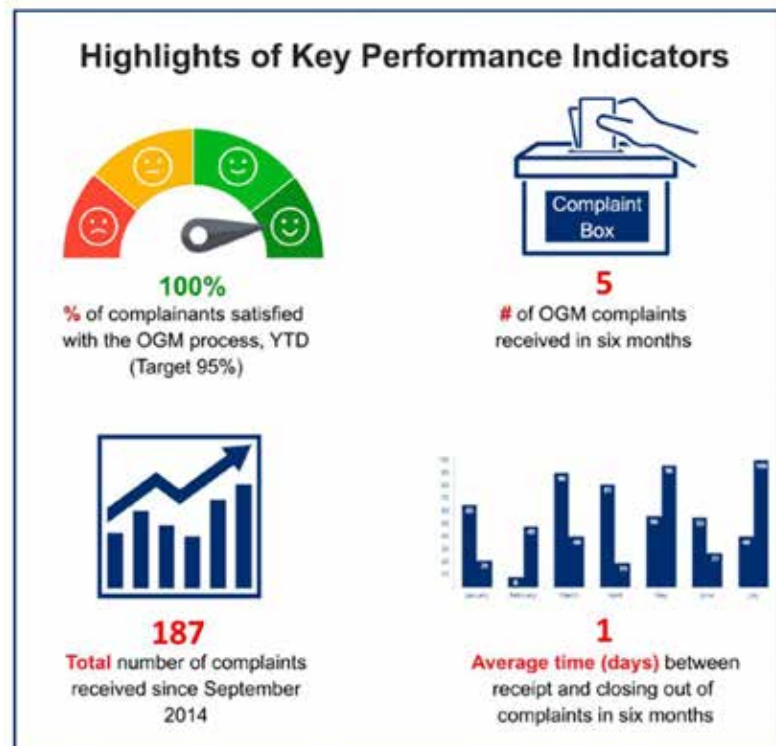


Figure 114: Key Performance Indicators of OGM

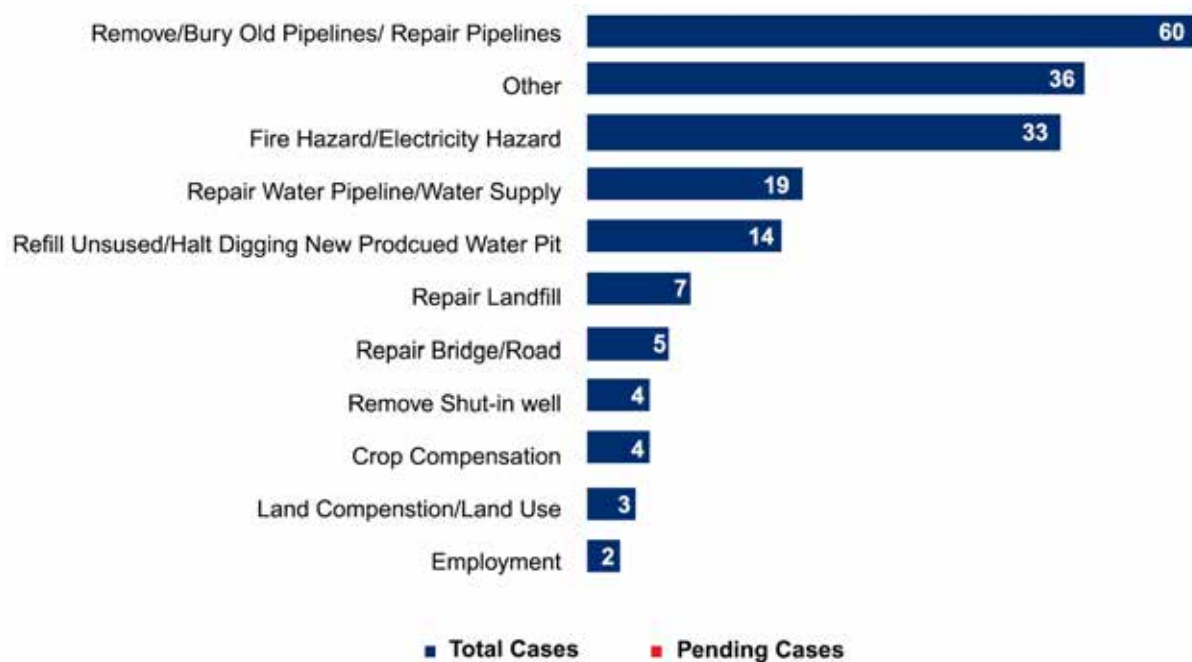


Figure 115: Received and Closed Cases, by Quarter, 2014-to-date



Figure 116: Publishing OGM 10-Year Anniversary Report and OGM Comic Book







Figure 117: Organizing OGM 10-Year Anniversary Celebration and Awareness-Raising Campaign in Mann Field Communities



Figure 118: Addressing OGM Case in Auk Kyaung Village



Figure 119: Addressing OGM Cases in Ywar Thar and Mei Bayt Kone Villages

Case Study

OGM at 10: A Journey of Passion, Purpose, and Progress



UN Guidelines on Business and Human Rights

The United Nations' Guiding Principles on Business and Human Rights emphasize the "Protect, Respect, and Remedy" framework. Under Principle 31, companies are responsible for respecting human rights and addressing grievances linked to their operations. To fulfill this obligation, companies should establish grievance mechanisms to receive, process, and resolve complaints from individuals, employees, and local communities impacted by their business activities.

A Decade of the Operational Grievance Mechanism

MPRL E&P values stakeholder engagement and recognizes that transparency and open communication are essential for building trust and securing a Social License to Operate (SLO). Guided by the UN Guiding Principles on Business and Human Rights, the company defines its Operational Grievance Mechanism (OGM) as a formal, non-state, preventive, and effective tool. In line with Principle 31, MPRL E&P, in partnership with Myanma Oil and Gas Enterprise (MOGE), launched the OGM in 2014 at Mann Field in Minbu, Magway Region. This initiative strengthens the company's human rights due diligence by identifying potential adverse impacts that may not be fully captured in standard impact assessments.

Since its inception in 2014, the OGM has played a vital role in fostering positive relationships between MPRL E&P and local stakeholders by promoting open dialogue and transparency. Over the past decade, 183 cases have been successfully resolved through the mechanism, consistently meeting Key Performance Indicators (KPIs) for acknowledgment time, feedback time, and case closure. Notably, the OGM has achieved a 100% satisfaction rate for both its process and outcomes, reflecting strong

stakeholder confidence in how concerns are handled. This high level of satisfaction demonstrates that community members trust the mechanism and are pleased with the resolutions provided by MPRL E&P.

Setting a Benchmark for Trust and Accountability

In partnership with MOGE, MPRL E&P implemented the OGM through a multi-stakeholder approach, making it the first mechanism of its kind to be jointly managed by the host community and the company. This model of inclusivity, accountability, and mutual trust was introduced across 14 communities surrounding Mann Field between 2013 and 2014. Since then, the OGM has become instrumental in advancing MPRL E&P's Environmental, Social, and Governance (ESG) objectives in field operations.

Grounded in key principles such as accessibility, transparency, fairness, accountability, and harm prevention, the OGM upholds human rights while fostering trust and long-term stakeholder relationships. By adhering to these values, the mechanism serves as a crucial bridge between the company's operations and the communities it impacts.

Milestones of Success

The 10-year OGM Anniversary Report, published in January 2025, highlights key achievements that have shaped MPRL E&P's decade-long commitment to transparent and effective grievance management:

- Piloted the OGM in three villages before rolling it out to all 14 villages in Mann Field.
- Established Key Performance Indicators (KPIs) to measure the mechanism's effectiveness.
- Trained community volunteers in stakeholder engagement and OGM processes.
- Conducted annual community awareness campaigns and knowledge, attitude, and practice (KAP) surveys to assess impact.
- Published quarterly OGM reports in both English and Myanmar, assessable on the company's website.
- Broadcasted an OGM documentary on government media.
- Introduced a CSR Open Day and launched additional KAP surveys.
- Adapted the mechanism to address challenges arising from the pandemic and environmental changes.

Celebrating 10 Years of the Operational Grievance Mechanism

This milestone marks a decade of implementing the Operational Grievance Mechanism in Mann Field—an initiative that has reshaped MPRL E&P's approach to operations, sustainability, and stakeholder engagement. Over the past 10 years, OGM has become a cornerstone of our commitment to addressing grievances effectively, fostering collaboration, and driving meaningful change.

To commemorate this achievement, MPRL E&P published the 10-year OGM Anniversary Report in January 2025. This report reflects the collective efforts of teams,

stakeholders, and partners who have contributed to the mechanism's success. It highlights key milestones, lessons learned, and case studies demonstrating the OGM's impact. Additionally, the report explores how the mechanism has enhanced operational efficiency, environmental stewardship, and stakeholder partnerships while setting a vision for its next phase of growth and continuous improvement.

As part of this celebration, MPRL E&P's CSR & Communications Department developed an OGM comic book, offering an engaging and assessable way to understand the process and implementation of the mechanism. Both the report and the comic book are now available on the company's website.

A Night of Unity, Fun, and Family

To commemorate this milestone, MPRL E&P hosted a special community event, "A Night of Unity, Fun, and Family: A Decade of the Operational Grievance Mechanism," on 25 January 2025 in Aye Mya Village, Mann Field. The event celebrated a decade of achievements, highlighting the progress made while fostering a sense of pride within the local community.



More than just a celebration, it served as a platform to engage the community in a shared responsibility for future successes. A key focus of the campaign was environmental sustainability, with an emphasis on educating younger generations about the importance of sustainable practices and conservation efforts. The Field Operations, HSE, and CSR Teams collaborated closely with community volunteers and village leaders to ensure the event's success.

While the event was primarily designed for children in Mann Field Communities, it attracted a total of 723 participants, including 415 children, reflecting strong community engagement and support.

Designed to foster community bonding and enjoyment, the program featured five key segments:

- **Food and Refreshments** – Free snack and juice coupons for children under 14.
- **Interactive Activities** – Face painting, OGM comic book reading, and coloring stations.
- **Lucky Draw and Games** – Engaging quizzes and prize giveaways.
- **Knowledge Sharing** – Educational talks on oil and gas exploration, a day in the life of a petroleum engineer, and Health, Safety, and Environment (HSE) under the theme “For the Heroes of Saving the Earth.”
- **Performances and Entertainment** – A traditional elephant dance by Aye Mya Village, an OGM 10-year anniversary role play by children from the mangoSTEEMS Online English Learning Program, and an animated movie night with all attendees.



MPRL E&P's OGM: Advancing Sustainability and Accountability

As MPRL E&P reflects on a decade of trust-building and accountability through its Operational Grievance Mechanism (OGM), the company remains committed to continuous improvement and sustainable development. By fostering transparency, addressing community concerns, and strengthening stakeholder relationships, MPRL

E&P ensures that its operations align with the principles of inclusivity and responsible business practices.



Looking ahead, the company recognizes the need to align with the Sustainable Development Goals (SDGs) to create meaningful and lasting impact. Through transparent progress tracking, responsible innovation, and proactive solutions to emerging challenges, MPRL E&P is dedicated to delivering long-term value for both communities and the environment.

By embracing collaboration and continuous improvement, the company strives to secure a sustainable future—one where businesses and communities grow together with trust, accountability, and shared success.



10.6.8 Stakeholder Engagement and Information Disclosure



At MPRL E&P, engaging stakeholders and disclosing information are vital components of our commitment to upholding human rights and providing access to remedies. Timely and consistent engagement with our key stakeholders forms the foundation of our CSR initiatives in Mann Field. We actively involve stakeholders at various levels, including field, community, local, and regional levels, to establish a robust two-way communication channel.

Achievements from October 2024 to March 2025

MPRL E&P's CSR Program actively engaged with stakeholders and ensured transparent information disclosure through various meetings, reports, and community interactions during the period of October 2024 to March 2025.

October 2024:

- Biannual CSR Progress Review: Organized the First Biannual CSR Progress Review Meeting for the Fiscal Year 2024-2025 with MOGE representatives in Nay Pyi Taw with 15 attendees.
- Reporting and Communication: Submitted bi-weekly and monthly CSR activity reports to the MOGE General Manager (Mann Field), organized monthly community volunteer meeting, and distributed Insight! Newsletter (Issue-40) and Doh Mann Myay Newsletter (Issue-14) to local stakeholders.

November 2024:

- Stakeholder Meetings: Met with relevant stakeholders to discuss community investment initiatives and organized monthly community volunteer meeting.
- Reporting and Planning: Submitted bi-weekly and monthly CSR activity reports to the MOGE General Manager (Mann Field) and conducted community needs assessments for developing CSR work programs and the budget plan for Fiscal Year 2025-2026.
- Biannual CSR Progress Update: Held the First Biannual CSR and HSE Progress Update Meeting with Mann Field Communities at Min Min Hotel (Minbu), with 59 attendees, to review activities and outline future plans.

December 2024:

- Government Engagement: Provided social performance management updates to the New Assistant Director of Environmental Conservation Department (ECD - Magway) and facilitated a mobile clinic visit.
- Community Appreciation: Distributed shirts and longyi to Village Administrators and Community Volunteers and distributed 2025 greeting cards, calendars, and gifts to stakeholders in Mann Field, Minbu, and Magway.
- Reporting and Communication: Published Insight! Newsletter (Issue-41), Doh Mann Myay Newsletter (Issue-15) and Community Grievance Mechanism Reports.

January 2025:

- Stakeholder Discussions: Held meetings with local stakeholders to discuss social investment initiatives.

- OGM Anniversary Preparation: Announced and prepared for the 10-year OGM anniversary celebration, collaborating with various teams and communities.
- Reporting and Monitoring: Organized monthly community volunteer meeting, prepared and submitted the third-quarter Monitoring and Evaluation (M&E) Report of the Fiscal Year 2024-2025, and submitted bi-weekly and monthly CSR activity reports to the MOGE General Manager (Mann Field).

February 2025:

- Stakeholder Engagement: Conducted stakeholder engagement sessions for social investment initiatives and organized monthly community volunteer meeting.
- Community Capacity Building: Held discussions with MCC Computer Training (Minbu) regarding a Summer Program computer class.
- International Engagement: MPRL E&P's Head of Corporate Sustainability attended the Asian Venture Philanthropy Network (AVPN) Southeast Asia Summit in Singapore.
- Reporting: Submitted bi-weekly and monthly CSR activity reports to the MOGE General Manager (Mann Field).

March 2025:

- Community Meetings and Coaching: Held monthly community volunteer meeting and provided coaching to the volunteer from Lay Eain Tan Village on key CSR topics.
- Reporting: Submitted bi-weekly and monthly CSR activity reports to the MOGE General Manager (Mann Field).
- Reporting and Communication: Conducted stakeholder engagement meetings, produced periodic CSR progress reports, announced the temporary closure of mobile clinics, and published Insight! Newsletter (Issue-42), Doh Mann Myay Newsletter (Issue-16), Community Grievance Mechanism Reports, and the Voluntary Principles on Security and Human Rights Report.



Figure 120: Organizing First Biannual CSR Progress Review Meeting for FY 2024-2025 with MOGE in Nay Pyi Taw



Figure 121: Organizing First Biannual CSR and HSE Progress Update Meeting with Mann Field Communities



Figure 122: Conducting Community Needs Assessments at Mann Field for FY 2025-2026 CSR Work Program and Budget Planning



Figure 123: Delivering Social Performance Management Updates to the New Assistant Director of ECD (Magway) and Facilitating their Visit to the Mobile Clinic in Mann Field



Figure 124: Meeting with Stakeholders for Social Investment Initiatives in Mann Field



Figure 125: Organizing Monthly Community Volunteer Meeting and Presenting New Year Gifts to Community Volunteers



Figure 126: Distributing 2025 Greeting Cards, Calendars and Presents to Stakeholders



Figure 127: Publishing and Distributing Insight! Newsletters (Issue-41) and (Issue-42)



Figure 128: Publishing and Distributing Doh Mann Myay Newsletters (Issue-15) and (Issue-16)



Figure 129: Distributing Doh Mann Myay Newsletters to Local Stakeholders

10.6.9 Corporate Philanthropy



MPRL E&P recognizes the importance of corporate responsibility and actively engages in philanthropic endeavors to benefit our communities. Our philanthropic efforts are targeted to create a significant and positive impact in the areas we operate. These include charitable donations, community contributions, employee volunteering initiatives, disaster relief programs, and other strategic partnerships focused on supporting social causes.

Achievements from October 2024 to March 2025

MPRL E&P's CSR Program demonstrated our commitment to corporate philanthropy through donations and community support initiatives during the period of October 2024 to March 2025.

October 2024:

- Minbu Hospital Donation: Donated a CHIGO 2 HP air conditioner, valued at MMK 2,714,000, to the Eye Specialist Outpatient Department (OPD) at Minbu Hospital.

November 2024:

- Kahtain Donations: Provided Kahtain donations to 27 monasteries in Mann Field Communities, including robe offerings, cash contributions, rice, oil, and other essential items, with a total cost of MMK 10,000,000.

March 2025:

- Community Center Book Donation: Donated purchased books to Mann Kyoe and Nan U Community Centers as part of the book request program.



Figure 130: Donating Books to Mann Kyoe and Nan U Community Centers under the Book Request Program





Figure 131: Offering Kahtain donations to Monasteries in Mann Field Communities



Figure 132: Donating Air Conditioner (CHIGO 2 HP) to Eye Specialist Outpatient Department at Minbu Hospital

10.6.10 MOGE Employee-Centered CSR Program



In the Fiscal Year 2024-2025, MPRL E&P has launched a comprehensive CSR Program focused on supporting MOGE employees and their families. This initiative reflects our commitment to responsible investment and community development, going beyond mere contractual obligations. The program includes a range of activities aimed at enhancing the well-being of MOGE employees, such as renovating school infrastructure for their children, providing essential educational materials, offering medical support, and facilitating vocational training. Additionally, the program supports the local community through contributions to cultural and religious events, including donations of food and essential supplies. This employee-centered approach ensures that the needs of MOGE employees and their families are prioritized and addressed effectively.

Achievements from October 2024 to March 2025

MPRL E&P's CSR Program continued to support MOGE (Mann Field) employees and their families through targeted initiatives focused on education, welfare, and capacity building during the period of October 2024 to March 2025.

October 2024:

- Education Support: Provided MMK 5,000,000 to the MOGE General Manager (Mann Field) for the maintenance and repair of Eain Yar Basic Education High School (Sub) and MMK 3,000,000 for books and stationery for MOGE employees' children.

November 2024:

- Employee Welfare: Conducted the second round of rice and cooking oil distribution to MOGE (Mann Field) employees, with a handover of MMK 35,000,000 to the MOGE General Manager (Mann Field).
- Kahtain Donation: Donated MMK 1,000,000 for Kahtain donation to MOGE (Mann Field).

December 2024:

- Capacity Building and Education: Provided MMK 22,750,000 to the MOGE General Manager (Mann Field) to support capacity building initiatives and a library upgrade. This included MMK 10,000,000 for Vocational and Life Skills Training, MMK 10,000,000 for a Need-Based Scholarship Program, and MMK 2,750,000 for upgrading the library.

January 2025:

- Program Monitoring: The MOGE General Manager (Mann Field) and MPRL E&P's Field Operations Team visited the library and Vocational and Life Skills Training sessions supported by the MOGE Employee-Centered CSR Program.

February 2025:

- Medical Support: Handed over MMK 950,000 to the MOGE General Manager (Mann Field) for medical supplies for the MOGE (Mann Field) Clinic.
- Fiscal Year Contribution: Reaffirmed the contribution of MMK 100 million from the Fiscal Year 2024-2025 CSR budget to support MOGE (Mann Field) by the MOGE Employee-Centered CSR Program.



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အတွက်
MPRL E&P Pte Ltd. ၏
ဝန်ထမ်းများမှ CSR လုပ်ငန်းပံ့ပိုးမှု အစီအစဉ်
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ကျပ်သိန်း(၅၀)

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အတွက်

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Figure 133: Donating a Total of MMK 8,000,000 for Maintenance and Repair of Eain Yar School and for Provision of Books and Stationery to MOGE Employees' Children



Figure 134: Donating MMK 35,000,000 for the Second Round of Rice and Cooking Oil Distribution to MOGE (Mann Field) Employees



Figure 135: Donating MMK 22,750,000 to Support Vocational and Life Skills Training for MOGE (Mann Field) Employees and their Families, to Provide a Need-Based Scholarship Program for Employees' Children, and to Upgrade the Library with Books and Learning Facilities



Figure 136: Visit of MOGE General Manager (Mann Field) and MPRL E&P's Field Operations Team to Library and Vocational and Life Skills Training Sessions Supported by MPRL E&P's MOGE Employee-Centered CSR Program



Figure 137: Donating MMK 950,000 for Provision of Medical Supplies to MOGE (Mann Field) Clinic

Case Study

MPRL E&P Expands Support for MOGE Employees with Employee-Centered CSR Program

MPRL E&P has launched its MOGE Employee-Centered CSR Program for the Fiscal Year 2024-2025, reinforcing its commitment to supporting Myanmar Oil and Gas Enterprise (MOGE) employees and their families. This initiative goes beyond contractual obligations, emphasizing responsible investment and sustainable community development.

The program includes a range of initiatives, such as renovating school infrastructure for the children of MOGE employees, providing essential educational materials, offering medical support, and facilitating vocational training. Additionally, it extends support to the local community by funding cultural and religious events and donating food and other essential supplies.

As part of the program, MPRL E&P's Field Operations Manager allocated MMK 35,000,000 in November 2024 for the second round of rice and cooking oil distributions to MOGE employees in Mann Field. In December 2024, an additional MMK 22,750,000 was designated for vocational and life skills training, a need-based scholarship program for employees' children, and significant upgrades to the MOGE library, including new books and enhanced learning facilities. Additionally, MMK 950,000 was provided for medical supplies at the MOGE (Mann Field) Clinic in February 2025.

By the end of this Fiscal Year, a total of MMK 100,000,000 had been handed over to the MOGE General Manager (Mann Field) as part of MPRL E&P's ongoing commitment. This comprehensive program continues to empower MOGE employees, promote sustainable development, and support their families and the broader community.

11. Conclusion

The tenth Environmental Monitoring Report for the Mann Field EOR Project has been successfully completed, documenting field activities and self-environmental monitoring conducted over the six-month period from October 2024 to March 2025.

During this period, comprehensive self-environmental monitoring was carried out, covering air and noise quality at Z3AQN and Z4AQN, soil quality at Z3S1, Z3S2, Z4S1, and Z4S2, and water quality at Z3SW1, Z3SW2, Z3GW1, Z3GW2, Z4SW1, Z4SW2, and Z4GW2 within designated assessment areas. For baseline monitoring locations that were temporarily inaccessible, we plan to resume air, noise, soil, surface water, and groundwater quality assessments when conditions improve.

During our operations at Mann Field, we faced a range of opportunities and challenges. Enhanced security measures limited activities to daytime hours, increasing operational risks. Key concerns included oil reserve depletion, disruptions caused by pilfering, and logistical difficulties. Despite these obstacles, our commitment to environmental responsibility remained unwavering.

We closely monitored environmental impacts, actively engaged in Corporate Social Responsibility (CSR) and Health, Safety, and Environment (HSE) initiatives, and nurtured a culture aligned with our organizational values. Our steadfast commitment to meeting Environmental Compliance Certificate (ECC) obligations reflects our dedication to regulatory compliance, goal achievement, and continuous improvement.

12. Annex

Annex – 1 Laboratory Results

Annex – 1 Laboratory Results



Analysis Report



Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

Magway Region

Customer Name : MPRL E & P Pte Ltd.
Sample Name : Z3AQN (Air Quality Analysis)
Sampling Date : 22-1-2025 to 23-1-2025 (24 Hours)
Reporting Date : 3-2-2025
Equipment Name : Haz-Scanner (920246) USA

No.	Parameter	Unit	Result	National Environmental Quality (Emission) Guidelines အပိုင်း(၁.၁)	Remark
1	Carbon Monoxide (CO)	ppm	0.172	-	
2	Carbon Dioxide (CO ₂)	ppm	1483.79	-	
3	Hydrogen Sulfide(H ₂ S)	ppb	0	-	
4	Nitrogen Oxide (NO)	ppb	37.83	200	
5	Nitrogen Dioxide (NO ₂)	ppb	3.124	-	
6	Particulate Matter (PM ₁₀)	μg/ m ³	48.5121	50	
7	Relative Humidity (RH)	%	52.66	-	
8	Sulphur Dioxide (SO ₂)	μg/ m ³	0	20	

This report is only valid for the sample received.

Not a certificate of conformance
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Analysis By

Signature: _____

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Analysis Report



Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

Magway Region

Customer Name : MPRL E & P Pte Ltd.
Sample Name : Z3AQN (20°13'21.73"N; 94°51'19.72"E)(Noise)
Analytical Date : 22-1-2025
Reporting Date : 3-2-2025
Equipment Name : Sound Meter(EXTECH-SDL600)

Receptor	One Hour LAeq(dBA) ^a	
	Day Time 07:00- 22:00 (10:00- 22:00 for Public holidays)	Night Time 22:00- 07:00 (22:00-10:00 for Public holidays)
Residential	55	45
Industrial	70	70
Average Test Result	67.4	46.3

This report is only valid for the sample received.

Not a certificate of conformance

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Analysis Report



Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

Magway Region

Customer Name : MPRL E & P Pte Ltd.
 Sample Name : Z4AQN (Air Quality Analysis)
 Sampling Date : 23-1-2025 to 24-1-2025 (24 Hours)
 Reporting Date : 3-2-2025
 Equipment Name : Haz-Scanner (920246) USA

No.	Parameter	Unit	Result	National Environmental Quality (Emission) Guidelines အပိုင်း(၁.၁)	Remark
1	Carbon Monoxide (CO)	ppm	0.3895	-	
2	Carbon Dioxide (CO ₂)	ppm	478.204	-	
3	Hydrogen Sulfide(H ₂ S)	ppb	1.089	-	
4	Nitrogen Oxide (NO)	ppb	56.079	200	
5	Nitrogen Dioxide (NO ₂)	ppb	7.145	-	
6	Particulate Matter (PM ₁₀)	µg/ m ³	77.28	50	
7	Relative Humidity (RH)	%	49.84	-	
8	Sulphur Dioxide (SO ₂)	µg/ m ³	0	20	

This report is only valid for the sample received.

Not a certificate of conformance
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Analysis Report



Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

Magway Region

Customer Name : MPRL E & P Pte Ltd.
 Sample Name : Z4AQN (20°13'21.73"N; 94°51'19.72"E)(Noise)
 Analytical Date : 22-1-2025
 Reporting Date : 3-2-2025
 Equipment Name : Sound Meter(EXTECH-SDL600)

Receptor	One Hour LAeq(dBA) ^a	
	Day Time 07:00- 22:00 (10:00- 22:00 for Public holidays)	Night Time 22:00- 07:00 (22:00-10:00 for Public holidays)
Residential	55	45
Industrial	70	70
Average Test Result	51.0	37.0

This report is only valid for the sample received.

Not a certificate of conformance
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Analysis Report



Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

Magway Region

Customer Name : MPRL E & P Pte Ltd.
Sample Name : Z3S1 (Soil Sample)
Sampling Date : 22-1-2025
Receiving Date : 24-1-2025
Analytical Date : 27-1-2025 to 2-2-2025
Reporting Date : 3-2-2025
Equipment Name : Arsenic Test Kit, Palintest (SKW500), AAS (Atomic Absorption Spectrophotometer)

No.	Parameter	Unit	Result	Remark
1	pH	-	6.9	
2	Arsenic	mg/kg	0.005	
3	Lead(Pb)	mg/kg	8.705	
4	Cadmium (Cd)	mg/kg	1.039	
5	Copper (Cu)	mg/kg	11.11	
6	Zinc (Zn)	mg/kg	19.87	
7	Manganese (Mn)	mg/kg	10.4	
8	Iron (Fe)	mg/kg	17.8	

This report is only valid for the sample received.

Not a certificate of conformance

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Analysis By

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Analysis Report



Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

Magway Region

Customer Name : MPRL E & P Pte Ltd.
Sample Name : Z3S2 (Soil Sample)
Sampling Date : 22-1-2025
Receiving Date : 24-1-2025
Analytical Date : 27-1-2025 to 2-2-2025
Reporting Date : 3-2-2025
Equipment Name : Arsenic Test Kit, Palintest (SKW500), AAS (Atomic Absorbtion Spectrophotometer),

No.	Parameter	Unit	Result	Remark
1	PH	-	6.52	
2	Arsenic	mg/kg	0.008	
3	Lead(Pb)	mg/kg	17.99	
4	Cadmium (Cd)	mg/kg	0.563	
5	Copper (Cu)	mg/kg	9.837	
6	Zinc (Zn)	mg/kg	17.52	
7	Manganese (Mn)	mg/kg	10.6	
8	Iron (Fe)	mg/kg	11.6	

This report is only valid for the sample received.

Not a certificate of conformance
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Analysis By

Signature:

Name: (ဟန်သီရိအောင်)

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Approved By

Signature:

Name: (ဇော်စိုး)

Designation: ညွှန်ကြားရေးမှူး
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Analysis Report



Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

Magway Region

Customer Name : MPRL E & P Pte Ltd.
 Sample Name : Z4S1 (Soil Sample)
 Sampling Date : 22-1-2025
 Receiving Date : 24-1-2025
 Analytical Date : 27-1-2025 to 2-2-2025
 Reporting Date : 3-2-2025
 Equipment Name : Arsenic Test Kit, Palintest (SKW500), AAS (Atomic Absorbion Spectrophotometer),

No.	Parameter	Unit	Result	Remark
1	PH	-	6.73	
2	Arsenic	mg/kg	0.007	
3	Lead(Pb)	mg/kg	25.47	
4	Cadmium (Cd)	mg/kg	0.435	
5	Copper (Cu)	mg/kg	27.43	
6	Zinc (Zn)	mg/kg	53.27	
7	Manganese (Mn)	mg/kg	9	
8	Iron (Fe)	mg/kg	15.5	

This report is only valid for the sample received.

Not a certificate of conformance
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Analysis By

Signature:

Name: (ဟန်သိန်းစာဝင်း)

Designation: မြေထဲမှ အဆေးအနား
 ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန

Approved By

Signature:

Name: (မောင်စိုး)

Designation: ညွှန်ကြားရေးမှူး
 ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန



Analysis Report



Ministry of Natural Resources and Environmental Conservation

Environmental Conservation Department

Magway Region

Customer Name : MPRL E & P Pte Ltd.
Sample Name : Z4S2 (Soil Sample)
Sampling Date : 22-1-2025
Receiving Date : 24-1-2025
Analytical Date : 27-1-2025 to 2-2-2025
Reporting Date : 3-2-2025
Equipment Name : Arsenic Test Kit, Palintest (SKW500), AAS (Atomic Absorbtion Spectrophotometer)

No.	Parameter	Unit	Result	Remark
1	pH	-	7.75	
2	Arsenic	mg/kg	0.004	
3	Lead(Pb)	mg/kg	21.17	
4	Cadmium (Cd)	mg/kg	0.470	
5	Copper (Cu)	mg/kg	24.39	
6	Zinc (Zn)	mg/kg	43.92	
7	Manganese (Mn)	mg/kg	5.8	
8	Iron (Fe)	mg/kg	6.8	

This report is only valid for the sample received.

Not a certificate of conformance

မိမိတို့သည် နမူနာကို ခံယူခြင်း၊ စစ်ဆေးခြင်း၊ ရေးသားခြင်း မဟုတ်ပါ။

Analysis By

Signature:

Name: (ဟန်သီဝအောင်)

Designation:

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန

Approved By

Signature:

Name: (ဇော်စိုး)

Designation:

ပတ်ဝန်းကျင်ထိန်းသိမ်းရေးဦးစီးဌာန

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04181		Date: February 26, 2025			
Client Information Client Name : MPRL E & P Pte Ltd Organization : - Client ID : - Registration Date & Time : 24.1.2025 10:30 AM Contact : 09-5177819 Testing Purpose : For Monitoring Email : han.m.aung@mprlexp.com		Sample Information Sample ID : 12382 Sample Name : Z3SW1 Sample Type / Source : Surface Water Sampling Date & Time : 23.1.2025 Sample Location : Minbu Township Latitude : - Longitude : -			
Testing Results This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service. This report shall not be reproduced except in full, without written approval of the laboratory.					
Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	BOD ₅ ¹	4.2	mg/L	-	-
2	Total Phosphorous ²	0.98	mg/L	-	-
3	Boron ³	0.23	mg/L	≤2.4 ⁴	Normal
4	Fluoride ³	0	mg/L	≤1.5 ⁴	Normal
5	Oil & Grease ⁵	4	mg/L	-	-
6	Total Nitrogen ⁶	0.82	mg/L	-	-
"ND" = Not Detected		"LOD" = Lower limit of detection		" - " = No Reference Standard	
Tested by		Checked by		Approved by	
 Daw Lin Myat Khine Lab. Technician II Ecological Laboratory ALARM		 Daw Lin Myat Aung Lab. Technician I Ecological Laboratory ALARM		 Dr. Aye Aye Win Laboratory In-Charge EcoLab ALARM	

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung

B.Sc Engg. (Civil), Dip S.E(Delft) Lecturer of YIT (Retd), Consultant [Y.C.D.C], LWSE 001,
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

Issue No - 1.0/Page 1 of 2

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WATER QUALITY TEST RESULTS FORM

Client	MPRL E & P
Nature of Water	Surface Water
Location	Z3SW1, Minbu Township.
Date and Time of collection	23.1.2025 (10:20 AM)
Date and Time of arrival at Laboratory	24.1.2025
Date and Time of commencing examination	25.1.2025
Date and Time of completing	27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.6		6.5 - 8.5
Colour (True)	25	TCU	15 TCU
Turbidity	50	NTU	5 NTU
Conductivity	410	micro S/cm	
Total Hardness	138	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃	
Magnesium Hardness	-	mg/l as CaCO ₃	
Total Alkalinity	176	mg/l as CaCO ₃	
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃	
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃	
Iron	-	mg/l	0.3 mg/l
Chloride (as CL)	-	mg/l	250 mg/l
Sodium Chloride (as NaCL)	-	mg/l	
Sulphate (as SO ₄)	-	mg/l	500 mg/l
Total Solids	-	mg/l	1500 mg/l
Total Suspended Solids	66	mg/l	
Total Dissolved Solids	-	mg/l	1000 mg/l
Manganese	-	mg/l	0.05 mg/l
Phosphate	-	mg/l	
Phenolphthalein Acidity	-	mg/l	
Methyl Orange Acidity	-	mg/l	
Salinity	-	ppt	

Remark: This certificate is issued only for the receipt of the test sample.



Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E (Dist) Lecturer of YIT (Reld), Consultant (V.C.D.C), LWSE 001,
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/ Page 2 of 2

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WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Surface Water
Location Z3SW1, Minbu Township.
Date and Time of collection 23.1.2025 (10:20 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)	25.0	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	-	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	6.2	mg/l	
Chemical Oxygen Demand (COD)	64	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	-	mg/l	3 mg/l
Copper (Cu)	-	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name:

Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by

Signature:

Name:

Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanzhargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04182

Date: February 26, 2025

Client Information

Client Name : MPRL E & P Pte Ltd
 Organization : -
 Client ID : -
 Registration Date & Time : 24.1.2025
 10:30 AM
 Contact : 09-5177819
 Testing Purpose : For Monitoring
 Email : han.m.aung@mprlxp.com

Sample Information

Sample ID : 12383
 Sample Name : Z35W2
 Sample Type / Source : Surface Water
 Sampling Date & Time : 23.1.2025
 Sample Location : Minbu Township
 Latitude : -
 Longitude : -

Testing Results

*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	ROD ₅ ¹	3.8	mg/L	-	-
2	Total Phosphorous ³	1.41	mg/L	-	-
3	Boron ³	0.24	mg/L	≤2.4 ²	Normal
4	Fluoride ¹	0	mg/L	≤1.5 ²	Normal
5	Oil & Grease ³	4	mg/L	-	-
6	Total Nitrogen ³	0.84	mg/L	-	-

ND = Not Detected

LOD = Lower limit of detection

* - * = No Reference Standard

Tested by

Checked by

Approved by

Daw Myo Aye Khin
 Lab. Technician II
 Ecological Laboratory
 ALARM

Daw Lin Myo Myat Aung
 Lab. Technician I
 Ecological Laboratory
 ALARM

Dr. Aye Aye Win
 Laboratory In-Charge
 EcoLab
 ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (H) Block, South Oakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



Laboratory Technical Consultant: U Saw Christopher Mung
B.Sc Engg. (Civil), Dip S.E.(Detl) Lecturer of YIT (Reld), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



W0125 554



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Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/ Page 1 of 2

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Surface Water
Location Z3SW2, Minbu Township.
Date and Time of collection 23.1.2025 (10:35 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.5		6.5 - 8.5
Colour (True)	40	TCU	15 TCU
Turbidity	55	NTU	5 NTU
Conductivity	406	micro S/cm	
Total Hardness	142	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃	
Magnesium Hardness	-	mg/l as CaCO ₃	
Total Alkalinity	192	mg/l as CaCO ₃	
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃	
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃	
Iron	-	mg/l	0.3 mg/l
Chloride (as CL)	-	mg/l	250 mg/l
Sodium Chloride (as NaCL)	-	mg/l	
Sulphate (as SO ₄)	-	mg/l	500 mg/l
Total Solids	-	mg/l	1500 mg/l
Total Suspended Solids	61	mg/l	
Total Dissolved Solids	-	mg/l	1000 mg/l
Manganese	-	mg/l	0.05 mg/l
Phosphate	-	mg/l	
Phenolphthalein Acidity	-	mg/l	
Methyl Orange Acidity	-	mg/l	
Salinity	-	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Zaw Hein Oo
Name: B.Sc (Chemistry)
Sr.Chemist

(a division of WEG Co., Ltd) **ISO Tech Laboratory**

Approved by

Signature: Thinzar Theint Theint
Name: B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

No.18, Lanthit Road, Nantthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Meung
B.Sc Engg. (Civil), Dip S.E (Tech) Lecturer of YIT (Retd), Consultant (V.C.D.C), LWSE 001,
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

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WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Surface Water
Location Z3SW2, Minbu Township.
Date and Time of collection 23.1.2025 (10:35 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)	25.0	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	-	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	6.6	mg/l	
Chemical Oxygen Demand (COD)	32	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	-	mg/l	3 mg/l
Copper (Cu)	-	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: [Signature]
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by

Signature: [Signature]
Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

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No.18, Lanthit Road, Nantthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04183

Date: February 26, 2025

Client Information

Client Name : MPRL E & P Pte Ltd
 Organization : -
 Client ID : -
 Registration Date & Time : 24.1.2025;
 10:30 AM
 Contact : 09-5177819
 Testing Purpose : For Monitoring
 Email : han.m.aung@mpriexp.com

Sample Information

Sample ID : 12384
 Sample Name : Z4SW1
 Sample Type / Source : Surface Water
 Sampling Date & Time : 23.1.2025
 Sample Location : Minbu Township
 Latitude : -
 Longitude : -

Testing Results

*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory.*

Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	BOD ₅ ^a	3.9	mg/L	-	-
2	Total Phosphorous ^a	1.62	mg/L	-	-
3	Boron ^a	0.26	mg/L	≤2.4 ^c	Normal
4	Fluoride ^a	0	mg/L	≤1.5 ^c	Normal
5	Oil & Grease ^a	5	mg/L	-	-
6	Total Nitrogen ^a	0.85	mg/L	-	-

"ND" = Not Detected

"LOD" = Lower limit of detection

" - " = No Reference Standard

Tested by

Checked by

Approved by

Daw Mye Mye Kywe
 Lab. Technician II
 Ecological Laboratory
 ALARM

Daw Lin Mye Mye Aung
 Lab. Technician I
 Ecological Laboratory
 ALARM

Dr. Aye Aye Mye
 Laboratory in-Charge
 Ecological Laboratory
 ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



Laboratory Technical Consultant: U Saei Christopher Maung
B.Sc Engg: (Civil), Dip S.E.(Drill) Lecturer of YIT (Ratd), Consultant (Y.C.D.C), LWSE 001
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

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WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Surface Water
Location Z4SW1, Minbu Township.
Date and Time of collection 23.1.2025 (14:35 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.3		6.5 - 8.5
Colour (True)	110	TCU	15 TCU
Turbidity	225	NTU	5 NTU
Conductivity	216	micro S/cm	
Total Hardness	72	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃	
Magnesium Hardness	-	mg/l as CaCO ₃	
Total Alkalinity	96	mg/l as CaCO ₃	
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃	
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃	
Iron	-	mg/l	0.3 mg/l
Chloride (as CL)	-	mg/l	250 mg/l
Sodium Chloride (as NaCL)	-	mg/l	
Sulphate (as SO ₄)	-	mg/l	500 mg/l
Total Solids	-	mg/l	1500 mg/l
Total Suspended Solids	279	mg/l	
Total Dissolved Solids	-	mg/l	1000 mg/l
Manganese	-	mg/l	0.05 mg/l
Phosphate	-	mg/l	
Phenolphthalein Acidity	-	mg/l	
Methyl Orange Acidity	-	mg/l	
Salinity	-	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name:

Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist

Approved by

Signature:

Name:

Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.) ISO Tech Laboratory

No.18, Lanthit Road, Nantargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

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WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/ Page 2 of 2

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Surface Water
Location Z4SW1, Minbu Township.
Date and Time of collection 23.1.2025 (14:35 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

**WHO Drinking Water Guideline
(Geneva - 1993)**

Temperature (°C)	25.0	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	-	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	6.0	mg/l	
Chemical Oxygen Demand (COD)	64	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	-	mg/l	3 mg/l
Copper (Cu)	-	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: *[Signature]*

Name:

Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
ISO Tech Laboratory

Approved by

Signature: *[Signature]*

Name:

Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lantit Road, Nantthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04184

Date: February 26, 2025

Client Information

Client Name : MPRL E & P Pte Ltd
 Organization : -
 Client ID : -
 Registration Date & Time : 24.1.2025
 10:30 AM
 Contact : 09-5177819
 Testing Purpose : For Monitoring
 Email : han.m.aung@mprlexp.com

Sample Information

Sample ID : 12385
 Sample Name : Z4SW2
 Sample Type / Source : Surface Water
 Sampling Date & Time : 23.1.2025
 Sample Location : Minbu Township
 Latitude : -
 Longitude : -

Testing Results

*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	BOD ₅ ¹	3.6	mg/L	-	-
2	Total Phosphorous ³	1.56	mg/L	-	-
3	Boron ¹	0.21	mg/L	≤2.4 ⁴	Normal
4	Fluoride ³	0	mg/L	≤1.5 ⁴	Normal
5	Oil & Grease ¹	5	mg/L	-	-
6	Total Nitrogen ³	0.58	mg/L	-	-

ND = Not Detected

LOD = Lower limit of detection

* - * = No Reference Standard

Tested by

Checked by

Approved by

Dr. Mye Mye Aye
 Lab. Technician II
 Ecological Laboratory
 ALARM

Dr. Lin Min Mye Aye
 Lab. Technician I
 Ecological Laboratory
 ALARM

Dr. Aye Aye Win
 Laboratory In-Charge
 EcoLab
 ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (D) Block, South Dakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E.(Self) Lecturer of YIT (Rohit), Consultants (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/ Page 1 of 2

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WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Surface Water
Location Z4SW2, Minbu Township.
Date and Time of collection 23.1.2025 (14:20 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.3		6.5 - 8.5
Colour (True)	90	TCU	15 TCU
Turbidity	170	NTU	5 NTU
Conductivity	226	micro S/cm	
Total Hardness	80	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃	
Magnesium Hardness	-	mg/l as CaCO ₃	
Total Alkalinity	48	mg/l as CaCO ₃	
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃	
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃	
Iron	-	mg/l	0.3 mg/l
Chloride (as CL)	-	mg/l	250 mg/l
Sodium Chloride (as NaCL)	-	mg/l	
Sulphate (as SO ₄)	-	mg/l	500 mg/l
Total Solids	-	mg/l	1500 mg/l
Total Suspended Solids	192	mg/l	
Total Dissolved Solids	-	mg/l	1000 mg/l
Manganese	-	mg/l	0.05 mg/l
Phosphate	-	mg/l	
Phenolphthalein Acidity	-	mg/l	
Methyl Orange Acidity	-	mg/l	
Salinity	-	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Zaw Hein Oo

Name: B.Sc (Chemistry)
Sr.Chemist

(a division of WEG Co., Ltd.) ISO Tech Laboratory

Approved by

Signature: Thinzar Theint Theint
Name: B.E (Civil)

Assistant Technical Officer
ISO Tech Laboratory

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E.(Drift) Lecturer of YIT (Rwtd), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012
Effective Date - 01-12-2012
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WATER QUALITY TEST RESULTS FORM

Client: MPRL E & P
Nature of Water: Surface Water
Location: Z4SW2, Minbu Township.
Date and Time of collection: 23.1.2025 (14:20 PM)
Date and Time of arrival at Laboratory: 24.1.2025
Date and Time of commencing examination: 25.1.2025
Date and Time of completing: 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)	25.0	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	-	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	6.2	mg/l	
Chemical Oxygen Demand (COD)	64	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	-	mg/l	3 mg/l
Copper (Cu)	-	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name:

Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by

Signature:

Name:

Thin Zar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.16, Lanthit Road, Nanthar-gone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644508, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04185		Date: February 26, 2025			
Client Information Client Name : MPRL E & P Pte Ltd Organization : - Client ID : - Registration Date & Time : 24.1.2025 10:30 AM Contact : 09-5177819 Testing Purpose : For Monitoring Email : han.m.aung@mprfexp.com		Sample Information Sample ID : 12386 Sample Name : Z3GW1 Sample Type / Source : Surface Water Sampling Date & Time : 23.1.2025 Sample Location : Minbu Township Latitude : - Longitude : -			
Testing Results <i>This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service. This report shall not be reproduced except in full, without written approval of the laboratory</i>					
Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	BOD ₅ ^a	3.2	mg/L	-	-
2	Total Phosphorous ^b	0.54	mg/L	-	-
3	Boron ^b	0.24	mg/L	≤2.4 ^c	Normal
4	Fluoride ^b	0	mg/L	≤1.5 ^c	Normal
5	Oil & Grease ^a	3	mg/L	-	-
6	Total Nitrogen ^b	0.51	mg/L	-	-
"ND" = Not Detected "LOD" = Lower limit of detection "- " = No Reference Standard					
Tested by		Checked by		Approved by	
 Daw Mya Mya Zin Lab Technician II Ecological Laboratory ALARM		 Daw Lin Myat Aye Lab Technician I Ecological Laboratory ALARM		 Dr. Aye Aye Win Laboratory In-Charge EcuLab ALARM	

No.121, Corner of Shu Khin Thar Street & 7 Street, (B) Block, South Oakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E.(Drift) Lecturer of YIT (Field), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/ Page 1 of 2

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WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Z3GW1, Minbu Township.
Date and Time of collection 23.1.2025 (10:10 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.4		6.5 - 8.5
Colour (True)	60	TCU	15 TCU
Turbidity	79	NTU	5 NTU
Conductivity	1710	micro S/cm	
Total Hardness	108	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃	
Magnesium Hardness	-	mg/l as CaCO ₃	
Total Alkalinity	248	mg/l as CaCO ₃	
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃	
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃	
Iron	-	mg/l	0.3 mg/l
Chloride (as CL)	-	mg/l	250 mg/l
Sodium Chloride (as NaCl)	-	mg/l	
Sulphate (as SO ₄)	-	mg/l	500 mg/l
Total Solids	-	mg/l	1500 mg/l
Total Suspended Solids	80	mg/l	
Total Dissolved Solids	-	mg/l	1000 mg/l
Manganese	-	mg/l	0.05 mg/l
Phosphate	-	mg/l	
Phenolphthalein Acidity	-	mg/l	
Methyl Orange Acidity	-	mg/l	
Salinity	-	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name:

Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist

Approved by

Signature:

Name:

Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.) ISO Tech Laboratory

No.18, Lanthit Road, Nanthagone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Z3GW1, Minbu Township.
Date and Time of collection 23.1.2025 (10:10 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

**WHO Drinking Water Guideline
(Geneva - 1993)**

Temperature (°C)	25.0	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	-	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	6.0	mg/l	
Chemical Oxygen Demand (COD)	64	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	-	mg/l	3 mg/l
Copper (Cu)	-	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: *Hein*

Name: Zaw Hein Oo

B.Sc (Chemistry)

Sr.Chemist

ISO Tech Laboratory

Approved by

Signature: *Thinzar Theint Theint*

Name: Thinzar Theint Theint

B.E (Civil)

Assistant Technical Officer

ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04186 Date: February 26, 2025

Client Information		Sample Information	
Client Name	: MPRL E & P Pte Ltd	Sample ID	: 12387
Organization	: -	Sample Name	: Z3GW2
Client ID	: -	Sample Type / Source	: Surface Water
Registration Date & Time	: 24.1.2025	Sampling Date & Time	: 23.1.2025
Contact	: 09-5177819	Sample Location	: Minbu Township
Testing Purpose	: For Monitoring	Latitude	: -
Email	: han.m.aung@mprlxp.com	Longitude	: -

Testing Results

This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
This report shall not be reproduced except in full, without written approval of the laboratory

Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	BOO ₅ ^a	3.4	mg/L	-	-
2	Total Phosphorous ^b	0.36	mg/L	-	-
3	Boron ^b	0.25	mg/L	≤2.4 ^c	Normal
4	Fluoride ^b	0	mg/L	≤1.5 ^c	Normal
5	Oil & Grease ^a	3	mg/L	-	-
6	Total Nitrogen ^b	0.68	mg/L	-	-

"ND" = Not Detected

"LOD" = Lower limit of detection

"-" = No Reference Standard

Tested by	Checked by	Approved by
 Daw Myo Mye Thine Lab. Technician II Ecological Laboratory ALARM	 Daw Lin Myo Aye Lab. Technician I Ecological Laboratory ALARM	 Dr. Aye Aye Win Laboratory In-Charge Ecological Laboratory ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.
Tel: 09-407496078, Email: aelab.2022@gmail.com

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WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/ Page 1 of 2

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Z3GW2, Minbu Township.
Date and Time of collection 23.1.2025 (9:40 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

**WHO Drinking Water Guideline
(Geneva - 1993)**

pH	7.3		6.5 - 8.5
Colour (True)	5	TCU	15 TCU
Turbidity	14	NTU	5 NTU
Conductivity	1144	micro S/cm	
Total Hardness	292	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃	
Magnesium Hardness	-	mg/l as CaCO ₃	
Total Alkalinity	372	mg/l as CaCO ₃	
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃	
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃	
Iron	-	mg/l	0.3 mg/l
Chloride (as CL)	-	mg/l	250 mg/l
Sodium Chloride (as NaCL)	-	mg/l	
Sulphate (as SO ₄)	-	mg/l	500 mg/l
Total Solids	-	mg/l	1500 mg/l
Total Suspended Solids	23	mg/l	
Total Dissolved Solids	-	mg/l	1000 mg/l
Manganese	-	mg/l	0.05 mg/l
Phosphate	-	mg/l	
Phenolphthalein Acidity	-	mg/l	
Methyl Orange Acidity	-	mg/l	
Salinity	-	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Zaw Hein Oo
Name: B.Sc (Chemistry)
Sr. Chemist

Approved by

Signature: Thinzar Theint Theint
Name: B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd) **ISO Tech Laboratory**

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Z3GW2, Minbu Township.
Date and Time of collection 23.1.2025 (9:40 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

**WHO Drinking Water Guideline
(Geneva - 1993)**

Temperature (°C)	25.0	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	-	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	6.2	mg/l	
Chemical Oxygen Demand (COD)	64	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	-	mg/l	3 mg/l
Copper (Cu)	-	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: [Signature]
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
ISO Tech Laboratory

Approved by

Signature: [Signature]
Name: Thinzar Theint Theint
B-E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.16, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04188

Date: February 26, 2025

Client Information

Client Name : MPRL E & P Pte Ltd
 Organization : -
 Client ID : -
 Registration Date & Time : 24.1.2025
 10:30 AM
 Contact : 09-5177819
 Testing Purpose : For Monitoring
 Email : han.m.aung@mpriexp.com

Sample Information

Sample ID : 12388
 Sample Name : Z4GW2
 Sample Type / Source : Surface Water
 Sampling Date & Time : 23.1.2025
 Sample Location : Minbu Township
 Latitude : -
 Longitude : -

Testing Results

*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	BOD ₅ ^a	3.1	mg/L	-	-
2	Total Phosphorous ^b	0.62	mg/L	-	-
3	Boron ^b	0.21	mg/L	≤2.4 ^c	Normal
4	Fluoride ^b	0	mg/L	≤1.5 ^c	Normal
5	Oil & Grease ^a	3	mg/L	-	-
6	Total Nitrogen ^b	0.65	mg/L	-	-

"ND" = Not Detected

"LOD" = Lower limit of detection

"-" = No Reference Standard

Tested by

Checked by

Approved by

Daw May Mye Aye
 Lab. Technician II
 Ecological Laboratory
 ALARM

Daw Lin Myat Aye
 Lab. Technician I
 Ecological Laboratory
 ALARM

Dr. Aye Aye Win
 Laboratory In-Charge
 Ecological Laboratory
 ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E.(Defn) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001,
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



W0125 558



WTL-RE-001
Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/ Page 1 of 2

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Z4GW2, Minbu Township,
Date and Time of collection 23.1.2025 (14:50 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.8		6.5 - 8.5
Colour (True)	Nil	TCU	15 TCU
Turbidity	7	NTU	5 NTU
Conductivity	13040	micro S/cm	
Total Hardness	1200	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃	
Magnesium Hardness	-	mg/l as CaCO ₃	
Total Alkalinity	890	mg/l as CaCO ₃	
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃	
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃	
Iron	-	mg/l	0.3 mg/l
Chloride (as CL)	-	mg/l	250 mg/l
Sodium Chloride (as NaCL)	-	mg/l	
Sulphate (as SO ₄)	-	mg/l	500 mg/l
Total Solids	-	mg/l	1500 mg/l
Total Suspended Solids	14	mg/l	
Total Dissolved Solids	-	mg/l	1000 mg/l
Manganese	-	mg/l	0.05 mg/l
Phosphate	-	mg/l	
Phenolphthalein Acidity	-	mg/l	
Methyl Orange Acidity	-	mg/l	
Salinity	-	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Zaw Hein Oo
Name: B.Sc (Chemistry)
Sr. Chemist

Approved by

Signature: Thinzar Theint Theint
Name: B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.) **ISO Tech Laboratory**

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Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc (Engg. (Civil), Dip. S.E (Defn)) Lecturer of YIT (Field) Consultant (Y.C.D.C.) LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/ Page 2 of 2

W0125 558

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Z4GW2, Minbu Township.
Date and Time of collection 23.1.2025 (14:50 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)	25.0	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	-	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	6.2	mg/l	
Chemical Oxygen Demand (COD)	96	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	-	mg/l	3 mg/l
Copper (Cu)	-	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Heary

Name:

Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
ISO Tech Laboratory

Approved by

Signature: Thinzar Theint Theint

Name:

Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nandhargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04173

Date: February 26, 2025

Client Information

Client Name : MPRL E&P Ptd Ltd
 Organization : -
 Client ID : -
 Registration Date & Time : 24.1.2025;
 10:30 AM
 Contact : 09-5177819
 Testing Purpose : For Monitoring
 Email : han.maung@mpriexp.com

Sample Information

Sample ID : 12374
 Sample Name : Bio-filter Outlet
 Sample Type / Source : Treated
 Sampling Date & Time : 23.1.2025
 Sample Location : Minbu Tsp
 Latitude : -
 Longitude : -

Testing Results



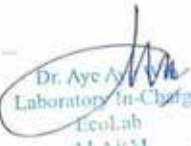
*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory.*

Sr.	Quality Parameters	Results	Units	Emission Standards	Remarks
1	Dissolved Oxygen ¹	3	mg/L	-	-
2	BOD ₅ ²	33	mg/L	≤ 50 ⁴	Normal
3	Total Phosphorous ³	0.52	mg/L	≤ 2 ⁴	Normal
4	Oil & Grease ⁵	4	mg/L	≤ 10 ⁴	Normal
5	Total Nitrogen ³	2.6	mg/L	-	-

ND = Not Detected

LOD = Lower limit of detection

* - * = No Reference Standard

Tested by	Checked by	Approved by
 Daw May Myat Khin Lab. Technician II Ecological Laboratory ALARM	 Daw Lin Myat Myat Aung Lab. Technician I Ecological Laboratory ALARM	 Dr. Aye Aye Win Laboratory In-Charge EcoLab ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



LABORATORY



Laboratory Technical Consultant: U Saw Christopher Maung

B.Sc Engg. (Civil), Dip S.E.(Deflt) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

WW0125 132

WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

Issue No - 1.0/ Page 1 of 2

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Sewage Water
Location Bio Filter Outlet, Minbu Township.
Date and Time of collection 23.1.2025 (13:00 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

pH	7.4	
Colour (True)	-	TCU
Turbidity	68	NTU
Conductivity	964	micro S/cm
Total Hardness	-	mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃
Magnesium Hardness	-	mg/l as CaCO ₃
Total Alkalinity	-	mg/l as CaCO ₃
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃
Iron	-	mg/l
Chloride (as CL)	-	mg/l
Sodium Chloride (as NaCL)	-	mg/l
Sulphate (as SO ₄)	-	mg/l
Total Solids	-	mg/l
Total Suspended Solids	49	mg/l
Total Dissolved Solids	-	mg/l
Manganese	-	mg/l
Phosphate	-	mg/l
Phenolphthalein Acidity	-	mg/l
Methyl Orange Acidity	-	mg/l
Salinity	-	ppt

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Zaw Hein Oo
Name: B.Sc (Chemistry)
Sr. Chemist

Approved by

Signature: Thinzar Theint Theint
Name: B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.) **ISO Tech Laboratory**

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



LABORATORY



Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E.(Defth) Lecturer of YIT (Reld), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

WW0125 132

WTL-RE-001

Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 2 of 2

WATER QUALITY TEST RESULTS FORM

Client MPRLE & P
Nature of Water Sewage Water
Location Bio Filter Outlet, Minbu Township.
Date and Time of collection 23.1.2025 (13:00 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

Temperature (°C)	-	°C	
Fluoride (F)	-	mg/l	
Lead (as Pb)	-	mg/l	
Arsenic (As)	-	mg/l	
Nitrate (N.NO ₃)	-	mg/l	
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	-	mg/l	
Chemical Oxygen Demand (COD)	128	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	
Zinc (Zn)	-	mg/l	
Copper (Cu)	-	mg/l	
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by

Signature:
Name: Thinzar Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E.(Delft) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-1-2016

Effective Date - 01-1-2016

Issue No - 1.0/Page 1 of 1

M0125 056

WATER QUALITY TEST (MICROBIOLOGY) RESULTS FORM

Client MPRL E & P
Nature of Water Sewage Water
Location Bio Filter Outlet, Minbu Township.
Date and Time of collection 23.1.2025 (13:00 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 24.1.2025
Date and Time of completing 25.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Total Coliform Count	40	CFU/100ml	Not detected
Thermotolerant (fecal) Coliform Count	10	CFU/100ml	Not detected
pH	7.4		6.5 - 8.5
Turbidity	60	NTU	5 NTU
Colour (True)	40	TCU	15 TCU
Free Chlorine	Nil	mg/l	
Total Chlorine	Nil	mg/l	

: This certificate is issued only for the receipt of the test sample.

: < - Less than

Tested by

Signature: Zaw Hein Oo
Name: B.Sc (Chemistry)
Sr. Chemist
ISO Tech Laboratory

Approved by

Signature: Thinzar Theint Theint
Name: B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04174

Date: February 26, 2025

Client Information

Client Name : MPRL E&P Ptd Ltd
 Organization : -
 Client ID : -
 Registration Date & Time : 24.1.2025;
 10:30 AM
 Contact : 09-5177819
 Testing Purpose : For Monitoring
 Email : han.m.aung@mprlexp.com

Sample Information

Sample ID : 12375
 Sample Name : Hydro Test Water
 Sample Type / Source : Warehouse
 Sampling Date & Time : 23.1.2025
 Sample Location : Minbu Tsp
 Latitude : -
 Longitude : -

Testing Results

*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Emission Standards	Remarks
1	BOD ₅ ^a	36	mg/L	≤ 50 ^d	Normal
2	Cadmium ^c	<0.01	mg/L	≤ 0.1 ^d	LOD = 0.01 mg/L
3	Lead ^c	<0.1	mg/L	≤ 0.1 ^d	LOD = 0.1 mg/L
4	Nickel ^c	0.34	mg/L	≤ 0.5 ^d	Normal
5	Sulfide ^b	0.24	mg/L	≤ 1 ^d	Normal
6	Phenol ^b	<0.1	mg/L	≤ 0.5 ^d	Normal
7	Chromium (Hexavalent) ^c	0.155	mg/L	≤ 0.1	Above the Limit
8	Mercury	0.001	mg/L	≤ 0.01 ^d	Normal

"ND" = Not Detected

"LOD" = Lower limit of detection

" - " = No Reference Standard

Tested by

Checked by

Approved by

Daw Mya Myat Khine
 Lab. Technician II
 Ecological Laboratory
 ALARM

Daw Lin Mya Myat Aung
 Lab. Technician I
 Ecological Laboratory
 ALARM

Dr. Aye Aye Win
 Laboratory In-Charge
 EcoLab
 ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.

Tel: 09-407496078, Email: aelab.2022@gmail.com

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Domestic Water
Location Warehouse, Minbu Township.
Date and Time of collection 23.1.2025 (11:25 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.3	6.5 - 8.5
Colour (True)	- TCU	15 TCU
Turbidity	- NTU	5 NTU
Conductivity	- micro S/cm	
Total Hardness	- mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	- mg/l as CaCO ₃	
Magnesium Hardness	- mg/l as CaCO ₃	
Total Alkalinity	- mg/l as CaCO ₃	
Phenolphthalein Alkalinity	- mg/l as CaCO ₃	
Carbonate (CaCO ₃)	- mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	- mg/l as CaCO ₃	
Iron	- mg/l	0.3 mg/l
Chloride (as CL)	140 mg/l	250 mg/l
Sodium Chloride (as NaCL)	- mg/l	
Sulphate (as SO ₄)	- mg/l	500 mg/l
Total Solids	- mg/l	1500 mg/l
Total Suspended Solids	240 mg/l	
Total Dissolved Solids	- mg/l	1000 mg/l
Manganese	- mg/l	0.05 mg/l
Phosphate	- mg/l	
Phenolphthalein Acidity	- mg/l	
Methyl Orange Acidity	- mg/l	
Salinity	- ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name:

Hein
Zaw Hein Oo

B.Sc (Chemistry)

Sr.Chemist

Approved by

Signature:

Name:

Thein
Theinzar Theint Theint

B.E (Civil)

Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.) **ISO Tech Laboratory**

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Laboratory Technical Consultant: U Saw Christopher Maung

B.Sc Engg. (Civil), Dip S.E.(Delft) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.
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WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

Issue No - 1.0/Page 2 of 2

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WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Domestic Water
Location Warehouse, Minbu Township.
Date and Time of collection 23.1.2025 (11:25 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)	-	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	-	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	-	mg/l	
Chemical Oxygen Demand (COD)	96	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	Nil	mg/l	3 mg/l
Copper (Cu)	Nil	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Hein

Name:

Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
ISO Tech Laboratory

Approved by

Signature: Thinzar Theint Theint

Name:

Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04180

Date: February 26, 2025

Client Information

Client Name : MPRL E&P Ptd Ltd
 Organization : -
 Client ID : -
 Registration Date & Time : 24.1.2025;
 10:30 AM
 Contact : 09-5177819
 Testing Purpose : For Monitoring
 Email : han.m.aung@mpriexp.com

Sample Information

Sample ID : 12381
 Sample Name : Down-hole Workshop
 Sample Type / Source : Domestic Water
 Sampling Date & Time : 23.1.2025
 Sample Location : Minbu Tsp
 Latitude : -
 Longitude : -

Testing Results

*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Emission Standards	Remarks
1	Ammonia ³	1.86	mg/L	≤ 10 ⁴	Normal
2	BOD ₅ ⁶	24	mg/L	≤ 50 ⁴	Normal
3	Free Cyanide ³	0.054	mg/L	≤ 0.1 ⁴	Normal
4	Total Phosphorous ³	1.92	mg/L	≤ 2 ⁴	Normal
5	Cadmium ⁷	ND	mg/L	≤ 0.1 ⁴	LOD = 0.01 mg/L
6	Iron ⁷	0.35	mg/L	≤ 250 ⁴	Normal
7	Lead ⁷	ND	mg/L	≤ 0.1 ⁴	LOD = 0.1 mg/L
8	Nickel ³	ND	mg/L	≤ 0.5 ⁴	LOD = 0.2 mg/L
9	Sulfide ³	0.313	mg/L	≤ 1 ⁴	Normal
10	Phenol ³	<0.1	mg/L	≤ 0.5 ⁴	Normal
11	Oil & Grease ⁹	8	mg/L	≤ 10 ⁴	Normal
12	Chromium (Hexavalent) ³	0.02	mg/L	≤ 0.1	Normal
13	Mercury	0.04	mg/L	≤ 0.01 ⁴	Above the Limit

"ND" = Not Detected

"LOD" = Lower limit of detection

" - " = No Reference Standard

Tested by	Checked by	Approved by
 Daw My My Thine Lab. Technician II Ecological Laboratory ALARM	 Daw Lin Myat Myat Aung Lab. Technician I Ecological Laboratory ALARM	 Dr. Aye Aye Laboratory In Charge EcoLab ALARM

No.121, Corner of Shu Khin That Street & 7 Street, (3) Block, South Okkalapa Township, Yangon.

Tel: 09-407496078, Email: aelab.2022@gmail.com



LABORATORY



Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E.(Delt) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

W0125 562

WTL-RE-001

Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/ Page 1 of 2

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Domestic Water
Location Downhole Workshop, Minbu Township.
Date and Time of collection 23.1.2025 (13:20 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.4	6.5 - 8.5
Colour (True)	- TCU	15 TCU
Turbidity	- NTU	5 NTU
Conductivity	- micro S/cm	
Total Hardness	- mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	- mg/l as CaCO ₃	
Magnesium Hardness	- mg/l as CaCO ₃	
Total Alkalinity	- mg/l as CaCO ₃	
Phenolphthalein Alkalinity	- mg/l as CaCO ₃	
Carbonate (CaCO ₃)	- mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	- mg/l as CaCO ₃	
Iron	- mg/l	0.3 mg/l
Chloride (as CL)	- mg/l	250 mg/l
Sodium Chloride (as NaCL)	- mg/l	
Sulphate (as SO ₄)	- mg/l	500 mg/l
Total Solids	- mg/l	1500 mg/l
Total Suspended Solids	147 mg/l	
Total Dissolved Solids	- mg/l	1000 mg/l
Manganese	- mg/l	0.05 mg/l
Phosphate	- mg/l	
Phenolphthalein Acidity	- mg/l	
Methyl Orange Acidity	- mg/l	
Salinity	- ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name:

Hein
Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist

Approved by

Signature:

Name:

Thinzar Theint Theint
Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.) **ISO Tech Laboratory**

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung

B.Sc Engg: (Civil), Dip S.E.(Dist) Lecturer of YIT (Retd). Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

Issue No - 1.0/Page 2 of 2

W0125 562

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Domestic Water
Location Downhole Workshop, Minbu Township.
Date and Time of collection 23.1.2025 (13:20 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)	25.0	°C	
Fluoride (F)	0.8	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	-	mg/l	50 mg/l
Chlorine (Residual)	Nil	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	-	mg/l	
Chemical Oxygen Demand (COD)	64	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	Nil	mg/l	3 mg/l
Copper (Cu)	Nil	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Henry

Name:

Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by

Signature: Thinzar Theint Theint

Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

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B.Sc Engg. (Civil), Dip S.E.(Deit) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001,
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001
Issue Date - 01-1-2016
Effective Date - 01-1-2016
Issue No - 1.0/ Page 1 of 1

M0125 054

WATER QUALITY TEST (MICROBIOLOGY) RESULTS FORM

Client MPRL E & P
Nature of Water Domestic Water
Location Downhole Workshop, Minbu Township.
Date and Time of collection 23.1.2025 (13:20 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 24.1.2025
Date and Time of completing 25.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Total Coliform Count	16	CFU/100ml	Not detected
Thermotolerant (fecal) Coliform Count	3	CFU/100ml	Not detected
pH	7.4		6.5 - 8.5
Turbidity	130	NTU	5 NTU
Colour (True)	80	TCU	15 TCU
Free Chlorine	Nil	mg/l	
Total Chlorine	Nil	mg/l	

Remark : Unsatisfactory for drinking purpose.

: This certificate is issued only for the receipt of the test sample.

: < - Less than

Tested by

Signature: [Signature]
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
ISO Tech Laboratory

Approved by

Signature: [Signature]
Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04179

Date: February 26, 2025

Client Information

Client Name : MPRL E&P Ptd Ltd
 Organization : -
 Client ID : -
 Registration Date & Time : 24.1.2025;
 10:30AM
 Contact : 09-5177819
 Testing Purpose : For Monitoring
 Email : han.m.aung@mpriexp.com

Sample Information

Sample ID : 12380
 Sample Name : Mechanical Workshop
 Sample Type / Source : Domestic Water
 Sampling Date & Time : 23.1.2025
 Sample Location : Minbu Tsp
 Latitude : -
 Longitude : -

Testing Results

*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Emission Standards	Remarks
1	Ammonia ³	0.54	mg/L	≤ 10 ⁴	Normal
2	BOD ₅ ⁴	32	mg/L	≤ 50 ⁴	Normal
3	Free Cyanide ³	0.039	mg/L	≤ 0.1 ⁴	Normal
4	Total Phosphorous ³	1.82	mg/L	≤ 2 ⁴	Normal
5	Cadmium ³	ND	mg/L	≤ 0.1 ⁴	LOD = 0.01 mg/L
6	Iron ⁷	0.32	mg/L	≤ 3.5 ⁴	Normal
7	Lead ⁷	ND	mg/L	≤ 0.1 ⁴	LOD = 0.1 mg/L
8	Nickel ³	0.31	mg/L	≤ 0.5 ⁴	Normal
9	Sulfide ³	0.303	mg/L	≤ 1 ⁴	Normal
10	Phenol ³	<0.1	mg/L	≤ 0.5 ⁴	Normal
11	Oil & Grease ³	6	mg/L	≤ 10 ⁴	Normal
12	Chromium (Hexavalent) ³	0.08	mg/L	≤ 0.1	Normal
13	Mercury	0.05	mg/L	≤ 0.01 ⁴	Above the Limit

"ND" = Not Detected

"LOD" = Lower limit of detection

" - " = No Reference Standard

Tested by	Checked by	Approved by
 Daw Myo Aye Khine Lab. Technician II Ecological Laboratory ALARM	 Daw Lin Myo Aye Aung Lab. Technician I Ecological Laboratory ALARM	 Dr. Aye Aye Laboratory In-Charge Ecological Laboratory ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



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Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

W0125 561

WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

Issue No - 1.0/ Page 1 of 2

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Domestic Water
Location Mobile Workshop, Minbu Township.
Date and Time of collection 23.1.2025 (13:35 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.6	6.5 - 8.5
Colour (True)	- TCU	15 TCU
Turbidity	- NTU	5 NTU
Conductivity	- micro S/cm	
Total Hardness	- mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	- mg/l as CaCO ₃	
Magnesium Hardness	- mg/l as CaCO ₃	
Total Alkalinity	- mg/l as CaCO ₃	
Phenolphthalein Alkalinity	- mg/l as CaCO ₃	
Carbonate (CaCO ₃)	- mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	- mg/l as CaCO ₃	
Iron	- mg/l	0.3 mg/l
Chloride (as CL)	- mg/l	250 mg/l
Sodium Chloride (as NaCL)	- mg/l	
Sulphate (as SO ₄)	- mg/l	500 mg/l
Total Solids	- mg/l	1500 mg/l
Total Suspended Solids	60 mg/l	
Total Dissolved Solids	- mg/l	1000 mg/l
Manganese	- mg/l	0.05 mg/l
Phosphate	- mg/l	
Phenolphthalein Acidity	- mg/l	
Methyl Orange Acidity	- mg/l	
Salinity	- ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Zaw Hein Oo
Name: B.Sc (Chemistry)
Sr.Chemist

Approved by

Signature: Thinzar Theint Theint
Name: B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd) **ISO Tech Laboratory**

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-840955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E.(Deflt) Lecturer of YIT (Field), Consultant (Y.C.D.C), LWSE 001,
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

Issue No - 1.0/Page 2 of 2

W0125 561

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Domestic Water
Location Mobile Workshop, Minbu Township.
Date and Time of collection 23.1.2025 (13:35 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)	25.0	°C	
Fluoride (F)	0.4	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	-	mg/l	50 mg/l
Chlorine (Residual)	Nil	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	-	mg/l	
Chemical Oxygen Demand (COD)	64	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	Nil	mg/l	3 mg/l
Copper (Cu)	Nil	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: Heiny

Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by

Signature: Thinzar Theint Theint
Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg: (Civil), Dip S.E.(Delft) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

WTL-RE-001
Issue Date - 01-1-2016
Effective Date - 01-1-2016
Issue No - 1.0/Page 1 of 1

M0125 055

WATER QUALITY TEST (MICROBIOLOGY) RESULTS FORM

Client	MPRL E & P
Nature of Water	Domestic Water
Location	Mobile Workshop, Minbu Township.
Date and Time of collection	23.1.2025 (13:35 PM)
Date and Time of arrival at Laboratory	24.1.2025
Date and Time of commencing examination	24.1.2025
Date and Time of completing	25.1.2025

Results of Water Analysis

WHO Drinking Water Guideline
(Geneva - 1993)

Total Coliform Count	12	CFU/100ml	Not detected
Thermotolerant (fecal) Coliform Count	2	CFU/100ml	Not detected
pH	7.6		6.5 - 8.5
Turbidity	77	NTU	5 NTU
Colour (True)	60	TCU	15 TCU
Free Chlorine	Nil	mg/l	
Total Chlorine	Nil	mg/l	

Remark : Unsatisfactory for drinking purpose.

: This certificate is issued only for the receipt of the test sample.

: < - Less than

Tested by

Signature: Very
Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
ISO Tech Laboratory

Approved by _____

Signature: _____
Name: **Thinzar Theint Theint**
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04177

Date: February 26, 2025

Client Information

Client Name : MPRL E&P Ptd Ltd
 Organization : -
 Client ID : -
 Registration Date & Time : 24.1.2025;
 10:30 AM
 Contact : 09-5177819
 Testing Purpose : For Monitoring
 Email : han.m.aung@mprlexp.com

Sample Information

Sample ID : 12378
 Sample Name : R.O Drinking Water
 Sample Type / Source : Treated Water
 Sampling Date & Time : 23.1.2025
 Sample Location : Minbu Tsp
 Latitude : -
 Longitude : -

Testing Results




*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	Lead ⁷	ND	mg/L	≤ 0.1 ⁸	LOD = 0.1 mg/L
2	Manganese ³	0.02	mg/L	≤ 2 ⁴	Normal

"ND" = Not Detected

"LOD" = Lower limit of detection

" - " = No Reference Standard

Tested by	Checked by	Approved by
 Daw Myat Khine Lab. Technician II Ecological Laboratory ALARM	 Daw Lin Myat Myat Aung Lab. Technician I Ecological Laboratory ALARM	 Dr. Aye Aye Win Laboratory In-Charge EcoLab ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung

B.Sc Engg. (Civil), Dip S.E.(Delft) Lecturer of YIT (Ratd), Consultant (Y.C.D.C), LWSE 001,
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

Issue No - 1.0/Page 1 of 2

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WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Drinking Water
Location Base Camp Of RO Outlet, Minbu Township.
Date and Time of collection 23.1.2025 (12:45 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.1		6.5 - 8.5
Colour (True)	Nil	TCU	15 TCU
Turbidity	1	NTU	5 NTU
Conductivity	-	micro S/cm	
Total Hardness	2	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃	
Magnesium Hardness	-	mg/l as CaCO ₃	
Total Alkalinity	-	mg/l as CaCO ₃	
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃	
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃	
Iron	0.07	mg/l	0.3 mg/l
Chloride (as CL)	12	mg/l	250 mg/l
Sodium Chloride (as NaCL)	-	mg/l	
Sulphate (as SO ₄)	Nil	mg/l	500 mg/l
Total Solids	-	mg/l	1500 mg/l
Total Suspended Solids	-	mg/l	
Total Dissolved Solids	16	mg/l	1000 mg/l
Manganese	-	mg/l	0.05 mg/l
Phosphate	-	mg/l	
Phenolphthalein Acidity	-	mg/l	
Methyl Orange Acidity	-	mg/l	
Salinity	-	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name:

Henry
Zaw Hein Oo

B.Sc (Chemistry)

Sr.Chemist

Approved by

Signature:

Name:

Thinzar Theint Theint
Thinzar Theint Theint

B.E (Civil)

Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.) **ISO Tech Laboratory**

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

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LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
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WTL-RE-001

Issue Date - 01-12-2012

Effective Date - 01-12-2012

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W0125 553

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Drinking Water
Location Base Camp Of RO Outlet, Minbu Township.
Date and Time of collection 23.1.2025 (12:45 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)	-	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	0.4	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	-	mg/l	
Chemical Oxygen Demand (COD)	-	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	-	mg/l	3 mg/l
Copper (Cu)	-	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: [Signature]

Name: Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by

Signature: [Signature]

Name: Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18. Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

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LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
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WTL-RE-001
Issue Date - 01-1-2016
Effective Date - 01-1-2016
Issue No - 1.0/ Page 1 of 1

M0125 053

WATER QUALITY TEST (MICROBIOLOGY) RESULTS FORM

Client MPRL E & P
Nature of Water Drinking Water
Location Base Camp Of RO Outlet, Minbu Township.
Date and Time of collection 23.1.2025 (12:45 PM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 24.1.2025
Date and Time of completing 25.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Total Coliform Count	Not detected (<1) CFU/100ml	Not detected
Thermotolerant (fecal) Coliform Count	Not detected (<1) CFU/100ml	Not detected
pH	7.1	6.5 - 8.5
Turbidity	1 NTU	5 NTU
Colour (True)	Nil TCU	15 TCU
Free Chlorine	Nil mg/l	
Total Chlorine	Nil mg/l	

Remark : Satisfactory for drinking purpose.

: This certificate is issued only for the receipt of the test sample.

: < - Less than

Tested by

Signature: Zaw Hein Oo
Name: B.Sc (Chemistry)
Sr. Chemist
ISO Tech Laboratory

Approved by

Signature: Thinzar Theint Theint
Name: B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04177

Date: February 26, 2025

Client Information		Sample Information	
Client Name	: MPRL E&P Ptd Ltd	Sample ID	: 12377
Organization	: -	Sample Name	: Ko Win Mg
Client ID	: -	Sample Type / Source	: -
Registration Date & Time	: 24.1.2025; 10:30 AM	Sampling Date & Time	: 23.1.2025
Contact	: -	Sample Location	: Minbu Tsp
Testing Purpose	: -	Latitude	: -
Email	: han.m.aung@mprlexp.com	Longitude	: -

Testing Results




*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	Lead ⁷	ND	mg/L	≤ 0.1 ⁸	LOD = 0.1 mg/L
2	Manganese ³	0.35	mg/L	≤ 2 ⁶	Normal

"ND" = Not Detected

"LOD" = Lower limit of detection

" - " = No Reference Standard

Tested by	Checked by	Approved by
 Daw May Myat Khine Lab. Technician II Ecological Laboratory ALARM	 Daw Lin Myat Myat Aung Lab. Technician I Ecological Laboratory ALARM	 Dr. Aye Aye Win Laboratory In-Charge EcoLab ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.
Tel: 09-407496078, Email: aelab.2022@gmail.com



LABORATORY

Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E.(Deflt) Lecturer of YIT (Reld), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)



WTL-RE-001

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Issue No - 1.0/Page 1 of 2

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WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Ko Win Mg (#132), Minbu Township.
Date and Time of collection 23.1.2025 (11:10 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.3		6.5 - 8.5
Colour (True)	5	TCU	15 TCU
Turbidity	9	NTU	5 NTU
Conductivity	-	micro S/cm	
Total Hardness	204	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃	
Magnesium Hardness	-	mg/l as CaCO ₃	
Total Alkalinity	-	mg/l as CaCO ₃	
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃	
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃	
Iron	0.48	mg/l	0.3 mg/l
Chloride (as CL)	35	mg/l	250 mg/l
Sodium Chloride (as NaCL)	-	mg/l	
Sulphate (as SO ₄)	102	mg/l	500 mg/l
Total Solids	-	mg/l	1500 mg/l
Total Suspended Solids	-	mg/l	
Total Dissolved Solids	683	mg/l	1000 mg/l
Manganese	-	mg/l	0.05 mg/l
Phosphate	-	mg/l	
Phenolphthalein Acidity	-	mg/l	
Methyl Orange Acidity	-	mg/l	
Salinity	-	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name:

Hein
Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist

Approved by

Signature:

Name:

Thinzar
Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd) **ISO Tech Laboratory**

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



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Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

Issue Date - 01-12-2012
Effective Date - 01-12-2012
Issue No - 1.0/Page 2 of 2

W0125 551

WATER QUALITY TEST RESULTS FORM

Client	MPRL E & P
Nature of Water	Ground Water
Location	Ko Win Mg (#132), Minbu Township.
Date and Time of collection	23.1.2025 (11:10 AM)
Date and Time of arrival at Laboratory	24.1.2025
Date and Time of commencing examination	25.1.2025
Date and Time of completing	27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline
(Geneva - 1993)

Temperature (°C)	-	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	0.3	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	-	mg/l	
Chemical Oxygen Demand (COD)	-	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	-	mg/l	3 mg/l
Copper (Cu)	-	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: _____

Name: _____

Zaw Hein Oo
B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by

Signature: _____

Name: _____

Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weq-myanmar.com

M0125 051

WATER QUALITY TEST (MICROBIOLOGY) RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Ko Win Mg (#132), Minbu Township.
Date and Time of collection 23.1.2025 (11:10 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 24.1.2025
Date and Time of completing 25.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Total Coliform Count	5	CFU/100ml	Not detected
Thermotolerant (fecal) Coliform Count	Not detected (<1)	CFU/100ml	Not detected
pH	7.3		6.5 - 8.5
Turbidity	9	NTU	5 NTU
Colour (True)	5	TCU	15 TCU
Free Chlorine	Nil	mg/l	
Total Chlorine	Nil	mg/l	

Remark : Unsatisfactory for drinking purpose.

: This certificate is issued only for the receipt of the test sample.

: < - Less than

Tested by

Signature: Zaw Hein Oo
Name: B.Sc (Chemistry)
Sr. Chemist
ISO Tech Laboratory

Approved by

Signature: Thinzar Theint Theint
Name: B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.
Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

ALARM Ecological Laboratory

Water Testing Result Report



Report Number: EL-WR-25-04175

Date: February 26, 2025

Client Information

Client Name : MPRL E&P Ptd Ltd
 Organization : -
 Client ID : -
 Registration Date & Time : 24.1.2025;
 10:30 AM
 Contact : 09-5177819
 Testing Purpose : For Monitoring
 Email : han.m.aung@mprlexp.com

Sample Information

Sample ID : 12376
 Sample Name : Ma Nyein
 Sample Type / Source : Tube Well
 Sampling Date & Time : 23.1.2025
 Sample Location : Minbu Tsp
 Latitude : -
 Longitude : -

Testing Results

*This laboratory analysis report is based solely on the sample submitted by the client unless client took our sampling service.
 This report shall not be reproduced except in full, without written approval of the laboratory*

Sr.	Quality Parameters	Results	Units	Drinking Standards	Remarks
1	Lead ²	ND	mg/L	≤ 0.1 ^a	LOD = 0.1 mg/L
2	Manganese ²	0.32	mg/L	≤ 2 ^a	Normal

ND = Not Detected

LOD = Lower limit of detection

" - " = No Reference Standard

Tested by	Checked by	Approved by
 Daw Lin Myat Khine Lab. Technician II Ecological Laboratory ALARM	 Daw Lin Myat Aung Lab. Technician I Ecological Laboratory ALARM	 Dr. Aye Aye Win Laboratory In-Charge EcoLab ALARM

No.121, Corner of Shu Khin Thar Street & 7 Street, (3) Block, South Oakkalapa Township, Yangon.
 Tel: 09-407496078, Email: aelab.2022@gmail.com



LABORATORY



Laboratory Technical Consultant: U Saw Christopher Maung

B.Sc Engg. (Civil), Dip S.E.(Delft) Lecturer of YIT (Field), Consultant (Y.C.D.C), LWSE 001.
Former Member (UNICEF, Water quality monitoring & Surveillance Myanmar)

W0125 552

WTL-RE-001

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Effective Date - 01-12-2012

Issue No - 1.0/ Page 1 of 2

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Ma Nyein (#132), Minbu Township.
Date and Time of collection 23.1.2025 (11:00 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

pH	7.4		6.5 - 8.5
Colour (True)	5	TCU	15 TCU
Turbidity	13	NTU	5 NTU
Conductivity	-	micro S/cm	
Total Hardness	100	mg/l as CaCO ₃	500 mg/l as CaCO ₃
Calcium Hardness	-	mg/l as CaCO ₃	
Magnesium Hardness	-	mg/l as CaCO ₃	
Total Alkalinity	-	mg/l as CaCO ₃	
Phenolphthalein Alkalinity	-	mg/l as CaCO ₃	
Carbonate (CaCO ₃)	-	mg/l as CaCO ₃	
Bicarbonate (HCO ₃)	-	mg/l as CaCO ₃	
Iron	0.52	mg/l	0.3 mg/l
Chloride (as CL)	50	mg/l	250 mg/l
Sodium Chloride (as NaCL)	-	mg/l	
Sulphate (as SO ₄)	84	mg/l	500 mg/l
Total Solids	-	mg/l	1500 mg/l
Total Suspended Solids	-	mg/l	
Total Dissolved Solids	562	mg/l	1000 mg/l
Manganese	-	mg/l	0.05 mg/l
Phosphate	-	mg/l	
Phenolphthalein Acidity	-	mg/l	
Methyl Orange Acidity	-	mg/l	
Salinity	-	ppt	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature:

Name:

Zaw Hein Oo

B.Sc (Chemistry)

Sr. Chemist

ISO Tech Laboratory

Approved by

Signature:

Name:

Thinzar Theint Theint

B.E (Civil)

Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com

WATER QUALITY TEST RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Ma Nyein (#132), Minbu Township.
Date and Time of collection 23.1.2025 (11:00 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 25.1.2025
Date and Time of completing 27.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Temperature (°C)	-	°C	
Fluoride (F)	-	mg/l	1.5 mg/l
Lead (as Pb)	-	mg/l	0.01 mg/l
Arsenic (As)	Nil	mg/l	0.01 mg/l
Nitrate (N.NO ₃)	0.6	mg/l	50 mg/l
Chlorine (Residual)	-	mg/l	
Ammonia Nitrogen (NH ₃)	-	mg/l	
Ammonium Nitrogen (NH ₄)	-	mg/l	
Dissolved Oxygen (DO)	-	mg/l	
Chemical Oxygen Demand (COD)	-	mg/l	
Biochemical Oxygen Demand (BOD) (5 days at 20 °C)	-	mg/l	
Cyanide (CN)	-	mg/l	0.07 mg/l
Zinc (Zn)	-	mg/l	3 mg/l
Copper (Cu)	-	mg/l	2 mg/l
Silica (SiO ₂)	-	mg/l	

Remark: This certificate is issued only for the receipt of the test sample.

Tested by

Signature: 

Name:

Zaw Hein Oo
B.Sc (Chemistry)
Sr. Chemist
ISO Tech Laboratory

Approved by

Signature: 

Name:

Thinzar Theint Theint
B.E (Civil)
Assistant Technical Officer
ISO Tech Laboratory

(a division of WEG Co., Ltd.)

No.18, Lanthit Road, Nanthargone Quarter, Insein Township, Yangon, Myanmar.

Ph: 01-640955, 09-880100172, 09-880100173, 01-644506, E-mail: isotechlaboratory@gmail.com, Website: weg-myanmar.com



LABORATORY



Laboratory Technical Consultant: U Saw Christopher Maung
B.Sc Engg. (Civil), Dip S.E.(Delft) Lecturer of YIT (Retd), Consultant (Y.C.D.C), LWSE 001.
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M0125 052

WATER QUALITY TEST (MICROBIOLOGY) RESULTS FORM

Client MPRL E & P
Nature of Water Ground Water
Location Ma Nyein (#132), Minbu Township.
Date and Time of collection 23.1.2025 (11:00 AM)
Date and Time of arrival at Laboratory 24.1.2025
Date and Time of commencing examination 24.1.2025
Date and Time of completing 25.1.2025

Results of Water Analysis

WHO Drinking Water Guideline (Geneva - 1993)

Total Coliform Count	6	CFU/100ml	Not detected
Thermotolerant (fecal) Coliform Count	Not detected (<1)	CFU/100ml	Not detected
pH	7.4		6.5 - 8.5
Turbidity	12	NTU	5 NTU
Colour (True)	5	TCU	15 TCU
Free Chlorine	Nil	mg/l	
Total Chlorine	Nil	mg/l	

Remark : Unsatisfactory for drinking purpose.

: This certificate is issued only for the receipt of the test sample.

: < - Less than

Tested by

Signature: Zaw Hein Oo
Name: B.Sc (Chemistry)
Sr.Chemist
ISO Tech Laboratory

Approved by

Signature: Thinzar Theint Theint
Name: B.E (Civil)
Assistant Technical Officer
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