Environmental and Social Monitoring Second Report

Project Number: 48368-001
August 2017

MYA: Myingyan Natural Gas Power Project
Part 1

Prepared by Environ Myanmar Co Ltd.

Intended for

International Finance Corporation, Asian Development Bank and Multilateral Investment Guarantee Agency

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MYINGYAN CCPP SECOND ENVIRONMENTAL AND SOCIAL MONITORING REPORT

RAMBOLL ENVIRON

MYINGYAN CCPP
SECOND ENVIRONMENTAL AND SOCIAL MONITORING REPORT

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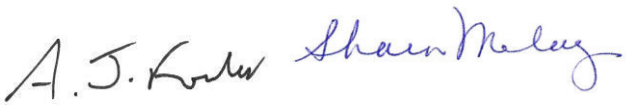

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GLOSSARY OF TERMS / ACRONYMS

Acronym	Abbreviation
ADB	Asian Development Bank
ADB-ES	Asian Development Bank – Environmental Safeguards
ADB-IPS	Asian Development Bank – Indigenous Peoples Safeguards
ADB-IRS	Asian Development Bank – Involuntary Resettlement Safeguards
AoI	Area of Influence
BCE	Bedok Construction & Engineering Company Limited
BOT	Build, Operate and Transfer
CBP	Concrete Batching Plant
CCGT	Combined Cycle Gas Turbine
CCPP	Combined Cycle Power Project
CDP	Community Development Plan
CGM	Community Grievance Mechanism
CHMP	Community Health Management Plan
COD	Commercial Operation Date
CPP	China Petroleum Pipeline Bureau
CRO	Community Relations Officer
DAI	Direct Area of Influence
ECC	Environmental Compliance Certificate
E&S	Environmental and Social
ESAP	Environmental and Social Action Plan
EHS	Environmental, Health and Safety
ENVIRON	Environ Myanmar Co Ltd
EPC	Engineering, Procurement and Construction
EPGE	Electric Power Generation Enterprise
EPR	Emergency Preparedness & Response
EMS	Environmental Management System
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESAP	Environmental and Social Action Plan
GIIP	Good International Industry Practice
GOM	Government of Myanmar
GT	Gas Turbine
HRSG	Heat Recovery System Generator
HSE	Health, Safety and Environment
HSE-MS	Health, Safety and Environment Management System
HSSE	Health, Safety, Security and Environment
IECC	Installation, Erection, Construction and Commissioning
IESC	Independent Environmental and Social Consultant
IFC	International Finance Corporation
ILO	International Labour Organization
IMS	Integrated Management System
IPP	Independent Power Producer
JEM	Jurong Engineering (Myanmar) Ltd
LRPMP	Local Recruitment and Procurement Management Plan
MDC	Min Dharma Co Ltd
MEPE	Myanmar Electric Power Enterprise
MIGA	Multilateral Investment Guarantee Agency
MOC	Management of Change
MOE	Ministry of Environment

Acronym	Abbreviation
MOEP	Ministry of Electric Power
MOGE	Myanmar Oil & Gas Enterprise
MOI	Ministry of Industry
MONREC	Ministry of Natural Resources and Environmental Conservation
MTKK	MTKK Electrical Services Company Limited
OHS	Occupational Health and Safety
PAP	Project-Affected Person
PCo	Project Company
PIIM	Project induced in-migration
PPA	Power Purchase Agreement
PPE	Personal Protective Equipment
PS	Performance Standard
ROSPA	Royal Society for the Prevention of Accidents
ROW	Right of Way
RWI	River Water Intake
SBS	ADB's Safeguard Policy Statement
SDCI	Sembcorp Design and Construction International
SEP	Stakeholder Engagement Plan
SIMOPS	Simultaneous Operations
WAMP	Workers Accommodation Management Plan
WBG	World Bank Group

EXECUTIVE SUMMARY

In July 2017, Environ Myanmar Co., Ltd, (ENVIRON) acting in the role of Independent Environmental and Social Consultant (IESC), monitored the environmental and social performance of the Sembcorp Myingyan Power Company Limited (Sembcorp) Combined Cycle Power Plant (CCPP) project in Myingyan, Myanmar (the 'Project').

The July trip was the second of several IESC monitoring visits scheduled to occur at six-monthly intervals during the Project's construction phase. A two-person team assessed the Project's management of environment and social matters, with a particular emphasis on the implementation of the Project Environmental and Social Action Plan; the adequacy of the Health, Safety, and Environment Management System; and the implementation of a suite of environmental and social management plans intended to address applicable Project standards, notably the IFC Performance Standards and ADB Safeguard Policy Statement.

Throughout the monitoring process, Sembcorp and its construction contractors cooperated fully and responded to all ENVIRON's requests. The monitoring visit covered a broad range of topics and Health, Safety, Environment and Social matters were found to be well managed for the most part. The project is generally compliant with the requirements of the Environmental and Social Action Plan (ESAP), however, the monitoring visit identified three open items and eight ESAP items that are work in progress. In addition, several opportunities for improvement in the Project's environmental and social performance have been identified.

The key high significance environmental findings are related to the discharge and disposal of sanitary wastewater, including sewage, and the standards of the off-site waste water disposal site. It is recommended that all sanitary wastewater is treated to meet Applicable Standards, either on-site or off-site, before its disposal and that Sembcorp evaluates options for on-site or off-site waste water treatment prior to disposal.

The key high significance social findings relate to contractor/subcontractor HR policies/procedures that have not been made available to PCo or ENVIRON and to the lack of employment contracts for short-term workers. It is recommended that PCo obtain copies of the contractors' and subcontractors' HR policies/procedures to determine if contractors/subcontractors have incorporated commitments included in Sembcorp's Code of Business Conduct and PCo's HR procedures into their policies and procedures. It is further recommended that Sembcorp complete mini-employment contract templates and work with subcontractors to have contracts executed with affected workers as soon as possible and have workers sign acknowledgment receipt.

The findings presented in this report should be incorporated within Sembcorp's compliance and corrective action tracking system. The IESC will assess evidence of close-out of each issue in our next site visit, which is expected to be in November or December 2017.

1. INTRODUCTION

The consortium of Sembcorp Utilities Pte Ltd and MMID Utilities Pte Ltd ("the Sponsors") have been selected by the Ministry of Electric Power (MOEP) of the Government of Myanmar (GOM) as a private sector Independent Power Producer (IPP) to develop a 225 MW Combined Cycle Gas Turbine (CCGT) Power Plant (the "Project") on a Build, Operate and Transfer (BOT) basis in Myingyan Township, in the Mandalay region of Union Republic of Myanmar. A special purpose company, Sembcorp Myingyan Power Company Limited, ("Project Company" or "PCo") has been established in Myanmar and ultimately will be beneficially owned by the Sponsors for the sole purpose of developing and operating the Project.

The Project has two phases. The Commercial Operation Date (COD) of Open Cycle Mode is on 21st December 2017 and the COD of Combined Cycle Mode is targeted for 20th May 2018.

A Power Purchase Agreement (PPA) has been signed for 22 years from Phase 1 COD with the Myanmar Electric Power Enterprise (MEPE), which is a government-owned utility enterprise responsible for power generation, transmission and system operations throughout Myanmar.

Environ Myanmar Co Ltd, (ENVIRON), which is a wholly owned subsidiary of Ramboll Environ, was commissioned in 2016 by Sembcorp Myingyan Power Company Limited to act as the Lenders' Independent Environmental and Social Consultant (IESC) on the Project.

In fulfilling the role of Lenders' IESC, ENVIRON has a duty of care to a consortium of lenders (the 'Lenders') to the Project, including the International Finance Corporation (IFC), Asian Development Bank (ADB) and the Multilateral Investment Guarantee Agency[1] (MIGA) which is a member of the World Bank Group (WBG).

This Second Environmental and Social Monitoring Report covers the period from December 2016 to July 2017 and provides our findings following a July 2017 monitoring visit to the Project and includes an assessment against Applicable Standards, specifically, the IFC Performance Standards (2012), applicable WBG Environmental, Health and Safety (EHS) Guidelines, and the ADB Safeguard Policy Statement 2009 and related ADB safeguard policies including ADB Social Protection Strategy, 2001, thereby identifying any environmental and social risks associated with the Project's realisation.

[1] Insurer for the lenders to Sembcorp Myingyan Power Company Limited.

2. SCOPE AND STRUCTURE OF THE REPORT

2.1 Scope and Methodology

This Second Environmental and Social Monitoring Report details the Project's compliance with the Applicable Standards listed in Section 2.2, and in doing so, presents the environmental and social risks associated with the Project. It has been prepared for the attention of Sembcorp, IFC, ADB, MIGA, and other entities defined as relying parties[2]. It addresses the various components of the Project (as defined in Section 3, Project Description).

The report presents the findings of the monitoring exercise based on information gained through the following activities:

- a review of updated Project documentation, initially reviewed during the 4Q 2016 monitoring period;
- a review of ESAP implementation;
- a review of Health, Safety, Environment Management System (HSE-MS) documentation;
- interviews held with senior management representatives, HSE and community liaison staff within the Project Company and its two main Engineering, Procurement and Construction (EPC) contractors:
  - Sembcorp Design and Construction International (SDCI)
  - Jurong Engineering (Myanmar) Ltd (JEM);
- visual observations made during walkover inspection of Project facilities (including associated facilities), and off-site waste disposal sites;
- visits to two affected local communities along the river water supply pipeline;
- visual observations made during visits to the three squatters' properties; and
- interviews with the squatters and other Project-affected persons (PAPs) along the river water supply pipeline.

The Monitoring Plan presented in Appendix 2 of this report details the scope and objectives of the monitoring visit, specifies the activities conducted and presents the work schedule for the site visit. The site visit was undertaken on 3rd to 5th July 2017 by Alan Fowler and Sharon Maharg of Ramboll Environ, on behalf of ENVIRON.

A full list of Project documentation reviewed during preparation of this 3Q 2017 Environmental and Social Monitoring Report is provided in Appendix 3 (each item has a Reference number, and, in the text of this report, specific named documents are provided with their Reference numbers).

2.2 Applicable Standards

In accordance with ENVIRON's Terms of Reference, the Project was assessed against the following standards, guidelines, and project-specific legal requirements (the Applicable Standards):

- applicable laws and regulations of Myanmar, including specific environmental licence conditions (if any);
- international Law including conventions and treaties adopted by Myanmar and applicable to the Project;

[2] Relying parties include other lenders.

- IFC Environmental and Social Performance Standards (1st January 2012) applicable to the project, including:
  - PS1: Assessment & Management of Environmental & Social Risks & Impacts;
  - PS2: Labour and Working Conditions;
  - PS3: Resource Efficiency and Pollution Prevention;
  - PS4: Community Health, Safety, and Security;
  - PS5: Land Acquisition and Involuntary Resettlement;
  - PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources;
  - PS8: Cultural Heritage;
- WBG Environmental, Health and Safety (EHS) Guidelines in force at the time of this agreement applicable to the Project, including General EHS Guidelines (2007), Thermal Power EHS Guidelines (2008), and Electricity Transmission and Distribution EHS Guidelines (2007); and
- ADB Safeguard Policy Statement 2009 and related ADB safeguard policies including ADB Social Protection Strategy, 2001.

IFC PS7 (Indigenous Peoples) was excluded from the scope of the monitoring assignment on the basis that the Environmental and Social Impact Assessment (ESIA) performed prior to financial close concluded that no Indigenous Peoples are affected by the Project.

The Project was also assessed against the requirements of the Environmental and Social Action Plan (ESAP) agreed between IFC and the Project Company (IFC Project # 36627).

2.3 Status of Environmental Licences and Permits

The Project has not yet been issued with an Environmental Compliance Certificate (ECC) by the Ministry of Natural Resources and Environmental Conservation (MONREC), but approval to commence construction was issued by the Ministry of Electric Power (MOEP). This situation is common in Myanmar due to a backlog of ESIAs awaiting approval by MONREC since the introduction of a new national ESIA standard in 2015.

A letter from the Ministry of Natural Resource and Environmental Conservation's Environmental Conservation Department (ECD), dated 17th March 2017, acknowledges that the Project ESIA report meets the requirements of the Myanmar Environmental Impact Procedure of 29th December 2015. It also highlights many commitments given in the ESIA report, which the ECD expects to be met.

2.4 Project Categorisation

The Lenders have determined that the Project is a Category A project under the IFC PSs and the following categorizations under the ADB Safeguard Policy Statement (2009):

- Environmental: Category A;
- Involuntary Resettlement: Category B; and
- Indigenous Peoples: Category C; and ENVIRON concurs with these assessments.

In accordance with IFC's and ADB's categorization requirements, the Project undertook a full ESIA, with public disclosure and a public consultation process. The initial ESIA was developed in September 2015 and two revisions were subsequently issued (November 2015 and August 2016).

2.5 Structure of the Report

Section 3, below, provides a description of the Project facilities, activities and timelines. Section 4 describes how different levels of significance are attributed to issues highlighted in the report, and Section 5 presents the findings of this environmental and social monitoring exercise. To avoid unnecessary repetition when commenting on compliance with IFC and ADB standards our findings have been structured around the Project's Environmental and Social Management Plan (ESMP), and additional topics not covered by the ESMP (i.e., Land Acquisition & Resettlement and certain topics under Labour & Working Conditions). The key issues identified against each topic are summarised in 'significance tables' for each Plan. Section 6 provides a commentary on the status of ESAP issues and Section 7 presents a summary of our key findings.

Within the report we have endeavoured to provide a balanced opinion, providing examples of good practice. However, due to the nature of a monitoring report, and the broad range of aspects covered, it does focus on the gaps in compliance with the Applicable Standards and recommended actions to close these gaps.

2.6 Limitations

The IESC only considered activities relevant for the current monitoring period, and ongoing Project activities. Future activities will be the subject of forthcoming monitoring visits.

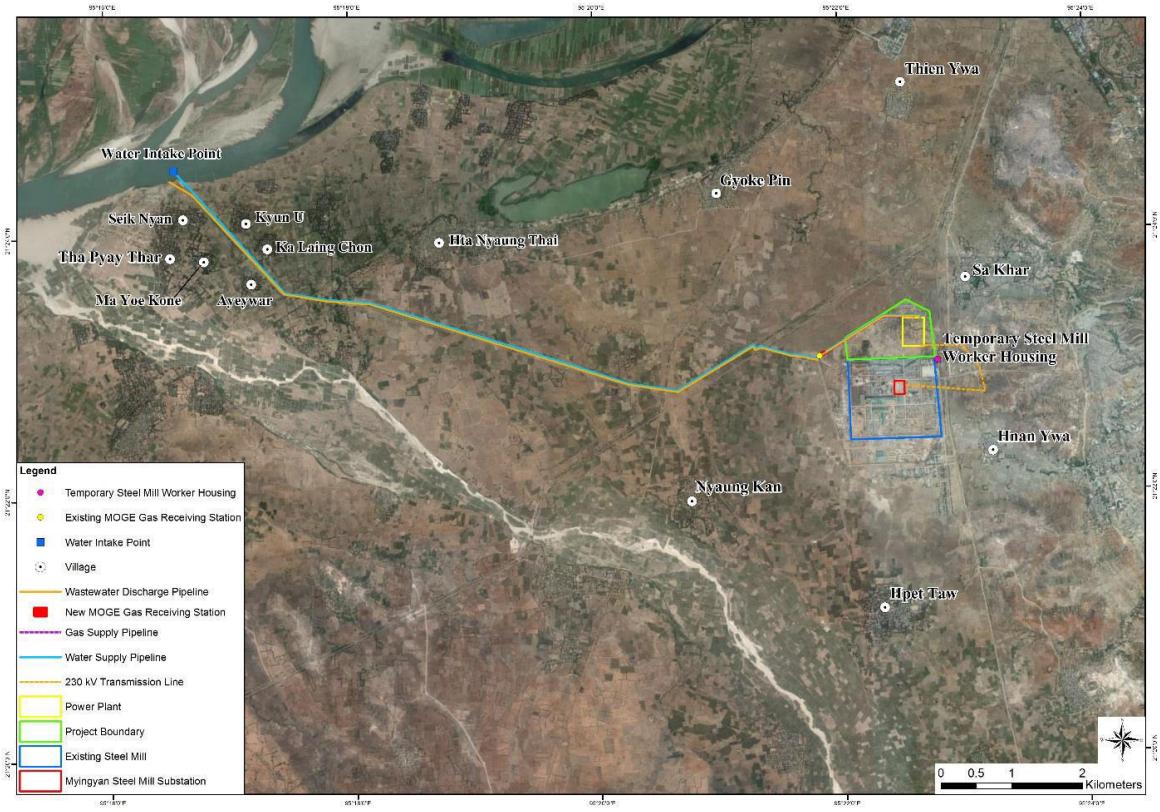
3. PROJECT DESCRIPTION

This section is intended to provide a brief description of the Project activities and current status. It provides a high-level summary of the Project based on the description in the Project's Final ESIA report and associated documentation, with emphasis on those elements of the Project that could give rise to environmental, social and health impacts.

3.1 Project Site

The Project site is located approximately 8 km South of the Myingyan Township, which is around 500 km North of Yangon and 90 km South-West of Mandalay, Myanmar. The 11.6 hectares predominately greenfield site is immediately North of an existing steel mill (Myingyan Steel Mill No. 4) owned by the Ministry of Industry (MOI), occupying a total area of 280 hectares.

Figure 1: Project Location



The Project Company is constructing a natural gas fired power plant. Project facilities include:

- A 225 MW CCGT power plant comprising two sets of Gas Turbines (GT) units, two sets of Heat Recovery System Generators (HRSG), one steam turbine generating unit with associated auxiliary equipment, switchyard area, cooling water system, demineralized water system, and a wastewater treatment facility.
- A 1.2 km 10" gas supply pipeline from a new gas receiving station installed by Myanmar Oil & Gas Enterprise (MOGE) to supply gas to the Project site, the steel mill and a temporary Aggreko gas-fired power plant. Work is ongoing on the gas pipeline, and the gas receiving station is almost complete.
- A 2.5 km 230 kV overhead transmission line (with eight towers – four in the steel mill site and four in Sa Khar village) between the power plant and a substation in the adjacent steel mill (connection beyond the steel mill is GOM's responsibility). The

overhead line construction is complete and physical reinstatement has been completed on land around each of the towers. In August 2017 a power feed from the national grid will start to assist with Project commissioning.

- A buried 14 km 12" diameter river water supply pipeline linked to a water intake pumping station on the Ayeyarwady River, to the West. At the time of this environmental and social monitoring visit the pipeline was complete except for the final section at the river, which will be an elevated structure connected to a floating barge on which the pumps will be located.
- An overhead line adjacent to the river water supply pipeline will supply power to the pumping station. At the time of the IESC inspection the poles had been erected and power cable stringing was underway.
- A buried 14 km 12" diameter wastewater discharge pipeline parallel to the river water supply pipeline. Construction work on this pipeline has finished.

The river water supply and wastewater pipelines are both buried 2 m below the ground surface in a right of way (ROW) 2 m wide, and mostly aligned next to an existing irrigation canal. The ROW has been physically reinstated. Landusers (farmers) will be allowed to reinstate crops (beginning at the end of July 2017) but large trees will not be permitted to avoid damage to the pipelines. The same restriction applies to the gas pipeline.

Heavy plant and equipment was delivered to the site via barge along the Ayeyarwady River to a landing site known as the Nyaung Hla jetty, approximately 32 km south-west of the Project site, then by road. The landing site, which was reinforced for the Project is no longer used. ENVIRON visited the landing site in November 2016 and July 2017 (Photo 001).

3.2 Associated Facilities

The Project's Associated Facilities, as defined by IFC PS1, are:

- the new gas receiving station that was recently installed by MOGE; and
- three temporary camps, owned by JEM and two sub-contractors (Bedok and Min Dhama), and two rented houses, which accommodate up to 1,700 workers during the construction phase.

3.3 Socio-economic Context

As indicated in the ESIA (Revision no. 2, August 2016), the Stakeholder Engagement Plan (SEP), and in Figure 1, there are 13 villages located within the Project's area of influence (AoI). These are:

- Sa Khar village;
- Hnan Ywa village;
- Hpet Taw village;
- Nyaung Kan village;
- Gyoke Pin village;
- Thien Ywa village;
- Tha Pyay Thar village;
- Kyun U village;
- Ka Laing Chon village;
- Aye village;

- Seik Nyan village;
- Ma Yoe Kone village; and
- Hta Hnaung Taing.

3.4 Status of the Project at Time of the Second Monitoring Assignment

The project is currently in an advanced stage of construction. Open cycle power generation is scheduled to commence in December 2017, with combined cycle operation starting in May 2018.

The two main EPC contractors, SDCI and JEM have six sub-contractors:

Table 1: Project Contractors and Sub-Contractors

EPC Contractor	Sub-Contractor	Status in July 2017
SDCI	CPP	Construction of water pipeline (96% complete)
	MDC	Major foundations (99% complete)
	BCE	Administration and electrical building (77.5% complete)
	MTKK	Transmission line for water intake (69.6% complete)
JEM	TriangleLink	Fire and service water tanks (91% complete)
	Demco	230 kV transmission line (100% complete)

4. SIGNIFICANCE ASSESSMENT

4.1 Review Findings

A summary of the review findings is presented in a significance table at the end of each sub-section in Section 5 of this report. For each item, we present:

- the topic/aspect;
- a description of the issue, for example deficiencies or omissions;
- the phase(s) to which an issue relates;
- identification of the standard(s) against which the issue has been identified;
- ENVIRON's recommendation, where applicable, to resolve/manage the deficiency;
- where applicable, updated status based on the July 2017 monitoring visit; and
- the significance on a three-point scale (see below for criteria).

4.2 Assessment of Significance

A ranking system has been used to indicate the relative significance of an issue identified during the monitoring visit. As well as highlighting the most important areas requiring attention, it can also be used to aid the tracking and rectification of specific items requiring improvement.

Identified issues have been placed into one of the following categories:

Minor:	Minor non-compliance, risk or minor technical breach of Applicable Standards and commitments with no material, actual or likely potential: environmental or social consequences; or significant human injury or harm.
Moderate:	Moderate non-compliance or risk with actual or likely potential: localised and short-term environmental or social consequences; minor human injury or harm; or material short-term breach of Applicable Standards and commitments.
High:	Major non-compliance or risk with actual or likely potential: spatially extensive and/or long-term environmental or social consequences; serious human injury/death or harm; or material and extensive breach of Applicable Standards and commitments.
Issue Closed:	An issue that was raised in a previous monitoring visit, which has now been addressed to the satisfaction of the IESC.
Ongoing Activity:	An issue that was raised in a previous monitoring visit, which the Project is actively addressing to close a gap and meet the Applicable Standards.

Where time-critical recommendations for specific actions are made a timeframe linked to Construction/Operational phase milestones is indicated in the IESC recommendation column. Time critical issues can lead to a higher classification of significance.

Table 2: Example of the Summary Table Format

ID	Aspect	Issue Description	Phase[3]	Standard	IESC Recommendations	Significance
00	Storm water runoff monitoring	The ESAP requires *Company X monitors the quality of surface water run-off from facilities.* To date the Company has been unable to procure monitoring equipment – no monitoring has been undertaken.	Ops	WBG EHS Guidelines ADB ES Framework	*Company X shall expedite procurement of monitoring equipment with the support of senior management.*	**Moderate**

[3] Phases can include: construction; operations; decommissioning or; any combination of these phases.

5. ASSESSMENT OF ENVIRONMENTAL AND SOCIAL CONFORMANCE WITH PROJECT COMMITMENTS

5.1 Introduction

The results of the environmental and social monitoring are presented in section 5 of this report, structured around the 20-construction phase environmental and social management plans, plus two additional sub-sections covering Land Acquisition & Resettlement and certain additional topics under Labour & Working Conditions. The management plans have been developed by the Project Company to implement the mitigation and monitoring measures recommended in the Project's ESIA and to meet Applicable Standards. After the overview of the Project's Environmental and Social Management System (ESMS) in section 5.2, the following sub-sections confirm compliance with and highlight any gaps identified against the management plans and against Applicable Standards.

Two management plans are directly managed by the Project Company:

- Community Development; and
- Stakeholder Engagement.

The remaining plans are implemented by the two main construction contractors (SDCI and JEM) with oversight by the Project Company.

5.2 Environmental and Social Management System

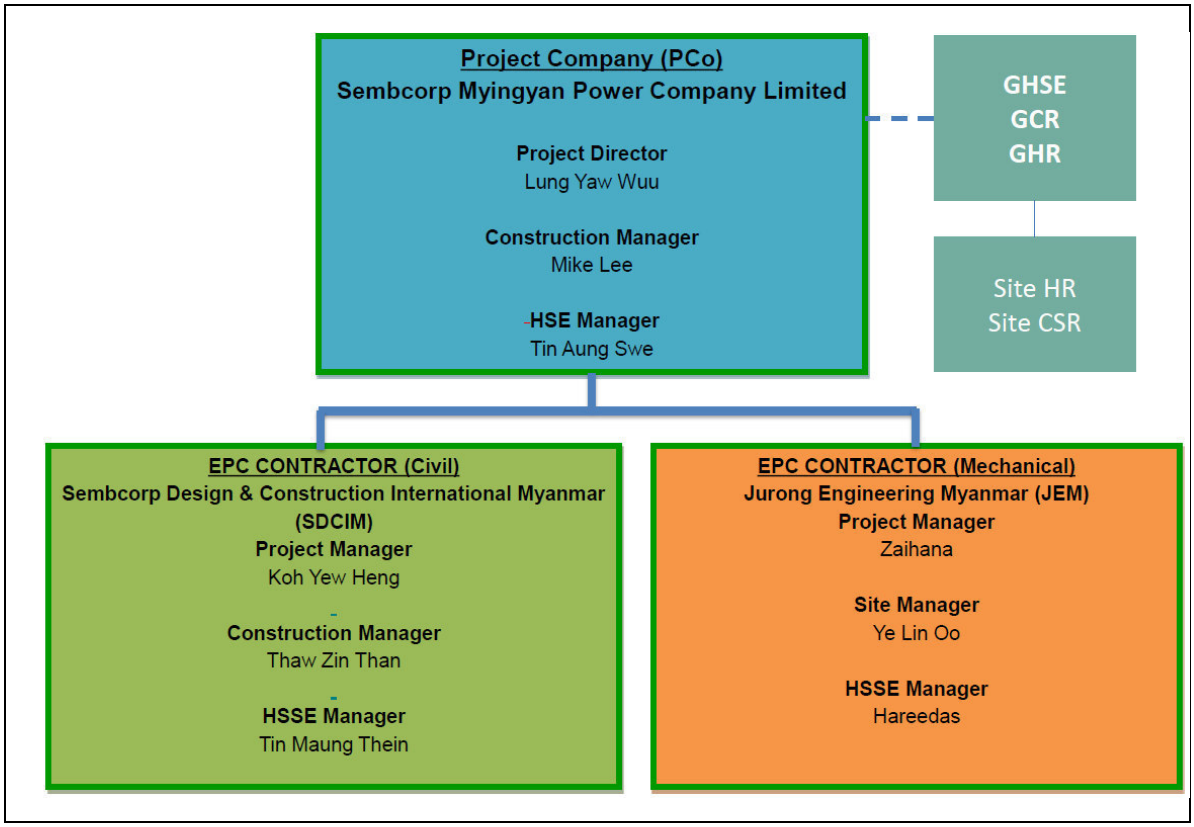
5.2.1 Environmental and Social Management System

The construction phase ESMP is implemented via the Project's HSE Management System (HSE-MS), which is based on Sembcorp's corporate HSSE-MS. The management system is described in the Project's Occupational Health and Safety Management Plan (see section 5.13 of this report) and in the Project HSE Plan (Rev 1, 1st April 2016). No major deficiencies or concerns have been identified in the HSE-MS.

Implementation of the Project's ESMP, which forms the main operational control element of the management system was reviewed during the July 2017 IESC monitoring visit. Section 5 of this report highlights several opportunities for improvement in the implementation of the ESMP and in the actual content of the 20 management plans that collectively form the ESMP. Some of the management plans do not provide a full and accurate description of environmental and social measures employed by the project so the IESC recommends a thorough review of the plans to remove irrelevant sections (e.g. descriptions of surface water management measures that are not used), add missing information (e.g. a full list of hazardous materials stored and wastes generated) and address other issues highlighted in this report.

The Project environmental and social organisation chart (see Figure 2, below) illustrates how roles and responsibilities have been assigned between the Project Company and the EPC Contractors.

Figure 2: Project Environmental and Social Organisation Chart



5.2.2 Contractor Management

Environmental and social requirements have been built into the major contracts between Sembcorp and its EPC contractors and major suppliers, namely:

- Installation, Erection, Construction and Commissioning (IECC) Agreement Contract No SEMBMIN-002, between Sembcorp Myingyan Power Company Limited (as Owner) and the SDCI / JEM joint venture (as Contractor); and
- Offshore Supply Agreement Contract No SEMBMIN-001, between Sembcorp Myingyan Power Company Limited (as Owner) and Jurong Engineering (Overseas) Pte Ltd and Sembcorp Project Engineering Company Pte Ltd (as Contractor).

Both contracts require the contractors to comply with applicable environmental, social and labour laws; IFC Performance Standards, WBG EHS Guidelines and any environmental, social and labour performance standards specified by any Financing Parties; the ESIA; and the Project HSE Plan. They state that in the event of conflict between standards the most stringent standard applies, and require the contractors to develop an environmental management system (EMS) to ensure that relevant standards are met.

Both contracts require that sub-contracts are consistent with the terms and provisions of the IECC contract or the Offshore Supply Agreement.

While the environmental and social management provisions in the contracts are adequate to ensure that Applicable Standards are adhered to by the contractors and sub-contractors, as ENVIRON was informed, Sembcorp has not been able to review any of the sub-contracts to confirm that the terms and provisions of the IECC contract or the Offshore Supply Agreement have been included in the subcontracts. ENVIRON observed during its two site visits that in some cases subcontractors have not fully implemented the terms of the Project's contracts with contractors (i.e., sleeping quarters at all three workers' camps are not fully compliant with the Workers' Accommodation Management Plan).

As ENVIRON was informed, prior to financial close, the contractors were each presented with copies of all 20 management plans and had to sign acknowledgment receipt and committing to ensuring that the plans' terms and provisions were carried forward in their contracts with subcontractors.

5.2.3 Operations Phase Environmental and Social Management

Since open cycle power generation is scheduled to commence later in 2017, it is recommended that the Project prepares operations phase environmental and social management plans prior to operations. The Project has already started planning for simultaneous operations (SIMOPS), when clear procedures are needed to define which areas are coordinated by the construction and commissioning teams. Permits will be needed if, for example, the construction team needs to complete work in an area controlled by the commissioning team.

Table 3: Summary of Findings - Environmental and Social Management System

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Operations phase ESMS	The ESMS for the Project's operations phase has not yet been developed.	Operations	• IFC PS1 • ADB-ES Principle 4	An operations phase ESMS should be developed for the project prior to commencement of operations. The ESMS should include an ESMP, which could include several individual plans if necessary. Lessons learned from the construction phase ESMP should be applied.	**Minor: Ongoing Activity**
002	SIMOPS	Simultaneous operations protocols for environmental and social issues have not yet been defined.	Operations	• IFC PS1 • ADB-ES Principle 7	Environmental and social procedures must be defined for the SIMPOPS phase, when construction and operations activities will both occur at the same time.	**Minor**
003	ESMP	The construction phase ESMP contains a number of errors and omissions (outlined in section 5 of this report).	Construction	• IFC PS1 • ADB-ES Principle 7	Review the 20 management plans to remove irrelevant sections, add missing information and address other issues highlighted in this report.	**Moderate**
004	Contractor Management	Sembcorp has not reviewed the environmental and social provisions in the sub-contracts.	Construction	• IFC PS1 • ADB-ES Principle 4	Sembcorp should review all sub-contracts by the end of August 2017 to ensure that they reflect the Project's environmental and social management standards.	**Moderate**

5.3 Air Quality and Dust

Considerable effort has been put into managing air quality, including dust, during the Project's construction phase. The Air Quality and Dust Management Plan (SDC-HSSEC-SMP-001, Rev 0, 30th September 2016) includes several management and mitigation measures designed to meet Applicable Standards and Good International Industry Practice (GIIP) but they have not all been implemented. The Project HSE Manager has provided awareness training on minimising air emissions and dust, and it was reported that performance in this area has improved.

5.3.1 Combustion Gases

All vehicles and equipment use premium diesel, which is the highest quality diesel available in Myanmar, to reduce sulphur emissions.

In accordance with the requirements of the air quality and dust management plan, each EPC contractor maintains its equipment in accordance with a planned preventive maintenance schedule. Each month a colour-coded sticker is affixed to each piece of plant and equipment to indicate that it has been maintained and is fit for use (Photo 002). This is one of the primary mechanisms used by the Project to minimise emissions to air, including combustion exhausts and fugitive emissions of volatile substances. Sembcorp periodically inspects the maintenance records of its EPC contractors.

The management plan states that the Concrete Batching Plant (CBP) will use grid electricity to minimise emissions from diesel generators, but during the site inspection it was noted that a diesel generator is used. It was reported that the grid supply cannot be relied on for critical operations such as the CBP. However, offices are currently served by a 33-kV grid electricity supply (with a backup generator).

The management plan requires vehicles and equipment to be turned off when not in use. During the site inspections several vehicles were observed with idling engines for long periods, including some with no occupants.

5.3.2 Dust

Given the relatively dry climate dust is a challenge for the construction project. However, a number of effective measures have been taken to reduce dust generation, including:

- Onsite roads and some off-site roads are sprayed daily with water abstracted from onsite groundwater boreholes to suppress dust (Photo 003). This activity was witnessed by the IESC during the monitoring visit and appears to be effective. One water spraying truck is used every day, but two or three vehicles are used in very dry periods.
- Trucks used to carry construction materials are covered (Photo 004). No breaches of this Project commitment were observed during the site inspections. It was reported that this was an issue in the past but the HSE team has trained workers and told the security team to only allow trucks fitted with covers onto the construction site.
- Hoppers and conveyor belts at the CBP are enclosed, and dust was not an issue when the CBP was inspected.
- The site is surrounded by 2 m high hoardings, which reduce the potential for dust to be blown to surrounding areas.
- A 15 km/hour speed limit is strictly enforced at the construction site, which reduces dust generation by vehicles.

Several non-conformities against the requirements of the management plan and opportunities for improvement were noted, including:

- The site has no vehicle wash nor tyre wash facilities. Site management reported that such facilities would be ineffective as the surrounding roads are not metalled. The IESC agrees with that conclusion but the management plan commits the Project to use such facilities.
- The management plan requires exposed stockpiles to either be covered or sprayed with water. Neither technique has been employed but it was reported that excavator operators have been told to slightly compact soil stockpiles to reduce the likelihood of dust generation. Wind-blown dust was observed around stockpiles during the site visit.
- The management plan requires all aggregate with a grain size of 5 mm or less to be stored in enclosed areas. Stockpiles of fine grained materials such as sand were observed on site.

Table 4: Summary of Findings - Air Quality and Dust

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Combustion gases	CBP does not use grid electricity.	Construction	• Management Plan • IFC PS3 • General EHS Guidelines • ADB-ES Principle 9	Evaluate opportunities to use grid electricity for other activities to reduce reliance on diesel generators.	**Minor**
002	Idling vehicles	Idling vehicles (some with no occupants) were noted in construction areas.	Construction	• Management Plan • IFC PS3 • General EHS Guidelines • ADB-ES Principle 9	Better enforcement of management plan requirements.	**Minor**
003	Vehicle wash facilities	The Project has no vehicle nor tyre wash facilities.	Construction	• Management Plan • IFC PS3 • ADB-ES Principle 9	The benefits of vehicle waste facilities are marginal so it is recommended that the management plan is amended rather than to install tyre wash facilities.	**Minor**
004	Soil stockpiles	Soil stockpiles are not covered nor sprayed with water.	Construction	• Management Plan • IFC PS3 • General EHS Guidelines • ADB-ES Principle 9	Implement the measures detailed in the management plan or amend management plan if a change can be justified.	**Minor**

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
005	Aggregate storage	Aggregate with a grain size of 5mm or less is not stored in enclosed areas.	Construction	• Management Plan • IFC PS3 • General EHS Guidelines • ADB-ES Principle 9	Implement the measures detailed in the management plan or amend management plan if a change can be justified.	**Minor**

5.4 Plant and Vehicle Management and Maintenance

The Plant and Vehicle Management and Maintenance Plan (SDC-HSSEC-SMP-002, Rev D, 14th July 2016) includes several management and mitigation measures designed to meet Applicable Standards and Good International Industry Practice (GIIP).

As noted in section 5.3.1, compliance with the machinery and equipment inspection and maintenance system, using colour coded labels, is good. During the site inspections no major issues were noted with the condition of plant and equipment.

Operators complete a daily checklist before operating plant and vehicles and send the completed forms to their supervisors. Should any maintenance issues be identified the maintenance department is immediately notified.

It was reported that the EPC contractors audit their sub-contractors every six months and that the process includes an inspection of maintenance records.

Several deficiencies were identified against Project requirements specified in the plan:

- Section 3.1 of the plan requires sub-contractors to use ultra-low sulphur diesel (if available), which is not consistent with the Air Quality and Dust Management Plan which specifies low sulphur diesel. It was reported that the Project uses Premium Diesel, which is the best available fuel.
- A mobile generator set was observed without a drip tray (see section 5.8 for details).

Table 5: Summary of Findings – Plant and Vehicle Maintenance and Management

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Diesel fuel quality	The management plan requires ultra-low sulphur diesel to be used, but the Project uses Premium Diesel.	Construction	• Management Plan • IFC PS3 • General EHS Guidelines • ADB-ES Principle 9	Check the specifications of Premium Diesel to determine whether it is low or ultra-low sulphur content.	**Minor**

5.5 Traffic Management

5.5.1 General Traffic Management Issues

The Traffic Management Plan (SDC-HSSEC-SMP-003, Rev 0, 20th September 2016) specifies measures to reduce adverse environmental, health & safety, and social impacts associated with Project-related traffic, including approved traffic routes (onsite and offsite), training and competency standards, speed limits and a requirement to wear seat belts.

EPCs and their sub-contractors complete a risk assessment of all activities that have a potentially significant traffic-related impact, for example abnormally large loads which may require temporary road closures and removal of obstructions such as overhead lines. Sembcorp reviews all such risk assessments.

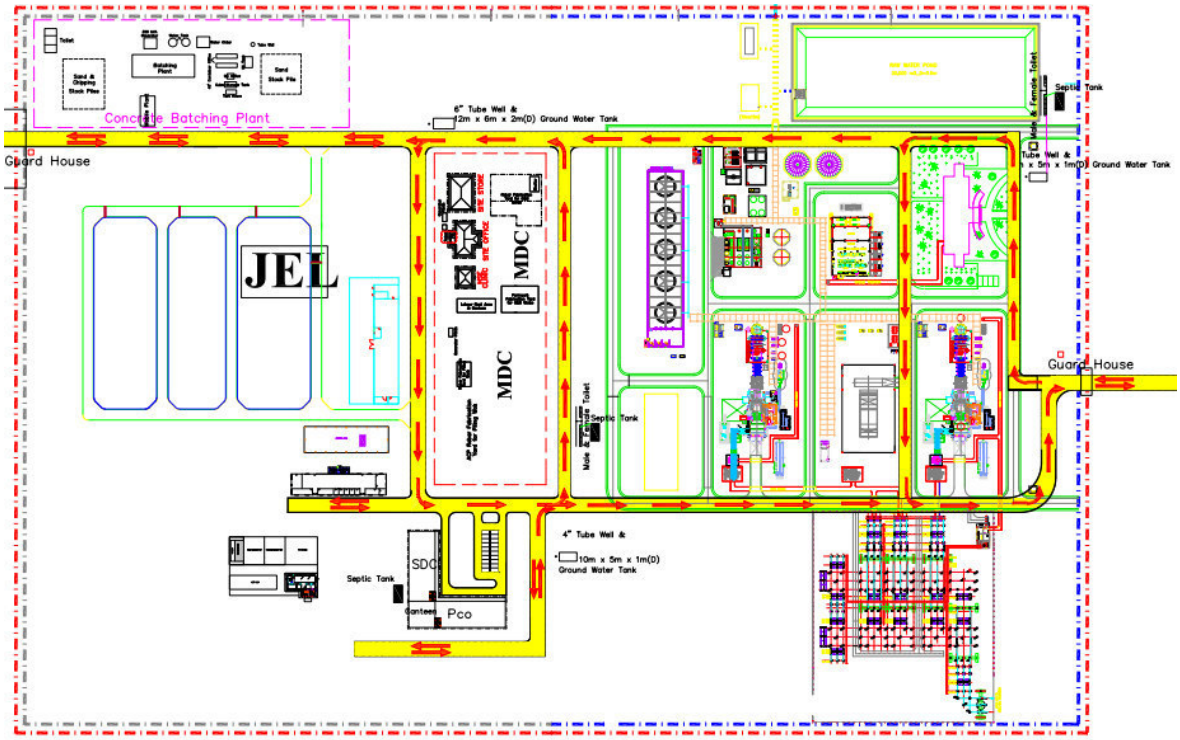
EPC contractors' complete random breath tests of workers and security staff are trained to look for signs of intoxication in drivers.

Minor vehicle maintenance is carried out on site in designated workshops, but more significant repair work is performed in specialist off-site facilities.

5.5.2 Onsite Traffic Management

Figure 3 shows the internal traffic layout within the main construction site. A one-way system is used and there are several signs clearly displaying the speed limit of 15 km/hour. Security personnel at the entrance check that all vehicle occupants are wearing a seat belt before vehicles can enter.

Figure 3: Construction Site Traffic Layout



5.5.3 Offsite Traffic Management

Figure 4 shows the approved access routes to the Project site. Heavy loads are conveyed by barge to Nyaung Hla jetty, approximately 32 km South-West of the Project site, and then then by

road using a route which enters the construction site from the West, thereby avoiding impacts on nearby communities such as the small settlement near the main site entrance (Route 2 (ii)). Deliveries of heavy loads have now been completed.

Figure 4: Approved Site Access Routes

5.5.4 Deficiencies Against Traffic Management Plan and Applicable Standards

No significant issues were noted during the IESC monitoring but the following deficiencies and opportunities for improvement have been identified:

- Drivers do not sound their horn prior to reversing or driving from a stationary position.
- Many vehicles are fitted with reversing alarms but not with non-tonal alarms (i.e. white sound) as specified in the management plan. This is not a significant issue on-site due to the lack of sensitive receptors but could cause a nuisance to inhabitants of communities near traffic routes.
- Headlights and hazard lights are not turned on when vehicles drive within the construction site. Despite this being a requirement of the Traffic Management Plan, HSE management staff reported that this is not customary in Myanmar and that the requirement is not enforced.
- The Traffic Management Plan requires segregated pedestrian walkways that are physically separated from access routes and at least 900 mm wide. No such walkways were observed on site.
- Use of seatbelts was generally excellent but one Project vehicle was noted driving on public roads with occupants not wearing seatbelts.

Table 6: Summary of Findings – Traffic Management

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Use of vehicle horns	Drivers do not sound their horn prior to reversing or driving from a stationary position.	Construction	• Management Plan • IFC PS2 • ADB-ES Principle 10	Enforce management plan requirements or revise management plan.	**Minor**
002	Reversing alarms	Many vehicles are fitted with reversing alarms but not with non-tonal alarms (i.e. white sound) as specified in the management plan.	Construction	• Management Plan • IFC PS3 • ADB-ES Principle 9	Ensure that all vehicles are fitted with reversing alarms, preferably non-tonal alarms to reverse potential noise nuisance.	**Minor**
003	Vehicle lights	Headlights and hazard lights are not turned on when vehicles drive within the construction site.	Construction	• Management Plan • IFC PS2 • ADB-ES Principle 10	Enforce management plan requirements.	**Minor**
004	Pedestrian walkways	No pedestrian walkways meeting Project specifications are used on site.	Construction	• Management Plan • IFC PS2 • ADB-ES Principle 10	Provide safe pedestrian access and egress on site, based on specifications in the management plan.	**Moderate**
005	Seatbelts	One instance of seatbelts not being used in a Project vehicle was noted on a public road.	Construction	• Management Plan • IFC PS2	Refresher training on use of seatbelts on and off-site.	**Minor**

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
				• ADB-ES Principle 10		

5.6 Noise and Vibration

The Noise and Vibration Management Plan (SDC-HSSEC-SMP-004, Rev D, 14th July 2016) details measures to mitigate and monitor noise and vibration as specified in the Project ESIA.

5.6.1 Mitigation Measures

Construction is limited to daytime (08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays) to reduce the potential for noise nuisance.

Piling work, which created significant noise and vibration, is complete. Noise insulation around equipment was generally good in all areas inspected and no particularly noisy processes were noted. Given the lack of sensitive nearby receptors noise and vibration are not a significant concern at this stage of the construction process. Workers were observed using hearing protection in relatively noisy areas.

In general, construction activities meet the requirements of the Noise and Vibration Management Plan, but the following deficiencies were identified:

- Vehicles do not use non-tonal reversing alarms (see Finding 002 in section 5.5, above).
- Vehicles are not always turned off when not in use (see Finding 002 in section 5.3, above).

It is recommended that the site speed limit in the Noise and Vibration Management Plan is changed from 20 km/hr to 15 km/hr to be consistent with other Project management plans and the enforced speed limit.

5.6.2 Noise Monitoring

Noise monitoring is conducted monthly by trained Project personnel at several locations within the CCPP construction site and at the six noise-sensitive receptors monitored in the ESIA.

The WBG General EHS Guidelines specify that daytime noise levels should not exceed 70 dBA in industrial areas or 55 dBA in residential areas.

Construction site noise monitoring data for March to May 2017 were reviewed. The highest readings were 71.8 dBA in March, 75.2 dBA in April and 73.5 dBA in May. The IESC concludes that PCo is already implementing effective noise abatement measures and that no further action is necessary as the noisiest construction processes are already complete. Also, use of hearing protection is good on site.

Data for off-site noise monitoring of the six external locations in May to June 2017 are within acceptable levels. The average levels are:

- NR1: Permanent Steel Mill Construction Worker Accommodation – 49.22 dBA;
- NR2: Monastery & Pagoda in Taung Tha Township – 47.65 dBA;
- NR3: Hnan Ywa Village, Taung Tha Township – 48.52 dBA;
- NR4: Sa Ka Village – 46.77 dBA;
- NR5: Steel Mill Worker Housing – 47.17 dBA; and
- NR6: Government Technical High School – 44.06 dBA.

5.7 Surface Water

The Surface Water Management Plan (SDC-HSSEC-SMP-005, Rev D, 14th July 2016) describes measures required to minimise adverse environmental impacts and specifies standards for water use, protection of surface and groundwater from contamination and the management of wastewater generated by the project. The plan includes a number of statements that are not relevant to this Project, such as references to silt traps on the surface runoff drainage system (there is no surface runoff system). The IESC recommends that the plan is reviewed and comprehensively updated to remove irrelevant information and accurately describe measures taken to manage water and wastewater during the Project's construction phase.

5.7.1 Water Use

Potable water is supplied to the construction sites and accommodation camps in plastic bottles and water coolers.

At the CCPP construction site water for other purposes (e.g. washing, toilet flushing and dust suppression) is abstracted from three on-site boreholes, which together abstract around 700 m^3/month. Water analysis certificates from the Public Health Laboratory dated 4th May 2017 indicate that the water from each borehole is below the maximum permissible levels for a range of parameters, classifying it as chemically potable. No microbiological monitoring is conducted on the groundwater. It is recommended that groundwater from each borehole is tested for pathogens and that the Project considers whether any control measures should be used to avoid exposure.

The volume of water abstracted is monitored but there has been no monitoring of associated draw down (a requirement of the Surface Water Management Plan).

5.7.2 Sanitary Wastewater Management

The main sources of sanitary wastewater generated during the Project's construction phase are:

- sewage and hand wash effluent from toilet blocks;
- wastewater from kitchens;
- wastewater from shower and handwashing facilities; and
- water from laundry facilities in worker accommodation camps.

It is understood that wastewater from toilets drains to septic tanks and that other wastewater is discharged to the ground.

Sewage

An adequate number of toilets has been provided at the CCPP construction site, and no issues were noted in those that were inspected.

Section 3.1.2 of the Surface Water Management Plan states that "liquid effluents arising from construction activities will be treated to the standards shown in Table 1.3.1 of the IFC EHS Guidelines, General Guidelines, Water and Ambient Water Quality (2007)". Section 2.6.1 of the Project's ESIA report states that sewage will be treated on site or transferred to an offsite septic tank. The report also states that "no untreated sewage will be disposed of on land for the duration of the project lifecycle". However, no wastewater treatment is carried out either on-site or off-site, and no monitoring has been conducted of the quality of the wastewater removed from the cess pits.

Sanitary wastewater from the cess pits at the construction site and worker accommodation camps is periodically removed by a government approved waste contractor, OK Service, using vacuum tankers (Photo 005). The contents of the cess pits are taken to a municipal wastewater disposal site adjacent to the Myingyan cemetery and graveyard, approximately 110 km South of

the centre of Myingyan (Figure 5). It was reported that sanitary wastewater is pumped into an unlined soil pit, measuring around 5 m x 4 m (Photo 006 and Figure 6), which appeared to contain rainwater rather than sewage at the time of the IESC inspection. An area of stained ground was noted adjacent to the pit, where residues suggest that wastewater may be discharged onto the ground, where it flows downslope (Photo 007). The quality of wastewater disposed of at this location is not monitored, which is not consistent with the requirements of the Surface Water Management Plan.

Figure 5: Location of Sanitary Wastewater Disposal Site and Landfill Site

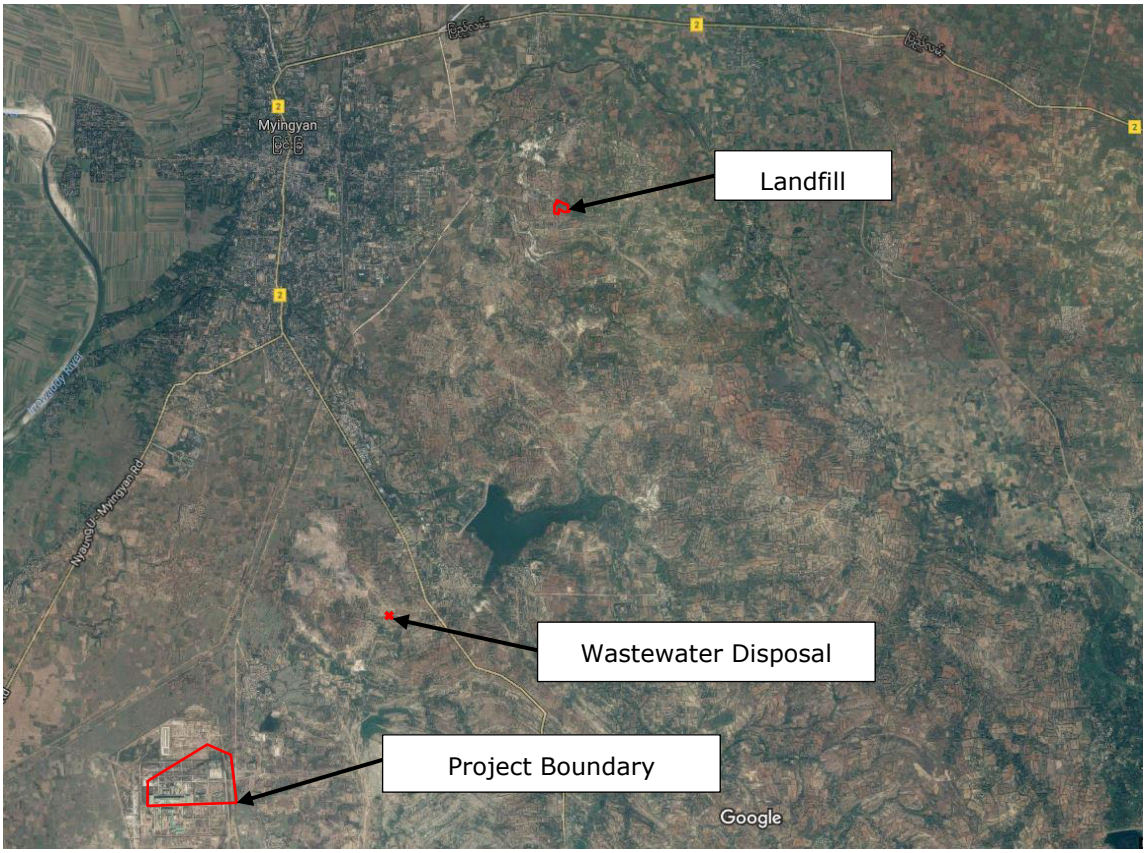
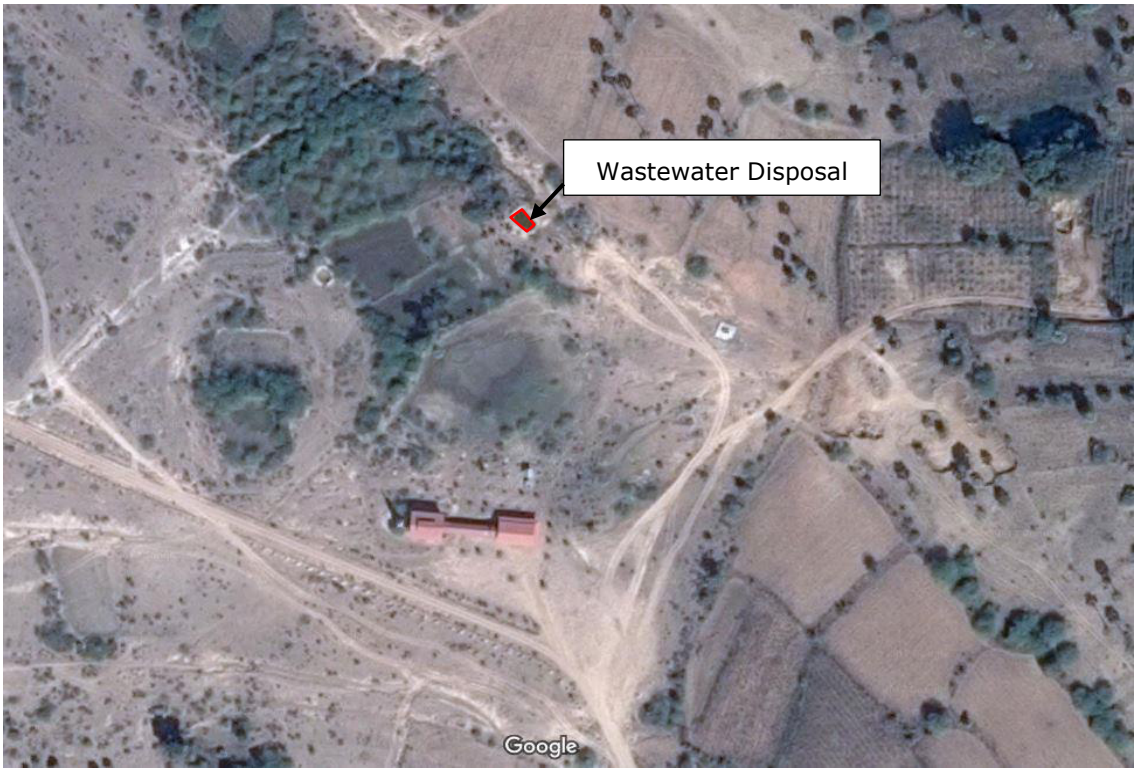


Figure 6: Sanitary Wastewater Disposal Site



No sensitive receptors were identified around the wastewater disposal site. The nearest building is the town's crematorium, 110 m to the South of the pit, and the nearest residential dwelling appears to be around 600 m to the North-East. The site is otherwise surrounded by agricultural land, and a wooded area immediately to the West, between the pit and the graveyard.

According to IFC PS3 and ADB's SPS SR1, the Project Company should avoid pollution through the application of GIIP. Neither the unlined pit nor the discharge onto soil are considered to represent GIIP for the disposal of untreated sanitary wastewater. The IESC recommends that Sembcorp evaluates alternative options for the disposal of sanitary wastewater for the remained of the Project's construction phase. Discussions with Project representatives indicated that this is the only wastewater disposal site in the Myingyan region. Sembcorp should therefore consider options for a package sewage treatment plant that would be capable of treating the total volume of sanitary wastewater generated in the remainder of the Project's construction phase.

The IESC also recommends that the Project Company monitors the quality of wastewater disposed of at the municipal site to determine whether it meets the guidelines stated in the WBG General EHS Guidelines.

Other Sources of Sanitary Wastewater

The plan requires wastewater collected from kitchens to passes through a grease trap before discharge to sanitary sewer. No grease traps are installed at the kitchen visited in the JEM accommodation camp and the wastewater flows through a course screen (approximately 5 mm mesh) before discharge to kitchen nearby open ditch (Photo 008).

5.7.3 Other Sources of Industrial Wastewater

At the time of the IESC monitoring visit the only wastewater generated from the Project is sanitary wastewater, as described above.

It is understood that water will be used for hydro-testing of the gas, water and wastewater pipelines prior to commissioning. The IESC recommends that plans are developed for the reuse or safe disposal of such water.

5.7.4 Surface Water Runoff

Surface water disposal is not a significant issue at the CCPP construction site. It was reported that surface water is channelled into several pits within the site, from where it percolates into the ground or evaporates. Several such pits were observed during the site inspection (Photo 009). Also, some runoff water is pumped from these pits into the newly constructed river water reservoir that will serve the power plant. It was reported that the runoff water protects the lining of the reservoir and that it will be emptied and cleaned before being filled with water from the Ayeyarwady River.

It is understood that perimeter ditches around the site are designed to stop surface runoff from flowing onto, rather than from the construction site.

The IESC site visit was conducted during a period of dry weather, and no issues were observed with surface water runoff.

Several deficiencies against the requirements of the Surface Water Management Plan have been identified:

- The plan requires surface runoff from bunded areas to pass through oil interceptors and silt traps before discharge to the storm water system. There are no oil interceptors nor silt traps at the construction site and there is no storm water system. It is recommended that water drained from bunded areas is tested before disposal (and treated if necessary) and that storage tanks are covered to avoid rainwater collecting in bunds.
- The plan requires open stockpiles or construction materials and construction wastes to be covered with tarpaulin or similar fabric during rainstorms. No covers were seen during the monitoring visit and it was reported that covers are not used.
- Wheel cleaning facilities are not used. As discussed in section 5.3 of this report, the IESC considers this to be an unnecessary requirement as the site is surrounded by unsealed roads.
- Surface runoff is not directed to silt removal facilities. However, this is not an issue as surface runoff is contained on site.

5.7.5 Ambient Water Quality Monitoring

Section 5 of the Surface Water Management Plan requires six-monthly monitoring of surface water quality at two locations on the Ayeyarwady River (upstream and downstream of the jetty) and monthly monitoring of water quality at the jetty for the duration of its use by the Project. Analysis reports prepared by Iso Tech Laboratory and SGS in February 2017 were inspected by the IESC. The reports do not make it clear whether the sample was taken upstream or downstream of the jetty, but it appears that only one sample was taken. Analysis of pH, turbidity, suspended solids, dissolved solids, fluoride, lead, arsenic, cyanide, zinc, copper, silica, dissolved oxygen, and oil & grease did not highlight any concerns. The list of parameters monitored does not match those specified in section 5 of the management plan. Key parameters not analysed include Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), total nitrogen, total phosphorus, total coliform bacteria, and heavy metals (aside from lead, zinc and copper although types of metals were not defined in list). No action is required as the jetty is no longer used by the Project.

The IESC inspected the jetty area. No visible evidence of soil or water contamination was found.

5.7.6 Other Issues

Section 3.1.2 of the Surface Water Management Plan requires the Project to carry out contaminated land assessments to identify legacy contaminated areas. No such assessments have been carried out, but Project HSE management representatives reported that no evidence

of contamination was detected during site excavations. Based on the limited industrial development in the area, contamination at the site from industrial activities is considered low. Other potential site contamination sources could be from illegal dumping of wastes and from application of chemicals for agriculture. As noted, no visual evidence of wastes was detected during site excavations, and the area where the power plant is located was not heavily used for agricultural purposes. No further action is recommended by the IESC.

Table 7: Summary of Findings – Surface Water

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Content of management plan	The plan includes several statements that are not relevant to this Project, such as references to silt traps on the surface runoff drainage system (there is no surface runoff system).	Construction	• Management Plan	The IESC recommends that the plan is reviewed and comprehensively updated to remove irrelevant information and accurately describe measures taken to manage water and wastewater during the Project's construction phase.	**Minor**
002	Sanitary wastewater treatment	Sanitary wastewater is not properly treated before off-site disposal. Sewage is treated in a cess pit and other wastewater is discharged to the environment untreated. Wastewater from the kitchen at the JEM accommodation camp is discharged directly to the ground, without passing through a grease trap or any other form of treatment.	Construction	• Surface Water and Soil & groundwater Management Plans • IFC PS3 • WBG EHS Guidelines • ADB-ES Principle 9	All sanitary wastewater should be treated to meet Applicable Standards, either on site or off-site, before its disposal.	**High**
003	Sanitary wastewater monitoring	The quality of sanitary wastewater is not monitored before disposal.	Construction	• IFC PS3 • WBG EHS Guidelines • ADB-ES Principle 9	Sanitary wastewater should be monitored before disposal to ensure it meets Applicable Standards.	**Minor**

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
					As sewage is collected for offsite disposal to a municipal landfill, there is marginal benefit in monitoring the quality of this waste stream although it is not in accordance with international good practices. Wastewater from kitchens and washing facilities continue to be discharged to ground. The impact of intermittent kitchen and wash water discharges to the immediate environment at the site is considered low.	
004	Sanitary wastewater disposal	The off-site wastewater disposal site does not meet lender standards and represents an environmental risk.	Construction	• IFC PS3 • WBG EHS Guidelines • ADB-ES Principle 9	Evaluate options for on-site or off-site treatment of sanitary wastewater before it is disposed of.	**High**
005	Hydrotest wastewater	Wastewater will be generated by hydrotesting of pipelines during pre-commissioning, but plans have not yet been developed for its disposal.	Construction	• IFC PS3 • WBG EHS Guidelines • ADB-ES Principle 9	Develop plans for sourcing water for hydrotesting and disposal of the water after the hydrotesting. Consideration may need to be given to treatment if chemical additives (e.g. corrosion inhibitor or biocide) are used in the process.	**Moderate**
006	Bund water	Water from bunded areas does not pass through an oil interceptor nor a silt trap.	Construction	• Management Plan • IFC PS3 • WBG EHS Guidelines	Water drained from bunded areas should be tested before disposal, and storage tanks should be covered to avoid rainwater collecting in bunds.	**Minor**

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
				• ADB-ES Principle 9		
007	Stockpile covers	Stockpiles of construction materials and wastes are not covered during rainstorms.	Construction	• Management Plan • IFC PS3 • WBG EHS Guidelines • ADB-ES Principle 9	The IESC does not consider this to be a practical mitigation measure so recommends its removal from the management plan.	**Minor**
008	Wheel cleaning	Wheel washing facilities are not used.	Construction	• Management Plan	The IESC does not consider this to be a practical mitigation measure so recommends its removal from the management plan.	**Minor**
009	Silt traps	Surface runoff is not directed to silt removal facilities.	Construction	• Management Plan	The IESC does not consider this to be a practical mitigation measure so recommends its removal from the management plan.	**Minor**

5.8 Soil and Groundwater

Several deficiencies were identified against the requirements of the Soil and Groundwater Management Plan (SDC-HSSEC-SMP-006, Rev 0, 30th September 2016) during the site inspections, including:

- Some bunded areas did not appear to be able to contain at least 110% of the contents of the largest tank (Photo 010).
- Cracks were observed in the concrete bund wall surrounding the diesel storage tank at the batching plant (Photo 011).
- Drainage holes or pipes were observed in several bunds, making them ineffective at containing spills, for example:
    - The diesel tank bund at the concrete batching plan has a drainage pipe, and the valve was open when inspected (Photo 012).
    - The bund wall around a diesel storage tank in the SDCI area has several drainage holes which allow any spills to flow onto the soil outside the building (Photos 013 and 014).
- A portable generator was seen without a drip tray (Photo 015).
- No spill kits were seen during the site visit other than a bucket of sand in a chemical storage area. The management plan requires spill kits on site and in vehicles. It is recommended that the requirement for all vehicles to have a spill kit is removed from the management plan as it is impractical.
- Soil stockpiles are not covered with polyethylene sheets at the end of each day to prevent loss of soil via wind or runoff. It is recommended that this requirement is removed from the management plan as it is impractical.

Table 8: Summary of Findings – Soil and Groundwater

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Surface Water Management Plan	The Surface Water Management Plan contains several inaccuracies and does not reflect the actual situation at the construction site.	Construction	• Management Plan	The Surface Water Management Plan should be revised to accurately reflect how water and wastewater is managed by the Project. Project commitments should be retained but descriptions of non-existent processes and infrastructure should be removed.	**Minor**
002	Bund deficiencies	Several bunds around diesel storage tanks have deficiencies, inclining inadequate capacity, structural damage or open drains.	Construction	• Management Plan • IFC PS3 • WBG EHS Guidelines • ADB-ES Principle 9	Repair all bunds to ensure that they provide effective secondary containment. If valves are fitted to drainage pipes they should be kept closed until needed. Future site inspections should check on these issues.	**Moderate**
003	Drip tray	A portable generator was seen without a drip tray.	Construction	• Management Plan • IFC PS3 • WBG EHS Guidelines • ADB-ES Principle 9	Remind EPC contractors and their sub-contractors that all mobile equipment that contains fuel should have a drip tray.	**Minor**
004	Spill kits	No spill kits are available at the construction site nor on vehicles.	Construction	• Management Plan • IFC PS3	Provide spill kits at all locations where fuel and chemicals are stored and in vehicles used to carry hazardous liquids.	**Minor**

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
				• WBG EHS Guidelines • ADB-ES Principle 9		
005	Groundwater monitoring	Groundwater is only monitored for chemical parameters and volume but draw down is not monitored.	Construction and operation	• IFC PS1 • WBG EHS Guidelines • ADB-ES Principle 7	Groundwater abstracted at the CCPP site should be tested for pathogens. Should elevated levels be detected the Project should implement measures to reduce exposure pathways. In addition, monitoring of draw down should be undertaken to assess the impact of abstraction on the water table.	**Moderate**

5.9 Biodiversity

No significant non-conformities were found against the requirements of the Biodiversity Management Plan (SDC-HSSEC-SMP-007, Rev D, 20th July 2016). However, the following general biodiversity issue was noted. The Project is only carrying out physical reinstatement of areas disturbed during construction, including the pipeline right of way, and ground surrounding towers for overhead transmission lines (Photo 016). It is recommended that biological reinstatement (i.e. revegetation) is also carried out unless the landowner objects.

Table 9: Summary of Findings – Biodiversity

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Biological reinstatement	The Project only carries out physical reinstatement of excavated areas.	Construction	• IFC PS6 • ADB-ES Principle 4	It is recommended that biological reinstatement is also carried out unless the landowner objects.	**Minor**

5.10 Waste Management

The Waste (Hazardous and Non-Hazardous) Management Plan (SDC-HSSEC-SMP-008, Rev D, 20th July 2016) describes processes and procedures for on-site waste management but does not detail off-site disposal. The plan also lacks the level of detail normally expected in such a document. The IESC recommends that the plan is revised to include a description of each type of waste generated during construction, along with details of how much is produced per year, where it is stored, and how it is disposed of.

5.10.1 On-site Waste Management

Clearly labelled and colour coded bins were observed on site, facilitating collection of recyclable materials. Waste storage areas are generally of an adequate standard but two opportunities for improvement were identified:

- The food waste bins at most rest areas within the construction site fully meet the requirements of the waste management plan (waste is placed into a plastic bag within a bin with a securely fitting lid). However, an exception was noted within the JEM compound, where waste food was deposited into an unlined wooden box with a poorly fitting lid (Photo 017). This could attract rodents and other pests.
- An area used for temporary storage of waste before collection by OK Service does not meet the requirements of the waste management plan as it is not covered to provide protection from the elements (Photo 018).

Section 6 of the waste management plan (monitoring) has not been fully implemented. The main deficiencies are:

- monthly waste records on waste generation and recycling rates are not kept; and
- waste minimisation targets have not been established.

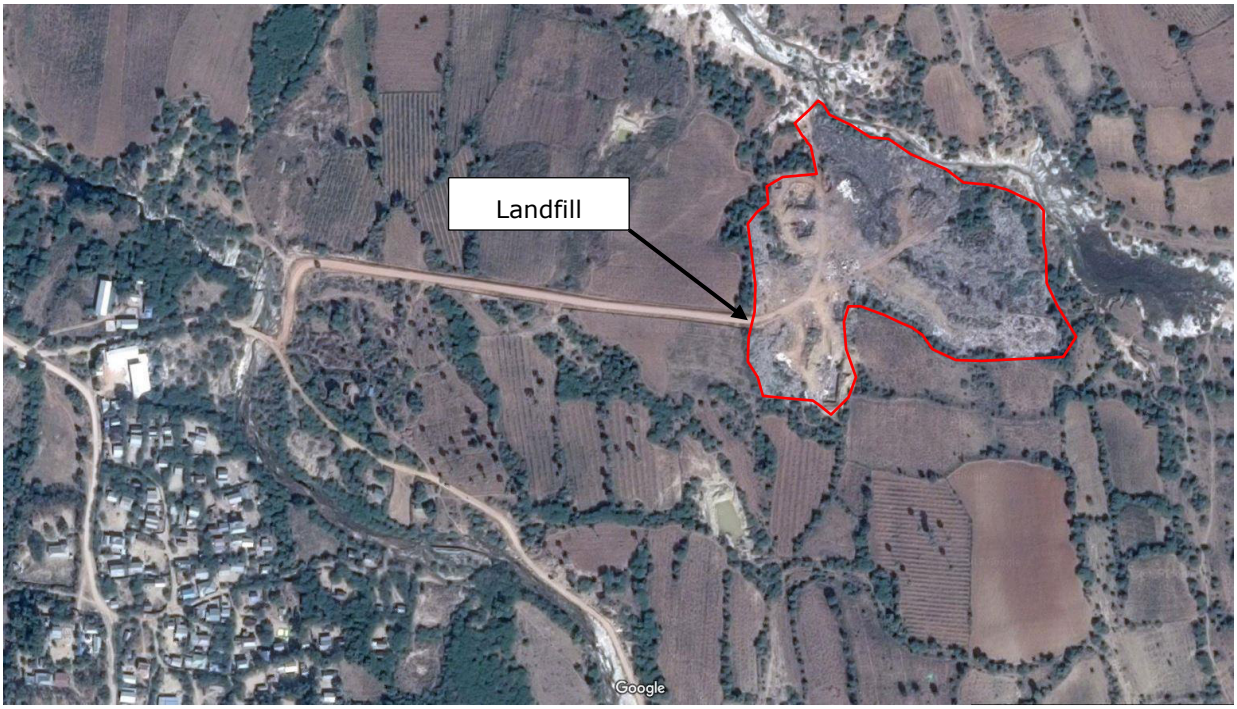
5.10.2 Off-site Waste Disposal

All waste produced during the Project's construction phase, with the exception of materials sent for off-site recycling, is disposed of by a company called OK Service, who collect waste twice per week. It is the only waste management company in the Myingyan region that has been approved by the regulatory agencies, and it also disposed of all municipal waste collected in Myingyan.

A review of waste disposal records for the last 12 months shows that all consignments have been classified as general waste. The IESC recommends that the Project Company checks whether hazardous waste is mixed with general waste when taken by the waste contractor.

Solid waste, including general waste, and hazardous waste (e.g. empty chemical containers and medical waste from clinics) is collected from the CCPP construction site twice per week by OK Service, then transported to a landfill site operated by the Myingyan Municipality, around 4 km East of the centre of Myingyan (Figure 7). This facility, which was opened two to three years ago, is not an engineered landfill but a poorly controlled and unlined waste dump. In addition to material generated by the CCPP construction project this site disposes of around 44 tonnes per day of municipal solid waste. Most waste appears to be deposited on the surface, where it is neither compacted nor buried. Waste across much of the site is smouldering and it was reported that waste is routinely burned. It is understood that smoke sometimes blows towards Myingyan, where it causes a nuisance.

Figure 7: Municipal Waste Disposal Site



At least ten scavengers were seen collecting waste materials for recycling. They appear to live in simple shacks made of waste materials, within the site, close to the entrance.

Site representatives reported that medical waste from the Project is comingled with waste from the local hospital before being deposited in an unlined soil pit (approximately 5 m by 5 m in area and 2 m deep) around 100 metres North of the site entrance (Photo 019). It is dowsed with petrol then burned. During the site inspection clinical waste (e.g. packets of pills) was also observed mixed with general waste to the North-East of the entrance, towards the ravine, suggesting that waste segregation is not effective (Photo 020).

Waste is not properly contained in the disposal site as much of it is left on the surface and not covered with soil. Reportedly only hazardous waste is buried in unlined pits within the site. As a result, waste was observed falling from the edge of the site into the bed of an ephemeral river (dry when visited) to the North-East of the site, which appears to flow towards the North West (Photo 021). An accumulation of debris further downstream indicates that when the river flows it transports waste from the designated disposal site. In addition, a considerable amount of wind-blown litter was observed in trees and on the ground surrounding the site.

It is understood that no waste disposal facilities that meet international good practice are available in the Myingyan region. It is therefore recommended that the Project works with the municipality to improve waste management practices at the site, though, for example:

- providing proper containment around the site such as an earth bund between the site and the river, and a boundary fence to reduce wind-blown litter and control access to the site;
- excavating landfill cells to allow waste to be buried;
- applying daily cover to reduce odour and litter and deter scavenging animals;
- providing a concrete-lined area for burning of clinical wastes; and

- providing proper personal protective equipment (PPE) to site employees and drivers who carry waste to the site.

Lender environmental and social standards (e.g. IFC PS 3, ADB's SPS SR1 and WBG EHS Guidelines) require waste to be disposed of in an environmentally sound manner.

5.10.3 Waste Hierarchy

Some waste streams are segregated on site for off-site recycling, most notably, scrap metal, waste oil and plastics. No data were available on the amount of waste recycled not the contractors engaged for recycling each type of material.

Table 10: Summary of Findings – Waste Management

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Waste management plan	The waste management plan does not describe off-site disposal routes for each waste stream, nor provide information on expected quantities and on-site storage arrangements for each type of waste.	Construction	• IFC PS1 • WBG EHS Guidelines • ADB-ES Principle 4	Revise the waste management plan to include a description of each type of waste generated during construction, along with details of how much is produced per year, where it is stored, and how it is disposed of.	**Minor**
002	On-site waste containment	A food waste bin was observed that did not securely hold its contents. Also, the main waste storage are on the CCPP site is not protected from wind and rain.	Construction	• Management plan • IFC PS3 • WBG EHS Guidelines • ADB-ES Principle 9	Ensure that food waste is stored in closed containers to discourage rodents and other vermin. Store waste in a secure, covered area before its off-site disposal to prevent wind-blown litter.	**Minor**
003	Waste management monitoring and targeting	Waste minimisation targets have not been established and waste records do not meet the requirements of the management plan.	Construction	• Management plan • IFC PS3 • WBG EHS Guidelines • ADB-ES Principle 9	Evaluate opportunities to avoid or minimise waste, set reduction targets and maintain records as prescribed in the management plan, which as a minimum include the amount of each waste stream sent to off-site disposal and recycling each month. This should include hazardous and non-hazardous wastes.	**Minor**
004	Off-site waste disposal	The municipal waste disposal site operates at a level well below what is considered Good International Industry Practice (GIIP).	Construction	• IFC PS3 • WBG EHS Guidelines	Work with OK Service and the municipality to improve conditions at the waste disposal site. In particular, effort should focus on improving containment of waste.	**High**

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
				• ADB-ES Principle 9		
005	Waste Segregation	It is unclear whether the waste disposal contractor (OK Service) mixes hazardous and non-hazardous wastes generated by the Project.	Construction	• IFC PS3 • WBG EHS Guidelines • ADB-ES Principle 9	The Project Company should check whether hazardous and non-hazardous wastes are mixed and co-disposed. Steps may need to be taken to ensure the secure disposal of hazardous wastes.	**Moderate**

5.11 Oil and Chemical Spill Contingency

The Oil and Chemical Spill Contingency Management Plan (SDC0HSSEC-SMP-010, Rev 0, 30th September 2016) details the approach taken by the two EPC Contractors to the management of oil and chemical spills. Measures have been taken to prevent spills and leaks (e.g. use of secondary containment around bulk storage containers and the main drum storage areas) but several issues were identified during the environmental and social monitoring visit, as detailed in section 5.8 of this report (Soil and Groundwater).

The main materials observed during the site visit are:

- Diesel, which is stored in bulk storage tanks and in day tanks associated with generators.
- Oil, which is stored in 205 litre drums.
- Paint and small quantities of chemicals in the JEM warehouse. Housekeeping was excellent, and no evidence of spills was seen (Photo 022).
- Drums of other chemicals stored at different locations around the site. Several drums were unlabelled, for example three drums outside the administrative and control building (Photo 023) and an unlabelled drum in poor condition in the JEM maintenance area (Photo 024).

No spill kits are available at any project site other than buckets of sand in a few locations. It is recommended that spill kits (typically including absorbent materials and booms) are placed in strategic locations based on a risk assessment. The IESC would expect to see spill kits near all facilities for bulk storage of hazardous liquids, and in maintenance areas where oil and waste oil is stored in drums.

In addition, there are several opportunities for improvement in the Oil and Chemical Spill Contingency Management Plan:

- The plan does not include a comprehensive list of oil, fuel and chemical storage facilities. It only describes two diesel storage tanks, each with a capacity of 1,000 litres but at least three diesel storage tanks were seen during the site visit (one in the SDCI area was reported to have a capacity of 1,300 litres but appeared to have a larger capacity). In addition, information supplied to the IESC after the site visit indicates that there are also petrol storage tanks on site. It is recommended that the plan is revised to include a comprehensive list of locations where oil, fuel and chemicals are stored in bulk. The plan should include a table summarising the storage arrangements, including material, tank capacity, contractor / sub-contractor responsible, and location. Locations should also be indicated on a site plan.
- Section 3.1.B of the plan states that the Project Management team will prepare unloading and loading protocols. No such procedures have been written, but it is understood that all deliveries of hazardous substances are supervised.
- The procedures for responding to a spill are unclear. The plan describes measures for managing a spill into the river (relevant for deliveries to the jetty by barge, and for work at the water intake pumping station) but does not detail the procedures to follow in the event of an incident at the main construction site. Annex B of the plan (Emergency response flowchart – oil & chemical spillage) provides a basis for spill response but it lacks detail. For example, it is not clear who should take the actions listed in the flowchart, nor how recommendations from an incident investigation will be implemented.

Table 11: Summary of Findings – Oil and Chemical Spill Contingency

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Unlabelled drums	Unlabelled drums were seen in several locations at the construction site.	Construction	• Management Plan • IFC PS 1&3 • WBG EHS Guidelines • ADB-ES Principle 9	Ensure that all chemical and oil drums have clear labels.	**Minor**
002	Spill kits	There are no spill kits (other than buckets of sand) in Project construction sites.	Construction	• IFC PS 1&3 • WBG EHS Guidelines • ADB-ES Principle 9	Place spill kits near all facilities for bulk storage of hazardous liquids), and in maintenance areas where oil and waste oil is stored in drums.	**Moderate**
003	Revisions to management plan	The Oil and Chemical Spill Contingency Management Plan does not include a full list of hazardous materials stored, does not include detailed loading and unloading protocols and has insufficient clarity on actions to take in the event of a spill.	Construction	• IFC PS 1&3 • WBG EHS Guidelines • ADB-ES Principle 9	Review and revise the Oil and Chemical Spill Contingency Management Plan to ensure it has a comprehensive list of materials stored, develop written procedures for deliveries and dispatch of hazardous liquids, and add written instructions for responding to spills at all Project locations.	**Moderate**

5.12 Emergency Preparedness and Response

The Emergency Preparedness and Response Plan (SDC-HSSEC-SMP-011, Rev C, 19th July 2016) provides a comprehensive description of the likely emergency situations, actions to be followed in the event of an emergency, and emergency response drills. It includes a wide range of potential incidents, including fire, collapse of equipment / structures, chemical spillage, worker injuries, water or gas pipeline leakage, electrical power supply cable damage, civil disturbance & bomb threat, and natural disaster.

It was reported that to date the Project has not had any environmental incidents. The only recorded incidents relate to minor injuries (cuts and bruises) and equipment-related issues (e.g. a vehicle being stuck in mud and a vehicle hitting a lamppost).

Two emergency drills have been completed at the CCPP construction site (a firefighting and evacuation drill in 2016, and in 2017 the drill included rescue of an injured worker at height and fire response). The 2017 drill included a firefighting team from the adjacent steel mill. Reports from the emergency drills were reviewed by the IESC and no issues were identified.

No noteworthy deficiencies have been identified in the Project's Emergency Preparedness and Response Plan.

5.13 Occupational Health and Safety

The Occupational Health and Safety Management Plan (SDC-HSSEC-SMP-012, Rev C, 20th July 2016) describes the Project's HSE-MS, and is based on Sembcorp's corporate HSE-MS. No significant deficiencies were identified in the Project's occupational health and safety (OHS) performance during the IESC 2nd monitoring period.

During the July 2017 monitoring visit the IESC noted that standards for OHS are very high. Examples of good practice include:

- clear safety hazard signs and clear signage for use of Personal Protective Equipment (PPE);
- good use of PPE (no examples of people working without the appropriate PPE were noted);
- OHS training for Project personnel and visitors is very comprehensive and toolbox talks appear to be an effective mechanism for reinforcing OHS messages;
- use of clear Lifesaving Rules, which focus on the key OHS risks (the rules are prominently displayed around the site and all personnel are trained in them); and
- site security monitors use of seatbelts and enforce the one way driving route for all vehicles entering the site.

The Project recently won a safety award from the Royal Society for the Prevention of Accidents (ROSPA) for achieving 4 million-man hours without a lost time incident.

It was noted that the Project uses Sembcorp's corporate Management of Change (MOC) procedure rather than a Project specific document. It was reported that to date there have been no significant HSSE issues related to MOC. Also, the EPC contractors' pre-construction HSSE readiness reviews of their sub-contractors included a review of their MOC procedures.

5.14 Stakeholder Engagement

5.14.1 Stakeholder Engagement

Sembcorp has a Stakeholder and Community Engagement Policy and a Stakeholder Engagement Plan (SEP) for the Project (SCI- HSSEC-SMP-001, undated, file date 20 July 2016). The SEP is well written with objectives, key standards and legislation, stakeholder identification and mapping, planned stakeholder activities, a Project Management Team organisation chart, roles and responsibilities, monitoring, KPIs and reporting. It also includes the community grievance mechanism (described in section 5.14.4).

The SEP will be in place for the life of the concession (22 years), and PCo has committed to ongoing stakeholder engagement with the local communities and PAPs.

As noted in the ESIA, PCo has engaged with multiple stakeholders including national and local governmental agencies and the local communities since 2015. As ENVIRON was informed, no records of any community consultation meetings and/or focus group discussions held by GOM with the 13 affected villages since the issuance of the ESIA were made available to Sembcorp by GOM. As a result, no minutes of these meetings were made available to ENVIRON.

With regards to PCo's own meetings with stakeholders, ENVIRON was provided with a copy of the Project's Stakeholder Engagement Database during the 1st monitoring period, as well as an Updated Stakeholder Engagement Database (as of 30th June 2017) (see Appendix 5).

As ENVIRON was informed, the Community Relations/Development Manager meets at least once per month with MOE, MONREC and EPGE, and he shares information with them on the local villages.

The SEP requires monthly dissemination of Project information to the 13 village leaders and quarterly face-to-face meetings. As was confirmed by PCo during the July 2017 site visit, PCo has ongoing open communication with the village leaders through which project information is channelled to the village residents. In addition, PCo has been meeting frequently with some PAPs, and these meetings are recorded in the Updated Stakeholder Engagement Database., although we have received no further details of these meetings.

As ENVIRON was informed, the next stakeholder engagement meeting will be before COD (i.e., before 20 December 2017), and information will be presented in the local language. Residents of all 13 local villages will be invited, and prior to the meeting Sembcorp and the EPGE engineers will engage with the local authorities.

<u>Recommendations</u>

- The SEP should be updated to include (i) a revised organization chart that includes the Community Relations/Development Department and its reporting lines; and (ii) revised roles and responsibilities, to reflect the division of responsibilities between the Community Relations/Development Manager and the recently hired Community Relations Officer (CRO), described in section 5.14.3.
- PCo should continue to engage in frequent and open communication with the village leaders through which project information is channeled, and in face-to-face communication with the individual PAPs; and PCo should keep detailed records of these meetings, including meeting minutes.

5.14.2 Public Disclosure

As ENVIRON was informed, during public consultations for development of ESIAs in Myanmar, the results of the findings of the consultants who developed the ESIA were presented. The project owner is also obligated to produce copies of the findings, as well as recommendations in the local language, and distribute them before the public consultations take place. ENVIRON received

from PCo a copy of the presentation PCo provided in the local language to the stakeholders from the 13 local villages who attended consultation meetings in 2015 and 2016. However, ENVIRON was informed that copies of this presentation were distributed in the 13 local villages just before the public meetings took place, and no advance copies of the presentation were provided.

In addition, ADB requires public disclosure of all findings including the monitoring results at all phases of the project. This is not adequately covered in the presentation and Sembcorp will ensure that it is incorporated in future engagement sessions.

Recommendations

- Sembcorp to advise ENVIRON and the Lenders if copies of its presentation were distributed in the 13 local villages before the public meetings that took place to develop the ESIA.
- Sembcorp to provide details on how they have disclosed to Project stakeholders the findings of all construction monitoring results to date.
- For future Public Stakeholder Engagement Meetings, project monitoring results need to be included as part of the presentation and information disclosure materials.

5.14.3 Community Relations

During the November 2016 site visit, we were informed that a CRO had not yet been hired and the Development Manager was fulfilling this role on an interim basis. A CRO, Hein Min Oo (Koyin), has since been hired (May 2017, prior to financial close), and is now supporting the Community Relations/Development Manager. Koyin is from the Mandalay Region. After joining Sembcorp, Koyin received one week's training in Myingyan on Stakeholder Engagement, Community Development and Relations, IFC Performance Standards, and community on the ground training from Htoon Nay Htoon and Jessica Tan Shi Han, the Community Relations Executive at Sembcorp's Singapore head office.

ENVIRON met with the Community Relations and Development team during the July 2017 site visit to assess the adequacy of the team in relation to the community relations work to be accomplished (i.e., ongoing engagement with the 13 affected villages for the life of the Project). The CRO accompanied ENVIRON on the visits to the squatters, other PAPs and a few communities along the river water supply pipeline (i.e., Hta Naung Tai, Aye and Tha Pyay Thar). It was clear that Koyin has quickly made himself known to the village leaders, PAPs and other residents in the local communities and he has a good rapport with them. He exhibits a keen interest in community relations, is well organised, keeps detailed records and is committed to his role as CRO. His job responsibilities include weekly visits to all 13 affected villages. In advance of these visits, he informs the village leaders and they together open the suggestion boxes and review any grievances/suggestions submitted. If the village leader isn't available, they discuss by phone the contents, if any, of the suggestion boxes. The CRO also supports the Community Relations/ Development Manager in the planning and implementation of community investment projects under the CDP.

In ENVIRON's opinion, the Community Relations/Development team is now adequately staffed for the work required.

5.14.4 Community Grievance Mechanism

Sembcorp's Community Grievance Mechanism (CGM) is incorporated into the Project's SEP and includes detailed procedures. Sembcorp has a Community Grievance Management Policy, which provides guidance for the implementation of the Project's CGM procedures. As ENVIRON was informed, within two months, PCo will establish a new external grievance committee that will include the leaders of all 13 local villages.

Suggestion boxes to enable anonymous submission of grievances are located at the Project site and, as we were informed, in 11 of the 13 villages. A suggestion box was observed outside of Aye Village during the July 2017 site visit (Photo 025)

We received a copy of the Project's grievance mechanism records, as of August 2016, and there were no grievances registered; the three entries posted were just examples. No complaints were heard from the four community members interviewed (three young women living in Hta Naung Tai Village and the Hpet Taw Village Chief) during the November 2016 site visit. While no grievances had been submitted up to the time of our First Monitoring Review, ENVIRON has recently learned that six grievances have been submitted since May 2017, and the details on the grievances and their status are included in the Updated Grievance Mechanism Log (Appendix 6)**.**

Recommendations

- While the CGM is well structured and detailed, timeframes for some actions are too long (i.e., acknowledgement of receipt of the grievance and responses on Level 1 and 2 grievances to the claimant) and should be shortened from 10-14 days to one week.
- PCo to ensure that its new external grievance committee, to be established within two months, involves all 13 village leaders, is managed by an individual from outside of PCo/Sembcorp and that its procedures are in compliance with the ADB 2009 SPS Paragraph 59 requirement for managing complaints from the local communities.

Table 12: Summary of Findings – Stakeholder Engagement

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Management Plan	SEP to be updated.	Construction/ Operations	• Management Plan • IFC PS1 • ADB ES Principle 4	The SEP should be updated to include (i) a revised organization chart that includes the Community Relations/Development Department and its reporting lines; and (ii) revised roles and responsibilities, to reflect the division of responsibilities between the Community Relations/Development Manager and the recently hired CRO.	**Moderate**
002	Stakeholder engagement	Stakeholder engagement with the 13 village leaders and PAPs.	Construction/ Operations	• Management Plan • IFC PS1 • ADB-SPS Paragraph No.54	PCo should continue to engage in frequent and open communication with the village leaders and in face-to-face communication with the individual PAPs; and the PCo should keep detailed records of these meetings, including meeting minutes.	**Moderate**
003	Public Disclosure	During the ESIA process in Myanmar, the project owner's obligation to produce copies of the findings, as well as recommendations in the local language, and distribute them before public consultations take place.	Pre-Construction	• ADB-ES Principle 6 • IFC PS1	Sembcorp to advise ENVIRON and the Lenders if copies of its Project presentation were distributed in the 13 local villages before the public meetings that took place in 2015 and 2016 to develop the ESIA.	**Minor**
004	Public Disclosure	ADB requires public disclosure of all findings, including the monitoring results at all phases of the project.	Construction/ Operations	• ADB-ES Principle 7 • IFC PS1	Sembcorp to provide details on how they share Project monitoring results with stakeholders.	**Moderate**

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
005	Community Grievance Mechanism	While the community grievance mechanism is well structured and detailed, most timeframes for actions are too long.	Construction/ Operations	• Management Plan • IFC PS1 • ADB-SPS Paragraph 59	The time frames for all actions should be reviewed. The acknowledgement of receipt of a grievance and also responses on Level 1 and 2 grievances to the claimant should be shortened from 10-14 days to one week.	**Moderate**
006	Community Grievance Mechanism	The Project's community grievance mechanism is part of the SEP. Since the PCo personnel process the grievances, this does not fully meet the criteria set in the ADB 2009 SPS Paragraph 59.	Construction	• Management Plan • ADB-SPS Paragraph 59	PCo to ensure that its new external grievance committee, to be established within two months, involves all 13 village leaders, is managed by an individual from outside of PCo/Sembcorp and that its procedures are in compliance with the ADB 2009 SPS Paragraph 59 requirement for managing complaints from the local communities.	**Moderate**

5.15 Community Development

The Community Development Plan (CDP, SCI- HSSEC-SMP-002, undated, file date 20 July 2016) aims to develop projects in the 13 villages within the Project's area of influence with the goal of improving the quality of life in the villages. The initial CDP included a plan scope and objectives; applicable standards including the ADB Safeguard Policy Statements (2009), the IFC Performance Standards (PS1, 2012), and Sembcorp's corporate policies, including its Corporate Social Responsibility Policy and Framework; community baseline assessments; an initial CDP Plan with a draft Table 2.4 (i.e., Table of Projects); implementation of the CDP; and roles and responsibilities. The CDP demonstrates PCo's sincere intentions to respond to the project requests made by the local communities.

ENVIRON in its First Monitoring Report recommended that PCo complete its CDP and add the following to the Plan:

- an organisation chart with assigned responsibilities;
- identification of projects to be implemented in the short, medium and long term;
- budgets to be allocated to the identified projects;
- schedule to be established for project implementation; and
- final Key Performance Indicators (KPIs).

During our July 2017 site visit, the Project's CRO provided ENVIRON with a more developed CDP Plan Table 2.4 (Appendix 7) which describes four categories of community investment projects:

- educational support;
- improvements in community structures;
- enhance access to groundwater; and
- flood relief.

The CDP Table of Projects also includes for each community investment category objectives, existing initiatives, timing/schedule, assigned responsibilities, budget, intended outcome, and KPIs.

As we were informed by the CRO, PCo conducted a needs assessment of each village, with the focus on education and health, and has since narrowed its scope to providing positive benefits to five villages near the Project site including:

- Sa Khar;
- Hnan;
- Nyuang Kan;
- Aye; and
- Tha Pyay Thar.

During the July 2017 site visit, ENVIRON visited the primary school in Tha Pyay Thar where major upgrades to the school are planned. The school upgrades will be financed by the Project under its CDP (Photos 026 and 027).

Recommendation

PCo should update its CDP, add an organisation chart and include the more developed Table 2.4.

Table 13: Summary of Findings – Community Development

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Community Development	CDP needs to be updated	Construction/ Operations	• IFC PS1	PCo should update its CDP and add an organisation chart and the more developed Table 2.4.	**Moderate**

5.16 Community Health

The purpose of the Community Health Management Plan (CHMP) (SDC-HSSEC-SMP-015, Rev C, 20 July 2016) is to manage and mitigate the residual impacts to community health, as identified in the Project's ESIA and the SDCI Health, Safety, Security and Environment Plan (HSSE Plan) (ref: SDCIM/JEM-HSSE-Myanmar-A001). The CHMP includes objectives; Myanmar laws and regulations for Community Health and the IFC Performance Standards; a Community Health baseline study on the seven villages included in the initial ESIA (September 2015); health care facilities in relation to these seven villages; community health risks and receptors and stakeholders; mitigation and management measures; and monitoring and semi-annual reporting.

Not included in the CHMP is a Community Health baseline study on the six additional villages included in the second revision to the ESIA (August 2016); an organisation chart, defined roles and responsibilities and an initial budget.

As ENVIRON learned during the July 2017 site visit, PCo recently engaged an NGO to provide some training on AIDs/HIV/TB prevention.

Recommendations

- A Community Health baseline study should be performed on the six additional villages (i.e., Kyun U Village, Ka Laing Chon Village, Aye Village, Seik Nyan Village, Ma Yoe Kone Village, and Hta Nyaung Thai Village). If this study was performed after the preparation of the CHMP in July 2016, the Plan should be updated to include the baseline study.
- The CHMP should also be updated to include an organisation chart, defined roles and responsibilities and an initial budget.

During the First Monitoring Period, ENVIRON used the Project's CHMP as a reference when monitoring the Project for compliance with IFC PS4. The findings and positive observations made by ENVIRON in the First Monitoring Report concerning compliance with the CHMP remain the same for the Second Monitoring Period. There are no new issues to report, and progress has been made in closing a significant gap, as described below.

During ENVIRON's November 2016 site visit, we recommended that standing water at the Bedok and Min Dharma workers' accommodation camps be removed. As indicated in the Final First Monitoring Report (photos in Appendix 2), the standing water at the Bedok camp was already addressed. During the July 2017 site visit, ENVIRON noted that the standing water observed at the Min Dhama workers' camp during the November 2016 site visit has been addressed as well. Drainage troughs were installed throughout the camp, and, in addition, a storage tank has been installed, as documented in the site visit photos (Photos 028 and 029).

Recommendation:

- Bedok and Min Dhama should continue to perform frequent inspections and maintenance of the new drainage systems to ensure they are well maintained.

Table 14: Summary of Findings – Community Health

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Human Health	Community Health baseline study included in the CHMP	Construction	• Management Plan • IFC PS4 • ADB-ES Principle 2	A Community Health baseline study should be performed on the six additional villages included in the second revision to the ESIA (August 2016). If this study was performed after the preparation of the CHMP in July 2016, the Plan should be updated to include the baseline study.	**Moderate**
002	Management Plan	CHMP is lacking an organization chart, defined roles and responsibilities and an initial budget	Construction/ Operations	• Management Plan • IFC PS4 • ADB-ES Principle 10	The CHMP should also be updated to include an organisation chart, defined roles and responsibilities and an initial budget.	**Moderate**
003	Community Exposure to Disease	Standing water at two workers' accommodation camps	Construction	• Management Plan • IFC PS4 • ADB-ES Principle 10	Bedok and Min Dhama should continue to perform frequent inspections and maintenance of the new drainage systems to ensure they are well maintained.	**Minor**

5.17 Workers' Accommodation

The Project's Workers Accommodation Management Plan (WAMP, SDC-HSSEC-SMP-016, REV C, 20 July 2016) was prepared by SDCI's and JEM's HR and HSSE Managers, but still refers to only SDCI's commitments to comply with the plan; and it doesn't state that it is applicable to JEM's workers' accommodation camp or the subcontractors' camps (i.e., Bedok and Min Dhama). As stated in the WAMP, the purpose of the plan is to set out SDCI (Myanmar) Co., Ltd.'s approach to ensure that the construction workers of the Project have suitable accommodation in terms of health and safety throughout the Project's construction period and to ensure that the workers' accommodation has minimal impacts on the local communities and the neighbouring environment.

In Section 4.9 of the EPC Contract with SDCI Myanmar Co. Ltd and Jurong Engineering the environmental, social and labour requirements are described and they include the ESIA and IFC Performance Standards (2012) but we were unable to find a section in the contract that describes the requirements for the workers' accommodation camps.

Workers' accommodations include:

- three temporary camps, used by JEM and two sub-contractors (Bedok and Min Dhama); and
- two houses being rented by MDKK and CPP, which ENVIRON has not had the opportunity to inspect.

Based on ENVIRON's observations, none of workers' accommodation camps are in full compliance with PS2 and/or with Sembcorp's Workers' Accommodation Management Plan. While the three camps ENVIRON visited during the November 2016 site visit had dining halls, shops and recreational areas, the sleeping accommodations, for unskilled labourers, in particular, were substandard. During ENVIRON's 2nd monitoring site visit in July 2017, we re-visited the three workers' camps to assess any improvements in their conditions, and noted the following:

- JEM: ENVIRON was able to inspect two rooms at the camp, and the occupants of both rooms were Thai male skilled labourers. Main observations at the camp are described below:
    1) six workers living in extremely overcrowded conditions in a room sized for two (3m x 5m) with three sets of bunk beds and clothing racks (Photo 030);
    2) four workers living in slightly less overcrowded conditions in a room sized for two (3m x 5m) with two sets of bunk beds and clothing racks (Photo 031); and
    3) a zinc roof installed on all camp buildings, with a sprinkler system to cool the buildings. (Photo 032).
- Bedok: The camp population has been reduced from 120 to 100 workers, since Bedok's work at the Project is almost finished. All camp occupants are from Myanmar (Yangon and other cities). For skilled workers, most rooms are now single-occupancy since the camp population has decreased. For privacy, unskilled male and female sleeping quarters, bathing areas and bathrooms have now been separated; there are separate dormitories for men and women and the women's dormitories have doors. The women's dormitories were locked so we were not able to inspect them. Camp inspections included select sleeping accommodations and a recreational area:
    1) two workers (supervisors and above) living in one room (15' x 20') with a divider in the middle of the room and a private bathroom (shower and toilet) (Photo 033);

2) one worker (supervisor and above) living in one room (15' x 20') with a private bathroom (shower and toilet) (Photo 034);

3) male unskilled workers (10-15 workers, reduced from 30), still sleeping on concrete slabs in open dormitories with small ceiling fans but with no screens for mosquito protection (Photo 035); and

4) a good recreational area with exercise equipment (Photo 036).

- Min Dhama: The camp population is approximately 200 (50-70 MDC skilled workers and the remaining, unskilled workers). Camp improvements include a proper drainage system (as described in section 5.16, Community Health); and a zinc roof and sprinkler system to cool the buildings (Photo 037). Camp inspections included select sleeping accommodations and a rural bathing area:

    1) Buildings with rooms for unskilled workers (24' x 8'), with wooden floors and windows; five occupants per room. There are no beds, workers sleep on the floor (Photo 038).

    2) Women's rural bath (Photo 039).

Even though the number of workers living at these camps has been reduced, due to the construction progress, overcrowded conditions at these camps still exist and need to be immediately addressed.

<u>Recommendations</u>

- PCo should work with JEM, Bedok and Min Dhama to immediately upgrade the workers' sleeping accommodations to eliminate the overcrowded conditions.
- Rural baths should be kept clean and free of standing water.
- PCo should confirm that JEM, Bedok and Min Dhama are fully aware of the requirements included in the Workers Accommodation Management Plan, and their need to comply with this plan.

Table 15: Summary of Findings – Workers' Accommodation

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Workers' Camps	The sleeping accommodation facilities at all three workers' camps are still overcrowded.	Construction	• Management Plan • IFC PS2	PCo should work with JEM, Bedok and Min Dhama to immediately upgrade the workers' sleeping accommodations, where gaps were noted and eliminate the overcrowded conditions.	**Moderate**
002	Workers' Camps	Maintenance of the bathing areas.	Construction	• Management Plan • IFC PS2	Rural baths should be kept clean and free of standing water.	**Moderate**
003	Management Plan	Contractors/subcontractors are not operating their workers' camps in compliance with IFC PS2 or the Project's Workers' Accommodation Management Plan.	Construction	• Management Plan • IFC PS2	PCo should confirm with JEM, Bedok and Min Dhama that they are fully aware of the requirements included in the Workers Accommodation Management Plan, and their need to comply with this plan.	**High**

5.18 Local Recruitment and Procurement

The Project's Local Recruitment and Procurement Management Plan (LRPMP, SDC-HSSEC-SMP-017, REV C, 20 July 2016) addresses the hiring of labour and capacity building for the local workforce. The LRPMP includes objectives; legal and regulatory requirements, Sembcorp's policies and procedures, and the applicable IFC Performance Standards (PS1 and PS2); provisions for recruitment and procurement; monitoring measures and reporting; and roles and responsibilities.

The LRPMP applies to the construction phase only and to all employment, procurement, contracting and acquisition activities associated with the Project regardless of the value. However, it is recognised that there are some products, goods or services that cannot be sourced locally (within local communities or even within Myanmar). In that case, this plan is not applicable.

As ENVIRON was informed by Sembcorp's HR Manager, within Myanmar, there are only four technical vocational centres, so Myanmar cannot produce a lot of the skilled labour required for the Project. Foreign skilled workers, employed by JEM, are all from Thailand (170) and make up 21% of the total workforce, as of July 2017.

5.18.1 Local Recruitment and Procurement

Local is defined under the LRPMP as including the six communities within the Project's DAI (i.e., Sa Khar, Hnan Ywa, Hpet Taw, Nyaung Kan, Gyoke Pin and Tha Pyay Thar), as mentioned in the Revised ESIA (August 2016). According to the LRPMP, inhabitants are considered local as long as they were present in the local area before the first quarter of 2016 when construction was scheduled to commence, and local businesses are those owned by local inhabitants.

As ENVIRON was informed by Sembcorp's HR Manager, Bedok and Min Dhama, together, employ 80 local workers from Sa Khar, Hnan Ywar and other villages within the Project's DAI.

Labour is recruited through construction contractors and subcontractors. Sembcorp's HR Manager confirmed that the six Sembcorp policies and procedures included in section 2.1 of the LRPMP were provided to the contractors, and they include:

- Procedure Manual for Material Procurement. Doc. No.: SDC-QP-207. on the procurement of material;
- Staff Requisition. Doc. No.: HR_S_SR. on the management of headcount;
- Use of Employment Agencies. Doc. No. HR_S_UEA. on the use of employment agencies;
- Probation and Confirmation. Doc. No.: HR_S_PC. on probation period;
- Offer of Employment. Doc No.: HR_S_OE. on priority to existing employees for job vacancy; and
- Employment of Temporary Employee. Doc. No: HR_S_ETE. on employment of temporary employee.

SCDI monitors compliance with the LRPMP and they provide Sembcorp's HR Manager with periodic reports.

The LRPMP does not explicitly state that it covers unskilled workers.

The LRPMP only requires signed contracts to be executed between the employer and employee, as per existing labour law and regulations for the hiring of Myanmar-citizen skilled workers, technicians and employees. There is no mention of employment contracts being required for unskilled workers.

5.18.2 Workers' Training and Capacity Building

Safety training courses for workers, including those of the subcontractors, are held three times per week, and based on the nature of a workers' job responsibilities, there is specialised safety training as well. In addition, first aid training (five-days) is provided to workers by the Red Cross, and every Saturday during the workers' assembly they have an awareness program. Environmental management training sessions are held as part of the HSEE training program and include: solid (hazardous and non- hazardous) waste management, chemical spill management training is also held.

5.18.3 Recommendations

- If the LRPMP is intended to cover unskilled workers, Sembcorp should amend the plan to make this more explicit.
- As recommended in section 5.24, Sembcorp should complete the mini-contract template, to be used for short-term workers, and inform the subcontractors of the need to implement this new contract procedure when engaging short-term workers; and encourage subcontractors to have contracts executed with all affected workers ASAP and have workers sign acknowledging receipt.

Refer to section 5.24, Labour & Working Conditions for additional labour information, and for ENVIRON's observations and recommendations for closing additional gaps in the Project's compliance with PS2.

Table 16: Summary of Findings – Local Recruitment and Procurement

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Unskilled Workers	It is not clear if the LRPMP covers unskilled workers.	Construction	• Management Plan • IFC PS2	If the LRPMP is intended to cover unskilled workers, Sembcorp to amend the plan to make it more explicit.	**Moderate**
002	Employment Contracts	Subcontractors' short-term workers do not have employment contracts	Construction	• Management Plan • IFC PS2	As recommended in section 5.24, Sembcorp should complete the mini-contract template to be used for short-term workers and inform the subcontractors of the need to implement this new contract procedure when engaging short-term workers; and encourage subcontractors to have contracts executed with all affected workers ASAP and have workers sign acknowledging receipt.	**High**

5.19 Project Influx

Project induced in-migration (PIIM) caused by an influx of in-migrants during construction was identified as a potential impact of the Project. The Influx Management Plan (SDC-HSSEC-SMP-018, REV C, 20 July, 2016) presents the different measures to mitigate the adverse impact from migration of construction workers and opportunistic migrants during the construction phase. The key objectives of this Plan are to identify management strategies and actions that aim to:

- discourage in-migration into the Project's Area of Influence (AoI) that would otherwise not occur if the Project did not exist;
- strengthen Project security to protect the Project against negative PIIM impacts;
- stage the in-flow of migrants and plan Project access routes, so as not to encourage the emergence of in-migrant hotspots in other parts of the Myingyan area;
- manage, to the extent possible, the footprint of in-migrants who settle within the Project's AoI;
- ensure delivery of Project benefits among existing residents and PAPs in a way that does not encourage in-migrants;
- plan and communicate Project and EPC contractor management policies that mitigate PIIM; and
- identify which strategies will be purely Project-led strategies, and those which will require collaboration with local authorities.

As ENVIRON was informed, the Project's workers are recruited through contractors and/or subcontractors and there is no influx of job seekers. No influx of camp followers was reported during ENVIRON's November 2016 site visit and none were observed as well during our July 2017 site visit.

The small informal community located outside the Project perimeter has been there since before construction for the Project commenced and does not appear to be increasing in size.

The IESC has not identified any issues relating to influx management.

5.20 HSSE Training

The HSSE Training Plan (SDC-HSSEC-SMP-019, Rev D, 20th July 2016) specifies the HSSE training and competency requirements for personnel working for the two EPC contractors and their sub-contractors. Most of the document focuses on OHS issues.

All new personnel, including Project Company, EPC contractor and sub-contractor staff receive two to three hours of HSE induction training prior to starting work. Training records were reviewed by the IESC and no issues were noted. Visitors, including the IESC team, are given a shorter version of the HSSE induction course. In addition, personnel graded supervisor above receive a more thorough training course on the Project's construction phase ESMP (401 people have been trained to date). The training slides were reviewed by the IESC, who concluded that they are comprehensive and fit-for-purpose.

No concerns have been identified with HSSE training.

5.21 Cultural Heritage

The Cultural Heritage Management Plan (SDC-HSSEC-SMP-020, Rev 0, 20th September 2016) describes procedures to be employed in the event of a chance find of a suspected item of cultural heritage value. The Project ESIA concluded that no cultural heritage sites are located within close proximity of the Project, and it was reported that no cultural heritage materials have been found during site clearance and excavation work.

The IESC has not identified any cultural heritage related issues.

5.22 Security

The Security Management Plan (SDC-HSSEC-SMP-021, Rev C, 20th July 2016) describes the procedures to ensure that Project worksites are protected against unauthorised entry, theft and damage.

Security at the CCPP construction site is provided by a private security company, who supplies 24-hour site security using unarmed personnel. Security personnel at the gate check gate passes issued to guests prior to visits, material delivery, and all other vehicles entering and exiting. Identification cards are issued to visitors and surrendered when exiting the Project site.

The Project maintains good communications with the Myingyan District Police. During ENVIRON's July 2017 site visit, PCo confirmed that there is a procedure in place with the police to provide additional support, if needed, but this arrangement is not covered under a written agreement.

As of the date of ENVIRON's visit to the Myingyan District Police Station during its November 2016 site visit, the police chief had no record of any incident involving project workers or of its contractors.

The IESC has not identified any issues relating to security management.

5.23 Land Acquisition & Resettlement

5.23.1 Resettlement Framework

PCo developed a Resettlement Framework for the Project (November 2015). The Resettlement Framework was submitted on 27th October 2016 to the Ministry of Natural Resources and Environmental Conservation of Myanmar.

At the time of preparation of the resettlement framework, it was envisaged that the footprints of the lands required for the transmission line and the water pipeline will be permanently acquired, and compensation paid, and impacts addressed consistent with ADB and IFC requirements. A resettlement plan to document the land acquisition and resettlement impacts was expected to be prepared by the Borrower.

ENVIRON was subsequently informed that there will be no permanent acquisition of lands, for the transmission line as well as the water pipeline alignment. The GoM will carry out negotiations and sign agreements for right of use of the alignment with the individual land owners. Due to this change in approach to land procurement by the GoM, several impacts that were originally anticipated in the resettlement framework, such as compensation of land values at replacement costs, permanent impacts on productivity, severance impacts etc are no longer relevant to the project.

ENVIRON was requested to play the role of an independent observer to witness the compensation process led by GoM and to confirm compliance to ADB and IFC requirements on land acquisition and resettlement.

5.23.2 ENVIRON's Land Acquisition and Resettlement Plan Observer Report

ENVIRON prepared its Final Observer Report (August 2017), based on information provided by the party/ies responsible for the land acquisition and observations made during its November 2016 site visit, to inform the Lenders on the land acquisition process followed at the Project, to identify gaps in compliance with Applicable Standards, and determine the actions required to bridge the gaps. ENVIRON's findings are documented in its Final Observer Report.

5.23.3 Land and Crop Compensation

As of 12th April 2017, all PAPs were compensated (at full replacement cost) for land and crop loss. For further details please refer to ENVIRON's Observer Report, Section 6.

5.23.4 Update on the Squatters and other PAPs

As ENVIRON was informed at the time of its July 2017 site visit, the river water supply pipeline had been buried and the four T-line towers constructed, and T-line wires installed. PAPs have been notified that they can begin re-planting crops above the pipeline (as of the end of July 2017) and re-planting has already begun under the T-line wires.

During ENVIRON's July 2017 site visit, we were able to visit with the owners of the small shop and tea house that had to be temporarily dismantled, as well as a farmer who grows corn and onions on land located near the river water supply pipeline.

- Farmer in Hta Naung Tai Village

  Mr. Paw Shwin, and his daughter, who we visited with during the November 2016 site visit. (Photo 041). Mr. Shwin, a corn and onion farmer, was compensated for temporary economic displacement due to the installation of the river water supply pipeline and three power poles. They mentioned that they were satisfied with their compensation, which they used to purchase materials to construct the foundation for a new house and shop

(Photo 042): and they also mentioned that they have a good relationship with the Project's CRO.

- Small Shop in Aye Village

  A household with a shop, owned by Mrs. Daw Than Aye, where the front of the shop was moved to the rear in order to accommodate installation of the river water supply pipeline, which occurred about 45 days before our visit (Photo 043). Compensation will be used to build a new and bigger house and shop next to the existing structures. She mentioned that she has a good relationship with the Project's CRO.

- Tea House in Aye Village

  Ye Myint, is the co-owner of the tea house, along with his wife, U Zaw Lin, who was out of town. (Photo 044) At least one person is present at the tea house 24 hours per day, to provide security for the tea house, but the family resides in Aye Village. The front of the tea house was demolished and re-built after the river water supply pipeline was installed. Compensation was used to purchase materials to re-build the tea house and add a new roof and poles (support structure inside the tea house. (Photo 045). He mentioned that he has a good relationship with the Project's CRO.

- New House with Fence in Aye Village

  Mr. U San Min Khaing, the owner of the house where the fence was taken down and re-built after installation of the river water supply pipeline, is from Mandalay (Photo 046). He began to occupy the land after the survey was performed and the cut-off date was announced. He was compensated by Sembcorp because they didn't want any costly delays. Compensation was used to purchase materials to re-build the fence. The Project's CRO has never met the owner because he is rarely at the house.

PCo's CRO provided ENVIRON with a document including information on the three squatters (i.e., name and village), along with before and after photos of their structures which illustrate the improvements they were able to achieve, using their land and crop compensation (Appendix 9).

5.23.5 Outstanding Gaps as per the Observer Report

Outstanding gaps in compliance with the Applicable Standards, as noted in ENVIRON's Final Observer Report, have been carried forward into this Second Environmental and Social Monitoring Report, and will be updated in subsequent monitoring reports, and include the following:

- The English and Myanmar language versions of the resettlement framework have been made publicly available on ADB website. However, the framework has not been shared publicly in the Myingyan Township and the 13 affected villages. While the PAPs were informed of the compensation during the compensation ceremonies prior to the signing of the individual contracts with the landowners, the resettlement framework was not publicly made available in the Myingyan township and the 13 affected villages.
- Information has not been provided on the number of power poles for which each PAP will be compensated (the same PAPs who were temporarily economically displaced for construction of the river water supply pipeline; the total number of poles along the river water supply pipeline is approx. 340- 350). Several power poles, already installed but not yet electrified, were observed along the river water supply pipeline ROW (Photo 040).

<u>Recommendations</u>

- PCo to provide the number of power poles installed on each PAPs property (total number of power poles along the river water supply pipeline has not yet been determined but is approximately 340-350).
- Now that construction has been completed for the river water supply pipeline, T-line towers and T-line wires have been installed, and PAPs have been notified that they can begin re-planting crops; PCo should have a face-to-face meeting with each PAP to assess resettlement outcomes, their impacts on the standards of living of the PAPs, and whether the objectives of the resettlement plan have been achieved, and detailed written records of these meetings should be prepared.
- PCo to provide details on the final land acquisition process, including the following:
    - Details on the final land acquisition process carried out for the affected land owners (only applies to the T-line tower foundation areas), including copies of any preliminary notices provided to land owners, and declaration of cut-off date for eligibility for entitlements.
    - Details on the final process carried out for non-titleholders impacted (land users and squatters), including whether there were any impacts on standing crops, whether any notices were provided for the harvest of standing crops or cut-off date declared. As ENVIRON understands, compensation for crop damages was provided.

Table 17: Summary of Findings – Land Acquisition & Resettlement

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Public Disclosure	Public disclosure of the Resettlement Framework in Myingyan Township and in the 13 affected villages.	Construction	• ADB-IRS Principle 9 • IFC PS5	In consultation with the Lenders, Sembcorp should determine the path forward to meet this requirement given the sensitivity of the information to be provided.	**Moderate**
002	Resettlement Grievance Mechanism	The framework for a grievance mechanism for the PAPs is included in the Resettlement Framework.	Construction	• Resettlement Framework • IFC PS5	The grievance mechanism's records, focused solely on the PAPs, should be recorded in a separate category in the Project's CGM database.	**Moderate**
003	Land Acquisition	A census on all PAPs who will be physically (temporarily) and economically displaced (both land owners and land users) was not made available by the GOM to Sembcorp, and in addition, no records of any community consultation meetings and/or focus group discussions held by the GOM with the 13 villages after issuance of the Revised ESIAs (November 2015 and August 2016), were made available to Sembcorp by GOM.	Construction	• ADB-IRS Principle 1&2 • IFC PS1	No action can be taken at this stage of the Project.	**N/A**
004	Land compensation	Identification of PAPs who will give up land for the power poles and the number of power poles for which each PAP will be compensated.	Construction	• ADB-IRS Principle 1&3 • IFC PS5	PCo to provide the number of power poles installed on each PAP's property (total number of power poles along the river water supply pipeline has not yet been determined but is approximately 340-350).	**Moderate**

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
005	Livelihood Restoration	Resettlement outcomes and impacts on the standards of living of displaced persons, and whether the objectives of the resettlement plan have been achieved.	Construction	• ADB-IRS Principles 3 & 12 • IFC PS5	There are no permanent land acquisition or involuntary resettlement impacts in the project, that would result in livelihood disruption of the PAPs. The impacts were during the construction phase and for a narrow strip of land used for construction, not significant enough to cause livelihood disruption. Now that construction has been completed for the river water supply pipeline, T-line towers and T-line wires installed, and PAPs have been notified that they can begin re-planting crops; PCo should have a face-to-face meeting with each PAP to assess resettlement outcomes, their impacts on the standards of living of the PAPs, and whether the objectives of the resettlement plan have been achieved, and detailed written records of these meetings should be prepared.	**Low**
006	Livelihood Restoration	Provision of transitional support and development assistance.	Construction	• ADB-IRS Principle 4 • IFC PS5	ENVIRON recommends that PCo, in collaboration with local banks, should establish some basic money management courses for the PAPsNot required.	**Low**
007	Land Acquisition	Final details on the land acquisition process followed by GOM are still pending.	Construction	• ADB-IRS Principle 6	ENVIRON attended the compensation award ceremonies and has also conducted consultations	**Low**

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
				• IFC PS5	with several of the affected persons and confirms that the PAPs have been compensated at replacement costs. However, a detailed documentation of the process followed has not been shared with ENVIRON. PCo to provide ENVIRON on receipt from GoM (i) details on the final land acquisition process carried out for the affected land owners (only applies to the T-line tower foundation areas), and (ii) details on the final process carried out for non-titleholders impacted (land users and squatters).	

5.24 Labour & Working Conditions

Human Resources documentation reviewed by ENVIRON includes:

- Sembcorp's Code of Business Conduct;
- Human Resources procedures;
- a sample employment contract;
- workforce statistics;
- Local Recruitment and Procurement Management Plan; and
- Workers' Grievance Mechanism.

5.24.1 Sembcorp's Code of Business Conduct

Sembcorp's Code of Business Conduct, which serves as the Project's HR policy, prohibits any form of discrimination and emphasises equal opportunity for all. The Code of Business Conduct also prohibits both child and forced labour, but the EPC Contract does not explicitly prohibit child or forced labour. ENVIRON did not observe during either of its first or second monitoring site visits any child or forced labour or any other activities that would violate Sembcorp's Code of Business Conduct.

We were unable to find any reference to workers' rights to organize in the Code of Business Conduct or ESMP.

Recommendation

- Workers' rights to organize should be explicitly stated in the Code of Business Conduct.

5.24.2 Human Resources Procedures

The Project has nine Human Resources (HR) operational procedures that address various HR topics: recruitment (with no discrimination); medical examination, if required for the position; performance appraisals; salary and overtime payments; and various types of paid leave (annual leave, medical leave, casual leave, maternity leave) and unpaid leave. All of the operational procedures are based on Myanmar labour laws and regulations. While the operational procedures are brief (about five pages each) they cover all the key points and are acceptable.

The Project's nine HR procedures apply to Sembcorp workers (full-time, part-time and temporary) and contract employees but subcontracted employees are not mentioned. Sembcorp's HR Manager will contact SDCI's HR Manager to confirm that the HR procedures were provided to subcontractors.

5.24.3 Employment Contracts

Currently, employment contracts are only executed with skilled workers. The sample Sembcorp employment contract reviewed was in compliance with IFC PS2 requirements. Employment contracts for workers engaged by subcontractors are discussed in section 5.24.7 below.

5.24.4 Workforce

Table 18 below includes a breakdown of the Project workforce, as of July 2017, (i) male vs. female workers for SMPC, contractors and sub-contractors, and (ii) the origin of the workers (i.e., local (from the 13 villages within the Project's AoI), Mandalay Region, Myanmar beyond the Mandalay region, and foreigners).

Table 18: Project Workforce

Sr. No	Company Name	Male	Female	Total	Location				Total
					Local	Regional	Inside Myanmar	Foreigner	
1	CPP	52		52		42		10	52
2	Bedok	181	62	243	48	195			243
3	JEM	629	30	659	282	74	58	245	659
4	MDC	390	15	405	95	47	263		405
5	SDCI	19	10	29	1	8	17	3	29
6	SMPC	37	6	43	4	4	21	14	43
	Totals	1308	123	1431	430	370	359	272	1431

5.24.5 Local Recruitment and Procurement Management Plan

For details on this plan, refer to Section 5.18.

5.24.6 Workers' Grievance Mechanism

While we were informed during the November 2016 site visit that a workers' grievance mechanism exists, we were not able to find any document in the ESMP that describes the workers' grievance mechanism or its procedures. After the November 2016 site visit, a one-page outline of the workers' grievance mechanism procedures was submitted to ENVIRON. Based on the explanation that has since been verbally provided to ENVIRON, a satisfactory workers' grievance mechanism is in place, but its procedures are not properly documented.

A suggestion box to receive anonymous grievances, inquiries and/or suggestions is located near the main door to Sembcorp's project office (Photo 047). As we understand, suggestion boxes where both workers' and communities' grievances can be submitted are now checked weekly.

Recommendation

- Comprehensive written workers' grievance mechanism procedures should be developed.

5.24.7 Workers Engaged by Third Parties

ENVIRON is not in receipt of any contractor's or subcontractor's HR policies/procedures, so we cannot confirm if commitments made in Sembcorp's Code of Business Conduct and PCo's HR procedures have been incorporated into the contractors'/subcontractors' HR policies/procedures.

As ENVIRON was informed, Sembcorp and PCo have not been able to review the contractors' contracts with subcontractors and many of the subcontractors' employees (i.e., short-term including unskilled workers) do not have contracts. As agreed with ENVIRON, Sembcorp's HR manager is in the process of creating a template for mini-contracts, and it will include all labour-related information that PCo's workers receive in their contracts (e.g., salary, work hours, paid time off), to be used by subcontractors when engaging short-term workers. ENVIRON has been provided with the draft mini-contract and will be providing comments.

During ENVIRON's July 2017 site visit, we inquired with Sembcorp's HR Manager how Sembcorp and PCo ensure through their monthly monitoring of contractors/subcontractors that:

- Subcontractors' employees are treated fairly and paid in accordance with local labour laws. According to Sembcorp's HR Manager, compensation to each worker is documented and each worker must sign a voucher each time he/she is paid (Appendix 8).
- No minors are hired. We were informed that the minimum age for employment at the Project is 18, and that each month all subcontractors must submit a spreadsheet of workers that includes for each employee his/her employee identification number and date of birth.
- Workers are fully paid and that they are free to leave. As we were informed, Sembcorp's HR Manager will include a clause to cover forced labour in the new contracts, described above.

Recommendations

- PCo should obtain copies of contractors/subcontractors HR policies and/or procedures to assess if they reflect all commitments included in Sembcorp's Code of Business Conduct and HR procedures.
- Sembcorp should complete the mini-contract template and inform the subcontractors of the need to implement this new contract procedure when engaging short-term workers;

and encourage subcontractors to have contracts executed with all affected workers ASAP and have workers sign acknowledging receipt.

5.24.8 Retrenchment

Retrenchment is not addressed in the ESMP.

Recommendation

- The ESMP should identify potential impacts of the retrenchment phase and identify policies and procedures to minimize its impacts.

The following Labour & Working Conditions topics are addressed in other sections of this report:

- Occupational Health and Safety, Refer to Section 5.13;
- Workers' Accommodation Camp Management, Refer to Section 5.17;
- Local Recruitment and Procurement, Refer to Section 5.18; and
- Influx Management, Refer to Section 5.19.

Table 19: Summary of Findings – Labour & Working Conditions

ID	Aspect	Issue Description	Phase	Standard	IESC Recommendations	Significance
001	Workers' Organizations	No reference to workers' rights to organise was found in the ESMP.	Construction/ Operations	• IFC PS2	Workers' rights to organise should be explicitly stated in the Code of Business Conduct.	**Minor**
002	Workers' Grievance Mechanism	Only a one-page outline of the workers' grievance mechanism was provided to ENVIRON.	Construction/ Operations	• IFC PS2	Comprehensive written workers' grievance mechanism procedures should be developed.	**Moderate**
003	Policies and Procedures	Contractors'/subcontractors' HR policies/procedures.	Construction	• IFC PS2	PCo should obtain copies of the contractors' and subcontractors' HR policies/procedures in order to determine if they have incorporated commitments included in Sembcorp's Code of Business Conduct and PCo's HR procedures into their policies and procedures.	**High**
004	Employment Contracts	Subcontractors' short-term workers do not have employment contracts.	Construction	• IFC PS2	Sembcorp should complete the mini-employment contracts template and work with subcontractors to have contracts executed with affected workers ASAP and have workers sign acknowledging receipt.	**High**
005	Retrenchment	Retrenchment is not addressed in the ESMP.	Transition from Construction to Operations	• IFC PS2	PCo should identify potential impacts of the retrenchment phase and identify policies and procedures to minimise its impacts.	**Moderate**

6. STATUS OF ESAP

The IESC's observations on the status of the Environmental and Social Action Plan (ESAP) are presented below. Following each commentary, we have provided a status summary (Closed, Work in Progress, or Open).

Table 20: Status of ESAP

No	Task Title / Description	Anticipated Completion Date	Status and Reference to Supporting Documentation and Section(s) of E&S Monitoring Report
1/PS1	Develop and implement construction phase E&S Management Program (ESMP) consistent with ESIA recommendation and IFC requirements and which includes: • Dust Management Plan; • Traffic Safety Management Plan; • Noise and Vibration Management Plan; • Surface Water Management Plan; • Soil and Groundwater Management Plan; • Waste Management Plan (Hazardous and non-Hazardous Waste); • Oil and Chemical Spill Contingency Management Plan; • Emergency Response Plan (including Community Emergency Response Plan); • Stakeholder Engagement Plan (including Grievance Management Plan); • Community Development Plan (CDP); • Community Health Management Plan; • Occupational Health and Safety Management Plan; • Workers' Accommodation Management Plan; • Local Recruitment and Procurement Plan; • Influx Management Plan;	Documented ESMPs in from and substance acceptable to IFC: by 15/05/2016 or prior to construction, whichever is earlier. Evidence of inclusion of plans in EPC HSE requirements: by 15/05/2016 or prior to construction, whichever is earlier.	The construction phase ESMP consists of 20 individual management plans, covering the topics included in the ESIA. The list is slightly different to that proposed in the ESAP. The main changes are: • The Project has not developed a Contractor Management Plan. Instead, roles and responsibilities of contractors are defined in the project's Occupational Health and Safety Management Plan (SDC-HSSEC-SMP-012) and in the Project HSE Plan. • The Project has developed three plans that are not mentioned in the ESAP: o Plant and Vehicle Management and Maintenance Plan; o Biodiversity Management Plan; and o HSSE Training Plan. The construction phase ESMP was developed prior to construction. IESC observations on the implementation of each plan are detailed in section 5 of this report. The IESC has reviewed the EPC contracts (see section 5.2 of this report) and concluded that they are not directly referenced in the contract documentation. However, annexes to the contract refer to the ESMP.

No	Task Title / Description	Anticipated Completion Date	Status and Reference to Supporting Documentation and Section(s) of E&S Monitoring Report
	• Cultural Heritage Chance Find Procedure; • Security Plan; and • Contractor Management Plan. The sponsor will also complement the EPC HSE construction requirements to include the aforementioned aspects.		15 of the 20 plans were written by the EPC Contractors, and the EPC Contractors are responsible for implementation of each of the plans except for Community Development and Stakeholder Engagement, which are the responsibility of the Project Company. **Status Summary: Closed**
2/PS1	Develop and implement Operational Phase E&S Management Program (ESMP) consistent with the outcomes of the ESIA, local legal requirements, and IFC PS requirements. The ESMP will cover applicable environmental, occupational health and safety, community health and safety, and social management aspects.	Documented Operational Phase ESMP in form and substance acceptable to IFC: 15/09/2018 or prior to commencement of operations, whichever is earlier.	The Operational Phase ESMP has not yet been developed but it was reported that the Project HSE Manager is working with the Plant Manager on this task. This will be assessed in the third IESC monitoring visit (Q4, 2017). **Status Summary: Work in Progress**
3/PS1	Assign a dedicated technically qualified construction phase ESHS management team comprised of a Head and supported by its own ESHS coordinators. Prior to the start of operations, define an ESHS organizational structure comprised of a Head of ESHS with supporting OHS and community affairs coordinators who will be fully responsible for implementation of the operational phase ESMP.	Assignment of construction ESHS team: 15/05/2016 or prior to construction, whichever is earlier.	A technically qualified ESHS management team has been appointed by the Project Sponsor and the EPC Contractors, as detailed in section 5.2 of this report. **Status Summary: Closed**
		Assignment of operation ESHS team: 15/09/2018 or prior to commencement of operations, whichever is earlier.	Operations phase ESHS management arrangements have not yet been defined. They will be assessed in the third IESC monitoring visit (Q4, 2017). **Status Summary: Open**

No	Task Title / Description	Anticipated Completion Date	Status and Reference to Supporting Documentation and Section(s) of E&S Monitoring Report
4/PS1	Expand scope of construction phase Emergency Preparedness & Response (EPR) plans mentioned in the EPC contract to include all emergency scenarios including but not limited to emergencies arising from occupational accidents, accidents involving the public, health related emergencies, and from natural hazards.	Evidence of construction phase EPR scope expanded in EPC contract: 15/05/2016 or prior to construction, whichever is earlier.	The Project's Emergency Preparedness & Response (EPR) Management Plan includes all foreseeable emergency response situations, including those specified in the ESAP. **Status Summary: Closed**
	Develop and implement an operational phase EPR Plan prior to commencing of testing and operational activities based on the outcome of the detailed quantitative risk assessment and after finalization of project design. The EPR Plan will define protocols to be followed in the event of emergencies or disasters; address both on-site and off-site emergency situations; disclose potential disasters/risks from the plant to the local community as well as the plan of action on emergency protocol in the event of any such eventuality. It will also include awareness programs for the Plant personnel, local community and local administration.	Operational phase EPR in form and substance acceptable to IFC: 15/09/2018 or prior to commencing plant testing activities, whichever is earlier.	An operational phase EPR has not yet been developed. It will be assessed in the third IESC monitoring visit (Q4, 2017). **Status Summary: Open**
5/PS1	Develop and implement a detailed, project specific monitoring and reporting program with monitoring measures applicable to each of the relevant management plans. Monitoring and reporting activities will be reviewed by an independent E&S consultant on a semi-annual basis during construction and annually thereafter for the first year of operation. A summary monitoring report will be disclosed to local communities semi-annually during construction and annually during first year of operation.	Program developed in form and substance acceptable to IFC: by 15/05/2016 or prior to construction, whichever is earlier. Independent reviews (construction): Semi-annually during construction phase (15/09/2016).	Rather than develop a stand-alone environmental and social monitoring plan the Project has included a monitoring and reporting section into each management plan where appropriate. ENVIRON has been appointed as the IESC on a semi-annual basis during construction and annually thereafter for the first year of operation. No summary monitoring reports have yet been disclosed to local communities.

No	Task Title / Description	Anticipated Completion Date	Status and Reference to Supporting Documentation and Section(s) of E&S Monitoring Report
		Independent reviews operation): By start of operations and annually for first year of operations (15/09/2019).	**Status Summary:** **Work in Progress**
6/PS1	Develop and implement a community development and stakeholder engagement program - to include clearly defined objectives, stakeholder identification and analysis, performance indicators, activities, resource allocation, assigned implementation personnel, grievance mechanisms for local stakeholders, and mechanisms to appropriately disclose project related information to communities on an ongoing basis. The program will be communicated to project affected local communities on an ongoing basis, so that they are well aware of its existence and can also easily access the grievance mechanisms.	Documented program in form and substance acceptable to IFC: 15/05/2016 or prior to construction, whichever is earlier.	Community Development program During our July 2017 site visit, the Project's CRO provided ENVIRON with a more developed CDP Plan Table 2.4 (Appendix 7) which describes four categories of community investment projects: • educational support; • improvements in community structures; • enhance access to groundwater; and • flood relief. The CDP Table of Projects also includes for each community investment category objectives, existing initiatives, timing/schedule, assigned responsibilities, budget, intended outcome, and KPIs. As we understand, the CDP program will start soon (see section 5.15 of this report). **Status Summary:** **Work in Progress**

No	Task Title / Description	Anticipated Completion Date	Status and Reference to Supporting Documentation and Section(s) of E&S Monitoring Report
			Stakeholder Engagement program The SEP is well written with objectives, key standards and legislation, stakeholder identification and mapping, planned stakeholder activities, a Project Management Team organisation chart, roles and responsibilities, monitoring, KPIs and reporting. It also includes the community grievance mechanism. PCo has engaged with multiple stakeholders including national and local governmental agencies and the local communities since 2015. The SEP should be updated to include (i) a revised organization chart that includes the Community Relations/Development Department and its reporting lines; and (ii) revised roles and responsibilities, to reflect the division of responsibilities between the Community Relations/Development Manager and the recently hired CRO (see section 5.14 of this report). **Status Summary:** **Work in Progress**
7/PS2	Ensure relevant parts of project HR policies and procedures cover labour practices of contractors and sub-contractors.	Documented program in form and substance acceptable to IFC: 15/05/2016 or prior to construction, whichever is earlier.	Contractors'/subcontractors' HR policies/procedures have not yet been made available to PCo so they can determine if contractors/subcontractors have incorporated commitments included in Sembcorp's Code of Business Conduct and PCo's HR procedures into their policies and procedures (see section 5.17 of this report). **Status Summary:** **Work in Progress**

No	Task Title / Description	Anticipated Completion Date	Status and Reference to Supporting Documentation and Section(s) of E&S Monitoring Report
8/PS2	During construction, regularly monitor the labour practices of contractors and sub-contractors (e.g. non-use of child/forced labour) against a checklist to ensure compliance with national labour laws and regulations.	Monitoring reports in form and substance acceptable to IFC: Annually following the start of construction activities (15/03/2017).	PCo through the monthly monitoring procedure does monitor contractors and subcontractors to ensure compliance with national labour laws and regulations, but additional monitoring needs to be put in place for subcontractors engagement of unskilled workers (see section 5.24 of this report). **Status Summary: Work in Progress**
9/PS2	Ensure that the housing provided by contractors/subcontractors to their workers meets standards required by the company as specified in the project HSE Plan and in IFC PS2, and are also consistent with principles of non-discrimination and equal opportunity.	Working housing specifications included in EPC contract making reference to IFC standards: 15/05/2016 or prior to construction, whichever is earlier.	Workers accommodations provided by JEM and two subcontractors are not in compliance with IFC PS2 and the Project's Workers Accommodation Management Plan (see section 5.17 of this report). **Status Summary: Work in Progress**
10/PS3	Ensure that wastewater discharge from construction and operational activities meets applicable World Bank Group (WBG) General EHS Guideline values including those applicable to sanitary wastewater, oily runoff, and cooling water blowdown.	Results submitted in AMRs (15/03/2017).	Wastewater discharges from construction activities do not meet applicable World Bank Group (WBG) General EHS Guideline values (see section 5.7 of this report). The main concern is that untreated sewage is disposed of to an unlined soil pit. **Status Summary: Open**

No	Task Title / Description	Anticipated Completion Date	Status and Reference to Supporting Documentation and Section(s) of E&S Monitoring Report
11/PS4	Mitigate traffic related accident risks during construction through measures such as: access control, barricading, reflectors, signage, community safety awareness programs, posting of traffic marshal, equipment back up alarms, proper securing of material while moving them from one place to another, planning material movement to cause minimum disruption, speed controls; alarms; posting traffic marshals at high risk locations; undertaking appropriate measures to reduce fugitive emissions from storage and transport of construction and waste material, implementing driver safety management and training requirements for the transport of people and materials. Require the EPC contractor to prepare a detailed traffic and transport management plan including such elements as: implementation of a personnel and materials movement plan which takes daily life and traffic patterns into account; periodical monitoring of noise levels at community sensitive receptor points.	Evidence of inclusion in EPC HSE requirements: 15/05/2016 or prior to construction, whichever is earlier.	Traffic related accident risks are well managed. The Project has a comprehensive Traffic Management Plan, which has been implemented effectively through a combination of physical controls (e.g. reversing alarms, vehicle maintenance), use of clear traffic signs on site, a strictly enforced speed limit, risk assessments for unusual loads, awareness training, and use of PPE such as reflective jackets. As a result, there have been no traffic related injuries. Only two traffic related accidents have been reported (one vehicle being stuck in mud and another colliding with a lamppost). Community impacts have been considered in the Traffic Management Plan. Designated traffic routes have been established to avoid populated areas, and the Project monitors noise at the six community sensitive receptor points identified in the ESIA report. **Status Summary: Closed**
12/PS4	Require EPC contractor to implement a management plan that will include: ensuring that appropriate medical facilities are available for all labour; a periodic health checkup program is in place; an awareness program on STI and HIV/AIDS; and measures to control disease vectors.	Evidence of inclusion in EPC HSE requirements: 15/05/2016 or prior to construction, whichever is earlier.	Immediate medical assistance is available at the Project site, and arrangements are in place with the medical centre is Myingyan for emergency services. A periodic (annual) health check-up program is in place, along with measures to control disease vectors. An NGO recently was engaged to provide training for an awareness program on STI and HIV/AIDS. **Status Summary: Closed**

No	Task Title / Description	Anticipated Completion Date	Status and Reference to Supporting Documentation and Section(s) of E&S Monitoring Report
13/PS5	Develop a resettlement framework with a set of project-level PS5 compliant procedures on land acquisition and involuntary resettlement which will be applied to all ongoing, and future land acquisition related activities should they occur.	Procedure in form and substance acceptable to IFC: 31/05/2016 or as advised by EPGE.	PCo developed a Resettlement Framework for the Project (November, 2015). As per the Lenders, the Resettlement Framework, together with ENVIRON's Land Acquisition and Resettlement Plan Observer Report serves the purposes of a Resettlement Action Plan (see section 5.23 of this report). **Status Summary: Closed**
14/PS5	Proactively work with EPGE during the river water supply pipeline and T-line RoW land acquisition process, and demonstrate that the outcome and process are consistent with PS5 requirements.	RoW land acquisition work plan in place and consistent with PS5 requirements – 31/05/2016 or as advised by EPGE RoW outcome/process report prepared by the company verifies consistency with PS5 requirements - prior to operations (15/09/2018).	PCo worked proactively work with EPGE during the river water supply pipeline and T-line RoW land acquisition process. As of 12th April 2017, all PAPs were compensated (at full replacement cost) for land and crop loss. Now that construction has been completed for the river water supply pipeline, T-line towers and T-line wires have been installed, and PAPs have been notified that they can begin re-planting crops; PCo should have a face-to-face meeting with each PAP to assess resettlement outcomes, their impacts on the standards of living of the PAPs, and whether the objectives of the resettlement plan have been achieved, and detailed written records of these meetings should be prepared (see section 5.23 of this report). **Status Summary: Work in Progress**

7. SUMMARY

The IESC finds the Project is generally compliant with the ESAP except for three open items and eight actions that are still work in progress. In addition, a number opportunity for improvement in the Project's environmental and social performance have been identified.

The key high significance environmental findings are related to the discharge and disposal of sanitary wastewater, including sewage, and the standards of the off-site waste water disposal site. It is recommended that all sanitary wastewater is treated to meet Applicable Standards, either on-site or off-site, before its disposal and that Sembcorp evaluates options for on-site or off-site waste water treatment prior to disposal.

The key high significance social findings are related to contractor/subcontractor HR policies/procedures that have not been made available to PCo or ENVIRON and to the lack of employment contracts for short-term workers. It is recommended that PCo obtain copies of the contractors' and subcontractors' HR policies/procedures to determine if contractors/subcontractors have incorporated commitments included in Sembcorp's Code of Business Conduct and PCo's HR procedures into their policies and procedures. It is further recommended that Sembcorp complete mini-employment contract templates and work with subcontractors to have contracts executed with affected workers ASAP and have workers sign acknowledging receipt.

Detailed suggested corrective actions are provided within the report, but these are not prescriptive: instead the Project should define appropriate corrective actions and report on the implementation of such actions via periodic monitoring reports submitted to the Lenders.

APPENDIX 2 – MONITORING PLAN

Myingyan Natural Gas Power Project
Lenders' Environmental and Social Consultant (LESC) Second Monitoring Visit
Monitoring Plan

Monitoring Visit Date:	3rd to 5th July 2017	**Site Location:**	Sembcorp Myingyan Power Company Ltd. Myingyan, Myanmar
Monitoring Team:	The monitoring team will comprise: • Alan Fowler, Ramboll Environ – Monitoring Team Leader, Environmental Specialist Mobile: +65 9615 3118, E-mail: afowler@ramboll.com • Sharon Maharg, Ramboll Environ – Social Specialist Mobile: +1 917 326 9330, E-mail: smaharg@ramboll.com		
Principal Client Representatives:	• Mr Htoon Nay Htoon, Commercial Manager, Sembcorp Myingyan Power Company E-mail: htoon.nayhtoon@sembcorp.com • Mr Tin Aung Swe – Project HSE Manager, Sembcorp Myingyan Power Company Tel: +65 6723 3371, E-mail: tin.aungswe@sembcorp.com • Mr Tin Maung Thein –Manager HSSE, SDCI (Myanmar) Company Limited Tel: +95 9 9763 70591, E-mail: tin.maungthein@sembcorp.com • Mr Hareedas Perumal – HSE Manager, JEM Tel: +95 9 7716 03262, E-mail: hareedas@jelsites.com • Mr. Aung Lwin Oo – Development and Community Relations Manager, Sembcorp Myingyan Power Company Tel: +95 9 9726 08080 E-mail: aung.lwinoo@sembcorp.com • Mr. Hein Min Oo – Community Relations Officer Tel: +95 9 4316 4626 E-mail: hein.minoo@sembcorp.com		
Persons to be Notified of Monitoring Visit:	In addition to those listed above: • Dennis Foo, General Manager, Sembcorp Myingyan Power Company Ltd Mobile: +95 9 9769 37101, E-mail: dennis.foo@sembcorp.com • Viswanathan Ramasubramanian - Senior Safeguards Specialist, ADB, Tel: +63 2 683 1447, E-mail: vramasubramanian@adb.org • Alexander Indorf, IFC E-mail: aindorf@ifc.org • Che Yu Kok, DZ Bank E-mail: cheyu.kok@dzbank.de		
Scope of Monitoring:	The environmental and social monitoring visit will cover the CCPP construction site and its associated facilities, including transmission line, water supply pipeline, wastewater pipeline and gas pipeline. It will also include an assessment of jobs, land acquisition and other social issues associated with the 13 affected local communities and persons affected by the Project (PAPs), including, the status of livelihood restoration after temporary economic displacement along the river water pipeline. Ramboll Environ will review the management of construction phase environmental and social risks and impacts, and in particular assess the implementation status of the		

	project's 20 construction management plans, which collectively form the construction phase environmental and social management plan (ESMP). The ESMP is designed to ensure that the project complies with Applicable E&S Standards and with commitments made in the project ESIA. We will also assess the status of deficiencies identified during the first monitoring visit (November 2016) and of items in the environmental and social action plan (ESAP).
Objectives:	The primary objectives of the monitoring visit, as defined in the scope of work, are to: a) verify that the Project is in compliance with the Applicable Standards in relation to the environment, local communities, health and safety; b) identify any E&S, labour, and Health and Safety (H&S) related impacts, risks or liabilities which have not been properly mitigated or controlled in the Project; c) assess the technical adequacy and the implementation status of the Project's environmental, safety and social management systems, its management plans and other related documents; and d) recommend any necessary additional preventive and corrective actions to address any ESHS related impacts, risks or liabilities identified to achieve compliance to the Lenders safeguard policy requirements.
Components of Monitoring Plan:	The monitoring visit will include: 1. Inspections of the main construction site and associated facilities (including transmission line, water supply pipeline, wastewater pipeline, gas pipeline, and jetty), and inspections of third party sites used for disposal of solid waste and sewage. Observations will focus on: a) Storage of hazardous materials (e.g. oil, fuel, paint and chemicals), including above ground and below ground bulk storage tanks and other storage areas. b) Storage of construction materials such as aggregate and cement. c) Equipment and materials laydown areas. d) Concrete batching plant. e) Waste handling and storage areas. f) Wastewater treatment facilities (e.g. septic tanks, and silt trap serving vehicle wash facility). g) Management of surface water runoff. h) Measures to control dust and noise. i) Construction activities. j) Medical facilities at the project site. k) Project vehicles and designated vehicle routes. 2. Social-related activities off-site, including: a) Inspection of all workers' accommodation camps, including return visits to the Bedok and Min Dhama camps. b) Visits to the three squatters along the river water pipeline route. c) Visits to random PAPs (farmers) who were temporarily economically displaced along the river water pipeline route. d) Visits to landowners by the T-line towers in Sa Khar village. 3. Discussions with Sembcorp and contractor personnel focussing on the following

areas:

a) Senior Management Representatives
   i. Overview of the construction project, including key environmental and social challenges
   ii. Overview of any ongoing E&S issues with the affected local communities
   iii. Legal compliance status

b) Project HSSE Manager
   i. Roles and responsibilities of the HSSE staff
   ii. Site specific HSSE procedures
   iii. Review internal audit and inspection programme and reports
   iv. Environmental monitoring
   v. Non-conformities and corrective actions
   vi. External reporting of environmental and social issues (e.g. reporting to government agencies and lenders)
   vii. Status of ESAP issues
   viii. Status of issues raised in first monitoring report

c) Human Resources Manager
   i. Workforce update (for PCo, contractors and subcontractors with breakdown: local vs. external workers, male and female)
   ii. Update on the HSSE training programme
   iii. Update on improvements at workers' accommodation camps for unskilled workers
   iv. Update on OHS practices and any incidents since the last visit
   v. Update on the workers' grievance mechanism, need to better document the procedure and register review

d) Community Relations Manager
   i. Progress made in expanding the Community Relations team
   ii. Roles and responsibilities of the new Community Relations team member
   iii. Update on community development and community/stakeholder engagement activities since the last visit
   iv. Update on the Community Grievance Mechanism and register review

e) Construction workers (discussions during site inspection)
   i. HSSE awareness
   ii. Knowledge of grievance mechanism

4. Assess compliance with a sample of requirements in the following environmental and social management plans:
   a) Air quality and dust management plan
   b) Plant and vehicle management and maintenance plan

	c) Traffic management plan d) Noise and vibration management plan e) Surface water management plan f) Soil and groundwater management plan g) Biodiversity management plan h) Waste management plan (hazardous and non-hazardous) i) Oil and chemical spill contingency management plan j) Emergency preparedness and response plan k) Occupational health and safety management plan l) Stakeholder engagement plan m) Community development plan n) Community health management plan o) Workers' accommodation management plan p) Local recruitment and procurement management plan q) Project influx management plan r) HSSE training plan s) Cultural heritage management plan t) Security management plan
Monitoring Schedule:	**Monday 3rd July 2017:** • 09.00 – 09.30 Opening meeting • 09.30 – 11.00 Discussion with senior management representatives • 11.00 – 13.00 Discussion with HSE Manager • 13.00 – 14.00 Lunch • 14.00 – 17.30 Alan Fowler to do site inspection of main construction camp and adjacent transmission line • 14.00 – 17.30 Sharon Maharg to meet with the following: o Htoon - to obtain an update on the final land acquisition and compensation activities; o Human Resources Manager; o Development/Community Relations Manager. • Sharon Maharg to conduct with PCo staff random interviews with subcontractors' workers to judge their knowledge of Sembcorp's labour policies and procedures. **Tuesday 4th July 2017:** • 09.00 – 14.00 Alan Fowler and Sharon Maharg to inspect pipeline route, stopping at affected residential and business properties on the way • 14.00 – 14.30 Lunch • 14.30 – 18.00 Alan Fowler to review compliance with requirements of

	management plans • 14.30 to 18.00 Sharon Maharg to visit all workers' accommodation camps, including return visits to the Bedok and Min Dhama camps; and landowners by the T-line towers in Sa Klar village. **Wednesday 5th July 2017:** • 08.00 – 11.00 Alan Fowler to visit off-site waste disposal facility and area used for disposal of sewage from septic tanks • 11.00 – 12.00 Alan Fowler to complete review of compliance with requirements of management plans • 09.00 – 12.00 Sharon Maharg to conduct any social site visits that were not able to be conducted the prior day • 12.00 – 13.00 Lunch • 13.00 – 14.00 Preparation for closing meeting • 14.00 – 15.00 Closing meeting then transfer to Nyang-U airport
Reporting:	A draft report will be available around two weeks after the monitoring visit.
Travel & Accommodation Arrangements:	• Wednesday 28th June: Sharon Maharg departs New York at 20.55 on SQ 25, arriving in Singapore at 06.50 on Friday 30th June. • Friday 30th June: Sharon Maharg departs Singapore at 07.55 on SQ 998, arriving in Yangon at 09.20. Overnight (two nights) in Winner Inn, Yangon. • Sunday 2nd July: Alan Fowler departs Singapore at 07.55 on SQ 998, arriving in Yangon at 09.20. Alan Fowler and Sharon Maharg depart Yangon at 15.30 on K7 264, arriving in Nyang-U at 17.35. Transfer to Sembcorp. Overnight in Family Hotel, Myingyan. • Monday 3rd July: Meetings and site inspections. Overnight in Family Hotel, Myingyan. • Tuesday 4th July: Meetings and site inspections. Overnight in Family Hotel, Myingyan. • Wednesday 5th July: Meetings and site inspections. Alan Fowler and Sharon Maharg depart Nyang-U at 17.50 on K7 264, arriving in Yangon at 19.10. Overnight in Winner Inn, Yangon. • Thursday 6th July: Alan Fowler departs Yangon at 17.35 on SQ 5019, arriving in Singapore at 22.10. • Friday 7th July: Sharon Maharg departs Yangon at 10.35 on SQ 997, arriving in Singapore at 15.10. • Wednesday 12th July: Sharon Maharg departs Singapore at 23.55 on SQ 26, arriving in New York at 11.10 on 13th July. Ramboll Environ has arranged a vehicle and driver for all road transfers in Myingyan.

Health & Safety Considerations:	• The Ramboll Environ team will take safety shoes. • H&S induction and site-specific PPE to be provided to monitoring team on arrival. • Ramboll Environ Health And Safety Plan (HASP) was approved on 27th June 2017.
Other Issues:	Alan Fowler (UK passport holder) and Sharon Maharg (US passport holder) will apply for a business visa on arrival at Yangon airport.