

Environmental and Social Monitoring Report

Project Number: 50182-001
January–June 2020
July 2020

Indonesia: Riau Natural Gas Power Project

Prepared by PT Medco Ratch Power Riau for Asian Development Bank.

The environmental and social monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

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Riau 275 MW Combined Cycle Power Plant IPP Project

Lenders Environmental & Social Monitoring Report

PT Medco Ratch Power Riau

June 2020





**LENDERS E&S REPORT – JULY 2020
RIAU 275 MW CCPP IPP PROJECT**

Date: June 2020

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DISCLAIMER NOTE

This report has been prepared by PT Medco Ratch Power Riau (“MRPR”) with support from Jacobs New Zealand Ltd for the purpose of providing quarterly Environmental & Social Monitoring of Riau 275 MW CCPP IPP Project.

This report is provided for the benefit of Lenders, Sponsors, MRPR, and related stakeholder of the project. It may not be used by any other entity or person for any other purpose without MRPR’s prior written consent.

This Environmental and Social Monitoring Report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing this report, MRPR has relied upon information provided by Contractors, Consultants, MRPR best knowledge, and/or from other sources. If the information is subsequently determined to be inaccurate or incomplete then MRPR reserves the right to amend this report in order to update the information.

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LIST OF ABBREVIATIONS

Acronym	Meaning
BAP	Biodiversity Action Plan
BOOT	Build Operate Own Transfer
BOP	Balance of Plant
CCB	Central Control Building
CCPP	Combined Cycle Power Plant
CHA	Critical Habitat Assessment
CPM	Citra Panji Manunggal
EPC	Engineering, Procurement, and Construction
ERP	Emergency Response Plan
E&S	Environment & Social
FAI	First Aid Injury
FTQ	Field Technical Query
GTG	Gas Turbine Generator
HK	Hutama Karya
HRSR	Heat Recovery Steam Generator
HSE	Health, Safety, and Environmental
IPP	Independent Power Producer
JSA	Job Safety Analysis
KPI	Key Performance Indicator
LEC	Lotte Engineering and Construction
LRP	Livelihood Restoration Plan
LTI	Lost Time Injury
MEDCO	PT Medco Power Indonesia
MOV	Motor Operated Valve
MRPR	Medco Ratch Power Riau
MTC	Medical Treatment Case
NCR	Non Conformance Report
NDT	Non Destructive Test
NTP	Notice to Proceed
PPA	Power Purchase Agreement
PLN	Perusahaan Listrik Negara
PTW	Permit to Work
QA	Quality Assurance
QC	Quality Control
RATCH	RATCH Group Public Company Limited
RMCD	Required Mechanical Completion Date
RCOD	Required Commercial Operation Date
STG	Steam Turbine Generator
SUTT	Saluran Udara Tegangan Tinggi

1. GENERAL INFORMATION

1.1. INTRODUCTION

The Environmental and Social (E&S) Monitoring Report is prepared in accordance with Indonesian environmental and social legislations and International Lenders environmental and social safeguards requirements for the Riau 275 MW Combined Cycle Gas Fired Power Plant Independent Power Producer (IPP) Project, referred to hereinafter as the 'Project'. This report is the second (2nd) Environmental & Social Monitoring Report covering the period of October 2019 to June 2020.

1.2. PROJECT DESCRIPTION

The Project Sponsors (being PT Medco Power Indonesia ("MEDCO") and RATCH Group Public Company Limited ("RATCH"), have formed PT Medco Ratch Power Riau ("MRPR") to build, own and operate the Riau 275 MW CCPP IPP Project under the terms of the Power Purchase Agreement ("PPA") which has been agreed with PLN. Construction is undertaken by Lotte Engineering & Construction ("LEC") for Plant EPC Supplier, Riau IPP Joint Operation for Plant Construction Contractor, and PT Citra Panji Manunggal ("CPM") for Gas Facilities EPC Contractor.

The key components of the Project include a 275MW Combined Cycle Power Plant ("CCPP"), a 40km long gas supply pipeline which will bring fuel to the site, a 150kV switchyard, and an approximately 750m long transmission line to connect the power plant to the PLN grid. Once constructed, ownership of the switchyard and transmission line collectively known as the Special Facilities will be transferred to PLN. At the end of the 20-year term of the PPA, PLN will take ownership of the power plant and gas supply pipeline.

The Project is located approximately 10 km due east of Pekanbaru city, approximately 3 km south of the Siak River. The power plant is designed to deliver up to 275 MW over the 20-year term of the PPA. It will burn gas fuel only. The key components of the project include:

- 275 MW combined cycle power plant (CCPP) burning natural gas fuel only;
- 40 km long gas supply pipeline which will bring fuel to the site;
- 150 kV switchyard;
- Approximately 750 m long overhead 150 kV transmission line to connect the power plant to the PLN grid via interception with the existing Tenayan – Pasir Putih 150 kV transmission line;
- 400 m access road;
- Temporary jetty for transportation of heavy equipment to site during construction; and
- Water supply and discharge pipelines to and from the Siak River, including the monitoring road adjacent to the water pipeline.

1.2.1. Location

The power plant and switchyard is located within 9.1 ha at Kelurahan Industri Tenayan, Kecamatan Tenayan Raya, Pekanbaru City. The site is bounded by palm oil plantations to the west, south and east, and Road 45 on the north.

MRPR will construct a gas supply pipeline from a connection point at an offtake location known as SV1401 on the main Grissik to Duri gas pipeline which is located north-east of the power plant in the Siak Regency. The gas will be delivered to the power plant by approximately 40 km of pipeline, the majority of which will be located within the existing road reserve and through government owned land, with only 4.5 km being through privately owned palm oil plantation.

An approximately 750 m long overhead 150 kV transmission line to connect the power plant to the PLN grid via interception with the existing Tenayan – Pasir Putih 150 kV transmission line with four transmission line tower bases that will be acquired from one private land owner will be constructed and transferred to PLN to operate.

A temporary jetty for transportation of heavy equipment to site during construction will be constructed on government owned land on the bank of the Siak River. The temporary jetty will be removed once construction is completed.

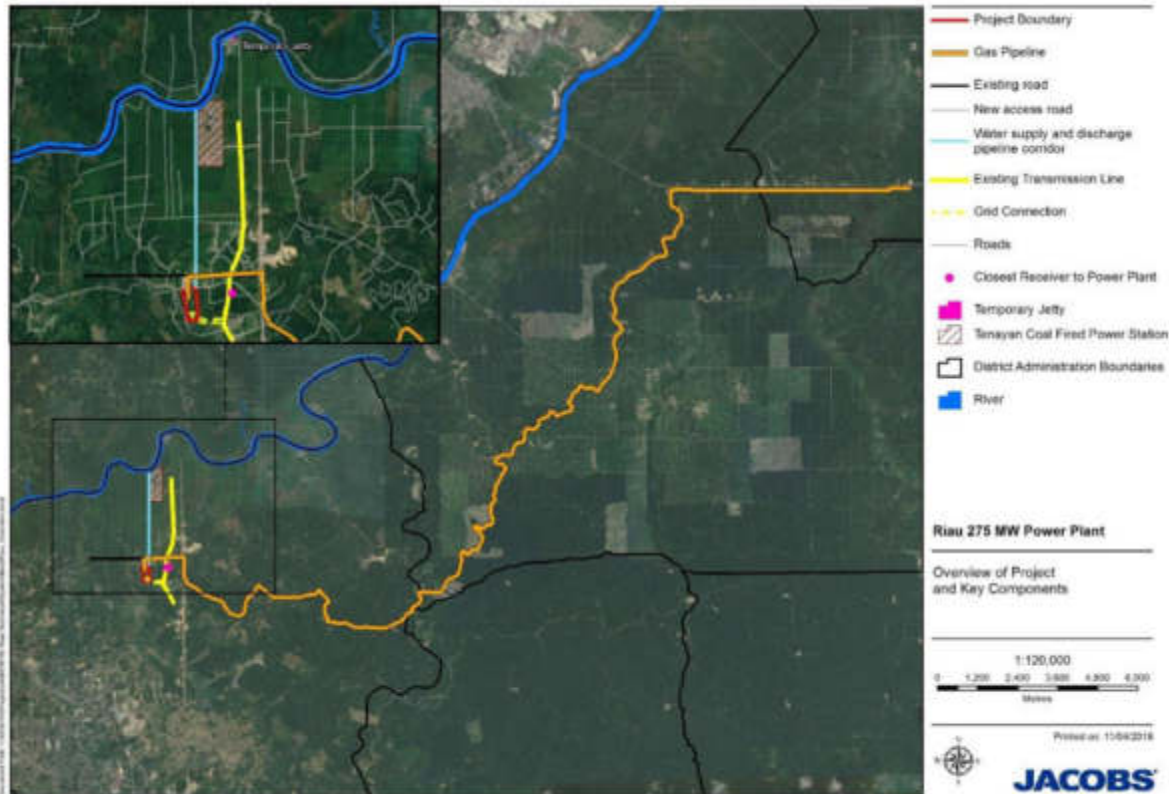


Figure 1.2-1. Project Location
(Source: ESIA, 2018)

1.3. PROGRESS OF CONSTRUCTION/OPERATION

The power plant construction schedule from Notice to Proceed to Required Provisional Acceptance Date is 29.5 months with the Commercial Operation Date (“COD”) on 9 May 2021. Gas Facilities EPC Contractor achieved the Required Mechanical Completion Date (“RMCD”) on 18 June 2020 which is inline with the requested Extension of Time of RMCD.

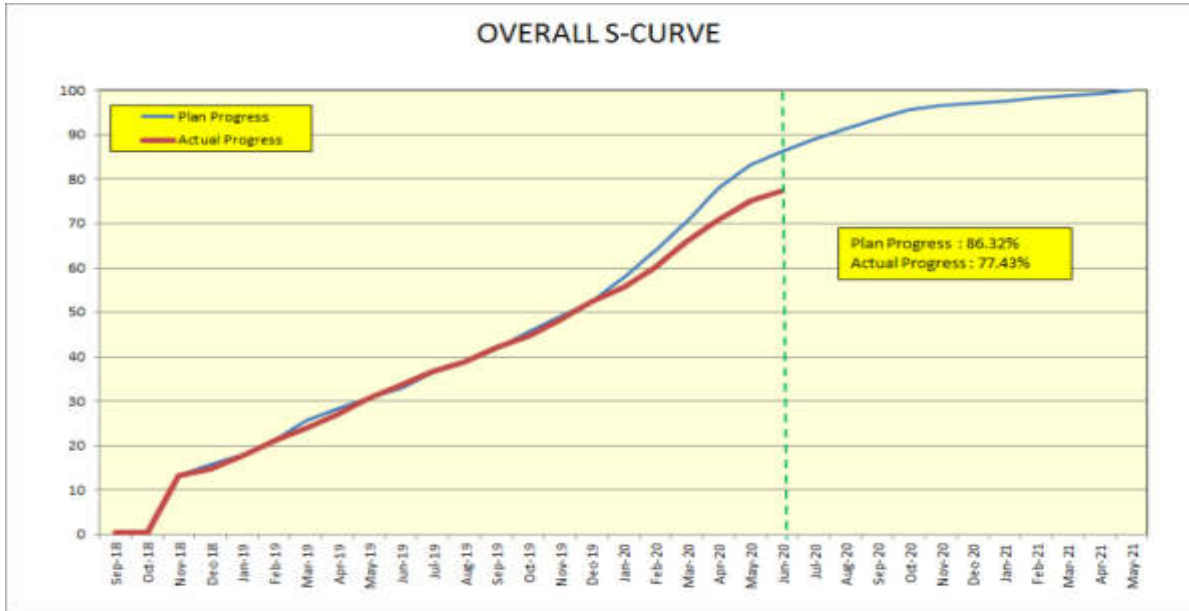
Current overall schedule status of the project is on track. However, impact of COVID-19 is closely monitored by EPC Power Plant Contractor with several mitigations being implemented in order to maintain the project schedule. Overall progress was 77.43% actual versus 86.32% planned.



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Description	2019							2020						
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	
	11	12	13	14	15	16	17	18	19	20	21	22	23	
Plan	Inc	3.32	2.15	3.32	3.76	3.42	3.35	5.42	5.93	6.77	7.79	5.27	2.92	2.65
	Cumm	36.47	38.62	41.94	45.70	49.12	52.47	57.89	63.82	70.59	78.20	83.35	86.32	88.97
Actual	Inc	3.10	2.05	3.26	2.50	3.69	4.09	3.27	4.56	5.81	4.98	4.06	2.31	
	Cumm	36.85	38.90	42.16	44.66	48.35	52.44	55.71	60.27	66.08	71.06	75.12	77.43	

Figure 1.3-1. Power Plant Construction Progress
 Source: EPC Contractors Monthly Report, June 2020

A summary of the overall project execution milestone status for the Power Plant EPC is provided in the Table 1.3-2 below.

Table 1.3-1. Power Plant Execution Milestone Status

Package	Activities	Completion Date		Remark
		Planned	Actual	
Engineering	Plot Plan Issue	30 Jan 2019	11 Des 2018	
	Single Line Diagram Issue	18 Feb 2019	23 Jan 2019	
	Electrical Main Cable Route Issue	26 Mar 2019	22 Jun 2019	
	Gas Turbine Foundation Drawing Issue	1 May 2019	25 Apr 2019	
	Central Control Building Drawing (Architecture) Issue	9 May 2019	10 May 2019	
	HRSG Foundation Drawing Issue	29 May 2019	17 May 2019	
	P&ID Issue	28 Jun 2019	31 Jul 2019	
	Piping Isometric Drawing Issue	2 Sep 2019	13 Jun 2019	
	Power Cable Schedule Issue	7 Oct 2019	26 Dec 2019	
	Instrument Main Cable Schedule Issue	23 Oct 2019	3 Dec 2019	



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Package	Activities	Completion Date		Remark
		Planned	Actual	
	Control and Logic Diagram Issue	10 Dec 2019	9 Aug 2019	
	Piping Arrangement Drawing	07 Feb 2020	14 Jan 2020	
Procurement	150 kV AIS PO Issue	04 Mar 2019	25 Apr 2019	
	150 kV Transmission Line PO Issue	04 Mar 2019	25 Apr 2019	
	Intake Facilities PO Issue	11 Mar 2019	30 Apr 2019	
	Mechanical Draft Cooling Tower PO Issue	8 Mar 2019	09 Apr 2019	
	Generator Step-Up Transformer & Unit Auxiliary Transformer PO Issue	14 Mar 2019	30 Apr 2019	
	Waste Water Treatment PO Issue	20 Mar 2019	20 Apr 2019	
	Water Treatment PO Issue	20 Mar 2019	20 Apr 2019	
	Fuel Gas Conditioning and Metering System PO Issue	20 Mar 2019	22 Apr 2019	
	DCS with TMR PO Issue	30 Mar 2019	15 Apr 2019	
	Black Start Diesel Generator PO Issue	8 Apr 2019	26 May 2019	
	MV Switchgear PO Issue	8 Apr 2019	03 May 2019	
	HRSB Module Material Transportation to Site	11 Feb 2020	02 Mar 2020	
	Gas Turbine & Generator Transportation to Site	12 Mar 2020	23 May 2020	
	Water Treatment System Transportation to Site	14 Mar 2020		Partially Arrived in June'20
	Waste Water Treatment System Transportation to Site	14 Mar 2020		Partially Arrived in June'20
	Steam Turbine & Generator Transportation to Site	11 Apr 2020	11 May 2020	
Construction	Site Grading Work Completed	28 Feb 2019	30 Apr 2019	
	Piling Work Start (BOP)	21 Jun 2019	27 Jun 2019	
	Piling Work Start (Power Block)	01 Jul 2019	29 Apr 2019	
	Central Control Building Work Start	30 Sep 2019	4 Jul 2019	
	Foundation Work Start (GTG)	14 Dec 2019	29 Jul 2019	
	U/G Piping Work Start (Intake Piping)	31 Dec 2019		Delay
	U/G Piping Work Start (Fire Water)	07 Feb 2020	5 Nov 2019	



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Package	Activities	Completion Date		Remark
		Planned	Actual	
	Piping Shop Fabrication Work Start	08 Feb 2020	21 March 2020	
	#1HRSG Pressure Module Installation Start	17 Feb 2020	9 June 2020	
	Black Start Diesel Generator Foundation Completed	28 Feb 2020	TBC	
	River Water Intake Facility Installation Start	06 Mar 2020		Delay
	#1GTG Installation Start	13 Mar 2020	26 May 2020	
	Waste Water Treatment System Installation Start	16 Mar 2020		Delay
	Piping Tie-In Work Start (Fuel Gas)	28 Mar 2020		Gas Pipe EPC Contractor end ready to Tie-In
	Field Piping Installation Work Start	30 Mar 2020	2 April 2020	
	STG Installation Start	21 Apr 2020		Delay
	Central Control Building Work Completed	09 May 2020		Delay
	Hydro Test Start	01 Jul 2020	18 March 2020	
	Black Start Diesel Generator Completed	28 Jul 2020		Delay
	Air System Available	04 Aug 2020		On track
	Main Foundation Work Completed (Power Block)	05 Aug 2020	16 April 2020	
	Admin Building Work Completed	06 Aug 2020		Delay
	AIS Installation Completed	22 Aug 2020		On track
	Transmission Line Stringing Completed	09 Sep 2020		On track
	River Water Intake System Available	10 Sep 2020		On track
	Waste Water System Available	28 Sep 2020		On track
	Closed Cooling Water System Available	14 Oct 2020		On track
	Fuel Gas System Available	21 Oct 2020		On track
Commissioning	Cold Commissioning Start (GTG)	02 Oct 2020		On track
	Cold Commissioning Start (HRSG)	15 Oct 2020		On track
	Cold Commissioning Start (STG)	09 Nov 2020		On track



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Package	Activities	Completion Date		Remark
		Planned	Actual	
	Hot Commissioning Start (GTG)	03 Dec 2020		On track
	Hot Commissioning Start (HRSG)	15 Dec 2020		On track
	Hot Commissioning Start (STG)	30 Jan 2021		On track
	Performance Test Start	26 Mar 2021		On track
	Reliability Test Start	25 Apr 2021		On track
	Provisional Acceptance Date	09 May 2021		On track

A summary of the overall project execution milestone status for the Gas Pipeline EPC is provided in the Table 1.3-3 below.

Table 1.3-2. Gas Pipeline Execution Milestone Status

Package	Activities	Completion Date		Remark
		Planned	Actual	
Engineering	Pig Receiver & Pig Launcher Installation Procedure	30-Sep-18	1-Nov-18	
	Master Document Register	30-Sep-18	3-Oct-19	
	Job Safety Analysis	15-Jan-19	2-May-19	
	Quantitative Risk Assessment	30-Nov-19	27-Nov-19	
	Pig Receiver & Pig Launcher Installation Procedure	3-Feb-19	29-Jan-20	
	Packing Gas Volume Calculation	5-Feb-19	4-Oct-19	
	MTO for Civil & Structure	23-Jan-19	11-Oct-19	
MTO for Fences and Gates	23-Jan-19	14-Aug-19		
Procurement	ERW Pipe OD 12", WT 0.500", API 5L X-52, DRL, BE PSL2, 3LPE Coated	1-Oct-18	29-Aug-18	
	Pig Launcher & Receiver	1-Feb-19	25-Feb-19	
	Piping, Valve, Fitting & Accessories	1-Feb-19	11-Sep-19	
	Pig Signal	4-Mar-19	1-Jul-19	
	PSV	1-Jan-19	13-Mar-19	
	Cathodic Protection	4-Mar-19	14-May-19	
	Contractor Submit Technical Query and Variation Order based on QRA	3-Dec-19	16-Oct-19	
Pre-Construction and Construction	Start Survey	13-Jul-19	13-Jul-19	
	Start Clearing & Grading	13-Jul-19	13-Jul-19	
	Start Stringing	16-Jul-19	16-Jul-19	
	Start Bending	16-Jul-19	16-Jul-19	

Package	Activities	Completion Date		Remark
		Planned	Actual	
	Start Welding	22-Jul-19	31-Jul-19	
	Start NDT	24-Jul-19	8-Aug-19	
	Field Joint Coating and Holiday Test	10-Aug-19	9-Aug-19	
	Start Trenching	2-Aug-19	18-Nov-19	
	Start Lowering	3-Aug-19	18-Nov-19	
	Start Backfilling	4-Aug-19	18-Nov-19	
	Clean up, Reinstatement and Restoration **)	17-Aug-19	4-Jan-20	
	Install Pig Launcher & Receiver	28-Dec-19	5 April 2020	
	Start Fabrication Piping System	15-Nov-19	27-Dec-19	
Commissioning	Pre-Commissioning and Commissioning Start	1-Feb-20	13-Mar-20	
	Preservation	11-Apr-20		Delay

**) MRPR partially started Clean up, Reinstatement, and Restoration

1.4. KEY DEVELOPMENTS AND ANY MAJOR CHANGES (LOCATION, DESIGN, TECHNOLOGY, IMPACTS, PROCEDURES, MITIGATION MEASURES ETC.)

None in this reporting period

2. ENVIRONMENTAL PERMITS AND APPROVALS

MRPR has obtained following environmental permits as summarized in below Table.

Table 2-1. Environmental Permit Status

Activity & Environmental Permit Approach	Authority	Status	Date Issuance	Renewal Required	Notes
AMDAL for Power Plant	DPMPSTSP of Pekanbaru City	Obtained	16 November 2018	N	-
UKL-UPL for Transmission Line	DPMPSTSP of Pekanbaru City	Obtained	17 September 2018	N	-
UKL-UPL for Gas Pipeline	DPMPSTSP of Riau Province	Obtained	8 July 2019	N	-

2.1. PERMITS, APPROVALS AND COMPLIANCE CERTIFICATES REQUIRED AND OBTAINED

MRPR monitors the status of permits and licenses related to Project activities. All relevant permits and licenses are valid and are listed in Table 2.1-1.

Permit / Licenses	Authority	Status	Issuance date	Renewal Required	Remarks
Environmental License for the Power Plant	OSS	Obtained	16 November 2018	N	This license is applicable for a life-time period of the business. However, MRPR shall submit implementation report every six (6) months starting from the issuance date.
Environmental License for the Substation and Transmission Line	Land Office of Pekanbaru City	Obtained	17 September 2018	N	This license is applicable for a life-time period of the business. However, MRPR shall submit implementation report every six (6) months starting from the issuance date.
Environmental License for Gas Pipelines	OSS	Obtained	12 September 2018	N	
Road Reserve Utilization Permit / Trenching Permit for Gas Pipeline	<ul style="list-style-type: none"> • DPMPTSP of Pekanbaru City • DPMPTSP of Riau Province 	Obtained	23 August 2018 27 February 2019	N	
Notification confirming IPPKH is effective with certain commitments to be further fulfilled	Ministry of Environmental and Forestry	Obtained	18 October 2019	N	
IPPKH (Definitive)	Ministry of Environmental and Forestry (or OSS)	Ongoing	Estimated on 18 October 2020	N	<ul style="list-style-type: none"> • MoEF approval for land boundary (tata batas) on 17 February 2020 • Site Survey with Regional BPKH on land boundary has been completed in April 2020 • The permit process has been delayed due to the COVID Situation and PSBB implementation.
Permit to discharge waste water into the water or water resources	DPMPTSP of Pekanbaru City		Estimated on 23 November 2020	Y (Every 5 years)	Application will be started on October 2020 after the completion of WWTP construction
B3 Waste Temporary Storage Permit (Izin Pengelolaan Limbah B3 untuk kegiatan penyimpanan sementara limbah B3)	DPMPTSP of Pekanbaru City	Obtained	31 December 2019	Y (Every 5 years)	
Water Resources Utilization Permit / Izin Pengusahaan	PUPR of Pekanbaru City	Obtained	19 March 2020	Y (Every 5 years)	

Permit / Licenses	Authority	Status	Issuance date	Renewal Required	Remarks
Sumber Daya Air (IPSDA)					
Groundwater Abstraction Permit	Local Government	N/A			No groundwater Abstraction for Power Plant construction. Water is supplied by third parties.

2.2. COMPLIANCE WITH AMDAL DOCUMENT AND ENVIRONMENTAL PERMIT

MRPR obtained the following Environmental Permits (*Izin Lingkungan*) for the Project activities:

- Environmental Permit for Construction and Operation of Riau 275 MW Combined Cycle Gas Fired Power Plant, issued on 16 November 2018;
- Environmental Permit for Sub Station and 150 kV High Voltage Transmission Lines, issued on 17 September 2018; and
- Environmental Permit for Installation and Operation of Gas Pipelines issued on 8 July 2019.

The environmental and social (E&S) activities undertaken by MRPR and EPC Contractors during this reporting period (1st October 2019 to 30 June 2020) are aligned with MRPR commitments in meeting the local Indonesian environmental and social regulations, the international standards of the Lenders (ADB Safeguards, IFC Performance Standard, WBG EHS Guidelines) and Good International Industry Practice (GIIP). The commitments are summarized in the Commitment Register which is currently pending Lenders approval.

The environmental and social activities undertaken include:

- Physical-chemicals Q4 monitoring and social survey for Gas Pipeline installation in November 2019;
- Physical-chemicals Q4 monitoring and social survey for Power Plant and Transmission Line in December 2019;
- Monthly domestic waste water monitoring at CPM site office from November 2019 to June 2020;
- Monthly domestic waste water monitoring at LEC/MRPR site office from October 2019 to June 2020;
- Physical-chemicals Q1 monitoring at Power Plant in March 2020;
- Physical-chemicals Q2 monitoring at Gas Pipeline in June 2020; and
- Physical-chemicals Q2 monitoring at Power Plant in May and June 2020.

Following the environmental and social monitoring, a regular six-monthly implementation report is submitted to the Local Environmental Agency (DLHK).

Table 2.2-1 presents the list of implementation reports submitted to DLHK during the reporting period of this Semester Report (October 2019 – June 2020).

Table 2.2-1: List of Implementation Report submitted to DLHK

No	Type of Report	Submission Date	Receiving Party
Implementation Report			
1	Riau 275 MW CCGT RKL/RPL - H2 2019	Jan 2020	DLHK Pekanbaru
2	Transmission Line UKL/UPL - H2 2019	Jan 2020	DLHK Pekanbaru
3	Gas Pipeline UKL/UPL - H2 2019	Jan 2020	DLHK Riau



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No	Type of Report	Submission Date	Receiving Party
4	Riau 275 MW CCGT RKL-RPL – H1 2020	Due in Jul 2020	DLHK Pekanbaru
5	Transmission Line UKL/UPL - H1 2020	Due in Jul 2020	DLHK Pekanbaru
6	Gas Pipeline UKL/UPL - H1 2020	Due in Jul 2020	DLHK Riau

2.3. ANY NOTICES OF NON-COMPLIANCE RECEIVED FROM REGULATORS RELATED TO ASPECTS COVERED UNDER LENDERS' E&S REQUIREMENTS

None in this reporting period.

3. STAKEHOLDER ENGAGEMENT AND GRIEVANCES

3.1. IMPLEMENTATION OF STAKEHOLDER ENGAGEMENT PLAN INCLUDING INFORMATION, DISCLOSURE, CONSULTATION AND PARTICIPATION ACTIVITIES INCLUDING STAKEHOLDER ENGAGEMENT RECORDS

In this period, community gatherings and consultation activities were greatly limited by Large-scale Social Restrictions or Pembatasan Sosial Berskala Besar (PSBB) implemented at Riau Province and Pekanbaru City in response to the COVID-19 pandemic. The restrictions are implemented by local governments with the approval of the Ministry of Health. It includes measures such as closing public places, capacity restrictions in public transport, travel limitation, social activities/gatherings restrictions. During covid pandemic in Indonesia, education activities are also limited into online approach.

Most activities involving participants gathering were postponed into Quarter 3 or Quarter 4 of 2020 subject to Covid situation and restrictions. List of consultation or socialization activities conducted prior to PSBB implementation is presented in table 3.1-1.

Ad-hoc communication or coordination with the related village authorities and local government agencies also conducted to ensure that major project activities updates are communicated well with the related stakeholders. For detail of all ad-hoc communication or coordination with related stakeholder, see Appendice J.



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Table 3.1-1 Consultation/Socialization Activities (January – September 2019)

No	Date/Time	Activities	Description	Venue	Attendees	Key Concern	MRPR Response	Documentation
	2 Dec 2020	Emergency Response Plan Socialization	During socialization, following topics were also covered: 1. General project description 2. Emergency Response Plan/Procedure for community 3. Emergency contact 4. Q&A Session related to project	Village office of Industri Tenayan	Related village authorities and affected community nearby Power Plant area	1. Whether there is explosion risk for power plant 2. Impact to community health 3. Whether community can also use the ambulance available on project site	1. The explosion risk will be minimized by fire fighting mechanism and during operational CCPP will be equipped by gas leakage detector 2. Potential impact to environmental and community will be minimized by CCPP technology and meeting the emission under government regulation. The company will also regularly monitor its emission 3. No, the ambulance needs to standby for emergency situation during construction	Minutes of Meeting Documentation
	4 Dec 2020	Emergency Response Plan Socialization	During socialization, following topics were also covered: 1. General project description 2. Emergency Response Plan/Procedure for community 3. Emergency contact 4. Q&A Session related to project		Related village authorities and affected community along gas pipeline route	Whether the Emergency Contact Number will be active only during construction	Emergency Contact was given and th	Minutes of Meeting Documentation

3.2. IMPLEMENTATION OF THE COMMUNITY GRIEVANCE REDRESS MECHANISM INCLUDING A SUMMARY OF THE GRIEVANCES RECEIVED AND REDRESSED

MRPR has conducted the socialization of the Emergency Response Plan (“ERP”) to communities on 4 December 2019 for gas pipeline and 2 December 2019 for Power Plant.



Figure 3.2-1. Socialization of ERP for Power Plant area

Figure 3.2-2. Socialization of ERP for Power Plant area

Apart from the Grievance box in the entrance of the Power Plant Site and EPC Contractor Site Office. MRPR is also in the progress of warning sign board installation along the constructed gas pipeline route. The emergency contact number is also posted at every board.



Figure 3.2-1. Grievance Box at the Entrance of Power Plant area



Figure 3.2-3. Installation of Warning Sign Board along Gas Pipeline Route

List of grievances recorded in this semester is presented in following table. Most grievance were communicated through letter to MRPR Site Office or through telp to External Relation/Social team.

Table 3.2-1. Grievance Recorded (October 2019 – June 2020)

No	Received Date	Key Concern	MRPR Response/Corrective Action	Status
1	23 Jan 2020	The remaining cement is dumped on road no 45 by PLTGU Project	The remaining cement is lifted and cleaned using an excavator and truck, then dumped into disposal site 23/01/2020	Closed on 23 Jan 2020
2	10 Mar 2020	Land owned by an individual was used for soil dumping by the Project. Therefore the owner is asking for compensation	After checking and further discussion with related land owners on 22 April 2020, EPC Contractor has agreed to compensated and take corrective action on the land. The land has been levelled and can be used by the land owners	Closed on 6 July 2020
3	17 Apr 2020	The disposal of water channels at the D hill location directed at the oil palm trees belonging to Pak Sujipto, is feared by the owners of the oil palm plantations becoming puddles	Mr. Putu and Mr. Limpi directed the creation of rainwater drainage channels based on designs that have been made by LEC The drainage system was completed on April 19, 2020	Closed on 19 April 2020
4	8 June 2020	The community submitted complaint through Bintara Pembina Desa (Babinsa) regarding covid spread due to new workers of EPC Sub-contractor coming from Java.	To address community corncen, a meeting between EPC Contractors, Village Authorities, Babinsa, and local community was arranged. It was agreed that eventhough the new workers has taken Rapid tes with negatif result, the new workers were to be quarantined for 14 days. During the quarantine, the new workers were not allowed to go to pray at Mosque	Closed on June 2020
5	15 June 2020	Farmers Group of Tenayan Indah Kelompok Tani Tenayan Indah (KTTI) claimed land ownership of water intake	MRPR and EPC Contractors clarified that the area of water intake is owned by Government and MRPR has leased the land from Government of Pekanbaru. A Clarification meeting was facilitated between MRPR, Pekanbaru Government, and KTTI. Any land claimant on the water intake will be submitted to Government as the rightful owner.	Closed on June 2020

3.3. SUMMARY OF ANY ADVERSE MEDIA REPORTS OR COMPLAINTS BY OTHER STAKEHOLDERS, NGOS/CSOS RELATED TO MATTERS COVERED UNDER LENDERS E&S REQUIREMENTS

Recorded news about MRPR Activities are shown in Table 3.3-1. There is no recorded complaints by NGOs/CSOSs in this reporting period.

Table 3.3-1. Media Reports (October 2019 – June 2020)

No	Received Date	Description	Media	Remarks
1	18 May 2020	To support the surrounding community during COVID-19 pandemic, MRPR has provided donation of 3,3 ton of Rice and 1500 masks	https://riaupos.jawapos.com/advertorial/18/05/2020/231720/medco-pedulimasyarakat-terdampak-covid19-riau.html	-
2	30 May 2020	Supporting local authorities in conducting mass disinfection at Tenayan Raya District by providing disinfectant devices.	https://www.cakaplah.com/berita/baca/54330/2020/05/30/pekanbaru-gelar-rapid-test-dan-disinfektan-massal-di-tenayan-riau/#sthash.4r2lQkiR.dpbs	-

4. ENVIRONMENTAL, HEALTH AND SAFETY (EHS) INCIDENTS

4.1. SIGNIFICANT SAFEGUARDS AND SOCIAL NON-COMPLIANCES¹ AND REMEDIAL/CORRECTIVE MEASURES IMPLEMENTED/PLANNED

Graphic below shows the health and safety statistics of the Project as per 30 June 2020.

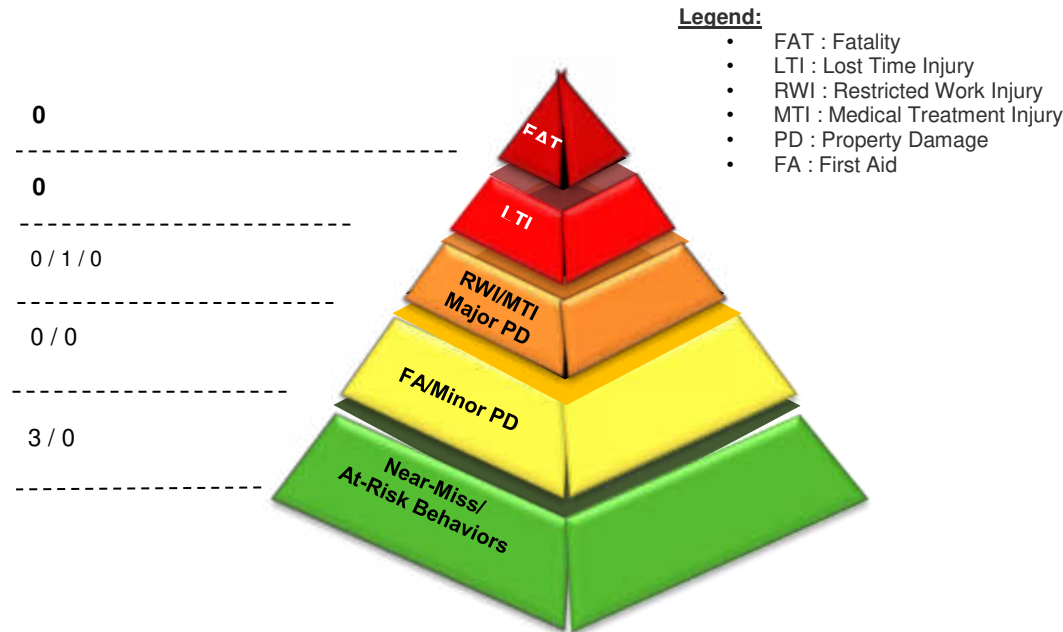


Figure 4.1-1. HSE Statistic

As per 30 June 2020, Safe Man-hours has reached 3,083,591. Overall HSE Status is shown in Table 4.1-1.

Table 4.1-1: Overall HSE Status

LAGGING KPI'S	Yearly Target	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
LTI Case(s)	0	0	0	0	0	0	0							0
Fatality	0	0	0	0	0	0	0							0
Total Recordable Injury Rate	2.50	0,00	0,00	3,51	0,00	0,00	0,00							0,57

¹ As defined in the ADB Loan Agreement.



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LAGGING KPI'S	Yearly Target	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
Total Recordable Injury	4	0	0	1	0	0	0							1
Traffic Accident Rate	29.01	0,00	0,00	0,00	0,00	0,00	0,00							0.00
Total Traffic Accident	8	0	0	0	0	0	0							0
Loss of Containment Case(s)	2	0	0	0	0	0	0							0
Property Damage Case (≥ 100K USD)	8	0	0	0	0	0	0							0.00
Occupational Illness Rate	2.19	0,00	0,00	0,00	0,00	0,00	0,00							0
Occupational Illness Case	2	0	0	0	0	0	0							0
Out Break	2	0	0	0	0	0	0							0
LEADING KPI'S	Yearly Target	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YTD
SOP Compliance / Task Observation	16	1	1	2	3	2	2							11
Management Walkdown	16	2	1	1	2	1	1							8
Contractor Management Meeting	16	4	4	3	2	2	2							17
PTW Audit	16	4	2	2	2	2	2							14
Leadership Program	16	1	2	2	2	2	0							9
Emergency Drill and Exercise	5	0	0	0	2	2	0							4
Hearing Conservation Program	9	0	1	0	2	0	0							3
HSE Training	32	9	6	7	7	9	7							45
Equipment Inspection	62	24	6	44	11	18	33							136
BBS Observation - HSE Cards	-	3285	3500	3351	3430	4075	4033							21.644
BBS Observation submission by POB	4	4.51	4.80	4.31	4.36	5.01	3.62							4.09
Road Safety	3	0	1	0	2	1	0							4
Health Risk Assessment	3	0	0	1	2	5	2							10
Environmental Campaign	5	1	0	1	2	1	1							6
Corrective Action Tracking System	85%	96%	99%	96%	98%	97%	97%							97%

4.2. SIGNIFICANT SAFEGUARDS AND SOCIAL REPORTING EVENTS² AND REMEDIAL/CORRECTIVE MEASURES IMPLEMENTED/PLANNED

None in this reporting period

4.3. OTHER EHS INCIDENTS OR RISKS³ AND REMEDIAL/CORRECTIVE MEASURES IMPLEMENTED/PLANNED

The other EHS Incidents for period of October 2019 – June 2020 are shown in the following Table 4.3-1

Table 4.3-1. Other EHS Incidents for period of October 2019 – June 2020

No	Date	Description
1	6 Mar 2020	<p><u>Category: Medical Treatment Recorded</u></p> <p>On 6 March 2020, a construction helper was requested by another crew to bend rebar with diameter 13 mm and with length 15 cm. While IP was using the equipment, his finger was unexpectedly pinched between rebar and equipment. The construction helper was sent immediately for first aid treatment at clinic facility on site and was sent to hospital for further treatment. After the treatment, IP returned to work at site.</p>

² As defined in the ADB Loan Agreements.

³ Less serious EHS incidents, near misses and hazard observations should be reported here.



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No	Date	Description
2	20 May 2020	<u>Category: Near Miss</u> On 20 May 2020, a rigger was unloading wooden box containing mechanical materials from trailer at laydown area. The load was lifted using 4 (four) sling belts with basket method on 2 (two) boxes at a single stacking. During the lowering process, the operator lowered the load on the uneven ground condition and caused materials on the top unbalanced. The operator immediately sling up the crane. However, during the sling up process, the load hit another material then fell down and broke the wooden box. No injury was recorded.
3	2 Jun 2020	<u>Category: Near Miss</u> On 2 June 2020, a welder conducted welding of column of HRSG 12 at top west side area on column G. During the welding, the spark fell down through the hole between H-beam and fire blanket on column cover that consist of green sheet, plastic, and carton, hence resulting the cover to get burned immediately. The fire fighting team immediately extinguished the fire using two fire extinguishers 6 kg. No injury and no property damage was recorded.
4	9 Jun 2020	<u>Category: Near Miss</u> On 9 June 2020, a security guard left his temporary security post to monitor the subcontractor' lay down area. At that time, he saw smoke was coming out from security post. He immediately went back to the post and extinguished fire together with the fire team using the nearest fire extinguishers. Based on the investigation, the fire was caused by electrical short circuit and the circuit breaker was failed. No Injury was recorded.

The corrective actions for above incidents are shown in Appendix I and have been implemented.

4.4. FINDINGS OF EHS INSPECTIONS OR AUDITS (INTERNAL AND EXTERNAL), AND STATUS OF IMPLEMENTATION OF CORRECTIVE ACTIONS BASED THE AUDIT FINDINGS

Based on CATS Register as per 30 June 2020, total 740 findings was identified. These findings has been identified from various sources: HSE Inspection, Sponsors HSE Roadshow, HSE Card, Management Walkdown, and other sources.

MRPR has conducted internal HSE Inspection regularly in monthly basis

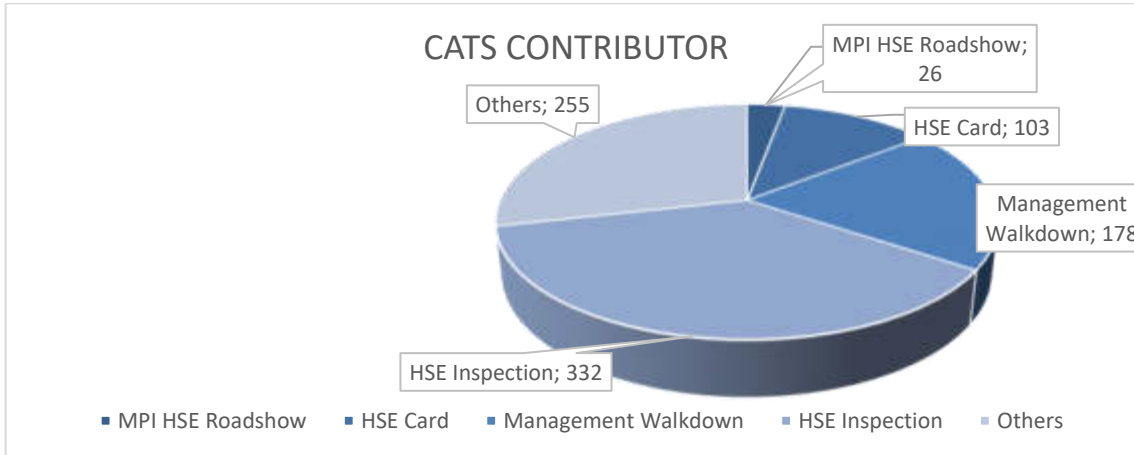


Figure 4.4-1. CATS Contributor

A summary of Corrective Action that is still open are shown in Table 4.4-1.

Table 4.4-1 List of Open Findings

No	Finding Date	Finding Sources	Location	Related Activity	Observation	Follow up	PIC
1	26 June 2020	HSE Inspection	Workshop ITI	Fabrication	Bottle pressure without valve	Provide all bottle pressure with valve	ITI
2	30 June 2020	Management Walkdown	HRSG 11	Cutting	Oxygen valve was broken	Change or repair broken valve with the proper one	ITI

Table 4.4-2. Inspection or Audits by Internal Parties (October 2019 to June 2020)

No	Date	Authority	Inspection Category	Documentation
1	8 November 2019	MRPR and LEC	HK Mess Audit	Audit Form
2	7 January, 26 February, 18 March, 27 Apr, and 19 May 2020	MRPR and MPI	Management walkdown	CATS
3	19-22 January 2020	MRPR	Permit to Work ("PTW") Audit	Report dan CATS
4	April 2020	MRPR	ESMS Audit	Report

The detail findings and progress of implementation of the Corrective Action as per 30 June 2020 is detailed in the Appendix H.

List of inspections or audits from external parties for this monitoring period is presented in Table 4.4-2.

Table 4.4-2. Inspection or Audits by External Parties (January to June 2020)

No	Date	Authority	Inspection Category	Documentation
1	8 November 2019	MRPR and LEC	HK Mess Audit	Audit Form
2	15-17 January 2020	Lenders E&S Consultant	Audit Site Visit	Phase 2 Construction ESR
3	23 January 2020	Environmental Protection Agency or Dinas Lingkungan Hidup dan Kebersihan ("DLHK") of Pekanbaru City	The permit process of Temporary Hazardous Waste Storage for Gas Pipeline	Survey Acknowledgement (Berita Acara Kunjungan) and DLHK Assignment Letter
4	5, 6, and 8 May 2020	Labor Agency of Pekanbaru City	Labor Inspectio	Official Assignment Letter

5. SOCIAL SAFEGUARDS MONITORING

5.1. SOCIAL SAFEGUARDS MONITORING GENERAL OVERVIEW

The social safeguards monitoring is conducted based on social impacts identified in the ESIA Volume 3: Social Impact Assessment. Based on the residual impact significant list, the social impacts have minor to moderate significant related to vulnerable groups and Project Affected Households (PAHs) along the gas pipelines, see Section 5.6.2 for further discussion.

The social monitoring also includes beneficial impacts and other social related components observed during the reporting period of October 2019 to June 2020, these are as follows:

- Stakeholder engagement plan and community grievances (Section 3)
- Labor and working condition (Section 5.2)
- Worker grievances (Section 5.3)
- Livelihood restoration plan (Section 5.4.2)
- Community development plan (Section 5.4.4)
- Community health, security and safety (Section 5.5)
- Gender inclusiveness (Section 5.6)

MRPR conducted social surveys to capture the snapshot of community perception about Project activities including construction of the Power Plant, Transmission Line and Gas Pipeline installation. The survey included some key discussion points about stakeholder engagement, grievance, recruitment, business opportunity and community development.

The survey involved 100 respondents residing in directly affected villages:

- 1st survey on Nov 5-7, 2019
Survey conducted at Gas Pipeline area involving 70 respondents of Industri Tenayan, Tuah Negeri, Kuala Gasib, Pinang Sebatang, Tualang Timur, Meredan, Melebung
- 2nd survey on Dec 16-23, 2019
Survey was undertaken at Power Plant and Transmission Line area involving 30 respondents of Bencah Lesung, Industri Tenayan and Tuah Negeri

The survey summary has been presented to Lenders in the Opening Meeting during the Lenders visit in January 2020 and is included in this report. See Appendix A. The survey recorded generally positive perceptions about the Project:

- **Power plant and Transmission line**

Key points taken from the discussions and questionnaires are:

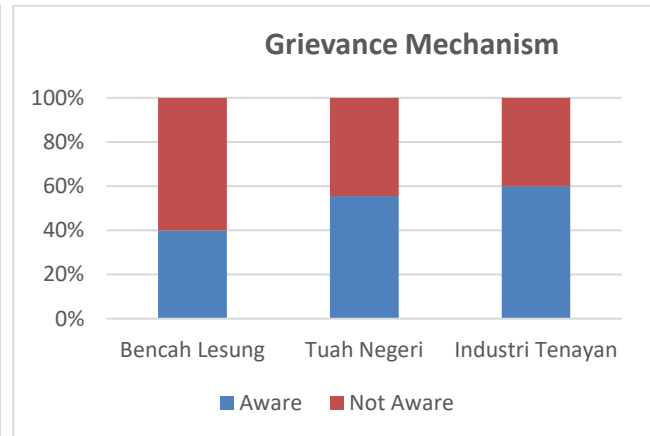
- Communities have been involved in regular meetings set up by the Project, i.e. MRPR or LEC-HK
- 53% was aware of the grievance mechanism and the process that submitted grievances are recorded and have been responded
- 67% was aware about the job opportunities but request a simpler and more transparent recruitment process
- Work opportunities for women were still limited
- Communities were able to establish small enterprises to provide renting, food and amenities for the workers
- The community proposed a CSR program to include health, education, economic development and social.
- Vocational training has not yet been conducted

This community feedback, in particularly the vocational training is followed up by MRPR. An engagement with UNRI was set up and finalized to include the implementation of vocational training for PAHs (see Section 5.4.3 and 5.4.4).

Graphics 5.1.1 shows the perception on recruitment, while 5.1.2 presents the community perception about grievance mechanism.



Graphics 5.1-1: Perception on recruitment



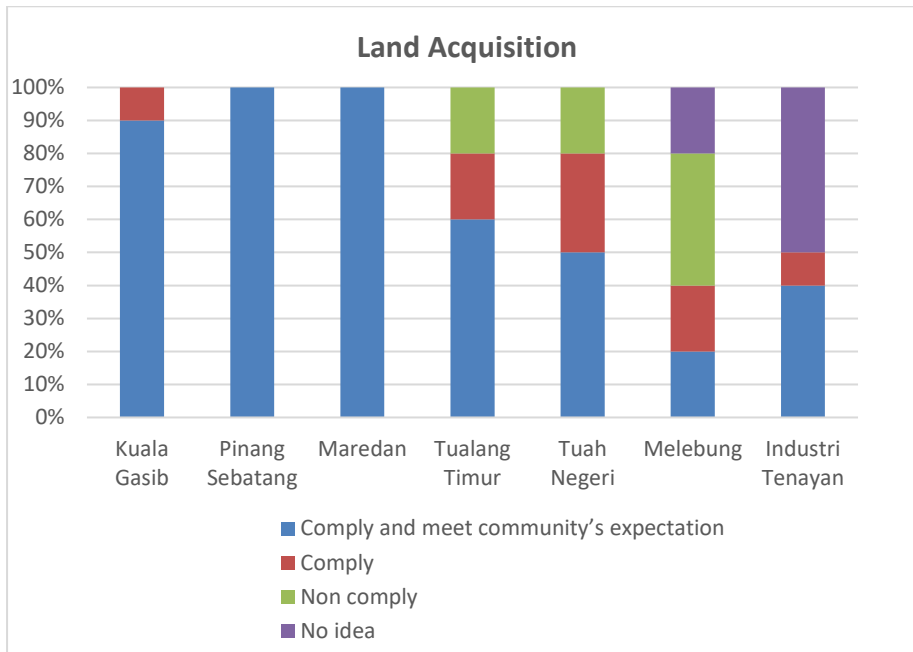
Graphics 5.1-2: Perception about grievance

- **Gas Pipeline**

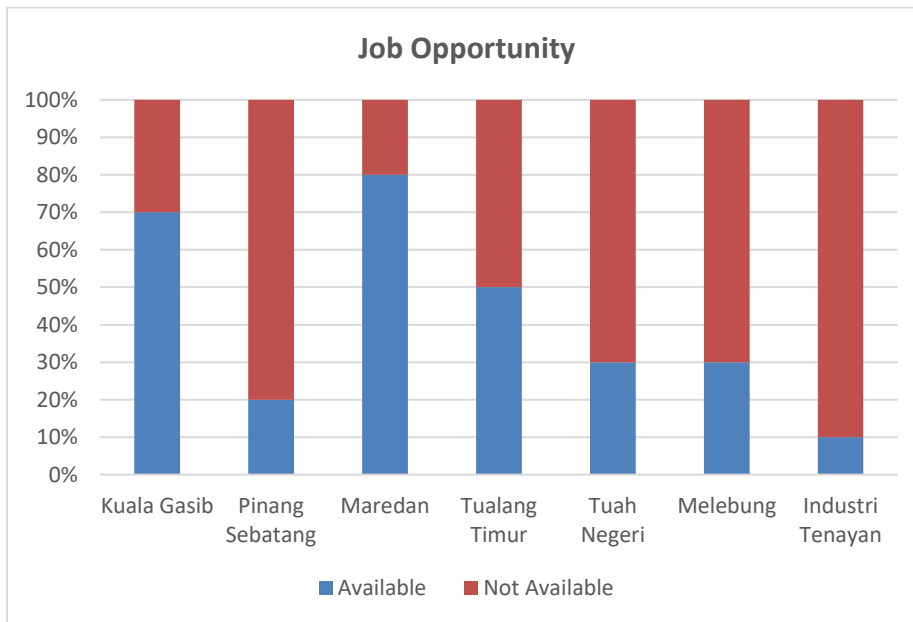
Key points taken from the discussions and questionnaires are:

- 66% responded that land acquisition process complies with regulations and meet with communities' expectation
- 59% were not aware about job opportunities
- Three main grievances that reported include:
 - o Non-transparent recruitment process
 - o Lack of coordination with local authorities
 - o Road condition along the gas pipeline (repair required)

Figures 5.1.3 show the perception relating to land acquisition, and 5.1.4 presents the community perception related to the recruitment process.



Graphics 5.1-3: Perception on land acquisition



Graphics 5.1-4: Perception on recruitment

5.2. LABOR HIRING INCLUDING A SUMMARY OF NUMBER OF PERSONS HIRED FROM PROJECT AFFECTED VILLAGES DIRECTLY BY MRPR AND THROUGH CONTRACTORS, GENDER BREAK UP OF EMPLOYMENT, NUMBER OF PEOPLE EMPLOYED FROM PROJECT AFFECTED FAMILIES, VENDOR AND OTHER EMPLOYMENT OPPORTUNITY PROVIDED BY MRPR

MRPR continues coordinating with the Contractors to actively communicate job opportunities to each Village and increase local hiring. The Project monitors recruitment status of the affected villages, locals Indonesian, and women workers. Table 5.2-1 shows the number of recruited labor of the Project.

Table 5.2-1. Labor Rekrutment Breakdown (1 October 2019 – 30 June 2020)

Labor	MRPR	LEC	HK	CPM	Notes
Project Affected Villages	0	91	55	77	-
Kuala Gasib	0	0	0	12	-
Pinang Sebatang	0	0	0	7	-
Tualang Timur	0	0	0	8	-
Maredan	0	0	0	10	-
Melebung	0	6	6	24	-
Tuah Negeri	0	31	15	7	-
Industri Tenayan	0	54	34	9	-
Project Affected Households (PAHs)					
PAHs	0	0			-
Indonesian/Foreign Manpower					
Local (Pekanbaru or Siak)	12	344	174	45	-
Indonesian (other than local people)	17	697	321	69	-
Foreigner	1	34	0	0	-
Women Employed					
Women Employed	4	37	5	17	-
Total Employment	30	1166	550	191	-

5.3. WORKER GRIEVANCES RECEIVED AND REDRESSED (BOTH DIRECT AS WELL AS CONTRACT WORKFORCE OR HIRED THROUGH SUB-CONTRACTORS)

MRPR continues working closely together with the Contractors in terms of receiving and closing out grievances in accordance with the Grievance Mechanism set out in ESMS.

Despite effort to encourage worker to submit their grievance and the establishment Grievance Box in the entrance of the Power Plant Site and EPC Contractor Site Office, only one worker grievance is reported (Table 5.3-1)

Table 5.3-1. Recorded Worker Grievances

No	Received Date	Receiving Method	Key Concern	MRPR Response/Corrective Action	Status
1	15 Jan 2020	Grievance Box	Inadequate Residence for HK Employees	Relocation of HK Mess in accordance with MRPR Accomodation Standard. The relocation was completed in April 2020	Closed

5.4. LAND ACQUISITION, STATUS OF IMPLEMENTATION OF LIVELIHOOD RESTORATION PLAN AND COMMUNITY DEVELOPMENT PLAN

5.4.1 Land Acquisition

Land acquisition and Land certification has been completed. Land acquisition status is presented in Table 5.4-1.

Table 5.4-1: Status of Land Acquisition

No	Project	Location	Status
1	Power plant	Power plant area	Land acquired, HGB certification obtained under MRPR
2	Transmission line	Transmission tower footings	HGB certificate obtained under MRPR

No	Project	Location	Status
3	Gas pipeline	Section 1-2	Land lease agreement completed,
4	Gas pipeline	Section 2-3	Road reserve utilization permit obtained, compensation paid
5	Gas pipeline	Section 3-4	Lease agreement completed
6	Gas pipeline	Section 4-5	Land acquired, land certification process is ongoing
7	Gas pipeline	Section 5-6	Compensation to PAHs is complete
8	Gas pipeline	Section 6-7	Land acquisition and admin process completed
9	Gas pipeline	Section 7-8	Road reserve utilization permit obtained

5.4.2 Livelihood Restoration Plan

The LRP V15 (FINAL LRP) is approved and was disclosed on IFC and ADB websites in December 2019.

The Livelihood Restoration Plan (LRP) reports that NO households are physically displaced at the power plant area, widening of the proposed access road, construction of the 750 m transmission line, temporary jetty site or water pipeline and intake structures. Instead, the households were temporarily affected by the construction of the gas pipeline and water pipeline, which resulted in a temporary restriction to access.

Impacts have been assessed as non-significant resulting in only short-term deprivation of access of up to 14 days and damage of ground surface due to trenching for pipe laying. Potential damage impacts included loss of productive trees and deprivation of access including suspension of some warung trading activity due to temporary relocation of non-permanent structures.

MRPR has completed compensation payment to all PAHs (47 households). 45 PAHs received cash compensation in May – September 2019; while two PAHs (M16 and M17) received asset of similar values (warung) in October 2019. Prior to completion of replacement warung construction, the government has been planning to use the land the warungs are located on for other purposes and therefore the warungs will need removal.

After further consultation with related PAHs, MRPR decided to fully compensate M16 and M17 instead of replacing the warungs. The compensation paid comprises of provision of materials, cash for construction of replacement warungs, the temporary economic lost cover and additional cost of capital in exchange to the micro financing program. MRPR has settled the compensation with M16 and is in on-going discussions with M17.

5.4.3 LRP Implementation and Status

The compensation payment to all PAHs is completed (see Section 5.4.2).

MRPR engaged PSLH LPPM UNRI to implement the LRP program targeting for 24 beneficiaries: 14 vulnerable households and 10 households impacted by cash depreciation during compensation payment. MRPR is involved in determining the applicable program and supervise the implementation progress. The program involves the following:

- Specific assistance measures:
 - Health access (KIS),
 - Micro finance (KUR)

- School access (KIP)
- Pre-school access (PAUD)
- Economic empowerment program:
 - Mushroom cultivation
 - Fish farming
 - Palm sticks handicraft
 - Vocational training and internship

The program was generally presented to Lenders during the January visit (Figure 5.4.1 and 5.4.2).



Figure 5.4-1: UNRI presentation of LRP implementation



Figure 5.4-2: Discussion with Lenders about LRP implementation

UNRI has resources available to facilitate the fish farming and collaborates with external parties such as Rumah Jamur Nando (mushroom cultivation), Caraka Corp (palm sticks handicraft) and BLK (vocational training). The communication and discussion with beneficiaries have been started and undertaken.

Figure 5.4-3 and 5.4-4 show UNRI collaboration with external parties. While Figure 5.4-5 and 5.4-6 show UNRI communication with beneficiaries.



Figure 5.4-3: UNRI meeting with Rumah Jamur Nando



Figure 5.4-4: UNRI meeting with Caraka Corp



Figure 5.4-5: UNRI with a group of beneficiaries



Figure 5.4-6: UNRI discussion with a beneficiary

Due to Covid-19 pandemic, the LRP program implementation for Vulnerable PAHs, is delayed and will likely be started in July 2020 when the restriction is relaxed.

Table 5.4.1 shows the beneficiaries and its proposed LRP program. The proposed LRP Programmes will be detailed and adjusted based on LRP Socialization and Consultation that has been scheduled in July 2020.



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Table 5.4.1: LRP Implementation Program

No.	Beneficiaries ID	LRP Implementation Program									
		KIS	KUR	KIP	PAUD	Mushroom cultivation	Mushroom training	Fish farming	Fish training	Handicraft	Vocational
Vulnerable Households											
1	C4		-	-	-	-	-	-	-		
2	C6		-	-	-	-	-	-	-		
3	C7		-	-	-	-	-	-	-	-	
4	C10		-		-		-		-	-	-
5	D1		-	-	-	-	-	-	-		
6	E4			-	-	-	-	-	-	-	-
7	E8		-	-	-		-		-		-
8	E14			-		-	-	-	-	-	-
9	F16			-	-	-	-	-	-	-	
10	G5		-	-			-		-	-	-
11	I11		-		-	-	-	-	-		-
12	M2		-	-	-		-		-	-	-
13	M16	MRPR has completed compensation									
14	M17	MRPR is in ongoing discussion									
Households impacted by cash depreciation during compensation payment											
1	A6	-	-	-	-	-	-	-		-	-
2	A7	-	-	-	-	-		-		-	-
3	A15	-	-	-	-	-		-		-	-
4	C4	-	-	-	-	-	-	-		-	-
5	C6	-	-	-	-	-	-	-		-	-
6	D1	-	-	-	-	-	-	-		-	-
7	E6	-	-	-	-	-	-	-		-	-
8	G8	-	-	-	-	-	-	-		-	-
9	I7	-	-	-	-	-	-	-		-	-
10	I11	-	-	-	-	-	-	-		-	-

Remarks:

- KIS: access to health services
- KUR: access to micro finance
- KIP: access to school and education
- PAUD: access to pre-school education

5.4.4 Community Development Plan

MRPR and EPC Contractors continue to commit to Community Development and Corporate Social Responsibility (CSR) program along with the Project activities. As of June 2020, there are 97 local people living in villages adjacent to the project which have been employed to work on the Project.

MRPR is continuing the CSR program for affected villages but due to Covid-19 pandemic situation the program implementation has been limited. However, MRPR were still able to finish a bridge construction at Tenayan Village in July 2020. The bridge improves access to the site by the local workers and increase villagers' mobility.

Figure 5.4-7 and 5.4-8 show the bridge prior to and post construction.



Figure 5.4-7: Bridge at Tenayan pre-construction



Figure 5.4-8: Bridge at Tenayan post-construction

A Vocational Training (VT) Plan has been established focusing on involvement of local communities from the affected villages (ref. MRPR-300-0031.0001 R03 Vocational Training Plan.R0). However, due to the Covid-19 pandemic situation and PSBB implementation at Pekanbaru City, MRPR has had to postpone all activities involving community gathering and socialisation including the vocational training. VT program will be continued in July 2020 subject to Covid-19 condition and restrictions.

CDP/CSR activities are reported in the Quarterly Construction Reports. The summary of activities for the reporting period is presented in Table 5.4.2.

Table 5.4.4-1: CDP/CSR Activities in H1 2020

No	Date	Activity	Action Party
1	Dec 2019	Cooperating with Community Health Centre or <i>Pusat Kesehatan Masyarakat</i> (Puskesmas) Rejosari to provide the free non-infectious disease screening & free medical treatment to community. It was participated by 38 persons from Melebung Village and 60 persons from Sialang Sakti	MRPR
2	11 Jan 2020	Catfish cultivation training in collaboration with LPM	HK
3	24 Jan 2020	Blood donation for Indonesian Red Cross Society or Palang Merah Indonesia (PMI). 60 blood bags were produced and given to PMI	CPM
4	Feb 2020	Bridge construction for Industry Tenayan sub-district	MRPR

No	Date	Activity	Action Party
5	Mar 2020	To support local culture and religious event, MRPR has provide additional sponsorship for the existing annual Quran recitation competition (MTQ) for year 2020 at : <ul style="list-style-type: none"> • 1.Industri Tenayan village on 6 March 2020 • Tuah Negeri village on 8 March 2020 • Bencah Lesung village on 11 March 2020 • Sialang Sakti village on 12 March 2020 	MRPR
6	24 Apr 2020	Purchase PPE for medical workers produced by local small enterprises	MRPR, LEC-HK, CPM
7	11 May 2020	Clean up of water pond used by local community for irrigation at SUPP plantation	CPM
8	13 May 2020	To support the surrounding community during COVID-19 pandemic, MRPR along with EPC Contractors also provided donation in form of PPE: <ul style="list-style-type: none"> • Donation of 200 set of Personal Protective Equipment (Hazmat) to Regional Agency for Disaster Countermeasure / Badan Penanggulangan Bencana Daerah (BPBD), • Donation of 1500 masks to community and local clinics. 	MRPR, LEC-HK, CPM
9	15 May 2020	Rice donation (3 tones) for local community at Pekanbaru and Siak	MRPR, LEC-HK, CPM
10	May 2020	Providing disinfectant devices for mass disinfection at Tenayan Raya District with local authorities and Vice Governor of Riau	MRPR

MRPR was positively covered by Media due to their contribution to society during the Covid-19 pandemic. Together with EPC Contractors, MRPR donated staple food, PPE for healthcare workers and supporting the small enterprises (see also Table 5.4.2).

Figure 5.4-9 to 5.4-14 show Project contribution amidst Covid-19 pandemic situation.



Figure 5.4.9: Staple food donation



Figure 5.4.10: Staple food donation at Maredan



Figure 5.4.11: Donation of medical supplies



Figure 5.4.12: Donation of masks given to Mayor of Pekanbaru



Figure 5.4.13: Purchase PPE from local enterprise, owned and managed by women



Figure 5.4.14: Donation of PPE to healthcare workers

5.5. COMMUNITY HEALTH, SECURITY AND SAFETY

The QRA was finalized on 26 November 2019. The mitigation recommendations were outlined in the QRA in order to maintain community health, security and safety issues during Construction phase. The main risks identified are related to potential pipe rupture and fire.

The progress of implementing of QRA mitigation recommendation area as follow:

- Installation of concrete slabs protection above the pipeline to cover crossing at sufficient distance (100 meters) around public areas such as:
 - Mosque (KP 7.0 – KP 8.5 and KP 25 – KP 27);
 - Restaurant (KP 8.5 – KP 10);
 - School (KP 11.5 – KP 13 and KP 19 – KP 20.5);
 - Crossing country road (KP 27 – KP 28.5);

The installation was completed in March 2020

- Provision of secondary escape route in emergency at the mosques, restaurant and the junior high schools. The location will be subject to further communication with related land owners
- Relocation of a bus stop to the other side of the road at KP 11.5 – KP 13.

It was previously anticipated that the gas pipeline construction would impact the existing bus stop. However, by the time of gas pipeline construction, the bus stop had been dismantled by the authorities. Hence, the bus stop relocation is no longer required.

- Relocation of a workshop to back yard area at KP 25 – KP 27.

It was previously anticipated that the gas pipeline construction would impact the existing workshop. However, the gas pipeline construction evidently did not impact the existing workshop. Hence, the workshop relocation is no longer required.

- Installation of safety sign and provision of escape route for people living in vicinity of MRPR gas pipeline that running parallel with gas pipeline owned by other company (PT EMP Bentu) at KP28.5 – KP 30 and at KP 30 – KP31.5. The installation process is ongoing and expected to be completed in Quarter 4 of 2020
- Awareness of any maintenance activities involving excavation or ground movement conducted at KP28.5 – KP 30 and at KP 30 – KP31.5 and communication among parties (MRPR, EMP Bentu and External Parties). The maintenance activities between MRPR, EMP Bentu, and related parties has been agreed and covered under Joint Utilization Agreement / Perjanjian Pemanfaatan Lahan Bersama (“PPLB”). The awareness board installation is expected to be completed in Quarter 4 of 2020

Emergency Response socialiation was conducted on the 2 December 2019 for communities living near Power Plant and on the 4 December 2019 for communities living near the gas pipeline.

The QRA program implementation also refers to the approved sub-plans: Community Health and Safety Management Plan (MRPR-300-HSE-0026) and Site Security Management (MRPR-300-HSE-0022).

Further discussion on Community Health, Security and Safety is also discussed in:

- Occupational safety and health management (Section 8.15)
- Traffic management (Section 8.11)
- Waste management (Section 8.10)
- Emergency preparedness and response (Section 8.16)

MRPR is continuing to install sign boards at prominent place to educate people on the potential risks of the gas pipeline installation and to increase community safety awareness. Appendix D presents the location of sign boards installation and progress of installation. Figure 5.5-1 and 5.5-2 show sample of sign boards installed at Project area.



Figure 5.5-1: Sign board is being installed



Figure 5.5-2: Sign board installed at the gas pipeline route

There are 33 local people hired as security personnel for the Project. As they represent the Project and its Management at the first level, they are also briefed on how to interact with public and attend inquiries from local community.



There was no community grievance filed related to community health and safety concerns at Project area or security personnel misconduct during the reporting period. Other community grievances and/or complaint are discussed in Section 3.

5.6. GENDER INCLUSIVENESS AND VULNERABLE GROUPS

5.6.1 Gender Inclusiveness

MRPR has specific targets relating to the employment of women (at all levels and skills) whenever possible and for the recruitment of women from the local communities.

As of June 2020, MRPR and EPC Contractors had employed 63 females out of 1,937 total workers (3%). The female jobs include administrative and general cleaning staff; 37 are working for LEC, 5 for HK, 17 for CPM and 4 are employed by MRPR.

The female contribution is expected to increase along the Project phases and is aligning with the non-discrimination and equal opportunity principle in the employment relationship (ref. MRPR Quality, Health, Safety and Environment Policy). This policy is also adopted by the contractor and included in the Site Environmental Management Plan (ref. Doc. No: RIAU-LEC-G10-PM-0001).

5.6.2 Vulnerable Groups

Vulnerability is defined based on the following categories:

- head of household is a female;
- head of household is a single mother
- head of household is disabled;
- head of household is elderly (male over 65 and female over 60 years of age);
- head of household is poor below the Riau Province poverty line (IDR 532,986 per month); and
- squatter

MRPR identified 14 vulnerable PAHs who are mostly squatter. The vulnerable group is eligible to specific assistance measures and economic empowerment program as defined in Table 5.4.1 (see Section 5.4.3).

MRPR allocated approximately USD 40k for the livelihood programs covering thematic area such as access to education, health, credit and the provision of vocational training. The budget will be managed by PSLH LPPM UNRI through the LRP implementation of vulnerable PAH program (see Section 5.4.3). MRPR will still manage UNRI in the implementation of the vulnerable program.

5.7. FINDINGS OF SOCIAL AND LABOR WORKING CONDITION INSPECTIONS OR AUDITS (INTERNAL AND EXTERNAL), AND STATUS OF IMPLEMENTATION OF CORRECTIVE ACTIONS BASED THE AUDIT FINDINGS

There were no non-conformance and litigations recorded during the reporting period.

MRPR developed a Corrective Action Tracking System (CATS) to monitor corrective actions taken against internal and external audits and/or management inspection. The findings are categorized into safety, health and environment related issues. The social concerns are not recorded in CATS, instead are addressed in CSR, grievance and SEP logs as attached in Appendix J.

As of June 2020, LEC-HK and CPM have closed 99.6% and 100% of the findings respectively (Table 5.7.1)

Table 5.7.1: Summary of CATS.

Contractor	Total CATS	Open CATs	Closed CATS
LEC-HK	776	2	774
CPM	118	0	118

CATS related to findings from the Lenders site visit in October 2019 are closed and verified. Other findings during the Lenders visit on 14 -17 January 2020 have also been closed. MRPR reported the corrective actions in the Phase 2 ESR Construction 2 2020 and obtained the E&S Full Certification in early June 2020.

The Lenders findings are as follows:

- LRP proposal and implementation

MRPR engaged PSLH LPPM UNRI to implement the LRP program for vulnerable people and PAHs impacted by cash depreciation during compensation payment. A detail planning for the LRP program is approved and ready to be implemented (see Section 5.4.3 and 5.6.2 for details). However due to Covid-19 pandemic that limits social interaction, the program is delayed and will likely be started in July 2020 when the restriction is relaxed.
- Local capacity development

MRPR established Vocational Training (VT) Plan and committed implementing the program targeting local community from seven affected villages and local workers employed by the Project, in total 20 participants. However, the VT program has to be postponed due to the large-scale social restriction (PSBB) during Covid-19 pandemic. MRPR will rearrange the training program and introduce it to the targeted participants when PSBB is relaxed.
- HK workers relocation to new accommodation

HK has completed relocating its workers to the new accommodation: 1st batch in Jan 2020 and 2nd batch in May 2020. MRPR has also developed a Site Worker’s Accommodation working instruction (MRPR-300-0019.0001 R00) and communicated to HSE EPC Contractors as a reference for internal audit.
- Temporary jetty construction

Sedimentation control measures are implemented with the installation of silt fence along the river bank and silt curtain for dredging activity. EPC Contractor confirmed that dredging materials are used to fill-in and reclaim the temporary jetty. The dredged materials are piled up in two temporary storage areas and there won’t be any disposal off-site. The site will be returned to its original conditions after use. MRPR regularly monitors the dredging activities and will report the reclamation status post jetty demolition in Lenders E&S reporting.
- Waste management, in particularly hazardous waste handling

The permit for hazardous waste temporary storage facility has been obtained by LEC-HK (31 Dec 2019) and CPM (14 Feb 2020). EPC Contractors record the waste disposal volume and maintain the waste manifests.
- Finalization of Commitment Register and ESMS

The ESMS and 27 associated procedures are approved by Lenders in January 2020. The last three procedures: Chance Find, Groundwater Management and Soil, Erosion and Water Management (dated 23 June 2020) are still pending approval. The Commitment Register Rev2 is submitted for Lenders review (see Section 8.1 for more discussion).

6. ENVIRONMENTAL MANAGEMENT CAPACITY

6.1. MRPR EHS STAFF ORGANISATION AND CAPACITY

With regards to MRPR' staff capacity, health, safety, and environmental employees are presented in Table 6.1-1.

Table 6.1-1. MRPR EHS Staff Employees

No	Name	Position	Qualification(s)	Years of Experiences	Working Based (Jakarta/Pekanbaru)
1	Riyo Nugroho Nurasa	HSE Manager	Profesional HSE	17 Years	Pekanbaru
2	Surya Dono	HSE Lead	Profesional HSE	15 Years	Pekanbaru
3	M. Nurbit Fidli	H&S Supervisor	Profesional HSE	11 years	Pekanbaru
4	Ardina Kusumawati	Environmental Supervisor	Profesional HSE	10 Years	Pekanbaru
5	Sony Daferry	HSE Officer	Profesional HSE	7 Years	Pekanbaru
6	Muhammad Nur	HSE Officer	Profesional HSE	8 Years	Pekanbaru

6.2. CONTRACTOR EHS STAFF ORGANISATION AND CAPACITY

Along with the increasing of construction activities and manpower for Power Plant, HSE organization of EPC Contractors for Power Plant has also grown. Under LEC and HK, there are now 7 subcontractors working for power plant construction, which are Wahana Karya Konstruksi, Jaya Kencana, Indo Tehnik industri, Indopora, Setia Handa Mandiri, and Siemens.

Currently, HSE Organization of Power Plant EPC Contractor is supported by 2 HSE Managers, 1 (one) safety engineer, 1 (one) PTW Coordinator, 1 (one) HSE Coordinator, 4 (four) HSE Supervisors, 2 (two) safety officers, 1 (one) environmental officer, 6 (six) safety patrols, 6 (six) HSE Officers, 8 (eight) safety man, 2 (two) HSE/Safety Administration , 1 (one) chief security, and 3 (three) paramedics.

Detail EPC Contractor HSE Organization is shown in Appendix B.

There is no changes in CPM's EHS Staff Employees in this reporting period for gas pipeline construction

6.3. TRAININGS CONDUCTED (EHS) INCLUDING NUMBER OF SESSIONS CONDUCTED, STAFF/ WORKERS (DIRECT AS WELL AS CONTRACT) ATTENDANCE.

MRPR and contractors have been continuously conducting required training in project. Training details conducted in this reporting period including types and date can be seen on Appendix C.

Training highlight for period of 1 October 2019 to 30 June 2020 are presented in Table 6.3-1.



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Table 6.3-1. Training Highlight for Period of October 2019 – June 2020

No	Training	Description	Location and Date	Participant	Documentation
MRPR and All Workers					
1	ESMS Socialization	Training consist of <ul style="list-style-type: none"> E&S Capacity Building Knowledge on IFC PS and ADB SPS ESMS Socialization 	MRPR Site Office, on 12-14 Nov 2019	<ul style="list-style-type: none"> MRPR LEC-HK CPM 	Minutes of Training Training Material List of Attendees
2	Workers Accomodation Standard Socialization	Socialization of MRPR Workers Accomodation Standard	MRPR Site Office, on 20 Mar 2020	<ul style="list-style-type: none"> MRPR LEC-HK CPM 	Training Material List of Attendees
LEC-HK Joint Operation for Power Plant					
1	HSE Induction	PPE Training is also given during HSE Induction	LEC training room, weekly	All working level	Induction Form and Photo Documentation
2	HSE Basic Training	Basic HSE training about environment and social management program to manage impacts during construction activity as well as how to mitigate	LEC Meeting Room, on 08, 10, 20, 22 Jan 10, 15, 17, 26 Feb, 02 Mar, 20 Mar.	All working level	Training report and attendant list
3	ESMS Refreshment	The training also covered detail sub-procedures under ESMS	8, 15, 22 April 2020	All working function of subcontractors	Training material Attendant list Documentation
4	Flagman and Traffic Management	Role and responsibility of flagman, procedures of traffic management, techniques give traffic directions and signal clearly and precisely, blind spot area, emergency procedure	07 & 16 Mar	Flagman	Training report and attendant list
5	Safety Leadership	Defenition of safety leadership, implementation of safety leadership at work, why leaders need to know effective HSE program, leader as man role can	30 Jan 17 Feb 02 Mar	<ul style="list-style-type: none"> Engineer Supervisors 	Training report and attendant list

No	Training	Description	Location and Date	Participant	Documentation
		implementation an effective HSE program work			
6	Permit to Work Training	Role and responsibility of permit system, Type of permit, PTW Meeting, Section of permit, Validation and revalidation, Attached of permit, closing permit	04, 10, 13, 20 Jan 15 & 29 Feb 02, 04, 16 Mar	<ul style="list-style-type: none"> Managers, Supervisors, Engineer, Foreman 	Training report and attendant list
7	Working at Height	Potential hazard and risk, Hierarchy of control working at high, 3 Point contact, fall protection, PPE, Scaffolding, ladder, man basket, falling object	06, 07, 09, 11, 15, 27, 29, 30 Jan 03 & 12 Feb 07, 09, 16, 18, 26 Mar	<ul style="list-style-type: none"> Managers, Supervisors, Engineer, Foreman Mechanic/Electrician Rigger Scaffolder Fitter 	Training report and attendant list
8	Basic Fire Fighting	Role and responsibility fire watcher, the fire triangle, classification of fire, maintenance and handle fire extinguisher, fire extinguisher techniques, and practical with drum fire	10, 13, 15, 23, 24, 31 Jan 05, 10, 19, 21, 29 Feb 04, 14, 28, 29, 30 Mar	<ul style="list-style-type: none"> Managers, Supervisors, Engineer, Foreman Mechanic/Electrician Rigger Scaffolder Fitter Paramedic Helper 	Training report and attendant list
9	Lifting	Role and responsibility of rigger & operator, classification of crane, classification of lifting gear, maintenance and handle lifting gear, lifting plan, and post test	24 & 25 Feb	<ul style="list-style-type: none"> Supervisors Engineers Operator Rigger 	Training report and attendant list
10	First Aid	Regulation of first aid, first aid handling or treatment to bleeding and wounds cases, basic life support/DRCAB, first kit, Emergency procedure	12 Jan, 07 Feb, 29 March	<ul style="list-style-type: none"> Engineers Supervisor Foreman HSE Personel Paramedic 	Training report and attendant list
11	Defensive Drive Training	Role and responsibility of driver, potential	02, 16, 20, 22 Jan	<ul style="list-style-type: none"> Supervisors Foreman 	Training report, attendant list,

No	Training	Description	Location and Date	Participant	Documentation
		hazard and risk, driving procedure, fatigue, pre tip inspection, blind spot, smith system driving	07, 10, 20 Feb 04, 06, 10, 20, 23 Mar	<ul style="list-style-type: none"> Operator Driver 	simulation and practices, photo evidenc
CPM for Gas Pipeline					
1	Hot Work Procedures Training	Risk assessment, Required permit for Hot Work, site preparation, PPE & emergency equipment	CPM Workshop area, on 5 March 2020	<ul style="list-style-type: none"> Grinder Foremen Welder 	Training Report Attendant list
2	Working at Height and PPE Body Harness	This training also include instruction and working practices	Gas Pipeline KP 30, on 2 May 2020	<ul style="list-style-type: none"> HSE, Helper Flagman 	Training Report Attendant list
3	PPE Training	The training consist of: The importance of PPE Type and function of each PPE	Gas Pipeline KP 30, on 12 May 2020	All function	Training Report Attendant list
4	Manual Handling	This training also include group discussion and working simulation	Gas Pipeline KP 30, on 12 May 2020	All function	Training Report Attendant list
5	Occupational Illness	Knowledge on Occupational illness, cause, how to identify, as well as preventive and management action	This training also include instruction and working practices	All function	Training Report Attendant list

7. SOCIAL MANAGEMENT CAPACITY

7.1. MRPR'S COMMUNITY RELATION TEAM (IF ANY OR ITS EQUIVALENT)

With regards to MRPR's staff capacity, social & community relation personels of MRPR and EPC Contractors are presented in Table 7.1-1.

Table 7.1-1. MRPR EHS Staff Employees

No	Name	Position	Qualification(s)	Years of Experiences	Working Based (Jakarta/Pekanbaru)
MRPR					
1	Erdiharto Sucahyadi	External Relation Manager	External Relation	15 Years	Pekanbaru
2	Mastika Wardhani	Social Specialist	Social professional	6 Years	Pekanbaru
LEC-HK Joint Operation for Power Plant					
1	Limpi Nasution	Social Staff	External Relation	20 Years	Pekanbaru

No	Name	Position	Qualification(s)	Years of Experiences	Working Based (Jakarta/Pekanbaru)
CPM for Gas Pipeline					
1	Murtala	Social Staff	External and Social Professional	6 Years	Pekanbaru

7.2. TRAINING CONDUCTED (STAFF AND COMMUNITY DEVELOPMENT)

No social specific training was conducted.

7.3. ACCOMMODATION AND LIVING CONDITIONS FOR CONSTRUCTION LABOR FORCE

As a follow up to Lenders E&S Audit Findings in November 2019 and in January 2020, MRPR has developed Workers Accommodation Standard (ref. MRPR-300-0019.0001 R00 Worker Accommodation at Site). It has been communicated to all EPC Contractors on 20 March 2020.

The relocation of HK Accommodation from Tenayan to new Mess at Pekanbaru was completed in May 2020, with total 215 occupant. For detail HK Mess relocation, please refer to HK Accommodation Relocation Report submitted on 30 April 2020. (Ref. PT HK New Workers Accommodation_Report)

The housing is only entitled for workers coming from outside Riau Province.

Table 7.3-1. EPC contractors' housing facility

CPM Housing		LEC-HK Housing	
Location	Occupants	Location	Occupants
Mess 1 – Simpang Bringin Pekanbaru	12	Mess – Tenayan Raya (LEC)	16 expatriates
Mess 2 - Komp. Aurora Garden B38 Kartama Marpoyan	8	Mess – Pekanbaru (HK)	215
Mess 3 - Komp. Aurora Garden A11 Kartama Marpoyan	9		
Mess 4 - Maredan - Melebung	8		
Maredan - Melebung	7		
Mess 5 -Komp. Aurora Garden C24 Kartama Marpoyan	4		
Total occupancy	49		231

8. ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM IMPLEMENTATION AND MONITORING

8.1. ESMS DEVELOPMENT AND IMPLEMENTATION

The ESIA for Project activities has been approved and disclosed on ADBs and IFCs website on the 26 November 2018. MRPR commitments related to the ESIA are outlined in the Environmental and Social Management Plan (ESMP) and Environmental and Social Management System (ESMS).

The ESMP forms part the ESIA document (ESIA Vol 4) and contains E&S commitments to be undertaken by MRPR and EPC contractors during all phases Project activities. MRPR developed a Commitment Register that consists of



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commitments to be fulfilled during the construction phase. The Commitment Register contains commitments excerpted from the ESMS, RKL/RPL, UKL/UPL and/or the Environmental Permits. Commitment Register Rev2 is submitted to Lenders in June 2020 for review.

Commitments during construction are currently being implemented and regularly reported in weekly, monthly and quarterly reports; and six-monthly reporting to both Indonesian authorities and Lenders. The ESMS and 27 associated procedures are approved by Lenders in January 2020. The last three procedures: Chance Find, Groundwater Management and Soil, Erosion and Water Management (dated 23 June 2020) are pending Lenders approval.

ESMS socialisation has been conducted on 30 September and 28 October 2019 to the supervisory level across all departments of EPC Contractors. ESMS Socialization has also been conducted on 12-14 November to all working levels. ESMS Refreshment to working level at Power Plant construction has been conducted On 8, 15, 22 2020

Related training undertaken is discussed in Section 6.3 and 7.2

8.2. STATUS OF ESAP IMPLEMENTATION

Lenders produced an Environmental and Social Action Plan (ESAP) as reference for MRPR to maintain compliance against the regulatory framework and international standards applicable for the Project. The ESAP forms part the Phase 1 Environmental and Social Review (ESR) conducted by AECOM prior to financial agreement. The Phase 2 Construction ESR undertaken on 30 November 2019 was to assess the Project compliance and verify whether the proposed corrective actions are implemented by MRPR in accordance with the ESAP.

The updated status of the ESAP, as a combination of Phase 1 and Phase 2 ESR, has been reported in QCR Q1 and Q2 2020. No changes have occurred since then, thus the same ESAP is presented in Table 8.2.1.



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Table 8.2-1: ESAP Status

No	Issue	Remaining Incomplete ESAP and Proposed CAP	Responsibilities	Timeline	Estimated Cost	Priority	Update Status
1	Assessment and management of environmental and social risks and impacts						
1.1	Environmental and social (E&S) policy	Provide induction of ESMS, including E&S policy, for new workers, and refreshment for all construction workers periodically (e.g. as part of regular HR and HSE program)	<ul style="list-style-type: none"> The Sponsor's General Manager EPC Project Manager 	Throughout construction stage	No additional budget	Minor	Induction is ongoing
1.2	Identification of risk and impacts, including cumulative impacts and impacts on disadvantages or vulnerable groups	Continuous implementation of QRA recommendation for the gas pipeline.	<ul style="list-style-type: none"> The Sponsor's General Manager and HSES Manager EPC Gas Pipeline Site HSE Manager 	Throughout construction stage	<\$50,000	Minor	QRA was finalised on 26 November 2019. Emergency Response socialisation was conducted on the 2 December 2019 for communities living near Power Plant and on the 4 December 2019 for communities living near the gas pipeline.
		Obtaining permit for temporary hazardous waste storage.	<ul style="list-style-type: none"> The Sponsor's HSES Manager 	End of April 2020	<\$50,000	Closed	Permit obtained on 14 Feb 2020
		Obtaining permit for groundwater use	<ul style="list-style-type: none"> The Sponsor's HSES Manager 	End of January 2020	<\$50,000	Closed	Groundwater well is decommissioned; extraction permit is no longer required
		MRPR to provide information on the disposal location of dredging materials.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs's Project Manager and HSE Manager 	End of April 2020	<\$50,000	Closed	There is no soil disposal.
		Seek confirmation from the authority whether the existing permit covers the dredging	<ul style="list-style-type: none"> The Sponsor's HSES Manager 	End of April 2020	<\$50,000	Closed	The dredged material is stored temporarily in jetty area boundary.



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No	Issue	Remaining Incomplete ESAP and Proposed CAP	Responsibilities	Timeline	Estimated Cost	Priority	Update Status
		activity and its material dumping.	<ul style="list-style-type: none"> EPCs's Project Manager and HSE Manager 				
		Completion of Commitment Register to contain further detailed list of all required actions compiling requirements from various documents in one table e.g. from ESIA, AMDAL, and ESMS sub-plans	<ul style="list-style-type: none"> The Sponsor's HSES Manager The Sponsor's External Relations Manager 	Throughout construction stage	<\$50,000	Minor	Rev2 Commitment Register is submitted for Lenders review
1.3	Management program	CESMPs as part of the ESMS needs to be included in regular induction/ refresher program to all relevant project team (in particular the Sponsor's Health & Safety, Environment, Social/ External team, all EPCs and their main sub-contractors), and aligned with the Training Policy and Procedures (under the ESMS)	<ul style="list-style-type: none"> The Sponsor's General Manager The Sponsor's HR&GA Manager/ Specialist 	Throughout construction stage	<\$50,000	Minor	ESMS socialisation and training is ongoing,
		ESMS and its sub-plans to be updated for operational phase	<ul style="list-style-type: none"> The Sponsor's HSES Manager The Sponsor's External Relations Manager 	At the latest three months prior to commercial operation date (COD)	<\$50,000 (assuming most procedure will be updated internally by the Project Team, with involvement of expert or specialist to	Closed	Overarching ESMS and 27 associated procedures are approved by Lenders in January 2020. Three remaining procedures: Chance Find, Groundwater Management and Soil, Erosion and Water Management (dated 23 June 2020) are pending Lenders approval



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No	Issue	Remaining Incomplete ESAP and Proposed CAP	Responsibilities	Timeline	Estimated Cost	Priority	Update Status
					advise and review)		
1.4	Organisational capacity and competency	Implementation of training plan, as defined in the Training Policy and Procedure (under the ESMS) for relevant project personnel, including the induction and refresher program as required under 1.1 and 1.3. Of note, Senior Advisor (or, if necessary, expert consultant) may be required to mentor new and existing staffs during the on-site implementation.	<ul style="list-style-type: none"> The Sponsor's General Manager The Sponsor's HR&GA Manager/ Specialist 	Throughout construction stage	\$50,000 – 250,000 (assuming hiring Senior Advisor or expert consultant for providing training, including day to day field guidance and monitoring)	Minor	Training is ongoing
1.5	Emergency preparedness and response	<ul style="list-style-type: none"> Implementation of ERP will be monitored throughout construction stage. Should any emergency situation occur, to be reported in the E&S Monitoring Report. 	The Sponsor's HSES Manager	Throughout construction stage	<\$50,000 (depending on the scale of emergency situation)	Minor	ERP training has been conducted as part of ESMS socialisation on 12-14 November 2019
		<ul style="list-style-type: none"> ERP to be socialized to the potentially affected communities, with particular attention related to QRA recommendation. 	<ul style="list-style-type: none"> The Sponsor's HSES Manager The Sponsor's External Relations Manager 	End of January 2020	<\$50,000	Closed	ERP socialisation to community has been conducted on 4 December 2019 for gas pipeline and 2 December 2019 for Power Plant.
1.6	Monitoring and review	Update of the 1 st E&S Monitoring Report, as accordance to Lenders consolidated comments shared on 18 November 2019, and have been incorporated in Table 4-1 to 4-7 of the ESR	<ul style="list-style-type: none"> The Sponsor's HSES Manager The Sponsor's External Relations Manager 	End of January 2020	<\$50,000	Closed	Lenders comments on Lenders E&S monitoring report was received on 18 November 2019. Revised 1 st E&S Monitoring report has been shared to Lenders. Waiting for Lenders confirmation.



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		report.					
		Provide RKL-RPL and UKL-UPL Monitoring Reports covering June to December 2019.	<ul style="list-style-type: none"> The Sponsor's HSES Manager The Sponsor's External Relations Manager 	End of April 2020	<\$50,000	Closed	RKL/RPL and UKL/UPL Implementation report are available in debt domain
		Preparation of the 2 nd E&S Monitoring Report to incorporate the progress of implementation of the ESMS and as defined in each of the sub-plans (CESMPs)	<ul style="list-style-type: none"> The Sponsor's HSES Manager The Sponsor's External Relations Manager 	End of July 2020	<\$50,000	Minor	Lenders comments on 1 st Lenders E&S monitoring report will be included and closed out in the 2 nd report due in July 2020.
1.7	Stakeholder engagement	<p>As per SEP recommendations and audit site visit findings, to implement e.g. six-monthly community meetings and E&S reporting, consultation for LRP implementation, ERP socialisation, and CSR program planning with adequate documentations and inclusion in the engagement log/ database.</p> <p>Of note to ensure appropriate key messages for each of the impacted groups e.g. different messages for those severely affected/ vulnerable group identified in the LRP with the wider affected communities.</p> <p>These activities should be included in the E&S Monitoring</p>	The Sponsor's External Relations Manager	<ul style="list-style-type: none"> First community meetings and E&S reporting to be conducted at the latest end of Q1 2020 Regular SEP implementation will be reviewed throughout construction stage 	<\$50,000	Minor	Consultation and meeting with communities as part of the SEP are ongoing



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		Report.					
1.8	External communication	Refer to 1.7	-	-	-	-	-
1.9	Grievance mechanism	Implementation of Community Grievance Mechanism, with clear tracking and provide resolution in timely manner (as defined under ESMS and in the SEP). Regular update of grievance log as tracking tools will be monitored throughout construction stage.	<ul style="list-style-type: none"> The Sponsor's External Relations Manager The Sponsor's HSES Manager 	Throughout construction stage	<\$50,000 (grievance resolution budget depending on the type of complaints)	Closed	Community grievance mechanism is in place. Tracking tool is monitored. Log is regularly updated and will be reported as per Lenders E&S monitoring report
		Updates of the Community Grievance Logs which incorporated in the E&S Monitoring Report, as has been suggested in Lenders consolidated comments (included in the Table 4-1 of this report).	The Sponsor's External Relations Manager	End of January 2020	No additional budget	Closed	Community grievance mechanism is in place. Tracking tool is monitored. Log is regularly updated and will be reported as per Lenders E&S monitoring report
1.10	Ongoing reporting to affected communities	Refer to 1.7	-	-	-	-	-
2	Labor and working conditions						
2.1	Human resources policy and procedure, Working condition and term of employment, and Worker Organization	Implementation of General HR policy and procedure with reference to compliance with laws particularly related to overtime, overtime wages, weekly off, and other components defined in the procedure. This includes clear differentiation	The Sponsor's HR&GA Manager/ Specialist	Throughout construction stage	No additional cost	Closed	General HR policy and procedure were updated to address Lenders comments on 15 November 2019. There is now clearer differentiation of roles between social/ external team and HR with regards to local recruitment and workforce management



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		of roles and responsibilities between HR and social team in term of local recruitment, as defined in the ESMS.					
		Socialisation of sexual harassment procedure to workforce and community.	The Sponsor's HR&GA Manager/ Specialist	At the latest end of Q3 2020	<\$50,000	Minor	MRPR policy does not allow sexual harassment by any of their staff, the EPC Contractor and Sub-contractor staff
		Coordination of workforce data with consistent definitions, to enable Project wide reporting, particularly on local employment;	The Sponsor's HR&GA Manager/ Specialist	Throughout construction stage	No additional cost	Minor	MRPR has instructed the EPC contractors to use similar categorisation
		Analysis of community perception survey results.	The Sponsor's HR&GA Manager/ Specialist	At the latest end of Q2 2020	<\$50,000	Moderate	MRPR seeks for further clarification from Lenders on this issue
		Refer to 1.4 for continuous improvement of HR capacity and competency	-	-	-	-	-
2.2	Non-discrimination and equal opportunity	Refer to 2.1 and 1.4	-	-	-	-	-
2.3	Retrenchment	Implementation of Retrenchment Plan (as part of the ESMS) to be monitored regularly as defined in the General HR Policy and Procedure.	The Sponsor's HR&GA Manager/ Specialist	Throughout construction stage	<\$50,000 (depending on the scope of retrenchment)	Minor	Ongoing monitoring of Retrenchment Plan implementation
		Preparation and implementation of Demobilization Plan (as part of the ESMS) to be monitored regularly as defined in the General HR Policy and	The Sponsor's HR&GA Manager/ Specialist	• Demobilization Plan completed at	<\$50,000 (depending on the scope	Minor	CPM demobilisation plan will be updated in next QCR



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		Procedure.		the latest end of Q3 2020 <ul style="list-style-type: none"> Implementation throughout construction stage 	of (retrenchment)		LOTTE/HK demobilisation plan is completed in May 2020
		Ensure that contractors' local hires have copies of their employment letter stating duration and retrenchment terms.	The Sponsor's HR&GA Manager/ Specialist	Throughout construction stage	No additional cost	Minor	The copy of working contract will be kept by related workers and HR personnel in accordance with General HR Procedures
		Inclusion of measures to manage impact of local workforce demobilization at the end of construction stage into CSR plan/strategy.	The Sponsor's External Relation Manager	End of Q1 2020	No additional cost	Closed	Construction workers are commonly used to limited working period, in which they will work in another construction project after their contract with EPC Contractors has been finished. The term and condition has been agreed in the working contract agreement. Thus, CSR Program for such workers is not expected.
2.4	Grievance mechanism	Updates of the Workers Grievance Logs which incorporated in the E&S Monitoring Report, as has been suggested in Lenders consolidated comments (included in the Table 4-2 of this report).	The Sponsor's HR&GA Manager/ Specialist	End of January 2020	No additional budget	Minor	Workers grievance mechanism is ongoing. Tracking tool is monitored, see Section 5.3



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		Ensure HR functions on site are appropriately staffed to handle worker's GRM. This will be monitored throughout construction stage.	The Sponsor's HR&GA Manager/ Specialist	Throughout construction stage	No additional budget	Minor	Ongoing monitoring of workers grievance mechanism
		Refer to 1.4 for continuous improvement of HR capacity and competency.	-	-	-	-	-
2.5	Protecting the workforce	Regular monitoring to EPCs and their main sub-contractor to ensure same standard of workforce management (including non-discrimination, local workforce requirements/ recruitment process, wage provision, etc.).	The Sponsor's HR&GA Manager/ Specialist	Throughout construction stage	No additional budget	Minor	Contractor management procedure was developed as part of the ESMS. Contractor management procedure will be socialised after the revised ESMS is approved by lenders.
2.6	Occupational health and safety (OHS)	Results of contractor safety management audit for both power plant and gas pipeline to be reported in the E&S Monitoring Report, while H&S incident corrective action tracking system will be monitored throughout construction stage.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPC's HSE Manager 	Throughout construction stage	No additional budget	Minor	CSMS audit is conducted, audit findings are recorded in Corrective Actions Tracking System (CATS). Process ongoing
		As part of action item 1.4, MRPR to provide regular training (induction and refresher) to all construction workers regarding H&S non-conformance (including e.g. the use of PPE to be enforced on site, applicable for MRPR and its contractors	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPC's HSE Manager 	Throughout construction stage	No additional budget	Minor	Training is ongoing, see Section 6.3 and 7.2.



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		and main sub-contractors), and demonstrate actions taken for any non-conformance. This will be monitored throughout construction stage					
		Corrective actions for improvement (in response to the audit result) regarding the worker's accommodation and employment terms by the plant site EPC (HK) will be checked in the next Lenders monitoring visit.	<ul style="list-style-type: none"> The Sponsor's HSES Manager The Sponsor's HR&GA Manager/ Specialist 	End of January 2020	<\$50,000	Closed	Corrective actions identified during Lenders E&S Audit Findings (14-17 Jan 2020) on workers accommodation are closed out by MRPR.
		A completed workers accommodation plan.	<ul style="list-style-type: none"> The Sponsor's HSES Manager The Sponsor's HR&GA Manager/ Specialist 	End of April 2020	<\$50,000	Closed	Worker accommodation standard has been finalized and socialized to EPC contractors.
		Completion of the contractor worker re-location to compliant accommodation.	<ul style="list-style-type: none"> The Sponsor's HSES Manager The Sponsor's HR&GA Manager/ Specialist 	End of April 2020	<\$50,000	Closed	HK camp Relocation has been completed and reported to Lenders on 30 April 2020.
2.7	Workers engaged by third parties	Ensure obligations to optimize local workforce employment and further capacity development are understood, and plans are established by EPCs and their main sub-contractors, through regular HR audit/ monitoring to contractors, as well as inclusion in the CSR planning.	<ul style="list-style-type: none"> The Sponsor's HR&GA Manager/ Specialist The Sponsor's External Relations Manager 	Throughout construction stage	No additional budget	Minor	Local employment will be prioritised subject to required qualifications and available positions



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2.8	Supply chain	Implementation of Contractor Management Procedure to be monitored throughout construction stage, particularly in relation to the implementation of HR policy and procedure as well as OHS management procedure	<ul style="list-style-type: none"> The Sponsor's HR&GA Manager/Specialist The Sponsor's HSES Manager 	Throughout construction stage	No additional budget	Minor	CSMS audit has been conducted, audit findings are recorded in CATS. Process ongoing
		Training in financial literacy and opportunities for gender participation in supply chain to be implemented as part of social (CSR) program, and inclusion in the CSR Plan.	<ul style="list-style-type: none"> The Sponsor's External Relations Manager The Sponsor's HR&GA Manager/Specialist 	<ul style="list-style-type: none"> CSR Plan to be prepared at the latest end of Q1 2020 Implementation to be monitored throughout construction stage 	<\$50,000	Moderate	To be followed up accordingly Social gathering or community activities are postponed due to Covid-19 and will be re-started after the COVID-19 situation has settled down
3	Resource Efficiency and Pollution Prevention						
3.1	Greenhouse gases	Implementation of GHG calculation and reporting procedure, including the six-monthly report.	The Sponsor's HSES Manager	Throughout construction stage	<\$50,000	Minor	GHG will be reported in Operation Phase
3.2	Water consumption	Permit to use groundwater to be obtained from Pekanbaru city regulator.	The Sponsor's HSES Manager	At the latest end of January 2020	<\$50,000	Closed	Groundwater well is decommissioned; extraction permit is no longer required
3.3	Air quality - Construction	Construct wheel washing bay (AQMP commitment).	The Sponsor's HSES Manager	At the latest end of January 2020	<\$50,000	Closed	There is no dedicated wheel washing on-site. Heavy equipment is cleaned up using pressurized air before leaving construction site.



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		Add one more air quality monitoring location to the AQMP in order to comply with SNI 19-7119.6-2005. Include coordinates of all locations into the table of monitoring locations.	The Sponsor's HSES Manager	At the latest end of January 2020	<\$50,000	Closed	Air Quality Monitoring locations are included in the AQMP of the revised ESMS. Revised AQMP is approved by Lenders.
		Suggest including an explanation for any changes in the monitoring procedure in the E&S Monitoring Report since HC, O ₃ and PM _{2.5} was not measured in Semester 2 (Sep 2019).	The Sponsor's HSES Manager	Throughout construction stage	No additional budget	Closed	The final Air Quality Management and Monitoring Procedure under ESMS does not require HC, O ₃ and PM _{2.5} during construction.
		Conduct air quality monitoring at the new proposed location (AQ-4) for the next monitoring season in accordance with the Air Management and Monitoring Procedure.	The Sponsor's HSES Manager	At the latest end of June 2020	<\$50,000	Minor	After gas pipeline installation is completed, air quality monitoring for the pipeline area is no longer required except for the AQ4-PL. The AQ4-PL will be continuously monitored as part of the Power Plant monitoring program as discussed in the ESMS subplan commitment (ref. MRPR-300-HSE-008 R00 Air Quality Management and Monitoring)
3.4	Air quality - Operation	A completed Operational-phase ESMS include a detailed air quality impacts management plan for operation and monitoring measures.	The Sponsor's HSES Manager	At the latest three months prior to commercial operation date (COD)	<\$50,000 (assuming most procedure will be updated internally by the Project Team, with involvement of expert or specialist to	Minor	Air Quality Management Monitoring Plan/Procedure for operation has been developed as part of ESMS



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					advise and review)		
3.5	Noise – Construction	As per ESIA requirements: Environmental noise monitoring will be conducted in accordance with ISO1996 Acoustics – Description, measurement and assessment of environmental noise (or equivalent).	The Sponsor's HSES Manager	At the latest end of January 2020	No additional budget	Closed	Revised Noise Monitoring Procedure is approved by Lenders
		Suggest providing the noise monitoring time period to ensure that the noise monitoring was conducted in accordance with WBG EHS Guidelines.	The Sponsor's HSES Manager	To be incorporated in the 2nd E&S Monitoring Report (June 2020)	No additional budget	Moderate	Time period for noise monitoring is discussed in H1 2020 report
		Noise monitoring results for Semester 2 (July to December 2019) to be provided for review.	The Sponsor's HSES Manager	At the latest end of April 2020	No additional budget	Closed	Noise monitoring is reported in QCR and available in Debt Domain
3.6	Solid and Liquid Wastes and Recycling	Provide Waste Generation Record in the E&S Monitoring Report.	The Sponsor's HSES Manager	At the latest end of January 2020	No additional budget	Minor	Waste generation record is available and reported in this Quarterly Construction Report
		Implementation of waste management in accordance with the management procedure to be implemented on site, e.g. segregation and designation of waste containers.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPC Project Manager and HSE Manager 	At the latest end of January 2020	<\$50,000	Minor	Waste segregation is introduced and continuously implemented on-site,
		Construct segregated solid waste store with containment	<ul style="list-style-type: none"> The Sponsor's HSES Manager 	At the latest end of January 2020	<\$50,000	Closed	Solid waste storage facility is constructed



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		and roof (all areas including EPC contractor camps).	<ul style="list-style-type: none"> EPC Project Manager and HSE Manager 				
		Obtain permit of temporary hazardous waste storage.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs's Project Manager and HSE Manager 	At the latest end of April 2020	<\$50,000	Closed	Temporary hazardous permit has been obtained for both power plant and gas pipelines
		<ul style="list-style-type: none"> Temporary hazardous waste storage in laydown area of pipeline construction site is to be differentiated/ separated from hazardous chemical store for hazardous materials. Management of hazardous waste in this area needs to be improved. Location of eyewash facility is to be moved closer to the temporary hazardous waste storage and provide proper and visible signage. 	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs's Project Manager and HSE Manager 	At the latest end of April 2020	<\$50,000	Closed	<ul style="list-style-type: none"> Hazardous material storage has been separated from Temporary Hazardous Waste Storage. MRPR will further coordinate with EPC Contractors to provide layout of CPM Laydown Eyewash facility at Temporary Hazardus Waste has been provided
		<ul style="list-style-type: none"> To have knowledge regarding the final disposal location/final treatment process for the black water generated in the power plant site. Provide monitoring results of the treated grey water effluent quality (grey water from the power plant site) and results 	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs's Project Manager and HSE Manager 	At the latest end of June 2020	<\$50,000	Minor	<p>MRPR will coordinate with CPM to ensure that the grey water channel is properly functioning. Documentation is targeted to be provided in June 2020</p> <p>See also QCR report in Debt Domain</p>



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		<p>shall meet the applicable standards.</p> <ul style="list-style-type: none"> Grey water channel behind the CPM camp or beside the laydown area is to be properly managed to prevent any standing water. 					
		<p>Implementation of wastewater management to be included in the E&S Monitoring Report. Sewage treatment plant to be constructed for the HK contractor camp and meanwhile licensed contractor needs to be engaged to transport and further treat the domestic wastewater generated.</p>	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs' Project Manager and HSE Manager 	At the latest end of January 2020	<\$50,000	Minor	Grey water from the toilet is treated by underground conventional septic tank
		<p>Cease discharge of concrete washwater without treatment.</p>	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPC Project Manager and HSE Manager 	At the latest end of January 2020	<\$50,000	Closed	Concrete washwater activities is prohibited onsite
3.7	Hazardous materials management	<p>Segregate hazardous wastes such as explosive and reactive materials.</p>	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPC Project Manager and HSE Manager 	At the latest end of January 2020	<\$50,000	Minor	Hazardous wastes are segregated in accordance with the Hazardous Waste Management procedure
		<p>Separation of hazardous materials from hazardous waste in laydown area of pipeline construction site.</p>	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs's Project Manager and HSE Manager 	At the latest end of April 2020	<\$50,000	Closed	CPM separated hazardous material storage from the temporary hazardous waste storage facility



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		Complete hazardous chemical store construction on site and obtain permit.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPC Project Manager and HSE Manager 	At the latest end of January 2020	<\$50,000	Closed	Hazardous waste storage construction is completed. Permit is obtained for LEC-HK, permit application process is ongoing for CPM.
		Provide evidence of proper implementation of the Hazardous Substance Management Procedure (e.g. storage condition of hazmat, use of PPE when handling hazmat, etc.), to be incorporated in the E&S Monitoring Report.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPC Project Manager and HSE Manager 	At the latest end of January 2020	No additional budget	Closed	Implementation is reported as part of E&S Reporting
		Availability of MSDS for all hazardous materials on site.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPC Project Manager and HSE Manager 	At the latest end of June 2020	<\$50,000	Closed	MSDS is available at prominent place such as the hazardous material storage area.
		Training on hazardous chemical and material handling to be updated in the training log and training documentation to be shared	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPC Project Manager and HSE Manager 	At the latest end of July 2020	No additional budget	Closed	Training on hazardous chemical and material handling was conducted on 12-14 November 2019. Other training is scheduled by LEC-HK in July 2020
3.8	Emerging Issues: Erosion and Sediment Control	Construct sediment control measures for the construction of the gas pipeline to treat run-off and any water collected in the excavations prior to discharge.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs Project Manager and HSE Manager 	At the latest end of January 2020	<\$50,000 (particularly for the sediment ponds installation)	Closed	Sheet Piles has been constructed in the temporary jetty area. Silt fencing has been constructed for erosion control at gas pipeline.



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No	Issue	Remaining Incomplete ESAP and Proposed CAP	Responsibilities	Timeline	Estimated Cost	Priority	Update Status
		Install silt curtains to protect river water from potential silt dispersion during dredging activity at the construction site of jetty and water intake.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs's Project Manager and HSE Manager 	At the latest end of April 2020	<\$50,000	Closed	Silt curtain was installed in March 2020
		Shoring of the jetty area as it appears that the sediment in the river was coming from the muddy shore.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs's Project Manager and HSE Manager 	At the latest end of April 2020	<\$50,000	Closed	Silt fence has been erected at the banks of the Siak River to prevent any sediment generated due to storm water run-off and/or excavation activities
		To provide site layout plan and seek confirmation from the authority whether the existing permit cover the dredging activity and its material dumping.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs's Project Manager and HSE Manager 	At the latest end of April 2020	<\$50,000	Closed	EPC Contractor confirmed that dredging materials are used to fill-in and reclaim the temporary jetty, there won't be any disposal off-site. The site will be returned to its original conditions after use.
		Implement erosion and sediment control at the powerplant site and contractors yard including construction of sediment ponds, sumps, benching and grass seeding of slopes, revegetation, and TSS monitoring. To be reported in the E&S Monitoring Report.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs Project Manager and HSE Manager 	At the latest end of January 2020	<\$50,000	Closed	Sediment ponds were constructed on 15 November 2019
		Apply sediment controls to reduce sediment plumes from construction works at the jetty, including installation of sheet piles to separate the river from the zone of works.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs Project Manager and HSE Manager 	At the latest end of January 2020	<\$50,000	Closed	Silt fence and sheet piles were constructed in December 2019. Silt curtain was installed in March 2020.



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No	Issue	Remaining Incomplete ESAP and Proposed CAP	Responsibilities	Timeline	Estimated Cost	Priority	Update Status
		Apply for a permit for on-shore disposal of soil near jetty area.	The Sponsor's HSES Manager	At the latest end of January 2020	<\$50,000	Closed	Dredged soil will be piled and used for levelling jetty area. No permit is required.
		Implementation of groundwater management and monitoring results at the powerplant site and/or pipeline to be provided in the E&S Monitoring Report.	The Sponsor's HSES Manager	At the latest end of January 2020	No additional budget	Closed	Groundwater well is decommissioned; clean water is supplied by a third party
4	Community health, safety, and security						
4.1	Infrastructure and equipment design and safety	Refer to 1.2 for implementation of QRA	-	-	-	-	-
		Implementation of Occupational Safety and Health (OHS) Management Procedure, which will be monitored throughout construction stage	<ul style="list-style-type: none"> The Sponsor's General Manager The Sponsor's HSES Manager 	Throughout construction stage	No additional budget	Minor	Process ongoing, findings are recorded in CATS
4.2	Ecosystem services	No further action is required	-	-	-	-	-
4.3	Community exposure to disease	Inclusion of community health impact management as regular program in the CSR plan.	The Sponsor's External Relations Manager	At the latest end of Q1 2020	<\$50,000 (assuming the use of external expert during the CSR planning)	Moderate	MRPR is preparing to conduct general Health Community Program in July 2020 or after <i>Pembatasan Sosial Berskala Besar</i> (PSBB), Large-scale social restriction is relaxed
4.4	Emergency preparedness and response	Refer to 1.5	-	-	-	-	-
4.5	Security management and personnel	Implementation of Security Management Procedure will be monitored throughout construction stage, including	Throughout construction stage	No additional budget	Throughout construction stage	Closed	Security training is ongoing



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No	Issue	Remaining Incomplete ESAP and Proposed CAP	Responsibilities	Timeline	Estimated Cost	Priority	Update Status
		awareness of security personnel on the process defined in the procedure and toward human rights.					
5	Land acquisition and involuntary resettlement						
5.1	Compensation and benefits for displaced persons	Implementation of LRP, with particular attention to the vulnerable/ severely impacted group and to address the depreciation gaps.	The Sponsor's External Relations Manager	LRP implementation progress to be included in the next E&S Monitoring Report (end of Q1 2020)	>\$250,000 (in reference to the proposed LRP budget)	Minor	MRPR engaged UNRI to implement LRP program for vulnerable people and PAHs. Pending realization due to <i>Pembatasan Sosial Berskala Besar</i> (PSBB) enactment.
		Consultation with PAH for livelihoods restitution and commencement of restitution activities (LRP implementation)	The Sponsor's External Relations Manager	Subject to COVID-19 situation	<\$50,000	Minor	LRP program implementation will be started after <i>Pembatasan Sosial Berskala Besar</i> (PSBB) is relaxed
		Implementation commitment for annual monitoring which should be included in the E&S Monitoring Report.	The Sponsor's External Relations Manager	At the latest end of Q3 2020	<\$50,000	Minor	E&S Commitment implementation will be reported as part of semi-annual Lenders E&S Monitoring Report
5.2	Community engagement and stakeholder engagement	Refer to 1.7	-	-	-	-	-
5.3	Grievance mechanism	Refer to 1.9	-	-	-	-	-
5.4	Resettlement and livelihood restoration planning and implementation	Refer to 5.1	-	-	-	-	-
6	Biodiversity conservation and sustainable management of living natural resources						
6.1	Protection and conservation of biodiversity	Pre-construction and construction survey should be	The Sponsor's HSES Manager	At the latest end of January 2020	<\$50,000	Closed	CVs of ecologists as well as other requested documentation have been



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No	Issue	Remaining Incomplete ESAP and Proposed CAP	Responsibilities	Timeline	Estimated Cost	Priority	Update Status
		reviewed by an experience ecologist.					submitted for Lenders review in December 2019
		Finalization of MOU with updated and more detailed KPI.	The Sponsor's HSES Manager	At the latest end of April 2020	<\$50,000	Minor	Memorandum of Understanding (MoU) is signed. Proposed KPIs for biodiversity offset is submitted for Lenders review on 28 February 2020
		Provide detail information in the E&S Monitoring Report regarding onsite biodiversity management required as per the BAP, and progress with implementation and monitoring. Provide discussion on mitigation measures proposed/conducted for the fauna species of concern (<i>Hylobates agilis</i>) found nearby a work location in the E&S Monitoring Report.	The Sponsor's HSES Manager	At the latest end of January 2020	No additional budget	Closed	Biodiversity management is updated and reported in E&S Monitoring Report Discussion between Lenders and LESC with the EPC Contractors and MRPR Personnel who conduct biodiversity Survey was conducted during Lenders E&S Site Visit
		Complete MOU in accordance with the timeline specified in the BAP.	The Sponsor's HSES Manager	At the latest end of January 2020	<\$50,000	Closed	MoU completed and signed by all parties in January 2020
		Biodiversity survey report covering the period after September to be provided for review.	<ul style="list-style-type: none"> The Sponsor's HSES Manager 	At the latest end of April 2020	No additional budget	Closed	Biodiversity management is updated and reported in E&S Monitoring Report
		Commencement of off-set implementation in accordance with the timeline specified in the BAP.	<ul style="list-style-type: none"> The Sponsor's HSES Manager 	At the latest end of June 2020	<\$50,000	Moderate	MoU is signed. Revised Proposal providing more detailed KPIs is submitted to Lenders for review on 28 February 2020



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No	Issue	Remaining Incomplete ESAP and Proposed CAP	Responsibilities	Timeline	Estimated Cost	Priority	Update Status
			<ul style="list-style-type: none"> EPCs Project Manager and HSE Manager 				
6.2	Supply chain	Complete documentation of the trainer to be provided for review, or, if necessary, to provide a follow up training after the biodiversity survey report has been verified by a qualified ecologist.	The Sponsor's HSES Manager	At the latest end of January 2020 (progress of implementation of BAP program to be provided throughout construction stage)	<\$50,000	Closed	CVs of ecologists as well as other requested documentation have been submitted for Lenders review in December 2019
		Implementation of program in relation to the Sunda Pangolin and agile gibbon in neighbouring communities as part of BAP requirements and CSR activities. To be reported in the E&S Monitoring Report.	<ul style="list-style-type: none"> The Sponsor's HSES Manager EPCs Project Manager and HSE Manager 	At the latest end of January 2020	<\$50,000	Closed	Agile gibbon and Sunda pangolin have been reported in the QCR MRPR is planning to install educational banner about pangolin
7	Indigenous people						
7.1	Avoidance of adverse impacts	Refer to 1.7	-	-	-	-	-
		Ensure the Project relevant personnel (i.e. External Relations Team working on-site) acknowledge and well understood the background and presence of IP, also the result of the previous IP study – this will be checked during the next audit.	The Sponsor's External Relations Manager	At the latest end of Q2 2020	No additional budget	Closed	No IP at project location. MRPR maintains communication with Okura Fisherfolks as necessary. Engagement with vulnerable group is conducted as part of LRP implementation.



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No	Issue	Remaining Incomplete ESAP and Proposed CAP	Responsibilities	Timeline	Estimated Cost	Priority	Update Status
		Increased engagement with media, NGOs and Indigenous peoples as part of SEP Implementation.	The Sponsor's External Relations Manager	Throughout construction stage	No additional budget	Closed	MRPR maintains communication with media. The latest media cover was about MRPR CSR Covid-19 donation.
8	Cultural Heritage						
8.1	Chance find procedures	No future action is required	-	-	-	-	-
8.2	Cultural heritage	Ensure inclusion of local cultural heritage in regular induction to new workers and refresher for current workers.	The Sponsor's HR & GA Manager/ Specialist	Throughout construction stage	No additional budget	Minor	New workers receive the induction. MRPR and EPC Contractors follow local culture and custom, particularly in communication with local people

8.3. STATUS OF IMPLEMENTATION OF THE BIODIVERSITY ACTION PLAN

Critical Habitat Assessment (CHA) forms part the ESIA document (ESIA Vol 3) and serves as reference to Biodiversity Action Plan (BAP). The BAP was developed and has been approved on 21 August 2019.

MRPR is engaging with Community Forest Ecosystem Services (CFES) to achieve the Project ‘no net loss’ and in part the ‘net gain’ targets (MRPR are also undertaking their own net gain activities). A Memorandum of Understanding (MoU) was signed in January 2020. A meeting in early March 2020 was held to discuss the BAP program, and subsequently a follow up meeting on 4 June 2020 was held with the lenders to discuss the program of works and the results are as follow:

- The proposed KPIs in the proposal submitted to Lenders on 28 February 2020 was generally accepted to be finalized;
- MRPR will provide the final working agreement with CFES incorporating the discussed KPIs by 2nd week of August 2020;
- The BAP will be updated to incorporate the details of Biodiversity Offsetting KPIs. The updated BAP will be issued to Lenders for final review and approval of the proposed program with CFES and how No Net Loss and Net Gain actions will be achieved.
- Biodiversity Offsetting implementation will be reported as part of semi-annual Lenders E&S Monitoring Report.

One additional suggestion received from the Lenders is for CFES to also consider other methods to report the success of the community forest in the conservation of sunda pangolin, in conjunction with SMART method, such as reporting of poaching, hunting through interviews with villagers. As a follow up, MRPR will coordinate with CFES on the matter and to provide English version of the updated proposal for Lenders.

MRPR is currently preparing information boards to be erected at nearby Villages in August 2020 which provide details on the pangolin. In addition, MRPR will organise educational program at local schools to spread awareness about pangolin conservation. This activity is expected to be conducted within quarter Q3 2020 and/or following quarter as necessary, subject to learning and social activities limitation during COVID pandemic.

Biodiversity monitoring is continuing to be implemented on-site. Both LEC-HK and CPM reported no species of concern observed in Q2 2020. LEC-HK has implemented a policy to prevent animal hunting and illegal poaching. Banners were installed on-site and at adjacent villages outlining this policy.

8.4. AIR QUALITY

Ambient air quality for power plant is monitored quarterly during construction meanwhile ambient air quality monitoring for gas pipeline is carried out six monthly aligned with construction progress. After gas pipeline installation is completed, air quality monitoring for the pipeline area is no longer required except for the AQ4-PL. The AQ4-PL will be continuously monitored as part of the Power Plant monitoring program as discussed in the ESMS subplan commitment (ref. MRPR-300-HSE-008 R00 Air Quality Management and Monitoring). The monitoring results are presented in tables below.

Table 8.4-1. Ambient Air Quality Monitoring Results (Power Plant)

No.	Parameter	GR 41/1999 (µg/m ³)	WHO AQ (µg/m ³)	Averaging Period (hour)	AQ-1			AQ-2			AQ-3		
					Dec 2019	Mar 2020	Jun 2020	Dec 2019	Mar 2020	Jun 2020	Dec 2019	Mar 2020	Jun 2020
1.	SO ₂	900	500	1	<33	<33	20.8	<33	<33	16.3	<33	<33	18.3
2.	NO ₂	400	200	1	<17	<17	21.3	<17	<17	18.6	<17	<17	16.7

No.	Parameter	GR 41/1999 (µg/m ³)	WHO AQ (µg/m ³)	Averaging Period (hour)	AQ-1			AQ-2			AQ-3		
					Dec 2019	Mar 2020	Jun 2020	Dec 2019	Mar 2020	Jun 2020	Dec 2019	Mar 2020	Jun 2020
3.	TSP	230	n/a	24	94	88	40.2	20	24	28.6	28	13	36.4
4.	Pb	2	n/a	24	2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
5.	CO	30,000	n/a	1	<1,140	1,140	685.7	<1,140	<1,140	228.6	<1,140	<1,140	114.3
6.	HC	160	n/a	3	<33	<33	<8	<33	<33	<8	<33	<33	<8
7.	PM _{2.5}	65	25	24	30	22	19.4	9	5	14.8	19	5	13.6
8.	PM ₁₀	150	50	24	62	33	25.6	12	20	20.1	19	8	22.4

AQ-1: Tuah Negeri (00°30'55.9" N, 101°31'51.6" E)

AQ-2: Bencah Lesung (00°30'57.3" N, 101°30'58.2" E)

AQ-3: Industri Tenayan (00°31'48.8" N, 101°29'38.2" E)

Table 8.4-2. Ambient Air Quality Monitoring Results (Gas Pipeline)

No.	Parameter	GR 41/1999 (µg/m ³)	WHO AQ (µg/m ³)	Averaging Period (hour)	AQ-1 PL	AQ-2 PL	AQ-3 PL	AQ-4 PL *
					Nov 2019	Nov 2019	Nov 2019	June 2020
1.	SO ₂	900	500	1	<33	<33	<33	21.4
2.	NO ₂	400	200	1	<17	<17	<17	32.2
3.	TSP	230	n/a	24	145	40	68	65.3
4.	Pb	2	n/a	24	<0.01	<0.01	<0.01	<0.01
5.	CO	30,000	n/a	1	<1,140	<1,140	<1,140	1,257
6.	HC	160	n/a	3	n/a	n/a	n/a	<8
7.	PM _{2.5}	65	25	24	35	10	18	26.9
8.	PM ₁₀	150	50	24	84	23	36	41.3

* Minimum gas pipeline construction activity

AQ-1 PL: 00°36'49.79" N, 101°38'45.72" E, (KP 12 – KP 13, Tualang sub-district)

AQ-2 PL: 00°38'37.85" N, 101°43'27.68" E, (KP 0, Koto Gasip sub-district)

AQ-3 PL: 00°37'32.81" N, 101°39'38.49" E, (KP 09, Tualang sub-district)

AQ-4 PL: 00°32'37.0" N, 101°31'17.7" E (near Power Plant, Industri Tenayan)

The laboratory analysis results show PM_{2.5} and PM₁₀ in AQ-1 in December exceeded the WHO guideline value but were below the Indonesian standard. The exceedances were linked to ongoing Jalan Abdul Rahman Hamid road widening and surfacing project which was on peak in December 2019. However, their concentration decreases significantly in following quarters and meet the WHO criteria. Similar exceedance occurs in gas pipeline, where the concentrations of PM₁₀ in AQ-1 PL and PM_{2.5} in both AQ-1 PL and AQ-4 PL were above the WHO criteria but still lower than the national standards. The concentrations of remaining contaminants were consistently lower than both national and international standards.

To minimise dust during construction phase, EPC Contractors have implemented the dust control procedures, as follow:

- LEC-HK conducted water spraying along access road from October 2019 to June 2020 (except during rainy day).
- CPM cleaned and removed soil and debris from construction activities impacting public road at BOB-PT BSP, PUPR, and plantation area.
- CPM carried out maintenance and inspection of crane, excavator, welding machine and other equipment on regular basis.



Figure 8.4-1: Ambient Air Quality Monitoring Location

8.5. NOISE AND VIBRATION

The noise monitoring was conducted in accordance MoE Decree No. 48/MenLH/11/1996 and the monitoring period was extended to 48 hours continuously in accordance with WBG EHS Guidelines. Necessary conversion has been applied to suit the result to achieve the one-hour L_{Aeq} as defined in the IFC WB EHS Guideline. Then noise level guidelines from the WBG EHS Guidelines (WHO, 1999) have been reproduced in Table 8.5-2 and 8.5-4, for reference. It is to note that the noise baseline referenced in both tables was undertaken in July 2017. Please refer to the 'ESIA Volume 5: Appendix I. Technical Report – Noise Impact Assessment', (Jacobs, July 2018)' for further details on baseline noise impact assessment. The noise monitoring location for power plant are shown in Figure 8.5-1

It is to note that the noise baseline referenced in both tables was undertaken in July 2017. Please refer to the 'ESIA Volume 5: Appendix I. Technical Report – Noise Impact Assessment', (Jacobs, July 2018)' for further details on baseline noise impact assessment. The noise monitoring location for power plant are shown in Figure 8.5-1

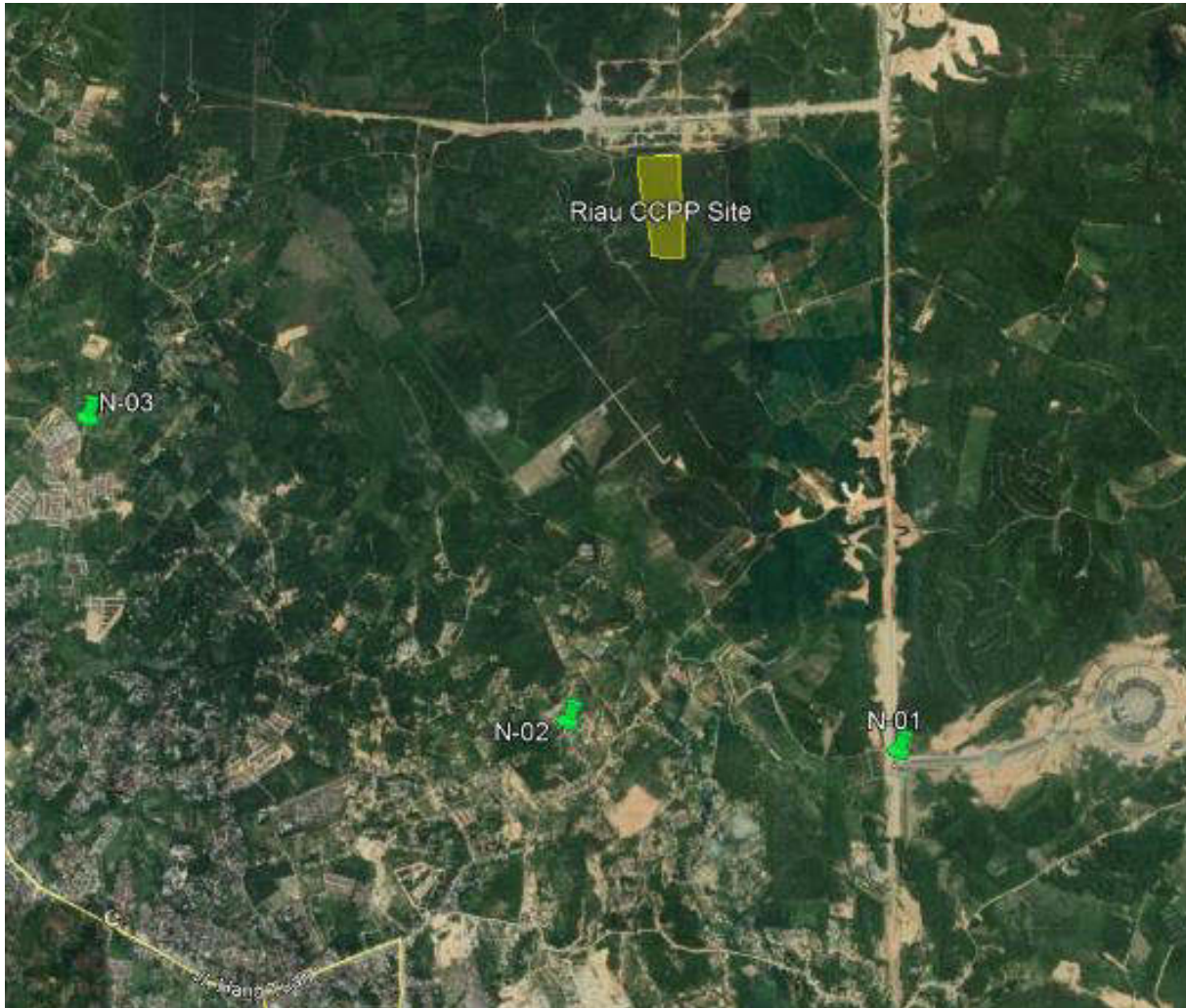


Figure 8.5-1 Noise Monitoring Location.

Table 8.5-1. Noise Monitoring Result (Power Plant) – MoE Regulation No.48 of 1996

No.	Parameter	Unit	Standards	N-1			N-2			N-3		
				Monitoring Results								
				Base	Dec 2019	May 2020	Base	Dec 2019	May 2020	Base	Dec 2019	May 2020
1.	L _s (daytime)	dBA	55	56	58	54.8	59	49	54.6	53	50	43.7
2.	L _M (night)			49	55	47.8	56	34	45.6	45	33	43.9
3.	L _{SM} (averaging 24h)			55	57	53.5	58	47	53.5	51	48	46

Noise Standard:

*Ministry of Environment Regulation No.48 of 1996 on Noise Level Standard

N-1 Coordinate: 00°30'57.6"N, 101°31'51.6"E (Settlement in Tuah Negeri Village)

N-2 Coordinate: 00°30'57.6"N, 101°30'57.6"E (Settlement in Bencah Lesung Village)

N-3 Coordinate: 00°31'48.8"N, 101°29'38.2"E (Settlement in Industri Tenayan Village)

Table 8.5-2. Noise Monitoring Result (Power Plant) – WB EHS Guidelines, One Hour LAeq (WHO, 1999)

Receptor	Unit	Monitoring Result								
		N-1			N-2			N-3		
		WB Guidelines, One Hour LAeq (WHO, 1999)	EHS Hour Baseline	Dec 2019	WB Guidelines, One Hour LAeq (WHO, 1999)	EHS Hour Baseline	Dec 2019	WB Guidelines, One Hour LAeq (WHO, 1999)	EHS Hour Baseline	Dec 2019
Daytime (07:00 – 22:00)	dBA	57	54	58	61	58	51	55	49	50
Night time (22:00 – 07:00)		57*	55	55	61	58	35	54	51	44

* Corrected to 57 from 58 dB(A) so not higher than day time criteria, noting night is a more sensitive period
Red bolded values are ones exceeding IFC WBG EHS guideline values

As presented in Table 8.5-1, overall noise level at monitoring sites is decreasing as compared to Semester II 2019, except N-2 which slightly increase but still below national standard.

The WBG EHS guidelines allows for ± 3 dB(A) increase from background level (baseline). As listed in Table 8.5-2, during the December 2019 monitoring, only the estimated day time LAeq value at ‘N-1’ exceeded IFC WB EHS Guideline value. Estimated LAeq values were below these values at the other locations and for the other times of the day. It is likely caused by ongoing Jalan Abdul Rahman Hamid road pavement and widening projects which was on peak during the event of monitoring. Therefore, the exceedances recording from noise monitoring is not anticipated to be linked to project activities

Table 8.5-3. Noise Monitoring Result (Gas Pipeline) – MoE Regulation No.48 of 1996

No.	Parameter	Unit	Standards	N-1 PL	N-2 PL	N-3 PL	N-4 PL
				Nov 2019	Nov 2019	Nov 2019	June 2020
1.	L _s (daytime)	dBA	55	73	71	76	66.01
2	L _M (night)			65	60	65	41.07
3	L _{SM} (averaging 24h)			71	69	75	64

N-1 PL: 00°36'49.79" N, 101°38'45,72" E, (KP 12 – KP 13, Tualang sub-district)

N-2 PL: 00°38'37.85" N, 101°43'27,68" E, (KP 0, Koto Gasip sub-district)

N-3 PL: 00°37'32.81" N, 101°39'38,49" E, (KP 09, Tualang sub-district)

N-4 PL: 00°32'37.0" N, 101°31'17.7" E (near Power Plant, Industri Tenayan)



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Table 8.5-4. Noise Monitoring Result (Gas Pipeline)– WB EHS Guidelines, One Hour LAeq (WHO, 1999)

Receptor	Unit	Monitoring Result								
		N-1			N-2			N-3		
		IFC WB EHS Guidelines One Hour LAeq (WHO, 1999)*	Baseline	Nov 2019	IFC WB EHS Guidelines One Hour LAeq (WHO, 1999)*	Baseline	Nov 2019	IFC WB EHS Guidelines One Hour LAeq (WHO, 1999)*	Baseline	Nov 2019
Daytime (07:00 – 22:00)	dBA	57	54	75	61	58	72	55	49	78
Night time (22:00 – 07:00)		57*	55	67	61	58	63	54	51	66

Unlike the result of power plant, the noise level at gas pipeline monitoring sites exceeded national limit for residential/school area and WBG EHS guidelines. Other background sources, i.e. traffic during day time (as gas pipeline construction was on the side of the road) and insect sounds during night time, were reported to contribute to the results. However, control measures were applied, for instance, limited working hours during night time and permit from community. For N-4 in particular, the monitoring site is at a school surrounded by plantation with no settlements around. The construction works next to the school took 2 days to complete and was carried out in June 2020 when the school was closed amid COVID-19 outbreak. Thus, no students were impacted by the construction noise.

8.6. SOIL, GEOLOGY AND GROUNDWATER

Power Plant and Temporary Jetty

LEC-HK confirmed that dredging materials are being used to fill-in and reclaim the temporary jetty and there is no disposal off-site. The site will be returned to its original conditions after use.

Construction of two temporary sediment ponds in the Power Plant have been completed. LEC conducted sediment pond cleaning in February 2020. The permanent sediment pond for operational stage is under construction.

Sheet piles were installed at the temporary jetty area in December 2019. Soil resulting from dredging was stock piled and then used to level the jetty area. Silt fencing has also been installed in the area for erosion control measures (Figure 8.6-1). Silt curtains have been installed during dredging operations (Figure 8.6-2). The temporary jetty construction has been completed in early July 2020.

Wheel washing facilities has been provided on-site. See Figure 8.6-3



Figure 8.6-1: Silt fencing at the temporary jetty area



Figure 8.6-2: Silt curtain in place during dredging activity at temporary jetty



Figure 8.6-3: Wheel Cleaning at Wheel Washing Facilities at Power Plant Site

Gas Pipeline

CPM constructed sediment ponds and a ditch at the gas pipeline laydown area to control rainwater runoff. Weekly monitoring to sediment ponds and ditch is conducted to check water and sediment level.

Silt fencing was installed during gas pipeline construction associated with river crossings and working adjacent to waterbodies e.g. swamp at (KP 07) in the Natural Habitat Area (See Figure 8.6-4). In addition, regular spot checks have been conducted at the installed silt fence. In the adjacent area at KP-07 CPM conducted a repair of slope area next to graveyard location to stabilize the slope.

CPM also installed a water barrier at KP 25 as preparation for the pipeline cleaning and flushing activity. A temporary water pond with a geotextile layer was also installed to contain mud and debris discharged during pipeline cleaning.

The pipeline construction has recently completed in early July 2020. CPM is currently undergoing a preparation to conduct a hydrotesting for the pipeline. Hydrotest schedule will be advised when confirmed by CPM.



Figure 8.6-4: Silt fence installation to avoid runoff surface during heavy rainfall at water pond area (KP 07)

8.7. WATER QUALITY

Surface Water

The surface water quality monitoring was conducted quarterly in Dec 2019, March and May 2020 at four sampling locations (see Figure 8.7-1). The results were compared against standards on Government Regulation No 82 of 2001 for surface water class II.

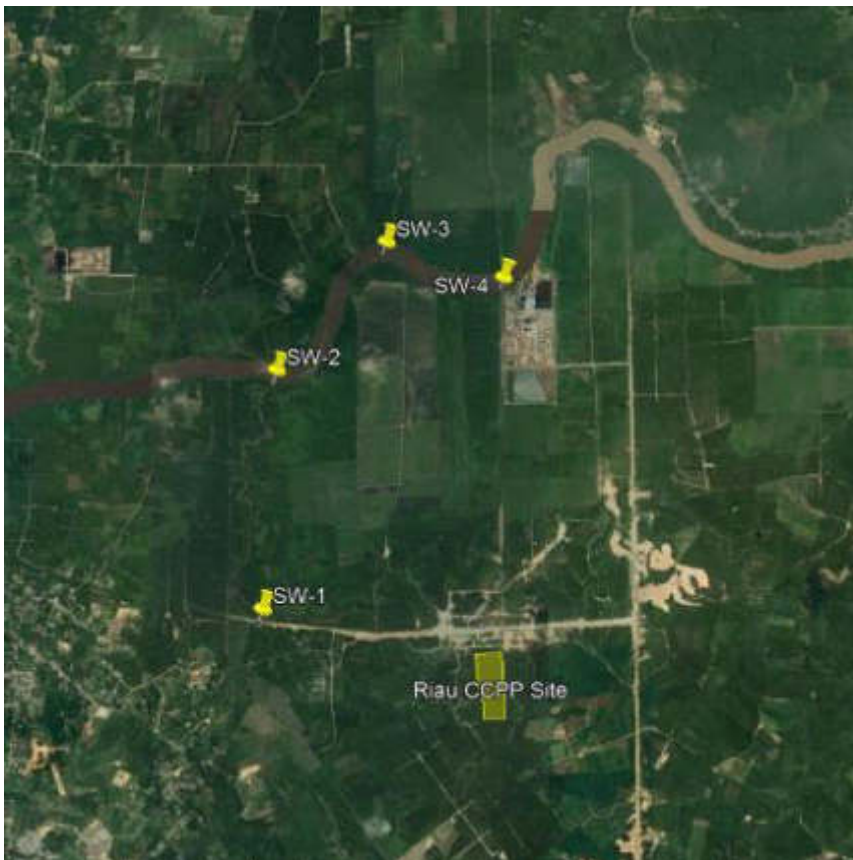


Figure 8.7-1 Surface water sampling locations



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The surface water quality monitoring results indicate that some parameters, i.e., TSS, BOD, COD, nitrite, zinc and copper were above the standard criteria while pH was lower than the defined standard criteria, as detailed below:

- SW-1 : TSS (Dec 2019 & Mar 2020), BOD (Dec 2019), nitrite (Dec and Mar 2020)
- SW-2 : TSS & pH (Dec 2019), BOD (Dec 2019 and May 2020), nitrite (Dec 2019), zinc and copper (May 2020)
- SW-3 : pH & BOD (Dec 2019 & May 2020), COD (May 2020), nitrite (Dec 2019)
- SW-4 : pH & BOD (Dec 2019 & May 2020)

It is suspected that fertilizer runoff from plantation and waste from riverside settlements contributes to the slightly low pH and high concentrations of the parameters noted above. The concentrations of the remaining parameters consistently are below the prevailing standard.

Domestic/blackwater wastewater generated during water intake construction is discharged to containment (septic tank) and pumped regularly by 3rd party contractors (PT Indopora) to prevent it from entering storm drains or nearby streams. Thus, the exceedances recording from surface water quality monitoring is not anticipated to be linked to project activities.



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Table 8.7-1 Surface Water Monitoring Results

Parameter	Unit	Standard*	SW-1			SW-2			SW-3			SW-4		
			Dec 2019	Mar 2020	May 2020	Dec 2019	Mar 2020	May 2020	Dec 2019	Mar 2020	May 2020	Dec 2019	Mar 2020	May 2020
Conductivity	µS/cm	-	62	131	67	49	64	42	60	60	41	53	58	43
Turbidity	NTU	-	433	570	77.6	203	57	46.10	46	32	24.6	79	34	25.1
TSS	mg/L	50	178	294	34	81	13	29	35	14	34	56	19	37
pH	pH Unit	6 - 9	6.12	6.11	6.26	5.95	6.58	6.54	5.71	6.12	5.95	5.66	6.71	5.67
Temperature	°C	±3	25.5	29.8	30.5	26.2	30.6	30.2	27.8	30.9	30.7	27.8	29.3	31
Total Coliform	MPN/100ml	5,000	1600	1600	1600	170	350	1600	1600	170	920	130	1600	1600
BOD	mg/L	3	8	<2	<2	6	<2	8.4	6	<2	25.3	8	<2	6.5
COD	mg/L	25	24	21	<10	18	10	20	19	33	54	22	15	16
Oil and grease	mg/L	1	0.316	<1	<1	0.342	<1	<1	0.198	<1	<1	<1	<1	<1
Phosphorus	mg/L	0.2	0.09	0.18	0.062	0.05	0.13	0.057	0.10	0.12	0.082	0.09	0.13	0.073
Nitrate	mg/L	10	0.047	0.425	0.022	0.036	0.230	0.01	0.033	0.273	0.008	1.59	0.189	0.008
Nitrite	mg/L	0.06	1.18	0.210	0.047	1.53	0.052	0.003	1.25	0.046	0.003	0.022	0.058	0.003
Total Nitrogen	mg/L	-	0.36	3.7	0.33	0.19	2.7	<0.02	0.15	2.9	<0.02	1.67	3.4	<0.02
Ammonia	mg/L	-	0.3	0.97	0.16	0.3	0.36	<0.02	0.3	0.52	<0.02	0.16	0.53	<0.02
Fluoride	mg/L	1.5	<0.010	<0.1	0.31	<0.010	0.2	0.47	<0.010	0.2	0.55	0.3	0.3	0.52
Chromium (VI)	mg/L	0.05	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Major Dissolved Metal														
Boron	mg/L	1	0.0201	0.0334	0.04	0.0156	0.0216	0.04	0.0260	0.0292	0.05	0.0257	0.0269	0.04
Zinc	mg/L	0.05	<0.0050	0.082	0.02	<0.050	0.0067	0.02	0.0104	0.0076	0.04	0.0095	0.0061	0.01
Mercury	mg/L	0.002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	0.00006
Copper	mg/L	0.02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Arsenic	mg/L	1	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cadmium	mg/L	0.01	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead	mg/L	0.03	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	<0.0050	<0.0010	<0.0050	<0.0050	<0.0010	<0.0050	<0.0050
Manganese	mg/L	-	<0.0050	0.0454	0.0294	<0.0050	0.0290	0.0423	0.0146	0.0263	0.0438	0.0202	0.0242	0.0431
Iron	mg/L	-	0.449	0.169	0.66	0.482	0.348	0.79	0.444	0.402	0.47	0.418	0.341	0.47



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Parameter	Unit	Standard*	SW-1			SW-2			SW-3			SW-4		
			Dec 2019	Mar 2020	May 2020	Dec 2019	Mar 2020	May 2020	Dec 2019	Mar 2020	May 2020	Dec 2019	Mar 2020	May 2020
Nickel	mg/L	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chromium	mg/L	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0260	<0.0050	<0.0050	0.0257	<0.0050	<0.0050
Total Dissolved Metal														
Boron	mg/L	1	0.0202	0.0358	0.0517	0.0173	0.0221	0.0514	0.0134	0.0212	0.0556	0.254	0.0234	0.0489
Zinc	mg/L	0.05	0.0166	0.0281	0.0216	0.0131	0.0190	0.0566	<0.00005	0.0116	0.0466	<0.00005	0.0113	0.0187
Mercury	mg/L	0.002	<0.00005	0.00007	0.00005	<0.00005	0.00006	0.00007	<0.0050	0.00007	0.00006	<0.0050	0.00006	0.00006
Copper	mg/L	0.02	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0975	<0.0010	<0.0050	<0.0050	<0.0010	<0.0050	<0.0050
Arsenic	mg/L	1	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cadmium	mg/L	0.01	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010	<0.0050	<0.0010	<0.0010
Lead	mg/L	0.03	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0332	<0.0050	<0.0050	0.0394	<0.0050	<0.0050
Manganese	mg/L	0.002	0.0372	0.0651	0.0305	0.0280	0.0339	0.0488	0.795	0.0256	0.0453	0.776	0.0276	0.0503
Iron	mg/L	-	1.42	1.61	2.2	1.84	1.23	1.05	<0.0050	0.788	0.72	<0.0050	0.895	0.69
Nickel	mg/L	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chromium	mg/L	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0260	<0.0050	<0.0050	0.0257	<0.0050	<0.0050

- SW-1 : Tenayan River upstream (101°30'14.40" BT, 00°32'38.40" LU)
- SW-2 : Tenayan River downstream (101°30'18.00" BT, 00°33'32.40" LU)
- SW-3 : Siak River upstream (101°30'46.80" BT, 00°34'08.40" LU)
- SW-4 : Siak River downstream (101°31'12.00" BT, 00°34'01.20" LU)

Domestic Waste Water

Wastewater quality is measured for power plant site and CPM onsite office every month.

Table 8.7-2 Domestic Wastewater Monitoring Result at Power Plant Site (October 2019 – June 2020)

Parameter	Unit	National Standards*	WBG EHS Guideline	Oct	Jan	Feb	March	Apr	May	Jun
pH	-	6 – 9	6 - 9	8.03	8.16	8.1	8.25	8.85	8.54	6.82
TSS	mg/L	30	50	4	133	80	134	85	17	16
BOD	mg/L	30	30	6.040	250	95.2	301	122	14.6	13.2
COD	mg/L	100	125	24.26	565	209	650	277	36	31
Oil and Grease	mg/L	5	10	<5	19	39	25	<5	<5	<5
Ammonia	mg/L	10	-	2.91	375	132	894	258	74.1	1.25
Total coliform	N/100ml	3000	400	n/a	160,000	5,400	220	1,600	16,000	16,000

* National standards: MoER No. 68/2016 about Domestic Wastewater

* Domestic waste water quality was not monitored in November and December 2019

Table 8.7-3 Domestic Wastewater Monitoring Result at CPM Onsite Office (November 2019 – June 2020)

Parameter	Unit	National Standards*	WBG EHS Guideline	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
pH	-	6 – 9	6 - 9	6.69	7.26	6.71	6.88	2.58	6.88	8.67	8
TSS	mg/L	30	50	37	92	195	186	58	4	78	80
BOD	mg/L	30	30	17.4	<2	58	<2,0	53.3	<2.0	<2.0	14
COD	mg/L	100	125	41	<10	132	<10	118	<10	<10	34
Oil and Grease	mg/L	5	10	<5	6	8	<5	<5	<5	<5	<5
Ammonia	mg/L	10	-	0.1	<0.02	0.17	<0,02	0.93	0.09	0.73	0.13
Total coliform	N/100ml	3000	400	1,700	240	54,000	1,700	18	11,000	1,300	110

* Standard criteria: MoER No. 68/2016 about Domestic Wastewater

All parameters, except pH in power plant significantly increase in January 2020 and exceeded both national standards and WBG EHS Guidelines. Concentrations for most parameters fluctuated and remained above the limit as of March 2020. The trends started to decline in subsequent months and by May 2020, all parameters, except total coliform, consistently were below the prevailing criteria. Total coliform remains high as of June 2020, however its current concentration is significantly lower compared to Jan 2020. Coliform is not considered as concern for now as there are no nearby settlements to the power plant and there is no groundwater well use for domestic purposes. Nevertheless, MRPR shall continue to monitor these results and should put necessary measures to reduce the level to an acceptable standard.

Similar trends occurred in domestic wastewater in CPM onsite office where all parameters, except pH elevated in Jan 2020. The concentration of all parameter declined sharply on the subsequent months and consistently lower than the standard criteria, except TSS. The current period's TSS overall is lower comparing to the Q4 2019 although still exceed the limit. LEC-HK has installed additional greywater treatment by the end of April 2020 before discharging

greywater to the outlet. The treatment compartment consists of fiber/straws (ijuk) filter of 7 cm depth. LEC-HK also Kaporit (2,5 gram) and tawas (150 gr) in monthly basis. General layout showing the greywater and blackwater flow route and the location of septictank and additional greywater treatment is shown in Appendix K.

MRPR will continue to monitor these results throughout construction phase and if increases continue to occur, additional adjustment or remedial actions may be taken to further reduce the levels.

8.8. FRESHWATER ECOLOGY

A fish catch survey was conducted in September 2019 as part of the pre-construction survey. The result has been reported in previous semester. Another survey will be conducted around August - September 2020 after the completion of the temporary jetty construction. MRPR will notify the consultant (Jacobs and NBC) on the jetty construction completion status to commence the fish survey.

The fish screen design has been sent to Lenders in November 2019.

8.9. TERRESTRIAL ECOLOGY

CPM conducted Biodiversity Surveys prior to construction activities and land clearing as summarised in table below. Table 8.9-1. Biodiversity Survey Results

Date	Location	Finding
22 Jul 2019	KP 02 – KP 03	Fauna observed 3 individuals of owa ungko (<i>Hylobates agilis</i>) seen brachiating on trees at ±150m from the work location at KP 03.
14 Oct 2019	KP 31 – KP 33	No species of concern
20 Oct 2019	KP 33 – KP 37	No species of concern
20 Oct 2019	KP 36 – KP 37	No species of concern
1 Jan 2020	KP 07+800	No species of concern
2 Jan 2020	KP 07+600	No species of concern
3-4 Jan 2020	adjacent to natural habitat area KP 7+200 – KP 7+400	No species of concern
5 Mar 2020	IPPKH area KP 30 – KP 33	No species of concern
12 Mar 2020	IPPKH area KP 31 – KP 33	Fauna of note observed was the <i>sanca darah hitam</i> (<i>python curtus</i> , commonly known as the Sumatran short-tailed python – IUCN Least Concern).
1 April 2020	KP 36 – KP 37	No species of concern
11 April 2020	KP 36 – KP 37	No species of concern
20 April 2020	KP 35 – 35+500	No species of concern
4 May 2020	KP 26 – KP 27	No species of concern

CPM have been implementing mitigation measures in relation to species of concern, as outlined in the BAP. These measures include no vegetation clearance undertaken beyond the boundary of the project site and zero tolerance towards poaching of any flora or fauna during construction.

The Biodiversity Survey monitoring results is described in the Biodiversity Survey Report (see Appendix G).

8.10. HAZARDOUS SUBSTANCES AND WASTE MANAGEMENT

8.10.1 Hazardous Substance

The warehouses have appropriate binding in place. Both LEC-HK and CPM keep MSDS up to date and available at the warehouses. The chemical inventory of October 2019 – June 2020 is presented in Appendix E.

8.10.2 Waste Management

Hazardous waste

Construction of a hazardous waste temporary storage (TPS LB3) facility for the power plant site and CPM basecamp were completed in November 2019. LEC-HK obtained the TPS LB3 permit for the power plant (Ref No.25/DPMPTSP/PS-LB3/XII/2019) on 31 December 2019.

For TPS LB3 at CPM basecamp site (laydown area), the Environmental Agency of Pekanbaru city conducted an inspection as a follow up of the permit application in January 2020. CPM has completed the recommendations resulting from the inspection and obtained the permit on 14 February 2020.

Both LEC-HK and CPM are still working on licensed waste disposal companies. LEC-HK engages PT Wahana Karya Konstruksi and CPM engages PT Shali Riau Lestari.

The following tables list hazardous waste generation by LEC-HK and CPM in January – June 2020. The logbook with details of weekly waste generation is presented in Appendix F

Table 8.10-1. LEC-HK Hazardous Waste Generation (October 2019 – June 2020)

Waste type	Unit	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Used lubricant	Liter	16	8	20	20	15	10	20	20	20
Used filter	pcs	2	2	2	4	7	0	5	6	6
Glass filler	pcs	0	0	0	0	0	0	0	0	1
Contaminated rags	kg	0	0	0	0	9	10	8	6	10

Table 8.10-2. CPM Hazardous Waste Generation (October 2019 – June 2020)

Waste type	Unit	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Used oil/grease	Liter	110	54	110	102	100	110	74	160	80
Used oil filter	pcs	3	6	32	10	12	13	6	30	12
Used oil containers	pcs	0	0	0	28	0	0	0	6	0
Contaminated rags	kg	0	0	0	1	0	0	0	2	0
Used paint can	pcs	0	0	0	0	0	0	0	7	0
Used penetrant can	pcs	0	0	0	0	0	0	0	5	0
Accu	Unit	0	0	0	5	0	0	0	0	0



Domestic waste

Waste segregation is being carried out on-site. Both LEC-HK and CPM engaged Environmental and Sanitary Agency (DLHK) of Pekanbaru City for domestic waste collection and disposal. The waste is collected and disposed off-site three times per week to designated landfill (TPS Air Itam).

8.11. TRAFFIC MANAGEMENT

Traffic generation during construction stages are resulted from staff travelling to or from the site on working days and mobilization of construction materials and equipment. Peak traffic is expected to occur during power plant and switchyard work activities. Peak hours are observed during workers commuting time at 6:00 a.m. to 7:00 a.m., at 11:00 a.m. to 12:00 p.m., and 4:00 p.m. to 5:00 p.m.

For CPM, minimal traffic disturbance was observed during pipeline installation. For temporary traffic obstruction, CPM assigned flagman and installed physical barrier and sign board to notify the ongoing activity to pedestrians or other road users.

The Traffic Management Plan (TMP) implementation is ongoing. LEC-HK and CPM install sign board, assign flagman at road intersections and escort long vehicle heading to and from the Project area.

Traffic survey was undertaken in Dec 2019 and May 2020 and reported that mobilisation to and from Power Plant site has negligible impact to general traffic flow and safety. Smooth traffic flow was observed, and zero traffic accident was reported along the access roads at Project area.

8.12. CULTURAL HERITAGE

The social baseline survey identified three potential cultural heritages which are:

- Sacred cemetery at Okura Village, located close to the village settlement in a place called Tebing Tinggi on the opposite side of the Siak River to the project site.
- Burial site of Princess Kacamayang at Koto Gasib, located approximately 3 km from the gas pipeline; and
- The Putri Puan Elok's tomb, located approximately 2 km from the gas pipeline.

In relation to the sacred cemetery at Okura Villag, the temporary jetty is sited away from the cemetery site and no impacts are anticipated.

The burial site and tomb are also not impacted by the construction of the gas pipeline.

MRPR and EPC Contractors implement a Chance-Find procedure during construction. Workers carefully work during the gas pipeline excavation to prevent unnecessary damage during earth work.

There were no chance finds during the reporting period. CPM did identify during pipeline excavation unexploded ordinance (UXO), see Section 8.15.1 for details.

8.13. LANDSCAPE AND VISUAL

Project site is landscaped to improve visual amenity. Power Plant project area is properly fenced but given that the on-going construction, trees planting is not yet started but shrubs and grass are planted. Figure 8.13-1 shows the site fencing and improved landscape of project area.



Figure 8.13-1. Fencing Around the Power Plant Site

CPM has recently completed the gas pipeline installation in early July 2020, while series of reinstatement activities have been initiated since April 2020. Table 8.13-1 presents the reinstatement activities conducted in Q2 2020.

Table 8.13-1: CPM Reinstatement Activities in Q2 2020.

No	Date	Activity
1	4 Apr 2020	Bridge repair at KP 33 IPPKH area
2	9 Apr 2020	Concrete slab installation at KP 20 in front of SPBE warehouse
3	16 Apr 2020	Concrete slab installation at KP 12-13 in front of SMP Tualang 2
4	9 May 2020	Reinstatement of a local business impacted by construction at KP 8
5	10 May 2020	Road access repair at previous Bintan plantation area
6	10 May 2020	Wire fence repair at SUPP plantation
7	15 May 2020	Parking space reinstatement at KP 07 local mosque
8	15 May 2020	Parking space reinstatement at KP 08+500 Bukit Raya restaurant
9	16 May 2020	Parking space reinstatement at KP 08 local restaurant
10	20 May 2020	Wire fence repair at KP 09+800
11	22 May 2020	Road side reinstatement at KP 13+000 in front of elementary school
12	27 May 2020	Barb wire repair at PT ATM area
13	10 Jun 2020	Reinstatement work at KP 20 in front of SPBE warehouse
14	10 Jun 2020	Wire fence repair at KP 25
15	10 Jun 2020	Slope repair at KP 07 Pinang Sebatang
16	17 Jun 2020	Relocation of water tank at SUPP plantation
17	24 Jun 2020	Relocation of PVC water pipeline at SUPP plantation

8.14. GREENHOUSE GAS EMISSIONS

MRPR developed a procedure regarding Greenhouse Gas Calculation and Reporting (MRPR-300-HSE-0014) and refer to GHG Protocol for reporting categories. GHG emissions will be reported during the Operation phase. For construction phase, EPC Contractors has started recording the energy consumption for internal purpose.

Table 8.14-1. Monthly Fuel and Electricity Consumption (October 2019 – June 2020)

Month	Diesel (Liters)		Gasoline (Liters)		Electricity (kWh)	
	LEC-HK	CPM	LEC-HK	CPM	LEC-HK	CPM
Oct	3,388.06	-	-	-	36,954	-
Nov	1,955.72	343,715.52	-	50,371.3	31,118	101,062
Dec	2,093.77	-	-	-	28,730	-
Jan	1,073,560	642,424	-	73,054	28,793	143,943
Feb	43,450	574,659	-	65,918	20,543	134,312
Mar	66,661	1,085,357	-	129,874	28,607	270,217
Apr	61,349	946,827.1	-	113,593.99	27488	242,944.04
May	60,019	1,011,029.13	-	121,607.46	26,131	263,658.84
Jun	86,740	1,050,146	-	118,553.81	28,972	285,455.34

8.15. WORKING CONDITIONS AND OCCUPATIONAL HEALTH AND SAFETY

8.15.1 Occupational Health and Safety

EHS training is discussed in Section 6.3.

The main health issues on-site are related to EPC contractors’ response to Covid-19 pandemic situation. LEC-HK and CPM undertake the following action to maintain workers’ health condition:

- Establish task force for Covid-19 cases
- Daily temperature check to all workers
- Provision of hand sanitizer and masks
- Install more hand wash facilities with antiseptic soap
- Provision of disinfectant for routine vehicle and camp cleaning
- Provision of multi-vitamin for workers
- Personal hygiene campaign
- General safety talk is replaced with limited tool box talk with physical distancing applied
- 14 days self-quarantine applied for non-local workers prior to entering and after leaving the site (field break)
- Work from Home arrangement for office employees

Figure 8.15.1 and 8.15.2 show samples of activities to prevent Covid-19 pandemic on-site.



Figure 8.15-1: Workers temperature check



Figure 8.15-2: Hand washing facility on-site

To date there have been no confirmed Covid-19 cases reported on site.

CPM identified a UXO during earthwork and excavation activities for the gas pipeline at KP 33 (IPPKH area) on 12 March 2020. The UXO relic circa 80's was $\pm 1.5\text{m}$ long, diameter of 90cm and reportedly related with military training activity. CPM stopped work and contacted the police to report the find. The police and military assessed the UXO and then safely removed it. Following this UXO find, MRPR ensures CPM undertakes UXO checks prior to further excavation works continuing on the gas pipeline.

8.15.2 Working Condition

MRPR and the EPC Contractors do not employ child labour or forced labour for Project activities.

EPC Contractors provide housing, canteen and toilet for workers. Housing is only entitled for workers coming from outside Riau Province.

HK provides new accommodation (Figure 8.15.3 and 8.15.4) for the workers following the Lenders audit findings in October 2019. The first batch of mobilization involving 100 construction workers is completed mid of March 2020. The second batch is completed in May 2020. Upon mobilization, the old HK1 and HK2 accommodations were demolished.

Further, MRPR developed a Site Worker's Accommodation working instruction (MRPR-300-0019.0001 R00) and communicated to HSE EPC Contractors as a reference for internal audit. This confirmed that corrective actions following Lenders site visit findings are completed (see also Section 5.7). The Lenders site visit report can be referred as Phase 2 Construction ESR Report submitted on 27 May 2020



Figure 8.15-5: HK new accommodation – hand wash



Figure 8.15-6: HK new accommodation - bedroom

Workers grievance is reported in Section 5.3.

8.16. EMERGENCY PREPAREDNESS

The QRA is finalized in November 2019, see Section 5.5 for detail. There was no emergency case reported during the period of 1st October 2019 – 30th June 2020.

As mentioned in Section 3.2., MRPR has conducted the socialization of the Emergency Response Plan (“ERP”) to communities on 4 December 2019 for gas pipeline and 2 December 2019 for Power Plant. Further, emergency drill about response to a suspect Covid-19 was conducted by LEC-HK on 23 April 2020. LEC-HK conducted a simulation of an employee who was detected to have a body temperature above 37°C. The set of response standards include:

- Security contacts the site paramedic to get confirmation of the suspect
- Site paramedic brings the suspect to observation room and dials in the emergency contact number to notify the Covid-19 task force
- Upon approval of Site Commander, the task force communicates with the referral hospital
- Paramedic from a the Tabrani (referral) hospital, equipped with PPE, arrived at the site and evacuates the suspect
- Observation room is cleaned up using disinfectant

MRPR posted emergency contact number and call out procedure on prominent location at Project area (Figure 8.16.1 and 8.16.2), including announcement board at village area (Figure 8.16.3 and 8.16.4). The emergency contact number is also presented at warning sign board that is being installed along the constructed gas pipeline route.



Figure 8.16-1: ER announcement board at Village Office



Figure 8.16-2: Emergency Contact Number posted at Sign Board Along Gas Pipeline Route



Figure 8.16-3: ER announcement at Warung



Figure 8.16-4: ER Announcement in the Front of a Villager House



Figure 8.16-4: Warning Sign Board Installation at Gas Pipeline Route KP 01+500



Figure 8.16-4: Warning Sign Board at Gas Pipeline Route KP 07+500



**LENDERS E&S REPORT – JULY 2020
RIAU 275 MW CCPP IPP PROJECT**

Date: July 2020

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9. DISCUSSION AND CONCLUSION

9.1. CORRECTIVE ACTIONS

MRPR has closed Lenders findings resulting from the monitoring visits conducted in October 2019 and January 2020. No pending corrective actions are observed (see Section 5.7)

The Corrective Action Tracking System (CATS) Register as per 30 June 2020 recorded a total of 894 findings resulting from HSE Inspection, Sponsors HSE Roadshow, HSE Card, Management Walkdown, and other sources. There were 356 findings recorded in Semester 1 - 2020 and only 2 cases (0.2%) of total CATS are still open.

APPENDICES

- APPENDIX A. Laboratory Analysis Result and E&S Analysis Presentation During Lenders E&S Site Visit in January 2020
- APPENDIX B. LEC-HK HSE Organization
- APPENDIX C Training Log and ESMS Refreshment
- APPENDIX D Emergency Response
- APPENDIX E Hazardous Material Log
- APPENDIX F Hazardous Waste Log
- APPENDIX G BAP - Biodiversity Walkover Prior to Gas Pipeline Construction
- APPENDIX H Corrective Action Tracking System (CATS) as per 30 June 2020
- APPENDIX I Incident Investigation & Corrective Action Plan (CAP)
- APPENDIX J SEP dan CSR Log
- APPENDIX K Temporary Wastewater Route during Power Plant Construction

APPENDIX A.

Laboratory Analysis Result

E&S Analysis Presentation During Lenders E&S Site Visit In January 2020

Riau Environmental and Social Survey

November and December 2019

Environmental

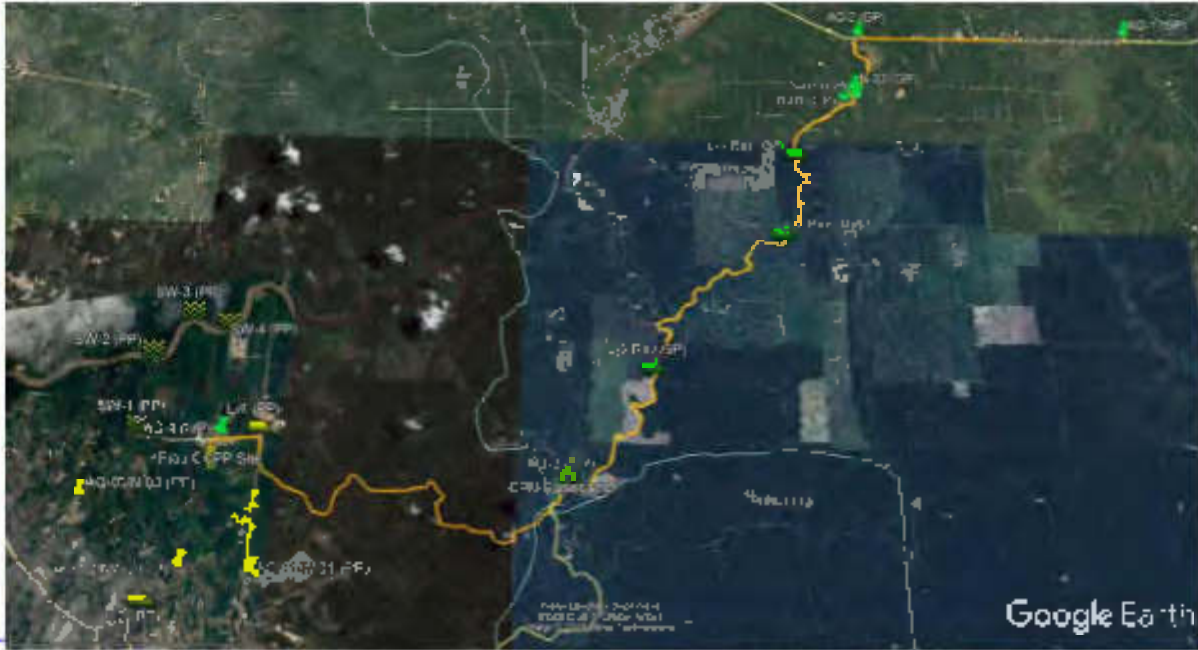
▪ November 2019

- Gas pipeline (S2-2019 in November 2019)
 - Ambient Air Quality (4)
 - AQ-01 (GP): SV1401; KP 00+050
 - AQ-02 (GP): near Simpang Bakal, Phang Sebatang; KP 07+250
 - AQ-03 (GP): Merodan; KP 26+400
 - AQ-04 (GP): Industri Tenayan (In front of power plant site); KP 37+950
 - Noise (3)
 - JL Baru Bakal, Tualang
(ongoing pipeline construction at KP 09+350 to KP 10+000; 27 – 29 Nov 19)
 - Wastewater – Domestic (1)
 - CPM Basecamp

▪ December 2019

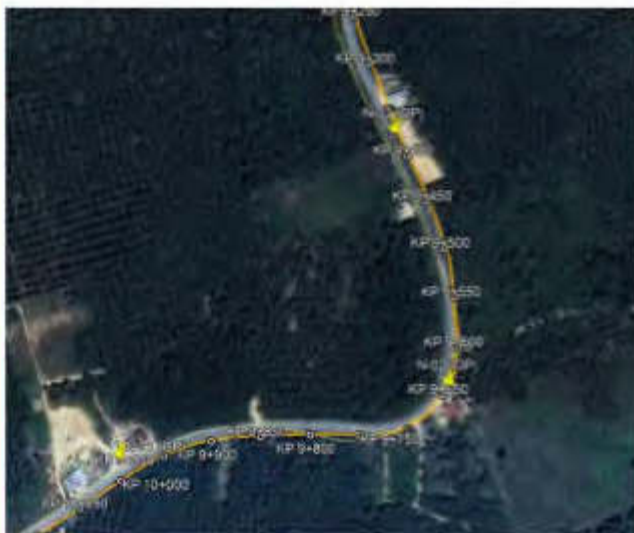
- Power Plant
 - Ambient Air Quality & Noise (3 + 3)
 - AQ-01 + N-01 (PP): Tuah Negeri
 - AQ-02 + N-02 (PP): Bencah Lesung
 - AQ-03 + N-03 (PP): Industri Tenayan
 - Surface Water Quality (4)
 - SW-01 (PP): upstream Terayan River
 - SW-02 (PP): downstream Tenayan River
 - SW-03 (PP): upstream Siak River
 - SW-04 (PP): downstream Siak River
- Gas Pipeline
 - Wastewater – Domestic (1)
 - CPM Basecamp

Environmental – Sampling Map, November & December 2019



Environmental – Gas Pipeline

- Noise, Jl. Baru Bakal, Tualang



LABORATORY ANALYSIS REPORT

Laboratory Sample ID	SW-1 (PP) 1	SW-1 (PP) 2	SW-1 (PP) 3			
Customer Sample ID	N-1	N-2	N-3			
Name	None	None	None			
Date of Sampling	27-11-2019 to 28-11-2019	28-11-2019 to 29-11-2019	29-11-2019 to 30-11-2019			
Time of Sampling	05.30 – 05.50 05.50	05.30 – 05.50 05.50	05.45 – 05.45 05.50			
Sampling Point Coordinate	4° 50' 07.6200" N 101° 02' 03.00" E	4° 50' 07.6200" N 101° 02' 03.00" E	4° 50' 07.6200" N 101° 02' 03.00" E			
Temperature at Sampling Point (°C)	26.2	26.1	26.2			
Humidity at Sampling Point (RH%)	76.4	76.2	74.8			
Windspeed at Sampling Point (m/s)	0.2	0.2	0.7			
Atmospheric Pressure at Sampling Point (m/s)	752	750	750			
Wind Direction	East to West	East to West	North to South			
Laboratory Analysis Result						
Parameter(s) of Analysis	Method	Unit	Det. Limit	Rep. Limit	Result	Result
Water 12	DM-A422 (Sound level meter)	dBA	---	---	72	72
Water 12	DM-A422 (Sound level meter)	dBA	---	---	76	72
Water 12	DM-A422 (Sound level meter)	dBA	---	---	77	80
Water 14	DM-A422 (Sound level meter)	dBA	---	---	80	80
Water 15	DM-A422 (Sound level meter)	dBA	---	---	81	80
Water 16	DM-A422 (Sound level meter)	dBA	---	---	80	80
Water 17	DM-A422 (Sound level meter)	dBA	---	---	80	80
Water 18	Calculation	dBA	---	---	72	72
Water 19	Calculation	dBA	---	---	80	80
Water 20	Calculation	dBA	---	---	72	72

Environmental - Gas Pipeline

Wastewater (Domestic), CPM Basecamp, November 2019

Nama: **Y. Mulyanti (20)**
 No. HP: **0811 775 1111**
 Alamat: **JAWAHRI, Kecamatan 2**
 Kota: **INDAH MULIA, LAMPUNG**



ANUGRAH ANALISIS SEMPURNA
 PT. ANUGRAH ANALISIS SEMPURNA
 Jl. Raya Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3
 Blok D, Jl. Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3, Blok D
 No. Telp: 0811 775 1111

Nama Proyek: **CPM Basecamp CPM**
 Lokasi: **CPM Basecamp CPM**
 Tanggal Pengambilan Sampel: **11/11/2019**
 Lokasi Pengambilan Sampel: **CPM Basecamp CPM**
 Nama Analisa: **Analisa Kualitas Air**
 Parameter: **Analisa Kualitas Air**
 Jumlah Sampel: **1**

Parameter	Metode	Unit	Nilai	Standar	Unit	High	Low
Analisa Kualitas Air							
Analisa Fisik							
Total Suspended Solids (TSS)	APHA (2470)	mg/L	15	50	mg/L	5	10
Oil & Grease	APHA (8000)	mg/L	11	100	mg/L	5	5
Analisa Kimia							
Chemical Oxygen Demand (COD)	APHA (5210)	mg/L	37	100	mg/L	5	10
Biochemical Oxygen Demand (BOD)	APHA (5210)	mg/L	21	100	mg/L	5	10
Total Phosphorus (TP)	APHA (4450)	mg/L	3	10	mg/L	5	10
Analisa Biologi							
Ammonia Nitrogen	APHA (4500)	mg/L	0.05	1.0	mg/L	5	10

Catatan: Semua hasil analisis di atas adalah rata-rata dari tiga sampel yang diambil pada saat pengambilan sampel.
 * 50% dari nilai maksimum.
 ** Nilai maksimum yang diperbolehkan untuk limbah domestik.
 *** Nilai maksimum yang diperbolehkan untuk limbah domestik.



PT. ANUGRAH ANALISIS SEMPURNA
ANALISA SEMPURNA
ANALISA SEMPURNA
 Jl. Raya Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3, Blok D
 Blok D, Jl. Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3, Blok D
 No. Telp: 0811 775 1111



ANUGRAH ANALISIS SEMPURNA
 PT. ANUGRAH ANALISIS SEMPURNA
 Jl. Raya Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3, Blok D
 Blok D, Jl. Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3, Blok D
 No. Telp: 0811 775 1111

Nama Proyek: **LAPORAN HASIL PENGALAMAN**
 Lokasi: **LAPORAN HASIL PENGALAMAN**
 Tanggal Pengambilan Sampel: **11/11/2019**
 Lokasi Pengambilan Sampel: **LAPORAN HASIL PENGALAMAN**
 Nama Analisa: **Analisa Kualitas Air**
 Parameter: **Analisa Kualitas Air**
 Jumlah Sampel: **1**

No.	No. Sampel	Nama Sampel	Persentase (%)	PH	Warna	Bau	Analisa Fisik	Analisa Kimia
1	001/2019	Wastewater Basecamp CPM	100	6.5	100	100	100	100

Catatan: Semua hasil analisis di atas adalah rata-rata dari tiga sampel yang diambil pada saat pengambilan sampel.
 * 50% dari nilai maksimum.
 ** Nilai maksimum yang diperbolehkan untuk limbah domestik.
 *** Nilai maksimum yang diperbolehkan untuk limbah domestik.

Environmental - Gas Pipeline

Wastewater (Domestic), CPM Basecamp, December 2019

Nama: **Y. Mulyanti (20)**
 No. HP: **0811 775 1111**
 Alamat: **JAWAHRI, Kecamatan 2**
 Kota: **INDAH MULIA, LAMPUNG**



ANUGRAH ANALISIS SEMPURNA
 PT. ANUGRAH ANALISIS SEMPURNA
 Jl. Raya Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3
 Blok D, Jl. Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3, Blok D
 No. Telp: 0811 775 1111

Nama Proyek: **CPM Basecamp CPM**
 Lokasi: **CPM Basecamp CPM**
 Tanggal Pengambilan Sampel: **11/12/2019**
 Lokasi Pengambilan Sampel: **CPM Basecamp CPM**
 Nama Analisa: **Analisa Kualitas Air**
 Parameter: **Analisa Kualitas Air**
 Jumlah Sampel: **1**

Parameter	Metode	Unit	Nilai	Standar	Unit	High	Low
Analisa Kualitas Air							
Analisa Fisik							
Total Suspended Solids (TSS)	APHA (2470)	mg/L	15	50	mg/L	5	10
Oil & Grease	APHA (8000)	mg/L	11	100	mg/L	5	5
Analisa Kimia							
Chemical Oxygen Demand (COD)	APHA (5210)	mg/L	37	100	mg/L	5	10
Biochemical Oxygen Demand (BOD)	APHA (5210)	mg/L	21	100	mg/L	5	10
Total Phosphorus (TP)	APHA (4450)	mg/L	3	10	mg/L	5	10
Analisa Biologi							
Ammonia Nitrogen	APHA (4500)	mg/L	0.05	1.0	mg/L	5	10

Catatan: Semua hasil analisis di atas adalah rata-rata dari tiga sampel yang diambil pada saat pengambilan sampel.
 * 50% dari nilai maksimum.
 ** Nilai maksimum yang diperbolehkan untuk limbah domestik.
 *** Nilai maksimum yang diperbolehkan untuk limbah domestik.



PT. ANUGRAH ANALISIS SEMPURNA
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 Jl. Raya Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3, Blok D
 Blok D, Jl. Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3, Blok D
 No. Telp: 0811 775 1111



ANUGRAH ANALISIS SEMPURNA
 PT. ANUGRAH ANALISIS SEMPURNA
 Jl. Raya Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3, Blok D
 Blok D, Jl. Garuda 18-11-3, Blok 18-11-3, Lantai 18, Gedung 18-11-3, Blok D
 No. Telp: 0811 775 1111

Nama Proyek: **LAPORAN HASIL PENGALAMAN**
 Lokasi: **LAPORAN HASIL PENGALAMAN**
 Tanggal Pengambilan Sampel: **11/12/2019**
 Lokasi Pengambilan Sampel: **LAPORAN HASIL PENGALAMAN**
 Nama Analisa: **Analisa Kualitas Air**
 Parameter: **Analisa Kualitas Air**
 Jumlah Sampel: **1**

No.	No. Sampel	Nama Sampel	Persentase (%)	PH	Warna	Bau	Analisa Fisik	Analisa Kimia
1	001/2019	Wastewater Basecamp CPM	100	6.5	100	100	100	100

Catatan: Semua hasil analisis di atas adalah rata-rata dari tiga sampel yang diambil pada saat pengambilan sampel.
 * 50% dari nilai maksimum.
 ** Nilai maksimum yang diperbolehkan untuk limbah domestik.
 *** Nilai maksimum yang diperbolehkan untuk limbah domestik.

Environmental – Power Plant

Ambient Air Quality, December 2019

No.	Parameter	GR 41/1999 (µg/m ³)	WHO AQ (µg/m ³)	AQ-1				AQ-2				AQ-3					
				Jan-19	May-19	Sep-19	Dec-19	Jan-19	May-19	Sep-19	Dec-19	Jan-19	May-19	Sep-19	Dec-19		
1	SO ₂	800	500	<33	<33	<33	<33	<33	<33	<33	<33	<33	<33	<33	<33	<33	<33
2	O ₃	225	n/a	<24	<24	-	-	<24	<24	-	-	<24	<24	-	-	-	-
3	NO ₂	400	200	<18	<17	<17	<17	<18	<17	<17	<17	<18	<17	<17	<17	<17	<17
4	TSP	240	n/a	190	179	109	64	289	89	169	90	165	49	199	28		
5	Pb	2	n/a	<0.6	<0.31	<0.01	<33	<0.6	<0.01	<0.01	<33	<0.6	<0.31	<0.01	<33		
6	CO	30,000	n/a	151	1.34	<114	<1,140	<114	<114	<114	<1,140	1.15	<114	<114	<1,140		
7	HG	180	n/a	<1.8	<95	-	<95	<1.8	<95	-	<95	<1.8	<95	-	<95		
8	PM _{2.5}	65	50	69	41	-	30	64	22	-	0	56	18	-	48		
9	PM ₁₀	160	25	111	67	52	62	170	39	36	12	91	27	136	18		

Quality Standards: RI Government Regulation No. 41 of 1999 on Air Pollution Control.

AQ-1 Coordinate: 00°50'57.8"N, 101°51'51.8"E (Settlement in Tanah Negeri Village)

AQ-2 Coordinate: 00°30'37.4"N, 101°30'37.6"E (Settlement in Hutan Lembang Village)

AQ-3 Coordinate: 00°51'48.8"N, 101°29'38.2"E (Settlement in Industri Tanjung Village)

Environmental – Power Plant

Surface Water Quality, December 2019 (partial result)

No.	Parameter	Unit	Limit Standard	SW-1				SW-2				SW-3				SW-4			
				Q12/19	Q22/19	Q32/19	Q42/19	Q12/19	Q22/19	Q32/19	Q42/19	Q12/19	Q22/19	Q32/19	Q42/19	Q12/19	Q22/19	Q32/19	Q42/19
Physical																			
1	Temperature (°C)	°C	400	145	147	64	178	31	338	50	31	33	160	51	36	99	110	30	69
2	pH-Value	pH	6-9	7.99	8.29	8.24	8.12	8.16	8.28	8.25	8.08	8.1	8.50	8.85	8.71	8.62	8.72	8.98	8.88
3	Electrical Conductivity	µS	27.9	28.9	32.1	25.3	22	22.5	30.5	28.2	28.7	28.7	3-3	27.8	22.8	28.5	31.8	27.8	
Organic																			
4	BOD	mg/L	5	<2	<2	8	<2	<2	3	4	<2	<2	<2	4	<2	<2	<2	8	
5	COD	mg/L	50	6	21	8	24	16	28	21	18	12	40	45	19	14	24	40	22
6	Oil and Grease	mg/L	1	< 1,000	< 1	NA	1,000	< 1	< 1	NA	< 1,000	< 1	< 1	NA	< 1,000	< 1	< 1	NA	
7	Nitrite-N	mg/L	50	0.068	0.007	0.456	0.318	0.20	0.500	0.348	0.345	0.287	0.140	0.493	0.168	0.54	0.153	1.8	1.88
8	Nitrate-N	mg/L	0.05	0.017	0.017	0.184	0.047	0.027	0.012	0.017	0.034	0.033	0.032	0.154	0.033	0.043	0.028	0.072	0.022
9	Ammonia-N	mg/L	-	0.2	0.08	0.19	0.34	0.24	0.06	0.41	4.18	0.22	0.37	0.30	4.15	0.28	0.33	0.25	0.15
10	Phosphate	mg/L	1.5	< 0.1	0.2	0.2	0.2	< 0.1	< 0.1	0.2	0.2	< 0.1	0.1	0.2	0.2	< 0.1	0.1	< 0.1	0.2
11	Dissolved Oxygen (%)	mg/L	0.05	< 0.004	< 0.004	< 0.010	NA	< 0.004	< 0.004	< 0.010	NA	< 0.004	< 0.004	< 0.010	NA	< 0.004	< 0.004	< 0.010	NA
12	Boron	mg/L	1	< 0.04	0.024	0.187	NA	0.02	0.028	0.023	NA	< 0.04	0.024	0.031	NA	0.38	0.045	0.023	NA
13	Zinc	mg/L	0.05	< 0.02	0.018	0.004	NA	< 0.02	0.023	0.02	NA	< 0.02	0.018	0.024	NA	< 0.02	0.018	0.012	NA
Microbiology																			
14	Total Coliform	MPN/100 ml	10,000	493	751	240	1888	< 1.8	1,800	130	178	< 1.8	800	79	1888	< 1.8	3,300	79	138

Area: 10m x 10m x 2m
 All Results are based on results for 2019 in the Water Resources and Quality Monitoring Unit
 1. 2019 Water Quality Data for 2019-2019
 2. 2019 Water Quality Data for 2019-2019
 3. 2019 Water Quality Data for 2019-2019
 4. 2019 Water Quality Data for 2019-2019

Social

- This social survey provides snapshot of general community perception.

1st Survey (gas pipeline)

- 5 – 7 Nov 2019
- 70 respondents
- 7 villages:
 - Industri Tenayan
 - Tualang Timur
 - Tuah Negeri
 - Meredan
 - Kuala Gasib
 - Melebung
 - Pinang Sebatang

2nd Survey (power plant and transmission line)

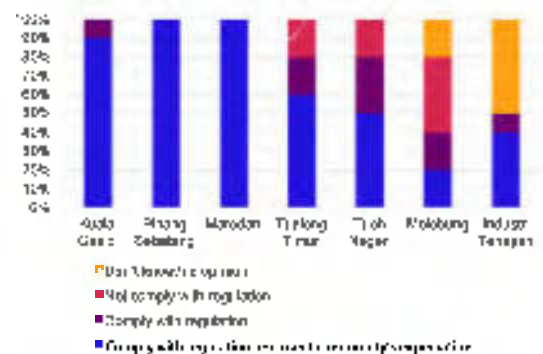
- 16 – 23 Dec 2019
- 30 respondents
- 3 villages:
 - Bencah Lesung
 - Industri Tenayan
 - Tuah Negeri

- Key discussion point: stakeholder engagement, recruitment, grievance, business opportunity and community development.

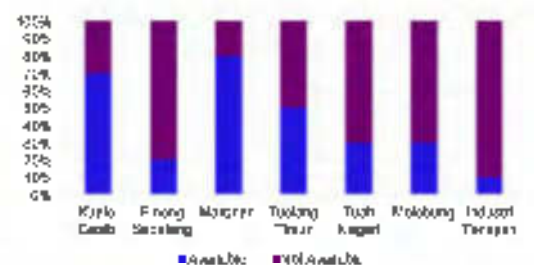
Social - Gas Pipeline

- Generally positive community perception
- 66% find that land acquisition process complies with regulation and meets their expectation
- 59% are not aware of recruitment opportunities
- Three main grievances:
 1. Recruitment is not transparent
 2. A request to repair the road along the gas pipeline
 3. Lack of communication with local authorities
- Communication to village authorities is needed to spread recruitment info and make sure recruitment transparency
- Follow up with Melebung PAHs is needed to confirm their vulnerability status

Perception of Land Acquisition Process

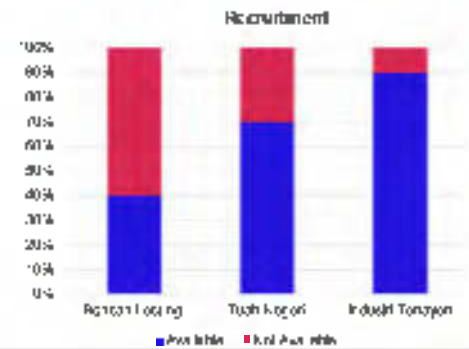
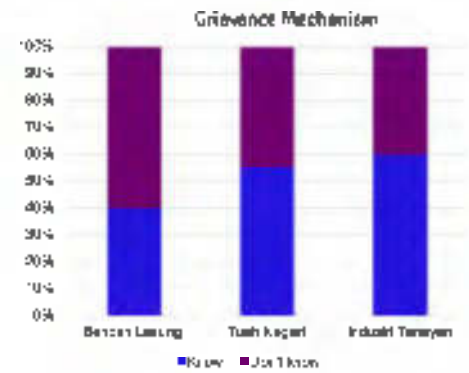


Recruitment



Social - Power Plant and Transmission Line

- Generally positive community perception
- Regular meetings with the affected communities
- 53% of communities know grievance mechanisms
- Submitted grievances are recorded and responded to
- 67% of communities are aware of recruitment opportunities
- Limited work opportunities for women
- Communities are benefiting from renting accommodation, selling food and amenities to construction workers
- Little community involvement
- Simpler and more transparent recruitment is needed
- Skills training for community has yet to take place.
- Program requested by community includes: health education, economic development and social program



LABORATORY ANALYSIS REPORT

Report Number : QSL1912070
Number of Pages : 2 Including Cover
Sample(s) Description : Ambient Air
Customer Sample(s) Identity : AQ-1 Jalur Pipa Kp12- Kp13, AQ-7 Jalur Pipa Kp 0, AQ-3 Jalur Pipa Kp 09
Sampled by : Laboratory Customer
Date of Sample(s) Reception : December 04, 2019
Date of Analysis Finished : December 19, 2019
Customer Name : PT Nusa Buana Cipta
Customer Category : Company Government Institution School/University
 Private Individual Others
Customer Address : Jl. Tebet Utara 1B No.3 Jakarta 12870
Customer Contact Person : Mr. Budi Prasetyo
Report On : Pemantauan UKL JPL Pipa Gas MRPR Tenayan Tahap Konstruksi
Attention : PT Medco Ratch Power Riau – JGI

Authorized by,

Yadi Bachtar, S.Si
Technical Manager
December 19, 2019

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* (1) is sign for substracted test parameter; * (2) is sign for non accredited test parameter or test parameter become unaccredited due to different sample matrix; * (3) is sign for air sample reporting result unit, ppm= (mg/Nm³ value)/(24,45/Molecular weight); * (4) is sign for parameter related to sample(s) taken by other party as described in point a; * (5) is sign for parameter related to sample(s) taken not in accordance with the stated method as described in point a; (6) is sign for in situ test parameter; * NA mean Not Available or Not Applicable

LABORATORY ANALYSIS REPORT

Laboratory Sample ID	OSL1912020-1	OSL1912020-2	OSL1912020-3				
Customer Sample ID	AQ-1 Jalur Pipa Kp12 - Kp13	AQ-2 Jalur Pipa Kp 0	AQ-3 Jalur Pipa Kp 09				
Matrix	Ambient Air	Ambient Air	Ambient Air				
Date of Sampling	27-11-2019	28-11-2019	29-11-2019				
Time of Sampling	12.30 WIB	13.45 WIB	16.00 WIB				
Sampling Point Coordinates	N: 00°36'49,79"; E: 101°38'45,72"	N: 00°38'37,85"; E: 101°43'27,68"	N: 00°37'52,81"; E: 101°39'38,48"				
Temperature at Sampling Point (°C)	36,0	34,3	36,3				
Humidity at Sampling Point (%RH)	49,3	55,3	48,1				
Windspeed at Sampling Point (m/s)	0,9	0,3	0,3				
Atmospheric Pressure at Sampling Point (mmHg)	750	752	750				
Wind Direction	Fast to West	South to North	South to North				
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Det. Limit	Reg. Limit	Result	Result	Result
Sulphur Dioxide	SNI 19-7119.1-2005	µg/Nm ³	33	900*	<33	<33	<33
Nitrogen Dioxide (E)	SNI 19-7119.2-2005	µg/Nm ³	17	400*	<17	<17	<17
Carbon Monoxide (E)	SNI 7119.10-2011	µg/Nm ³	1.140	30.000*	<1.140	<1.140	<1.140

Laboratory Sample ID	OSL1912020-1	OSL1912020-2	OSL1912020-3				
Customer Sample ID	AQ-1 Jalur Pipa Kp12 - Kp13	AQ-2 Jalur Pipa Kp 0	AQ-3 Jalur Pipa Kp 09				
Matrix	Ambient Air	Ambient Air	Ambient Air				
Date of Sampling	27-11-2019 to 28-11-2019	28-11-2019 to 29-11-2019	29-11-2019 to 30-11-2019				
Time of Sampling	12.30 - 12.30 WIB (24 Hours)	13.45 - 13.45 WIB (24 Hours)	16.00 - 16.00 WIB (24 Hours)				
Sampling Point Coordinates	N: 00°36'49,79"; E: 101°38'45,72"	N: 00°38'37,85"; E: 101°43'27,68"	N: 00°37'52,81"; E: 101°39'38,48"				
Temperature at Sampling Point (°C)	27,9	28,2	28,4				
Humidity at Sampling Point (%RH)	89,0	84,1	79,7				
Windspeed at Sampling Point (m/s)	0,4	0,3	0,3				
Atmospheric Pressure at Sampling Point (mmHg)	752	754	752				
Wind Direction	East to West	East to West	West to East				
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Det. Limit	Reg. Limit	Result	Result	Result
Total Suspended Particulates	SNI 19-7119.3-2005	µg/Nm ³	2	730*	145	40	68
Lead	SNI 19-7119.4-2005	µg/Nm ³	0,01	2*	<0,01	<0,01	<0,01
Particulate Matter (PM 10)	ASIM U4069 (2003)	µg/Nm ³	2	150*	84	23	36
Particulate Matter (PM 2.5)	ASTM D4069 (2003)	µg/Nm ³	2	65*	35	10	18

(*) Regulation Limit Refer to PP 41/1999

Reported Quality Control				
<i>We show only part of the whole quality control parameters that we have done. All quality control parameters that we did already meet the requirements. Figures shown in blank sample column indicate Detection Limit (DL).</i>				
Parameter(s) of Analysis	Coefficient Correlation	Verification Standard/CRM (% Recovery)	Standard Spike to Sample (% Recovery)	Replicate (% RPD)
Sulphur Dioxide	1,000	100	NA	NA
Nitrogen Dioxide	0,9998	NA	NA	NA
Lead	0,9990	95	B7	1,6



Certificate No. C1243/AL/ALAN
Date: June 23, 2020



Assessing Office
Jl. Jend. A. Yani No. 79, Tanahbaru 25115, Indonesia
Phone/Fax: +62 751 35061/3449704
Email: cs.pro@sucofindo.com

REPORT OF SAMPLING AND ANALYSIS

PRINCIPAL : NUSA BUANA CIPTA, PT
Jl. Tebet Utara 15 No 3 Jakarta 12820

SUBJECT : AIR AMBIENT

RECEIVED DATE : 08/06/2020

REFERENCE : 288/WADM 02/NSC/LAB/2020 dated 20/05/2020

TESTED FOR : **Air Ambient:**
Carbon Monoxide (CO), Sulfur Dioxide as SO₂, Nitrogen Dioxide as NO₂, Total Suspended Particulate (TSP), Lead (Pb), Hydrocarbon (HC), PM10 (Particle < 10 µm), PM2.5 (Particle < 2.5 µm)
♦ Comply to The Republic Indonesia Government Regulation No. 41/1998

SAMPLE DESCRIPTION : Sample was drawn by Sucofindo Laboratory dated on 05/06/2020 up to 08/06/2020

SAMPLING LOCATION : Jaur Pida PLTGJ TENAYAN
AQ4 - Decan Site Project PLTGJ Riau 275 MW Kelurahar Industri Tenayan, Kecamatan Tenayan Raya
Coordinate : N. 00°31'37.00" | E. 101°31'17.70"

ANALYSIS DATE : 08/06/2020 up to 22/06/2020

The attachment available is an integral part of this certificate

This test result(s) is/are related to the sample(s) submitted only and the report/certificate cannot be reproduced in any way, except in full context, with the prior approval in writing from Sucofindo Laboratory

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Dept. of Commercial 1


Utoyo Widagdo

1831012003488



3497462

301-2007A

REPORT OF SAMPLING AND ANALYSIS

Results :

Sampling Location : AQ4: Depan Site Project PLTGU Riau 275 MW Keurahan Industri Tenayan, Kecamatan Tenayan Raya

Coordinate : N 00°31'37.00" ; E. 101°31'17.70"

Sampling Date : 05/06/2020 to 06/06/2020

Sampling Method : SNI. 19-7119.6-2005 : Penentuan Lokasi Pengambilan Contoh Uji Pemantauan Kualitas Udara Ambient.

Parameter	Unit	Test Results	Threshold Limit Value #)	Methods Part Number
Nitrogen Dioxide (NO ₂)	µg/Nm ³	32.2	400	SNI 19-7119.2-2005
Sulfur Dioxide (SO ₂)	µg/Nm ³	21.4	900	SNI 19-7119.7-2005
Hydrocarbon (HC)	µg/Nm ³	<8	160	108*)
Carbon Monoxide (CO)	µg/Nm ³	1257	30000	SNI 7119.10-2011
Total Suspended Particulate (TSP)	µg/Nm ³	65.3	230	SNI 19-7119.3-2005
Lead (Pb)	µg/Nm ³	<0.01	2	SNI 19-7119.4-2005
PM10 (Particle <10 µm)	µg/Nm ³	41.5	150	SNI 19-7119.15-2005
PM2.5 (Particle <2.5 µm)	µg/Nm ³	26.9	65	SNI 19-7119.14-2005

Weather Conditions :

Temperature	°C	27
Humidity	%	65
Wind Direction	-	West to East
Wind Speed	m/s	0.2-1.8
Weather	-	Bright-Rain
Pressure	mmHg	760.0

<# Less than the detector limit indicates

#; Government Regulation Republic Indonesia No. 41/1996

*) Method of Air Sampling and Analysis, 3rd Edition 1996 (AMWA-ACS-A/CHE-APWA-SME-ACAS-DPS-ISA);



1632026

LABORATORY ANALYSIS REPORT

Report Number : QSL1917106
Number of Pages : 2 Including Cover
Sample(s) Description : Ambient Air
Customer Sample(s) Identity : AQ-1 to AQ-3
Sampled by : Laboratory Customer
Date of Sample(s) Reception : December 23, 2019
Date of Analysis Finished : January 09, 2020
Customer Name : PT Nusa Buana Cipta
Customer Category : Company Government Institution School/University
 Private Individual Others
Customer Address : Jl. Tebet Utara 1B No.3 Jakarta 12870
Customer Contact Person : Mr. Budi Prasetyo
Report On : Pemantauan Lingkungan AMDAL PLTGU Riau Tahap Konstruksi
Attention : PT Medco Ratch Power Riau – IGI

Authorized by,

Yadi Bachtjar, S.Si
Technical Manager
January 09, 2020

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LABORATORY ANALYSIS REPORT

Laboratory Sample ID	OSL1912106-1	OSL1912106-2	OSL1912106-3				
Customer Sample ID	AQ-1	AQ-7	AQ-3				
Matrix	Ambient Air	Ambient Air	Ambient Air				
Date of Sampling	16-12-2019	17-12-2019	18-12-2019				
Time of Sampling	10.00 WIR	11.00 WIR	17.00 WIR				
Sampling Point Coordinate	N: 0°32'57,60"; E: 101°31'51,6"	N: 0°32'57,60"; E: 101°30'57,6"	N: 0°31'51,60"; E: 101°29'38,4"				
Temperature at Sampling Point (°C)	37,7	31,4	33,8				
Humidity at Sampling Point (RH)	63,4	66,1	69,1				
Windspeed at Sampling Point (m/s)	0,6	1,6	1,3				
Atmospheric Pressure at Sampling Point (mmHg)	754	754	756				
Wind Direction	South to North	South to North	North to South				
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Uec. Limit	Reg. Limit	Result	Result	Result
Sulphur Dioxide	SN1 19-7119.7-2005	µg/Nm ³	33	900*	<33	<33	<33
Nitrogen Dioxide (5)	SN1 19-7119.7-2005	µg/Nm ³	17	400*	<17	<17	<17
Carbon Monoxide (6)	SN1 7119.10 2011	µg/Nm ³	1.140	30.000*	<1.140	<1.140	<1.140
Hydrocarbons	NIOSH 1500 (2003)	µg/Nm ³	33	100*	<33	<33	<33

Laboratory Sample ID	OSL1912106-1	OSL1912106-7	OSL1912106-3				
Customer Sample ID	AQ 1	AQ 2	AQ 3				
Matrix	Ambient Air	Ambient Air	Ambient Air				
Date of Sampling	16-12-2019 to 17-12-2019	17-12-2019 to 18-12-2019	18-12-2019 to 19-12-2019				
Time of Sampling	10.00 - 10.00 WIR	11.00 - 11.00 WIR	17.00 - 17.00 WIR				
Sampling Point Coordinate	N: 0°32'57,60"; E: 101°31'51,6"	N: 0°32'57,60"; E: 101°30'57,6"	N: 0°31'51,60"; E: 101°29'38,4"				
Temperature at Sampling Point (°C)	30,4	29,8	30,2				
Humidity at Sampling Point (RH)	63,4	66,2	69,1				
Windspeed at Sampling Point (m/s)	0,6	1,6	1,3				
Atmospheric Pressure at Sampling Point (mmHg)	754	755	753				
Wind Direction	South to North	South to North	North to South				
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Uec. Limit	Reg. Limit	Result	Result	Result
Total Suspended Particulate	SN1 19-7119.3-2005	µg/Nm ³	2	230*	34	30	28
Lead	SN1 19-7119.4-2005	µg/Nm ³	0,01	2*	<0,01	<0,01	<0,01
Particulate Matter (PM 10)	ASTM D4069 (2003)	µg/Nm ³	2	150*	62	12	19
Particulate Matter (PM 2.5)	ASIM U4069 (2003)	µg/Nm ³	2	60*	30	9	16

(*) Regulation Limit Refer to PP 41/1999

Reported Quality Control				
<i>We show only part of the whole quality control parameters that we have done.</i>				
<i>All quality control parameters that we did already meet the requirements. Figures shown in blank sample column indicate Detection Limit (DL).</i>				
Parameter(s) of Analysis	Confident Conclusion	Verification Standard/CRM (% Recovery)	Standard Spike to Sample (% Recovery)	Heplicate (% RPD)
Sulphur Dioxide	0,9997	102	NA	NA
Nitrogen Dioxide	0,9998	NA	NA	NA
Lead	0,9990	104	53	7,4
Hydrocarbons	0,9999	114	114	0,6

LABORATORY ANALYSIS REPORT

Report Number : OSL2003036
Number of Pages : 2 Including Cover
Sample(s) Description : Ambient Air
Customer Sample(s) Identity : AQ-1, AQ-2, AQ-3
Sampled by : Laboratory Customer
Date of Sample(s) Receipt on : March 06, 2020
Date of Analysis Finished : March 23, 2020
Customer Name : PT Nusa Buana Cipta
Customer Category : Company Government Institution School/University
 Private Individual Others
Customer Address : J. Tebet Utara TB No.3 Jakarta 12820
Customer Contact Person : Mr. Budi Prasetyo
Report On : Pemantauan Lingkungan AMDAL PUSU Riau Tahap Konstruksi Triwulan I tahun 2020
Attention : PT. Medco Ratch Power Riau-JSI

Authorized by,



Yadi Budhilar, S.Si
Technical Manager
March 23, 2020

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• (1) is sign for subcontracted test parameter; • (2) is sign for non accredited test parameter or test parameter become unaccredited due to different sample matrix; • (3) is sign for air science reporting result unit, ppm = (ng/m³ x value(24,45/molecular weight)); • (4) is sign for parameter related to sample(s) taken by other party as demanded in point c; • (5) is sign for parameter related to sample(s) taken not in accordance with the stated method as described in point c; (6) is sign for in situ test parameter; • NA mean Not Available or Not Applicable

LABORATORY ANALYSIS REPORT

Laboratory Sample ID	US_2003036-1	USL2003036-2	OS17002035-3				
Customer Sample ID	AQ-1	AQ-2	AQ-3				
Matrix	Ambient Air	Ambient Air	Ambient Air				
Date of Sampling	04-03-2020	05-03-2020	05-03-2020				
Time of Sampling	09:30 WIB	09:30 WIB	10:00 WIB				
Sampling Point Coordinate	N: 0°30'57,00" E: 101°31'51,5"	N: 0°30'57,00" E: 101°30'57,0"	N: 0°31'51,60" E: 101°29'38,4"				
Temperature at Sampling Point (°C)	26,4	27,8	30,5				
Humidity at Sampling Point (%RH)	45,3	29,6	66,1				
Wind speed at Sampling Point (m/s)	0,8	0,7	0,3				
Atmospheric Pressure at Sampling Point (mmHg)	756	754	756				
Wind Direction	North to South	North to South	North to South				
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Det. Limit	Req. Limit	Result	Result	Result
Sulphur Dioxide	SNI 19-7119.7 2005	µg/Nm ³	33	900*	<33	<33	<33
Nitrogen Dioxide (NO ₂)	SNI 19-7119.2 2005	µg/Nm ³	17	400*	<17	<17	<17
Carbon Monoxide (CO)	SNI 7:29.10 2012	µg/Nm ³	1.140	30.000*	1.140	<1.140	<1.140
Hydrocarbons	NIOSH 1500 (2009)	µg/Nm ³	33	160*	<33	<33	<33
Ozone (O ₃)	SNI 19-7116.8 2005	µg/Nm ³	34	210*	<34	<34	<34

(*): Regulation Limit Refer to PPR No. 41 Tahun 1999

Reported Quality Control

We know only part of the whole quality control parameters that we have done.

All quality control parameters that we are already meet the requirements. Figures shown in blank sample column indicate Detection Limit (DL).

Parameter(s) of Analysis	Coefficient Correlation	Verification Standard/CRM (% Recovery)	Standard Spike to Sample (% Recovery)	Replicate (% RPD)
Hydrocarbons	0,998%	95	93	3,16

LABORATORY ANALYSIS REPORT

Report Number : OSL2005036a
Number of Pages : 2 Including Cover
Sample(s) Description : Ambient Air
Customer Sample(s) Identity : AQ-1, AQ-2, AQ-3
Sampled by : Laboratory Customer
Date of Sample(s) Reception : March 06, 2020
Date of Analysis Finished : March 23, 2020
Customer Name : PT Nusa Buana Cipta
Customer Category : Company Government Institution School/University
 Private Individual Others
Customer Address : Jl. Tebel Utara 1B No.3 Jakarta 12820
Customer Contact Person : Mr. Bud Prasetyo
Report On : Penantauan Lingkungan AMDAL PLTGU Riau Tahun Konstruksi Triwulan I tahun
2020
Attention : PT. Medco Batch Power Riau-JCI

Authorized by:

Yadi Bachtiar, S.Si
Technical Manager
March 23, 2020**Terms and Conditions**

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* (1) is sign for subcontracted test parameter; * (2) is sign for non accredited test parameter or test parameter become unaccredited due to different sample matrix; * (3) is sign for air sample reporting result unit, ppm- (mg/m³ value)/(24,45/Molecular weight); * (4) is sign for parameter related to sample(s) taken by other party as described in point d; * (5) is sign for parameter related to sample(s), taken not in accordance with the stated method as described in point d; (6) is sign for in situ test parameter; * NA mean Not Available or Not Applicable

LABORATORY ANALYSIS REPORT

Laboratory Sample ID	OS_20200366-4	OS_20200366-2	OS_20200366-3				
Customer Sample ID	AQ_2	AQ_2	AQ_3				
Matrix	Ambient Air	Ambient Air	Ambient Air				
Date of Sampling	04-08-2020 to 05-08-2020	05-08-2020 to 06-08-2020	06-08-2020 to 07-08-2020				
Time of Sampling	09.00 to 19.00 WIB	08.30 to 09.30 WIB	10.00 to 10.00 WIB				
Sampling Point Coordinate	N: 0°30'57.80" E: 101°11'31.0"	N: 0°30'57.80" E: 101°10'37.8"	N: 0°31'51.80" E: 101°10'38.2"				
Temperature at Sampling Point (°C)	30,3	29,4	29,3				
Humidity at Sampling Point (%RH)	71,1	78,5	76,6				
Wind speed at Sampling Point (m/s)	0,3	0,3	0,3				
Atmospheric Pressure at Sampling Point (mmHg)	756	756	756				
Wind Direction	North to South	North to South	North to South				
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Det. Limit	Reg. Limit	Result	Result	Result
Total Suspended Particulates	SN 15-7119.4 2005	µg/Nm ³	2	230*	88	24	13
Lead	SN 15-7119.4 2005	µg/Nm ³	<0,01	2*	<0,01	<0,01	<0,01
Particulate Matter (PM 10)	ASTM D4069 (2003)	µg/Nm ³	2	150*	33	20	8
Particulate Matter (PM 2,5)	ASTM D4069 (2003)	µg/Nm ³	2	65*	22	5	5

[*] Regulation Limit Refer to PPB No. 41 Tahun 1999

Reported Quality Control				
We show only part of the whole quality control parameters that we have done.				
All quality control parameters that we did directly meet the requirements. Figures shown in blank sample column indicate Detection Limit (DL).				
Parameter(s) of Analysis	Coefficient Correlation	Verification Standard/CPU (% Recovery)	Standard Spike to Sample (% Recovery)	Replicate (% RPD)
Lead	0,9951	98	100	2,54



Certificate No: 01242/ALAIAN
Date: June 23, 2020



SUCOFINDO

Testing Office
Jl. Jend. A. Yani No. 33, Pekayoran Jaya, Jakarta 12130, Indonesia
Phone/Fax: +62 201 3168144/139
Email: cs_pkj@sucofindo.co.id

REPORT OF SAMPLING AND ANALYSIS

PRINCIPAL : NUSA BUANA CIPTA, PT
Jl. Tebet Utara 1B No. 3 Jakarta 12820

SUBJECT : AIR AMBIENT

RECEIVED DATE : 08/06/2020

REFERENCE : 296/WADM 02/NBC/LAB/2020 dated 20/05/2020

TESTED FOR : **Air Ambient:**
Carbon Monoxide (CO), Sulfur Dioxide as SO₂, Nitrogen Dioxide as NO₂, Total Suspended Particulate (TSP), Lead (Pb), Hydrocarbon (HC), PM10 (Particle <10 µm), PM2.5 (Particle <2.5 µm)
• Comply to The Republic Indonesia Government Regulation No. 41/1999

SAMPLE DESCRIPTION : Sample was drawn by Sufindo Laboratory dated on 02/06/2020 up to 05/06/2020

SAMPLING LOCATION : P. TSU TENAYAN
Details see to file attachment

ANALYSIS DATE : 08/06/2020 up to 22/06/2020

The attachment available is an integral part of this certificate

This test result is only related to the sample(s) submitted only and the report/finding cannot be reproduced in extent in any way, except in full contact with the prior approval in writing from Sufindo Laboratory

This Certificate is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at www.sucofindo.co.id

Dept. of Commercial 1


Utoyo Widagdo

1501012000489



3497461

501-2017A



Attachment
To Certificate No. C1242/ALAIAN
Date: June 23, 2020

Page 1 of 4

Issuing Office
Jl. Jend. A. Yani No. 78 Pekanbaru 28115 Indonesia
Phone/Fax: +62 761 35681848729
Email: cs.pku@sucofindo.co.id

REPORT OF SAMPLING AND ANALYSIS

A. Sampling Location, Coordinate, Sampling Date

No.	Sampling Location	Coordinate	Sampling Date
1	AQ1: Permukiman Penduduk Kelurahan Tuah Negeri Kecamatan Tenayan Raya – PLTGU Tenayan	N. 00°30'57.60" ; E. 101°31'51.50"	02/06/2020 to 03/06/2020
2	AQ2: Permukiman Penduduk Kelurahan Bencah Lesung, Kecamatan Tenayan Raya – PLTGU Tenayan	N. 00°30'57.60" ; E. 101°30'57.60"	03/06/2020 to 04/06/2020
3	AQ3: Permukiman Penduduk Kelurahan Industri Tenayan Kecamatan Tenayan Raya – PLTGU Tenayan	N. 00°31'51.60" ; E. 101°29'38.40"	04/06/2020 to 05/06/2020



1632022

SCI-2007P

REPORT OF SAMPLING AND ANALYSIS

B. Results :

Sampling Location	:	AG 11 Perumahan Penduduk Kelurahan Lurah Negeri Kecamatan Terayan Raya – PLIGU Tenayan
Coordinates	:	N: 00°30'57.60" E: 101°31'51.80"
Sampling Date	:	02/06/2020 to 03/06/2020
Sampling Method	:	SNI 19-7119.6-2005: Penentuan Lokasi Pengambilan Contoh Uji Pemantauan Kualitas Udara Ambient

Parameter	Unit	Test Results	Threshold Limit Value #)	Methods Part Number
Nitrogen Dioxide (NO ₂)	µg/Nm ³	21.3	400	SNI 19-7119.2-2005
Sulfur Dioxide (SO ₂)	µg/Nm ³	20.5	900	SNI 19-7119.7-2005
Hydrocarbon (HC)	µg/Nm ³	<8	160	108 ^{a)}
Carbon Monoxide (CO)	µg/Nm ³	685.7	20000	SNI 7119.10-2011
Total Suspended Particulate (TSP)	µg/Nm ³	40.2	230	SNI 19-7119.3-2005
Lead (Pb)	µg/Nm ³	<0.01	2	SNI 19-7119.4-2005
PM10 (Particle < 10 µm)	µg/Nm ³	25.6	150	SNI 19-7119.15-2005
PM2.5 (Particle < 2.5 µm)	µg/Nm ³	19.4	65	SNI 19-7119.14-2005

Weather Conditions :

Temperature	°C	30
Humidity	%	65
Wind Direction	-	West to East
Wind Speed	m/s	0.2-1.2
Weather	-	Bright
Pressure	mmHg	760.2

a) Less than the detection limit is stated

b) Government Regulation (Keputusan) No. 41/1989

c) Method of Air Sampling and Analysis, 3rd Edition 1995 (AMVA-005-A-CR6-NPWA-ASV-4014-0116-95)



1632023

REPORT OF SAMPLING AND ANALYSIS

Sampling Location : AQ2: Permukiman Penduduk Kelurahan Bencah Lesung,
Kecamatan Tenayan Raya – PLTGU Tenayan

Coordinates : N. 00°30'57.60" . E 101°30'57.60"

Sampling Date : 03/06/2020 to 04/06/2020

Sampling Method : SNI 19-7119.5-2005 : Penentuan Lokasi Pengambilan Contoh Uji;
Pemantauan Kualitas Udara Ambien

Parameter	Unit	Test Results	Threshold Limit Value #)	Methods Part Number
Nitrogen Dioxide (NO ₂)	µg/Nm ³	16.6	400	SNI 19-7119.2-2005
Sulfur Dioxide (SO ₂)	µg/Nm ³	16.3	900	SNI 19-7119.7-2005
Hydrocarbon (HC)	µg/Nm ³	<8	160	105 ^{*)}
Carbon Monoxide (CO)	µg/Nm ³	228.6	30000	SNI 7119.10-2011
Total Suspended Particulate (TSP)	µg/Nm ³	38.6	230	SNI 19-7119.3-2005
Lead (Pb)	µg/Nm ³	<0.01	2	SNI 19-7119.4-2005
PM10 (Particle <10 µm)	µg/Nm ³	20.1	150	SNI 19-7119.5-2005
PM2.5 (Particle <2.5 µm)	µg/Nm ³	14.6	65	SNI 19-7119.4-2005

Weather Conditions :

Temperature	°C	31
Humidity	%	67
Wind Direction	-	West to East
Wind Speed	m/s	0.4-1.2
Weather	-	Bright
Pressure	mmHg	760.4

<= Less than the detection limit indicated

#) Government Regulation Resub of Indonesia No. 11/1999

*) Method of Air Sampling and Analysis, 3rd Edition, 1998 (AMVA-ACS/ACHC/APWA-ASME-ACAC-DPS-ISA)



1632024

801-2007P

REPORT OF SAMPLING AND ANALYSIS

Sampling Location : AQ3: Permukiman Penduduk Kelurahan Industri Tenayan,
Kecamatan Tenayan Raya – PLTGU Tenayan
Coordinate : N. 00°31'51.60" ; E. 101°29'38.40"
Sampling Date : 04/06/2020 to 05/06/2020
Sampling Method : SNI. 19-7119.6-2005. Penentuan Lokasi Pengambilan Contoh Uji
Pemantauan Kualitas Udara Ambien.

Parameter	Unit	Test Results	Threshold Limit Value #)	Methods Part Number
Nitrogen Dioxide (NO ₂)	µg/Nm ³	16.7	400	SNI 19-7119.2-2005
Sulfur Dioxide (SO ₂)	µg/Nm ³	18.3	900	SNI 19-7119.7-2005
Hydrocarbon (HC)	µg/Nm ³	<8	160	108 ^{*)}
Carbon Monoxide (CO)	µg/Nm ³	114.3	30000	SNI 7119.10-2011
Total Suspend Particulate (TSP)	µg/Nm ³	36.4	230	SNI 19-7119.3-2005
Lead (Pb)	µg/Nm ³	<0.01	2	SNI 19-7119.4-2005
PM10 (Particle <10 µm)	µg/Nm ³	22.4	150	SNI 19-7119.15-2005
PM2.5 (Particle <2.5 µm)	µg/Nm ³	13.6	65	SNI 19-7119.14-2005

Weather Conditions :

Temperature	°C	27
Humidity	%	70
Wind Direction	-	West to East
Wind Speed	m/s	0.4-1.8
Weather	-	Bright-Cloudy
Pressure	mmHg	760.0

<= Less than the detection limit indicated

#) Government Regulation Republic Indonesia No. 41/1999

*) Method of Air Sampling and Analysis, 3rd Edition, 1996 (AMWA-ACS-APC1E-APWA-A-SME-ACAC-DFS ISA)



1632025



Analytical Results

Sub-Matrix: WASTE WATER

Client Sample ID

WW01 DOMESTIK BASUKAN CPM

Laboratory Sample ID

JW1901690-001

Sample Description

N=003206.51; E=10135.41.0

PerMeasLIR No.
P 301Meas/Seljesi/ku 18201
6

Sampling Date/Time

06 Nov 2019 11:41

Compound	Method	LOQ	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Total Suspended Solids	APHA 2540 D	0.5	mg/L	3.7*	—	30	mg/L
In Situ Measurement							
pH - Field	APHA 4500-H	0.1	pH Unit	6.69	6	9	pH Unit
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	17.4	—	30	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	41	—	100	mg/L
Oil & Grease	APHA 5520 B	5	mg/L	<5	—	5	mg/L
Nitrite-N							
Ammonia as N	API-A 4500-NH3D	0.02	mg/L	0.10	—	1.0	mg/L

Note: Bold and italicized font is applied when the result is equal to or greater than the Guideline Limit.

- Key:
- LOQ = Limit of reporting
 - * = This result is computed from individual analyte detections at or above the level of reporting
 - = ALS is not accredited for these tests
 - ~ = Indicates an estimated value



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services



Jl. Raya Jakarta Bagas KM. 37, Rt 002/04, Grogol, Depok, Jawa Barat 16412
 Telp: 021-79629393-94, Fax: 021-29629395 Website: www.aaslabactory.com, Email: marketing@aalabactory.com
 A Member Of Saraswanti Sin.p

LAPORAN HASIL PENGUJIAN

No: AAS LHF XI 2019.3068

Nama Pelanggan: PT Nusa Buana Cipta
 Customer Name
 Parameter Analisa: Air Limbah Domestik
 Parameter

Tanggal Sampling: 08 November 2019
 Sampling Date
 Waktu Sampling: 11.4' WIB
 Sampling Time

No	No. Sample	Kode sample	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	011.0478	WWD-1 Domestik Basecamp CPM	Total Coliform	1700	3000	100ml	AP-HA 5221 B (APM)	

Keterangan:
 B Kadar Maksimum Mengacu Pada Permen LHK No F. 65/Men/Per/Sekjen/15/2019 Tentang Baku Mutu Air Limbah Domestik. Lampiran I
 Peraturan Menteri Lingkungan Hidup dan Kehutanan No. 15/2019/Men/LHK/Per/Sekjen

REPORT ON:
 Parameter Uji: UPL Faps Gas MPRR, Tembak, Tanpa Kondusasi

Analisa:
 PL Method Field Power - uau - JGI





Analytical Results

Substrate: WASTE WATER

Client Sample ID	WWS-1 EKMBRTJK BASF-CAMP-004		
Laboratory Sample ID	JN1900851-001		
Sample Description	SI 487927417 (S) 10153044 (P)	Procedures No P.68/Measur/Selipul/Gem.19/201 5	
Sampling Date/Time	06-Dec-2019 19:31		

Substrate	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Total Suspended Solids	APHA 2540 B	0.0	mg/L	92.9	—	30	mg/L
In Situ Measurement							
pH - Field	APHA 4500-04	8.1	pH Unit	7.25	6	8	-
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 D	2.0	mg/L	<0.0	—	30	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	<1.0	—	100	mg/L
Oil & Grease	APHA 5520 B	5	mg/L	4	—	5	mg/L
Nutrient							
Ammonia as N	APHA 4500-NH3D	0.02	mg/L	<0.02	—	10	mg/L

Low, High and Allowed Limit is applied where the result is equal to or greater than the Guideline Limit.

- Key:
- LOR = Limit of Reporting
 - ▲ = This result is computed from individual analyte detectors at or above the level of reporting
 - = AI 5 is not applicable for this test
 - ~ = Indicates an estimated value



LAPORAN HASIL PENGUJIAN
No: AAS.LHP.XII.2019.327

Nama Pelanggan: PT. Hesa Ratus Cipta
Customer Name:
Parameter / Analisa: Total Coliform
Parameter:

Tanggal Sampling: 01 Desember 2019
Sampling Date:
Waktu Sampling: 10.01 WIB
Sampling Time:

No.	No. Sample	Kode sampel	Parameter Uji	HASIL	Kadar Maksimum	Salinan	Metode Pengukuran	Keterangan
1	012 017*	AWW_2-1 Demasik Basacomp GPM	Total Coliform	240	3000	jumlah = 100ml	APM 15.8221 B APM	

Keterangan:
*Kadar maksimum terdapat pada Parameter: No. P. 85. Mutu Sampel Kurang dari 20% Tembakau atau Air Limbah Domestik Sampel ini
Kontaminasi melebihi angka yang diperbolehkan.

REPORT ON:
Pemeriksaan KUALITAS Air pada Sampel Air Perumahan Tembakau

Alamat:
PT Mecca Ratus Power Riau - LG



SARASWANTI



CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Field, Client Information, Laboratory Information, and Analysis Details. Includes fields like Work Order, Client, Contact, Address, E-mail, Telephone, Project, Order number, Issue Date, and Date Samples Received.

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. The analytical procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures...



Signatories

This laboratory is accredited under KOMITE AKREDITASI NASIONAL. The tests reported herein have been performed in accordance with laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below.

Table with 2 columns: Signatories and Position. Row 1: Riva Nurhafida, Laboratory Manager

Handwritten signature of Riva Nurhafida over the PT ALS Indonesia logo.



Analytical Results

Sample: **WASTE WATER**

Client Sample ID

Laboratory Sample ID

Sample Description

Sampling Date/Time

WWD-1 DOMESTIK BASECAMP GPM

JW2000294-001

N= 00°32'06.5" E
E= 101°35'44.3"

Per-MenLHK No.
D. 69/Menlhk/Satjen/Kem/19/201
E

31-Jan-2020 12:27

Component	Method	LOD	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
pH Value	APHA 4500-H	0.10	pH Unit	5.71	6	9	pH Unit
Total Suspended Solids	APHA 2540 D	0.5	mg/L	196	—	30	mg/L
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	58.0	—	30	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	122	—	100	mg/L
Oil & Grease	APHA 8620 B	5	mg/L	1	—	5	mg/L
Nutrient							
Ammonia as N	APHA 4500-NH3C	0.02	mg/L	0.17	—	10	mg/L



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

Jl. Raya Inceh Sempur KM. 37, RT 005/04, Gledong, Depok, Jawa Barat 16412
 Telp.: 021-29629393-94, Fax: 021-29629395, Website: www.aaslaboratory.com, Email: marketing@aalaboratory.com
 A Member of Saraswanti Gr.p.



LAPORAN HASIL PENGUJIAN
Result of Analysis
No: AAS.LHP.II.2020.0256

<u>Nomer Order</u> (Order Number)	: AAS.KU. 2020.0256	<u>Matrik Sampel</u> (Sample Matrix)	: Air Limbah
<u>Nama Pelanggan</u> (Customer Name)	: PT Nusa Buana Cipta	<u>Parameter Analisa</u> (Parameter)	: Analisa Total Coliform
<u>Alamat</u> (Address)	: Jl. Tebet Liris TB No. 3 Jakarta - 12820	<u>Tgl. Penerimaan</u> (Received Date)	: 04 Februari 2020
<u>Telepon/Faks</u> (Phone/Fax)	: 021 6303718	<u>Tgl. Analisis</u> (Analysis Date)	: 05 Februari 2020
<u>Personil Penghubung</u> (Contact Person)	: Irena Sursya	<u>No. Lab.</u> (Lab. No.)	: 002.0424-002.0425



Depok, 07 Maret 2020
 Manager Teknis Pengujian

 Sobly H. Saragih

No. Formulir : 28.1/F-PP/SMM-AAS
 Revisi : 3



PT. ANUGRAH ANALISIS SEMPURNA

One Line Laboratory Services

Jl. Raya Jakarta Bogor Km. 37, RT 005/04, Cicaung, Ciasem, Jawa Barat 16412.

Telp.: 021-29629393-94, Faks: 021-29629395. Website: www.anugrahanalisisempurna.com, Email: marketing@caselaboratory.com.

A/Membei LP Saraswanti Group



LAPORAN HASIL PENGUJIAN

No. WBS LHP II.2720.0255

Nama Pengirim: PT. Madra Buana Gips
Customer Name:
Parameter Analisa: Total Coliform
Parameter:

Tanggal Sampling: 31. Januari 2020
Sampling Date:
Waktu Sampling: 12:27 WTA
Sampling Time:

No	No. Sample	Kode sample	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	002.0424	WWF-1 Domestik Bersampur C. Pfd N: 00° 32' 08.5" E: 101° 38' 44.2"	Total Coliform	54000	3000	jumlah / 100mL	APHA 2021 B (AFM)	

Keterangan

1. Kadar Maksimum Mengacu Pada Peraturan Menteri LHK No. P. 30/Men/LK/Ses/LK/Kum. 1/5/2010, Tentang Baku Mutu Air Limbah Domestik. Lampiran 1. Mengandung jumlah ts. mengacu pada 20-200000/100L

REPORT ON

Fasilitas Uji: UFT Gips Casem di PT. Madra Buana Gips

Aleman

PT Madra Buana Gips - IG



Hasil uji ini hanya berlaku pada sampel yang diuji.

Hal. 2 dari 2

Dilarang menggunakan, memperjualkan, atau mempublikasikan isi sertifikat ini tanpa izin dari PT. Anugrah Analisis Sempurna.

The Results shown in this report refer only to the sample(s) tested. It is prohibited to copy, reproduce, or publish the content of this Certificate without PT. Anugrah Analisis Sempurna's approval!



CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Field, Client Information, Laboratory Information, and Additional Details. Fields include Work Order, Amendment, Client, Contact, Address, Email, Telephone, Facsimile, Project, Order number, C/O/C number, Date, Sampled by, Issue Date, Date Sample Received, No. of samples received, and No. of samples analyzed.

General Comments

This report superseded any previous report(s) with the reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. The analytical procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures. In-house developed procedures are employed in the absence of documented standards or by client request. Where a reported less than (<) result is higher than the LOR, this may be due to primary sample not with adequate dilution and/or insufficient sample for analysis. When no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided the sampling date will be assumed by the laboratory and analyzed in brackets without a flow assignment.



Signatories

This laboratory is accredited under KOMITE AKREDITASI NASIONAL. The tests reported herein have been performed in accordance with laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below. Electronic signing has been carried out in compliance with procedure specified in 21 CFR Part 11.

Table with 2 columns: Signatories and Position. Row 1: Edda Nurhalifa, Laboratory Manager

Handwritten signature of Edda Nurhalifa over the PT. ALS Indonesia logo.



Analytical Results

Substrate: **WASTE WATER**

Client Sample ID

WWD-1 DOMESTIK BASECAMP GPM

Laboratory Sample ID

JW200596-001

Sample Description

N=00°32'00.5" S, E=101°35'44.3" E
 P.59 Merink/Selatan Kum.1 BZC1
 6

Sampling Date/Time

28-Feb-2023 13:00

Parameter	Method	LCR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Total Suspended Solids	APHA 2540 D	0.5	mg/L	ND	—	30	mg/L
In Situ Measurement							
pH - Field	APHA 4500H	0.1	pH Unit	6.99	6	9	-
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	<2.0	—	30	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	<1	—	150	mg/L
Oil & Grease	APHA 5570 B	5	mg/L	<5	—	5	mg/L
Nutrient							
Ammonia as N	APHA 4300-NH3D	0.12	mg/L	<0.02	—	10	mg/L

Note: LCR and Guideline Limit is applied where the result is equal to or greater than the Guideline Limit.

- Key:
- LCR = Limit of reporting
 - * = This result is computed from individual analyte detections at or above the level of reporting
 - g = ALS is not accredited for these tests
 - = Indicates an estimated value



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

■ Raya Jakarta Barat KM. 37, RT 005/04, Cilandak, Depok, Jawa Barat 16412
 Telp.: 021-29679393-94, Fax.: 021-29629355 Website: www.aaslaboratory.com, Email: marketing@pds.laboratory.com
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LAPORAN HASIL PENGUJIAN

Result of Analysis

No: AAS.LHP.III.2020.0475

<u>Nomor Order</u> (Order Number)	AAS.KU.III.2020.0475	<u>Matrik Sampel</u> (Sample Matrix)	Air Limbah
<u>Nama Pelanggan</u> (Customer Name)	PT Nusa Buana Cipta	<u>Parameter Analisa</u> (Parameter)	Analisa Total Coliform
<u>Alamat</u> (Address)	Jl. Tebet Utara 1B No. 3 Jakarta - 12920	<u>Tgl. Penerimaan</u> (Received Date)	02 Maret 2020
<u>Telepon/Faks</u> (Phone/Fax)	021 8303718	<u>Tgl. Analisis</u> (Analysis Date)	02 Maret 2020
<u>Personil Penghubung</u> (Contact Person)	Ibu Saraya	<u>No. Lab</u> (Lab No.)	003 0741



No. Form/Ur 28.14F-PP/SMM-AAS
 Revisi 3



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One Line Laboratory Services

Jl. Raya Jakarta Bogor No. 37, RT 003/C4, Cilandak, Depok, Jawa Barat 16112.
 Telp.: 021- 29629393-94, Fax.: 021- 29629395. Website: www.aaslaboratory.com, Email: marketing@oaslaboratory.com.
 A Kantor: Jl Sarasinmii 516/3,



LAPORAN HASIL PENGUJIAN
 No: AAS LHP III.2020.0476

Nama Pelanggan: PT. MIRA BUANA Cipta
 Customer Name
 Parameter Analisa: Total Cadangan
 Parameter

Tanggal Sampling: 20 Februari 2020
 Sampling Date
 Waktu Sampling: 13.00 WIB
 Sampling Time

No	No. Sample	Kode sample	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	003.0T41	WWD-1 Domebuk Basecamp GPM N: 05° 32' 06,5" E: 101° 35' 44,5"	Total Cadangan	1700	2000	Liter / 100ml	AHA 9221 B 2012 (APMI)	

Keterangan:
 1) Cara Maksimum Mengacu Pada Peraturan HC No 9 68/MenK/Serj/Kum 1/8/2016, Tentang Buku Mutu Air Limbah Domestik, Lampiran 1.
 Peraturan cadangan mengacu pada: 20-S/K/2016/4/5

REPORT ON
 Completion UKL UPL (Spa Gas MRPS Terayun Bahap Konstruksi)

Atas:
 PT Mecca Reach Power Rtu - JGI





CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Field, Client/Project info, Laboratory/Address info, and QC/Standard info. Includes fields like Work Order, Client, Contact, Address, Email, Telephone, Facsimile, Project, Order number, C.O.C number, Site, Sampled by, Issue Date, No. of samples received, Date Samples Received, and No. of samples analysed.

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. The analytical procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures. In-house validation procedures are employed in the absence of documented standards or by client request. Where a reported less than (<) result is higher than the LOD, this may be due to primary sample extraction/generation dilution and/or insufficient sample for analysis. When no sampling time is provided, the sampling time will default to 00:00 on the date of sampling. If no sampling rate is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component.

Signatories

This laboratory is accredited under KOMITE AKREDITASI NASIONAL. The tests reported herein have been performed in accordance with Laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below. Electronic signing has been carried out in compliance with procedure specified in QM QP3 Part 11.



Table with 2 columns: Signatory Name and Position. Includes Daniel Pimanto (R & D Chemist), Georgiana Teauje (R&D Chemist), and Gioca Nurhafifa (Laboratory Manager).



Analytical Results

Substrate: WATER

Client Sample ID

WIND-2 DOMESTIK BASEDAMP GPM

Laboratory Sample ID

JW2000779-001

Sample Description

No. DUKUNGGI LE= 10135443
 Perfile LHK No. P.08/Menlhk/Sejen/Kur.1/32018

Sampling Date/Time

08-Mar-2020 11:38

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
pH Value	APHA 4500-H	0.10	pH Unit	2.58	5	9	-
Total Suspended Solids	APHA 2540 D	0.5	mg/L	58.0	---	30	mg/L
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	53.3	---	30	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	118	---	100	mg/L
Oil & Grease	APHA 5520 B	5	mg/L	<5	---	5	mg/L
Nutrient							
Ammonia as N	APHA 4500-N-HLD	0.02	mg/L	2.09	---	10	mg/L

Note: Bold and Italicized font is applied where the result is equal to or greater than the Guide Line Limit

Key: LOR = Limit of Reporting
 * = This result is computed from multiple replicate detections at or above the level of reporting
 e = ALO is not applicable for these tests.
 - = Indicates an estimated value.



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

Il. Raya Jendral Basore KM 37, Rt. CC5/04, Cincing, Depok, Jawa Barat 16412.
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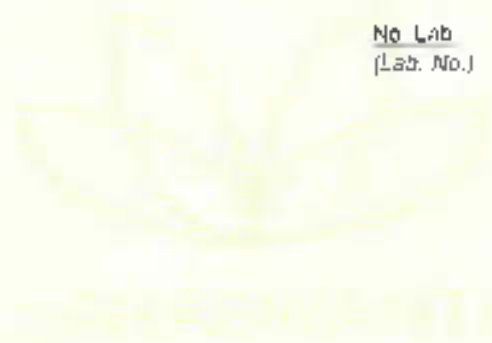


LAPORAN HASIL PENGUJIAN

Result of Analysis

No: AAS.LHP.IV.2020.0648

<u>Nomor Order</u> (Order Number)	: AAS.KU.IV.2020.0647	<u>Yatrik Sampel</u> (Sample Matrix)	: Air Limbah
<u>Nama Pelanggan</u> (Customer Name)	: PT Nusa Buana Cipta	<u>Parameter Analisa</u> (Parameter)	: Analisa Total Coliform
<u>Nama</u> (Address)	: Jl. Tebet Utara 1B No. 3, Jakarta - 12620	<u>Tgl. Penerimaan</u> (Received Date)	: 09 Maret 2020
<u>Telepon/Faks</u> (Phone/Fax)	: 021-8303718	<u>Tgl. Analisis</u> (Analysis Date)	: 09 Maret 2020
<u>Personal Penghubung</u> (Contact Person)	: Ibu Seraya	<u>No. Lab</u> (Lab. No.)	: 004 0099



No. Formir : 28.1/F-PPSMM-AAS
 Revisi : 2



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

Jl. Raya Jakarta-Bogor Km. 37, RT 005/04, Gludang, Cipayung, Jakarta Barat 16412.
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LAPORAN HASIL PENGUJIAN

No. AAS.LHP IV 2020.0648

Nama Pelanggan: PT Nusa Dua Re Cipta
 Customer Name
 Parameter Analisa: Total Coliform
 Parameter

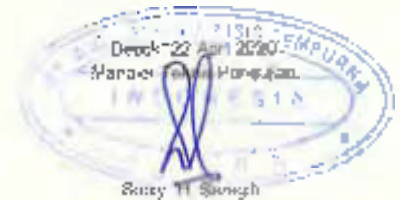
Tanggal Sampel: 08 Maret 2020
 Sampling Date
 Waktu Sampling: 11:38 WIB
 Sampling Time

No	No. Sample	Kode sample	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	004.0959	W/11-2 Domestik Bhsacamp GPM N: 00° 32' 08.5" E: 101° 11' 44.0"	Total Coliform	18	3000	unit / 100mL	APHA 2021 B 2012 (APM)	

Keterangan:
 1. Kadar Maksimum Menjadi Pada Permen LHK No P. 68/Mo-LK-Su/Per/Kum/1/2016, Tentang Baku Mutu Air Limbah Domestik, Lampiran I
 2. Responden sudah uji meyakinkan pada : 25-500/SMK-AAA

Revisi: 01
 Perizinan Uji: IPL, PISA, CAS, MRPR Terapan Tanpa Keistimewaan

Affiliated:
 PT Madca Ratch Power Batu - JSI





CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Field, Client Information, Laboratory Information, and Test Details. Includes fields like Work Order, Client, Control, Address, Email, Telephone, Project, Order number, Date, and No. of samples.

General Comments

This result supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. The analytical procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures. In-house developed procedures are employed in the absence of documented standards or by client request. When a reported (less than) result is higher than the LOQ, this may be due to an in-sample extract/digestion solution and/or insufficient sample for analysis. When no sampling time is provided, the sampling time will default JH00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component.



Signatories

This laboratory is accredited under KEMETERIAN RI/KEMITRAF/01/2019/PA/01/2020/001/PT. ALS INDONESIA. The tests reported herein have been performed in accordance with laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below. Electronic signing has been carried out in compliance with procedure specified in 21 CFR Part 11.

Table with 2 columns: Signatories and Position. Lists Georgiana Paulus (K&J Chemist) and Sisca Nurhalifa (Laboratory Manager).

Handwritten signature and PT. ALS Indonesia logo.



Analytical Results

Sub-Media: WASTE WATER

Client Sample ID:

Laboratory Sample ID:

Sample Description:

Sampling Date/Time:

WASTU 2 JOM'SITIK BASECAMP CPU							
JW2000854-001							
N° 001370F T11 S1	Perwakilan HK No.						
1011244 V	P. 652 Menloke Seljan Kur. '18/01/2018'						
12-Apr-2020 14:17							
Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
pH Value	AP 154500 I	0.10	pH Unit	5.88	6	8	-
Total Suspended Solids	APHA 2540 D	0.5	mg/L	<L	—	30	mg/L
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	<2.0	—	30	mg/L
Chemical Oxygen Demand	APHA 5220 C	10	mg/L	<10	—	100	mg/L
Oil & Grease	APHA 5520 D	5	mg/L	<5	—	5	mg/L
Nutrient							
Ammonia as N	A-1 (A) 4500 NI JL	0.02	mg/L	0.00	—	10	mg/L

Note: Bold and Italicised Font is applied where the result is equal to or greater than the Guideline Limit

- Key:
- LOR = Limit of reporting
 - * = This result is calculated from individual analyte detections at or above the level of reporting
 - ⦿ = ALS is not accredited for these tests
 - = Indicates an estimated value



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One Line Laboratory Services

Jl. Kayanabara Raya No. 37, RT 005/04, Ciocong, Depok, Jawa Barat 16412.
 Telp. 021-29629393-94, Fax: 021-29629395 Website: www.oneline-lab.com, Email: marketing@onadab.com,
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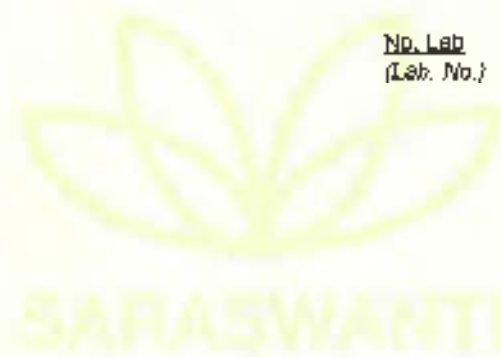


LAPORAN HASIL PENGUJIAN

Result of Analysis

No: AAS.LHP.IV.2020.0662

Nomer Order (Order Number)	: AAS.LHP.IV.2020.0662	Matrik Sampel (Sample Matrix)	: Air Limbah
Nama Pelanggan (Customer Name)	: PT Nusa Buana Cipta	Parameter Analisa (Parameter)	: Analisa Total Coliform
Alamat (Address)	: Jl. Tebet Utara 1B No. 3, Jakarta - 12820	Tgl. Penerimaan (Received Date)	: 14 April 2020
Telepon/Faks (Phone/Fax)	: 021 8303718	Tgl. Analisis (Analysis Date)	: 15 April 2020
Personil Penghantar (Contact Person)	: Ibu. Soraya	No. Lab (Lab. No.)	: 004 0158



No. Form LR : 28.1/F-PP/8MM-AAS
 Revisi : 3



ALS Life Sciences

CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Field, Client/Project info, Laboratory info, and Analysis details. Includes fields like Work Order, Client, Contact, Address, E-mail, Telephone, Facsimile, Project, Order number, Issue Date, and Date Samples Received.

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. The analytical procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures...

Signatories

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Table with 2 columns: Signatories and Position. Row: Daniel Primanto, H & D Chemist



PT. ALS Indonesia



Komite Akreditasi Nasional
Laboratory No. 001
LP - 001 - 001



Analytical Results

Sub-Matrix: WASTE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description

WWD-1 DOMESTIK DASDECAMP CPM							
JW2001113-001							
N° 0032706,9 g/L 111°25'44.3"				PetaMata No. No. 4.66/Mer/10/Sorot/Kam.1/5/2016			
12-May-2020 09:10							
Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Total Suspended Solids	APHA 2540 D	0.5	mg/L	ND	—	30	mg/L
In Situ Measurement							
pH - Field	APHA 4500-H	0.1	pH Unit	8.67	6	9	
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	<0.9	—	30	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	ND	—	100	mg/L
Oil & Grease	APHA 5820 B	5	mg/L	<5	—	5	mg/L
Nutrient							
Ammonia as N	APHA 4500-NH3D	0.02	mg/L	0.70	—	10	mg/L

Note: Rule of 3 (Pellew-Elmer) is applied where the result is equal to or greater than the following limit.

- Key
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 - * = This result is computed from individual analysis determination or shows the level of reporting
 - ND = ALS is not accredited for these tests.
 - = Indicates an estimated value.




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One Line Laboratory Services

Jl. Raya Jember- Sagar 45, 37, Rt 335/05, Glodong, Bendo, Jawa Barat 15417.
 Telp.: 021- 29529393-94, Fax : 021- 29529395, Website: www.aaslab.com, Email: marketing@aslab.com
 A Member of Saraswanti Group.



LAPORAN HASIL PENGUJIAN
 Result of Analysis
 No: AAS.LHP.V.2020.0803

<u>Name Order</u> (Order Number)	AAS.KJ.V.2020.0803	<u>Matrik Sampel</u> (Sample Matrix)	Air Limbah
<u>Nama Pelanggan</u> (Customer Name)	PT Nusa Birana C. pt	<u>Parameter Analisa</u> (Parameter)	Analisa Total Coliform
<u>Alamat</u> (Address)	Jl. Trans Liris 18 No. 3 Jakarta 12820	<u>Tgl. Penerimaan</u> (Received Date)	13 Mei 2020
<u>Telepon/Faks</u> (Phone/Fax)	021- 8303713	<u>Tgl. Analisis</u> (Analysis Date)	14 Mei 2020
<u>Responil Penghub. dg</u> (Control Person)	Ibu Safaya	<u>No. Lab</u> (Lab No.)	005 0255

Depok 28 Mei 2020
 Supervisor Laboratorium

 Slamet Tri Ariyanto

No. Formulir 25 1/1-PPISMM AAS
 Revisi 3



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services



Jl. Raya Laksono Duren Km. 37, 3100504, Cikalong, Depok, Jawa Barat 16112
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LAPORAN HASIL PENGUJIAN
 No. AAS LHP V.2020 0803

Nama Pelanggan: PT. Indo Bina Rasa
 Customer Name
 Parameter Analisa: Total Coliform
 Parameter

Tanggal Sampling: 12 Mei 2020
 Sampling Date
 Waktu Sampling: 09:15 WIB
 Sampling Time

No	No. Sample	Kode sample	Parameter Uji	MPN-L	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	005.0235	WWD-2 Domestik Basecamp CPM N: 00° 32' 06,6" E: 101° 35' 44,3"	Total Coliform	1300	3000	jumlah / 100mL	APHA 9221 B 2012 (AFM)	

Kata Kunci:
 Di Kadar Maksimum Mengacu Pada Permen, HK No. P. 68/MenK/Sesjen/Kum. 1 & 2016, Tentang Basu Mut. Air Limbah Domestik. Lampiran 1
 Pengambilan contoh uji menggunakan nomor 25.0003/144-442

REPORT ON
 Pemantauan URL UPL Pico Gas IMPP Terayut Telaga Kubuka

Atas nama
 PT Indo Bina Rasa Power Plant - JB





ALS Life Sciences

CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Work Order	JW2001230	Page	1 of 2
Client	PT. NUSA SUKAMA CIPTA	Laboratory	PT. ALS INDONESIA
Contact	MS RORO SCRAYA	Contact	Sonya Agung
Address	JL. TERBET UTARA 1B NO. 3 JAKARTA 12820	Address	SENTJL INDUSTRIAL AREA CAHAYA RAYA ROAD BLOCK K BOGOR WEST JAVA Indonesia 15810
E-mail	lah@nusahitaracipta.com	E-mail	Sonya.Agung@ALSGlobal.com
Telephone	0218303718	Telephone	+62 21 29416151
Facsimile	—	Facsimile	+62 21 29416152
Project	PEMANTAUAN UKL UPL FIPA GAS MRFR TCMAYAN TAYAF KONSTRUKS	Quota number	JWZ01/NBC0011 (IDT4H77-1 WATER ANALYSIS-perman 19 No. 58 No. 5 Jamo XLVI)
Order number	—	QC Level	ALS Indonesia Quality Control Schedule (Standard)
QC# number	—		
Site	—		
Sampled by	CLIENT		
Issue Date	15-Jun-2020 17:24	No. of samples received	1
Date Samples Received	04-Jun-2020 10:44	No. of samples analyzed	1

General Comments

This report supersedes any previous reporting with this reference. Results shown in the sample(s) is/are certified. All pages of this report have been checked and approved for release.

The analytical procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures. In-house developed procedures are employed in the absence of documented standards or by client request.

Moisture reported less than 11.0% (11.5% higher than the LUR) this may be due to primary sample attrition/loss/dilution and/or insufficient sample for analysis.

When no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assigned by the laboratory and displayed in brackets without a time component.



Signatories

This laboratory is accredited under KAMITE AKREDITASI NASIONAL. The tests reported herein have been performed in accordance with laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below. Electronic signing has been carried out in compliance with procedure specified in 21 CFR Part 11.

Signatories	Position
Georgiana Pauks	R&D Control
Sisca Nurafita	Laboratory Manager

PT. ALS Indonesia



Analytical Results

Substrate: WASTE WATER

Client Sample ID	WWD-2 DOMESTIK BASECAMP CPM		
Laboratory Sample ID	JW2001230-001		
Sample Description	N= 30'32'08.5" E= 101'35'44.3"	Penyerupukan C	
Sampling Date/Time	03-Jun-2020 19:25		
	F.627M/11K/Serjan/K.Ju.19/201		

Compound	Method	LOM	Unit	Result	Low	High	LOL
Physical and Aggregate Properties							
pH Value	APHA 4500-H	0.10	pH Unit	8.30	8	9	-
Total Suspended Solids	APHA 2540 D	CF	mg/L	89.0	—	30	mg/L
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	CF	mg/L	14.0	—	20	mg/L
Chemical Oxygen Demand	APHA 5220 G	TD	mg/L	34	—	100	mg/L
Oil & Grease	APHA 5520 B	CF	mg/L	<5	—	5	mg/L
Nutrient							
Ammonia as N	APHA 4500-NH3D	0.02	mg/L	0.13	—	10	mg/L

Note: Bold and italicized text is applied where the result is equal to or greater than the Guideline Limit.

- Key:
- LOR = Limit of reporting
 - ^ = This result is composed from individual analyte detections at or above the level of reporting
 - = ALS is not accredited for these tests
 - = Indicates an estimated value



PT. ANUGRAH ANALISIS SEMPURNA

One Line Laboratory Services

Jl. Raya Sekeloa Utara Km. 57, RT 005/04, Craming, Bekasi, Jawa Barat 16412.

Telp.: 021-29625353-94, Fax: 021-29625395 Website: www.aasahome.com, Email: marketing@sesthehome.com.

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LAPORAN HASIL PENGUJIAN

Result of Analysis

No: AAS.LHP.VI.2020.0931

<u>Nomor Order</u> (Order Number)	AAS.K.I.VI.2020.0931	<u>Matrik Sampel</u> (Sample Matrix)	Acilmbah
<u>Nama Pelanggan</u> (Customer Name)	PT Nusa Buana Creta	<u>Parameter Analisa</u> (Parameter)	Analisa Total Coliform
<u>Alamat</u> (Address)	Jl. Tebel Utara 15 No. 3, Jakarta - 12820	<u>Tgl. Penerimaan</u> (Received Date)	04 Juni 2020
<u>Telepon/Faks</u> (Phone/Fax)	021-83037-8	<u>Tgl. Analisis</u> (Analysis Date)	05 Juni 2020
<u>Personil Penghubung</u> (Contact Person)	Ibu Saraya	<u>No. Lab</u> (Lab No.)	006-0047



No. Form : 28/17-PM/SM-AAS
Revisi : 2

Elaborasi: ini hanya berisikan hasil uji yang tertera.

Hal. 1 dari 2

Dilarang mengutip, menyalin, atau menyalin isi sertifikat ini tanpa izin dari PT. Anugrah Analisis Sempurna
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One Line Laboratory Services

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Telp: 021-29629393-94, Fax: 021-29629395, Website: www.aaslaboratory.com, Email: marketing@uaslaboratory.com

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LAPORAN HASIL PENGUJIAN

No. AAS I HP VI 2020 0531

Nama Pelanggan: PT Nasa Buana Cipta
Customer Name
Pemerintah Analisa: Total Coliform
Parameter

Tanggal Sampling: 05 Juni 2020
Sampling Date
Waktu Sampling: 11.25 WIB
Sampling Time

No	No Sample	Kode sample	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
	006 0087	200017 Damesdik Uasecamp UPM N: 0° 32' 06,9" E: 101° 38' 44,3"	ota Coliform	113	3000	jumlah / 100mL	APHA 2221 B 2012 (APM)	

Keterangan:

1. Untuk Masalah Menemukan Pada Parameter No. 2: 0575-0106, Referensi: KEM-PROTOKOL-01/2018, Bab 4.1.1.1. Air, sesuai dengan ketentuan yang tertera dalam peraturan yang berlaku. 25-5AM/5M/AAS

REPORT ON

Fasilitas Uji UFL UFL Pipa Gas MRFR Terlaya - Telp. Koral Jsa

Analisa:

Maduo Hatch Power Riau - JBI





PEMERINTAH PROVINSI RIAU
DINAS PEKERJAAN UMUM DAN PENATAAN RUANG
UPT LABORATORIUM BAHAN KONSTRUKSI

Jl. Jend Sudirman No.197 - Pekanbaru Kode Pos 28282
 Telepon (0761) 21531, Fax (0761) 32943
 e-mail: lab_pu_riau@yahoo.com website :



LAPORAN HASIL UJI
 Report Of Analysis

Tanggal dan Perhitungan Sampel Date/Time of sampling	: 28/10/2019	No Laporan Report Number	: MTN.11.01.22
Koordinat Sampel Coordinate	: -	Tanggal penerimaan Date/Time of receipt	: 01/11/2019 08:10 WIB
Titik Sampel Sampling Point	: Outlet Air Dugangan Domestik	Penerimaan Sampel Received By	: Willy Sander
Person Pengambil Sampel Person of Sampling	: Rizka Agnesarova, Karyawan LBB Lingkungan & Construction Riau GEPP 2/3 MW IPP Project	Tanggal Pengujian Date of Analysis	: 01/11/2019 - 08:10 WIB

NO	PARAMETER	SATUAN Unit	ACUAN Method	BAKU MUTU Threshold	HAESIL Result
1	BOD ₅ #	mg/L	SNI 6989.72-2009	30	6,540
2	COD #	mg/L	SNI 6989.73-2009	100	24,20
3	TSS #	mg/L	SN 06-6989.3-2004	30	4
4	pH #	-	SNI 06-6989.11-2004	6,0 - 8,0	8,03
5	Minyak & Lemak #	mg/L	SNI 6989.10-2011	5	<5
6	Amonia	mg/L	SNP MTN 33	10	2,91
7	Total Coliform #	ymt/100 ml	APHA 9221F EDMSI 22, 2012	9.000	-

Catatan :

1. Hasil uji hanya berlaku untuk sampel yang diuji
Valid only for the testing sample
2. Laporan hasil uji merupakan bagian dari sertifikat kompetensi
The report of the test is an attachment to the certificate of conformity
3. Tidak menggunakan laporan hasil uji sebelum mendapat persetujuan
Do not apply part of this report except approval of this report
4. Referensi berdasarkan Peraturan Menteri L. K. No. 2/2016 tentang Sistem Akreditasi
Reference of this report is based on Peraturan UPT No. P.680/2016/2016/Kum.1/8/2016
5. Tanda (#) adalah parameter yang diuji
The sign (#) is scope of accreditation
6. Kejutan terhadap hasil analisis maksimal 60 hari setelah sampel diterima
Complaints to the result of the analysis are maximum: 60 days after the sample is received



Pekanbaru, 29 November 2019
 Koordinator Pengujian Air & Lingkungan
 UPT Laboratorium Bahan Konstruksi
 Dinas Pekerjaan Umum dan Penataan Ruang
 Provinsi Riau

(Handwritten Signature)

AHMAD MULYANA, S.Si
 NIP. 19700405-199208 1 001



Sample Name: WASTE WATER

Client Sample ID

WWD-2 DOMESTIK KANTOR LAMANGAN PLTGU

Laboratory Sample ID

JW7000294-002

Sample Description

No. 022'15,11" E
 101'31'14.57"

PerVen. HK No.
 P.68/Wertho/Sugan/Kum.1/520
 5

Sampling Date/Time

31-Jan-2020 10:01

Compound	Method	LOD	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
pH Value	APHA 4570-H	0.10	pH Unit	6.18	6	9	pH Unit
Total Suspended Solids	APHA 2540-D	0.5	mg/L	133	—	30	mg/L
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210-B	3.0	mg/L	250	—	30	mg/L
Chemical Oxygen Demand	APHA 5220-D	10	mg/L	666	—	100	mg/L
Oil & Grease	APHA 5520-B	5	mg/L	70	—	5	mg/L
Nutrient							
Ammonia as N	APHA 4500-NH3-D	0.02	mg/L	370	—	10	mg/L

Note: Bold and Italicized font is applied where the results equal to or greater than the regulatory limit.

- Key
- LOD = Limit of Reporting
 - ▲ = This result is computed from individual analytical determinations above the level of reporting
 - ▲ = ALS is not accredited for these tests
 - = Indicates an unreported value



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services



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 Telp.: 021 - 25629393-94, Fax: 021 - 29629395, Website: www.caslaboratory.com, Email: marketing@caslaboratory.com
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LAPORAN HASIL PENGUJIAN
 No. AAS 1 - R 11 2020 0966

Nama Pelanggan: PT Nusa Fakra Cipta
 Customer Name
 Parameter Analisa: Total Coliform
 Parameter

Tanggal Sampel: 31 Januari 2020
 Sampling Date
 Waktu Sampling: 10.00 WITA
 Sampling Type

No	No. Sample	Kode sample	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	002.0425	IWWD 2 Domestik Kantor Lapangan PLTGU N: 00° 32' 15,11" E: 101° 31' 14,57"	Total Coliform	10000	3000	jumlah / 100ml	APHA 9271 B (MPN)	

Keterangan:
 Jika Kadar Maksimum: Kriteria: Nilai Ekstrem (IK) No 2 BSM (Merkuripengukuran) 1/2016, Tentang Esok (M/L) Air Limbah Domestik: Lapangan
 Domestik (Lampiran) (Merkuripengukuran) 25/01/2016/000445

REPORT ON:
 Pemantauan UKL LP. Pga Gas MRPR Tahap Konstruksi

Atas nama:
 PT Nusa Fakra Power Kel. JCI





CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Field, Client Information, Laboratory Information, and Analysis Details. Includes fields like Work Order, Amendment, Client Name, Contact, Address, E-mail, Telephone, Project, Order number, U-O-C number, Site, Sample by, Issue Date, Date Samples Received, No. of samples received, and No. of samples analyzed.

General Comments

This report supersedes any previous report(s) with data referenced. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. The analytical procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures...



Signatories

This laboratory is accredited under KOMITE AKREDITASI NASIONAL. The tests reported herein have been performed in accordance with laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below.

Table with 2 columns: Signatory Name and Position. Row 1: Susca Nurmalita, Laboratory Manager.

Handwritten signature of Susca Nurmalita over the PT ALS Indonesia logo.



Analytical Results

Sub-Matrix: **WASTE WATER**

Client Sample ID

Laboratory Sample ID

Sample Description

Sampling Date/Time

WWD-2 DOMESTIK KANTOR LAPANGAN PLTGU

JW2000600-001

N= 0°32'15.71" E= 101°31'14.57"

Per-MenLHK No.
P.58/Menh/Sejen/Kem.1/9/2016

28-Feb-2020 14:30

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Total Suspended Solids	APHA 2540 D	0.5	mg/L	87	—	30	mg/L
In Situ Measurement							
pH - Field	APHA 4500-H	0.1	pH Unit	8.10	6	9	-
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	0.0	mg/L	95.2	—	30	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	209	—	100	mg/L
Oil & Grease	APHA 5520 B	5	mg/L	39	—	5	mg/L
Nutrient							
Ammonia as N	APHA 4500-N-H3O	0.02	mg/L	132	—	10	mg/L

Note: Bold and italicized text is applied where the result is equal to or greater than the Guideline Limit.

Key: LOR = Limit of reporting
 * = This result is computed from individual analyte detectors at or above the level of reporting
 @ = At 5% or not corrected for these tests
 - = Indicates an undetected value



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II, Raya Jakarta-Bogor KM. 37, RT 005/D4, Cibadung, Depok, Jawa Barat 16112.

Telp.: 021-29629393-94, Fax: 021-29629395 Website: www.aaslaboratory.com, Email: marketing@aanalishnatory.com.

A. Anggota Of Saraswanti Group.

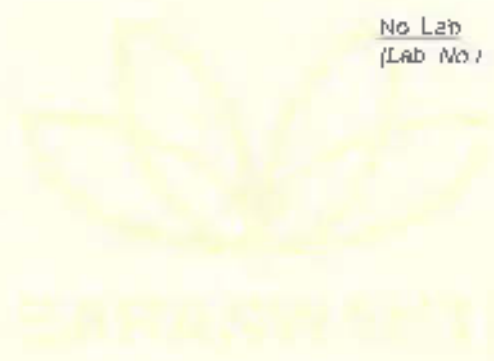


LAPORAN HASIL PENGUJIAN

Result of Analysis

No: AAS.LHP.III.2020.0474

<u>Nomor Order</u> (Order Number)	: AAS-KU III 2020 0474	<u>Matrik Sampel</u> (Sample Matrix)	: Air Limbah
<u>Nama Pelanggan</u> (Customer Name)	: PT Nusa Buana Cipta	<u>Parameter Analisa</u> (Parameter)	: Analisa Total Coliform
<u>Alamat</u> (Address)	: Jl. Tebet Utara 16 No. 3 Jakarta - 12820	<u>Tgl. Penerimaan</u> (Received Date)	: 02 Maret 2020
<u>Teleponi/Faks</u> (Phone/Fax)	: 021 8303716	<u>Tgl. Analisis</u> (Analysis Date)	: 02 Maret 2020
<u>Personil Penghubung</u> (Contact Person)	: Ibu Soraya	<u>No. Lab</u> (Lab No.)	: 003 0740



No. Formulir : 28.5/P-PP/SVM AAS
Revisi : 3

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 Telp: 0911-25629393-94, Fax: 021-29629395. Website: www.saraswanti.com, E-mail: marketing@saraswanti.com
 A. Anggota Of Saraswanti Group.



LAPORAN HASIL PENGUJIAN

No. AMS LHP III.2020.0474

Nama Pelanggan: PT Nusa Bukit Cipta
 Customer Name:
 Parameter Analisa: Total Coliform
 Parameter:

Tanggal Sampel: 29 Februari 2020
 Sampling Date:
 Waktu Sampling: 14:20 WIB
 Sampling Time:

No	No. Sampel	Koordinat Sampel	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	003.0740	UWD-2 Domestik Kantor Lapangan PLTGU N: 03° 32' 16,11" E: 101° 31' 14,57"	Total Coliform	5430	3000	jumlah / 100mL	APHA 2021 B 2012 (APM)	

Keterangan

1) Kadar Maksimum Mengacu Pada Permen LHK No P. 68/Men/Kesjen/Kum.1-8/2016 Tentang Baku Mutu Air Limbah Domestik, Lampiran 1 Pengambilan contoh uji menggunakan 25-500/2004-418

REPORT ON

Pencapaian URL UPL Transmisi Su-IT MRPR Terayah Tahap Konstruksi

Attnsion

PT Medica Ratch Power Riau - JGI





CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Field, Value, Field, Value. Includes Work Order (JW2000807), Client (PT. NUSA BUANA CIPTA), Laboratory (PT ALS INDONESIA), E-mail (lab@nusabuancipta.com), Project (PEMANTAPAN UKL UPL TRANSMISI), Issue Date (20-Apr-2020 17:21), and Date Samples Received (09-Mar-2020 10:37).

General Comments

This report supersedes any previous reports with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. The analytical procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures...



Signatories

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Table with 2 columns: Signatories, Position. Lists Georgiana Paulusa (R&D Chemist) and Siaca Nurhasrita (Laboratory Manager).

Handwritten signature and stamp for PT. ALS INDONESIA



Analytical Results

Substrate: WATER

Client Sample ID

WWD-1 DOMESTIK KANTOR LAPANGAN PLTGU

Laboratory Sample ID

JH2000007-001

Sample Description

No. D'32'5 11' E =
10'31'14.57

Perfile LHK No.
P.08/Monhkr/Serje/Kur.1/320
8

Sampling Date/Time

06-Mar-2020 10:07

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
pH Value	APHA 4500-H	0.10	pH Unit	8.25	6	9	-
Total Suspended Solids	APHA 2540 D	0.5	mg/L	134	----	30	mg/L
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	301	----	30	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	650	----	100	mg/L
Oil & Grease	APHA 5520 B	5	mg/L	25	----	5	mg/L
Nutrient							
Ammonia as N	APHA 4500-N-HLD	0.02	mg/L	894	----	10	mg/L

Note: Bold and italicized font is applied where the result is equal to or greater than the Guide Line Limit

Key: LOR = Limit of reporting
 * = This result is computed from multiple replicate detections at or above the level of reporting
 # = ALO is not applicable for these tests.
 - = Indicates an estimated value.



SARASWANTI

PT. ANUGRAH ANALISIS SEMPURNA

One Line Laboratory Services

Jl. Raya Jakarta Depok KM. 37, RT 005/04, Cincing, Depok, Jawa Barat 16112.

Telp.: 021- 29629393-94, Fax: 021- 29629395. Website: www.aaslaboratory.com, E-mail: marketing@aalaboratory.com

A. Anggota Df Saraswati Group



LAPORAN HASIL PENGUJIAN

Result of Analysis

No: AAS.LHP.IV.2020.0647

<u>Nomer Order</u> (Order Number)	: AAS.KU.IV.2020.0647	<u>Matrik Sampel</u> (Sample Matrix)	: Air Limbah
<u>Nama Pelanggan</u> (Customer Name)	: PT Nusa Bangsa Cipta	<u>Parameter Analisa</u> (Parameter)	: Analisa Total Coliform
<u>Alamat</u> (Address)	: Jl. Tebet Utara 16 No. 3, Jakarta - 13820	<u>Tgl. Penerimaan</u> (Received Date)	: 09 Maret 2020
<u>Telepon/Faks</u> (Phone/Fax)	: 021 6303718	<u>Tgl. Analisa</u> (Analysis Date)	: 09 Maret 2020
<u>Personil Penghubung</u> (Contact Person)	: Ibu Soraya	<u>No. Lab</u> (Lab. No.)	: 004 0100



No Formulir : 28 1/T-PP/SAM-AAS

Revisi : 3

Hal. 1 dari 2

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One Line Laboratory Services

Jl. Raya Jakarta-Bogor KM. 37, R. CUS/CA, Cimang, Depok, Jawa Barat 16412
 Telp.: 021-29625752-54, Fax: 021-25629395 Website: www.analissempurna.com, E-mail: marketing@analissempurna.com
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LAPORAN HASIL PENGUJIAN

No: AAS-LMP.IV.2020-0647

Nama Pelanggan: PT Medco Retail Power Run - JCI
 Customer Name
 Parameter Analisa: Total Coliform
 Parameter

Tanggal Sampung: 06 Mei 2020
 Sampling Date
 Waktu Sampung: 10.07 WIB
 Sampling Time

No	No. Sampel	Kode sampel	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	004.0100	WWD-1 Domestik No. 1061 Lapangan PLTGE N: 0° 52' 14,11" E: 101° 31' 14,57"	Total Coliform	220	3000	MPN/100mL	APHA 9221 B 2012 (APM)	

Keterangan:
 1) Kadar Maksimum Bergacu Pada Peraturan Menteri No. P. 68/Men/Sesjen/Kum/18/2018, Tentang Buku Mutu Air Limbah Domestik, Lampiran 1
 Pengambilan sampel air limbah domestik

REPORT ON
 Pemantauan UKL UPL Terhadap SUPT NRP/R Terlayah Tahap Kerasukan

Alamat:
 PT Medco Retail Power Run - JCI





CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Field, Value, Field, Value. Includes Work Order (JW2000855), Client (PT. KUSA BUANA Cipta), Laboratory (PT ALS INDONESIA), Issue Date (22-Apr-2020 18:10), and Date Samples Received (13-Apr-2020 13:28).

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release. The analytical procedures used by this PT ALS Indonesia have been developed from established internationally recognized procedures...

Signatories

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Table with 2 columns: Signatories, Position. Lists Georgiana Paulus (QA/QC Chemist) and Siska Nurmalita (Laboratory Manager).



Handwritten signature and blue stamp of PT. ALS INDONESIA



Analytical Results

Substrate: WASTE WATER

Client Sample ID

WWD - DOMESTIK KANTOR LAPANGAN PI TIRU

Client Sample ID

JW2000855-001

Sample Description

K. J.32° 5' 11" D.
 101° 51' 14" E
 Perumahan K.3.
 T.85/Merlik/Sek. 15/201
 5

Sampling Date/Time

17-Apr-2020 13:08

Component	Method	LOD	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
pH Value	APHA 4500-H	0.10	pH Unit	8.63	6	9	-
Total Suspended Solids	APHA 2540 D	0.3	mg/L	83.0	—	20	mg/L
Aggregate Organics							
5-Day BOD	APHA 5210 G	3.0	mg/L	122	—	30	mg/L
Chemical Oxygen Demand	APHA 5200 D	1.0	mg/L	277	—	100	mg/L
TN & Crude Oil	APHA 6320 F	1	mg/L	<5	—	5	mg/L
Nutrient							
Ammonia as N	APHA 4500-N-BD	0.02	mg/L	258	—	10	mg/L

Note: Bold and Italic text font is applied where the result is equal to or greater than the Guideline Limit.

- Key
- LOD = Limit of Reporting
 - *** This result is computed from individual analyte detections at or above the level of reporting
 - = ALS is not accredited for these tests.
 - ~ = Indeterminate value



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

Jl. Raya Inkarni Raya KM. 27, RT 005/04, Glodong, Depok, Jawa Barat 16412.
 Telp.: 021-29629393-94, Fax: 021-29629399, Website: www.ansahcentary.com, Email: marketing@ansahcentary.com
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LAPORAN HASIL PENGUJIAN

Result of Analysis

No: AAS.LHP.IV.2020.0883

<u>Nomer Order</u> (Order Number)	: AAS.KJ.I.V.2020.0653	<u>Matrik Sampel</u> (Sample Matrix)	: Air Limbah
<u>Nama Pelanggan</u> (Customer Name)	: PT Nusa Buana Cipta	<u>Parameter Analisa</u> (Parameter)	: Analisa Total Coliform
<u>Alamat</u> (Address)	: Jl. Tebet Utara 1B No. 3, Jakarta 12830	<u>Tgl. Penerimaan</u> (Received Date)	: 14 April 2020
<u>Telepon/Faks</u> (Phone/Fax)	: 021 8303718	<u>Tgl. Analisis</u> (Analysis Date)	: 15 April 2020
<u>Personil Penghubung</u> (Contact Person)	: Ibu Soraya	<u>No. Lab</u> (Lab. No.)	: 004.C159



No. Formulir : 28.1/F-PF/STAN-AAS
 Revisi : 3



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

Jl. Anugerah Segitiga 45/37, RT 005/04, Cidolog, Depok, Jawa Barat 16412.
 Telp: 021-29629393-94, fax: 021-29629395 Website: www.one-line-lab.com, Email: anuket@one-line-lab.com
 4, Merbau 91 Sempurna, Cikarang



LAPORAN HASIL PENGUJIAN

No. AAS LHP IV 2023 0885

Konduktivitas: P1 Nusa Duae Ciro
 Customer Name
 Parameter Address: Total Cellfarm
 Parameter

Tanggal Sampel: 12 April 2023
 Sampling Date
 Waktu Sampling: 13:08 WIB
 Sampling Time

No	No. Sample	Kode sample	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	054.0139	WWD-1 Pemukim Kantor Lapangan PLTGU N 0° 32' 15,11" E: 101° 21' 14,57"	Total Cellfarm	1600	5000	jumlah / 100ml	APHA 2221 B 2017 (APM)	

Keterangan:
 In Case Melainkan Dengan Hasil Hasil 11.000.000/100ml. Untuk lebih detailnya, silahkan hubungi kami di nomor kontak kami, atau melalui email kami di alamat email kami.
 Pengiriman sampel: No. 20-0403/2023

REPORT ON:
 Perantara L.L.L.L. (Sempurna) (Sempurna) (Sempurna)

Address:
 P1 Medo Katuh Tower 2au - JGI





CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Work Order, Client, Contact, Address, Email, Telephone, Facsimile, Project, Order number, R-CL-CL number, Site, Sampled by, Issue Date, Date Samples Received, No. of samples received, No. of samples analyzed.

General Comments

This report supersedes any previous reports, with the reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

The analytical procedures used by the PT ALS INDONESIA have been developed from established internationally recognized methodologies. In-house developed procedures are employed in the absence of documented standards or by client request.

When a reported result is higher than the LOR, this may be due to primary sample or to digestible dilution and/or insufficient sample for analysis.

When no sampling time is provided, the sampling time will default to 15 min. in the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time zone format.



Signatories

The laboratory is accredited under KOMITE AKREDITASI NASIONAL, the tests reported herein have been performed in accordance with laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below. Electronic signing has been carried out in compliance with procedure specified in 21 CFR Part 11.

Table with 2 columns: Signatories, Position. Rows include: Dwi Setiawan (R & D Director), Siska Nurhalla (Laboratory Manager).

Handwritten signature in blue ink over the PT ALS INDONESIA logo.



Analytical Results

Sub-Meth: WASTEWATER

Client Sample ID

WWD-1 DOMESTIK KANTOR LAPANGAN PLTGU

Laboratory Sample ID

JW2001126-001

Sample Description

No. 073215111 F
101-3114.57
Da. Mand. HK No.
P.09/Menhut/Sekop/Kum.18/201
F

Sampling Date/Time

12-May-2020 12:34

Compound	Method	LOD	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Total Suspended Solids	APHA 2540 D	0.5	mg/L	17.0	—	30	mg/L
In Situ Measurement							
pH - Field	APHA 4520-H	0.1	pH Unit	8.54	6	9	—
Aggregate Organics							
Recombined Oxygen Demand	APHA 5210 B	2.0	mg/L	14.8	—	30	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	30	—	100	mg/L
Oil & Grease	APHA 5520 B	5	mg/L	<5	—	5	mg/L
Nutrient							
Ammonia as N	APHA 4500-NH3O	0.02	mg/L	74.1	—	10	mg/L

Note: Bold and italicized text is applied where the result is equal to or greater than the Guideline Limit

Key:

LUR = Limit of reporting

* = This result is compiled from individual analyte detections at or above the level of reporting

g = ALS is not accredited for these tests

- = Indicates an estimated value.



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

Jl. Raya Jakarta Boyer KM. 3/1, R' CC5/CA, C. o.Boy, Depok, Jawa Barat 16412.
 Telp : 021 - 29629353-54, Faks : 021 - 29629355. Website: www.aaslaboratory.com, Email: info@analis sempurna.com.
 A. Anggota Of Saraswati Group.



LAPORAN HASIL PENGUJIAN
Result of Analysis
No: AAS.LHP.V.2020.0804

<u>Num.ri Order</u> (Order Number)	AAS KL V 2020 0804	<u>Maink Sampel</u> (Sample Method)	Air Limbah
<u>Nama Pelanggan</u> (Customer Name)	PT Nusa Buaru Cipta	<u>Parameter Analisa</u> (Parameter)	Analisa Total Coliform
<u>Alamat</u> (Address)	Jl. Tolak Utara 1B No. 3, Jakarta - 17820	<u>Tgl. Penerimaan</u> (Received Date)	13 Mei 2020
<u>Telepon/Faks</u> (Phone/Fax)	021 8303719	<u>Tgl. Analisis</u> (Analysis Date)	14 Mei 2020
<u>Personal Penghubung</u> (Contact Person)	Ibu Sriyati	<u>No. Lab</u> (Lab. No.)	005 0236

Depok 28 Mei 2020
 Supervisor Laboratorium

 Samet Tri Amanto

No. Formir 28 14.FP/SM/AAE
 Rev. 3



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services



Jl. Raya Jakarta Boy: KM. 37, R. CC5/C4, Cioyong, Depok, Jawa Barat 16412.
 Telp.: 021- 29629393-94, Fks.: 021- 29629395. Website: www.aaslabanalisis.com, Email: marketing@oaslabanalisis.com.
 A. Anggota Of Saraswati Group.

LAPORAN HASIL PENGUJIAN

No. AAS.LHP.V.2020.0604

Nama Pelanggan: PT Nisa Buana Cipta
 Customer Name
 Parameter Analisa: Total Coliform
 Parameter

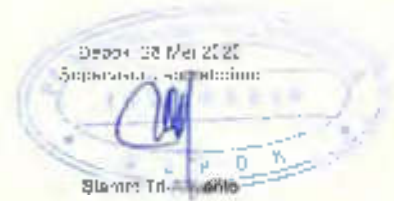
Tanggal Sampel: 12 Mei 2020
 Sampling Date
 Waktu Sampel: 12.04 WIB
 Sampling Time

No	No. Sampel	Waktu sample	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	006.0206	WWD-1 Domestik Kantor Lapangan PLTGU N: 0° 32' 15,11" E: 101° 31' 14,57"	Total Coliform	13093	3000	jumlah / 100ml	APHA 9221 B 2012 (APM)	

Keterangan:
 1. Kadar Maksimum Mengacu Pada Permen LK No F. 58/Men/10/2015 Tentang Baku Mutu Air Limbah Domestik - Limbah I
 2. Pengambilan sampel air dilakukan pada 12-05-2020-0604

REPORT ON
 Perihal: Uji UPL Trans-Is-SUT/MPFR Tanyan Tahap 1/2020

Atas nama
 PT Medica Ralch Power Rau - JEI





ALS Life Sciences

CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Field, Client Information, Laboratory Information, and Analysis Details. Includes fields like Work Order, Client, Contact, Address, E-mail, Telephone, Project, Order number, Issue Date, and Date Samples Received.

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of the report have been checked and approved for release. The analytical procedures used by the PT ALS Indonesia have been reviewed and established internationally recognized procedures...

Signatories

This laboratory is accredited under KOMITE AKREDITASI NASIONAL. The tests reported herein have been performed in accordance with laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below.

Table with 2 columns: Signatories and Position. Lists Georgina Paulus (R&D Chemist) and Hira Nurharta (Laboratory Manager).

Handwritten signature in blue ink over the PT ALS Indonesia logo.



Laboratorium Pengujian LP-001-KM



Analytical Results

Substrate **WASTE WATER**

Client Sample ID	WWD-1 DOMESTIK KANTOR LAPANGAN PLISU		
Laboratory Sample ID	JW2001223-021		
Sample Description	N= 0'32'15 11" E 104'21'14.67"	PerMenLHK No. P.38/Perlh/Seljen/Kum.10/201 E	
Sampling Date/Time	03-Jun-2020 14:35		

Component	Method	LOD	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
pH Value	APHA 4500-H	0.10	pH Unit	6.82	6	9	-
Total Suspended Solids	APHA 2540 D	0.5	mg/L	16.0	—	30	mg/L
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	13.2	—	30	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	31	—	100	mg/L
Oil & Grease	APHA 5520 B	3	mg/L	<5	—	5	mg/L
Nutrient							
Ammonia as N	APHA 4600-NH3D	0.02	mg/L	1.25	—	10	mg/L

Note: Bold and Italicized font is applied where the result is equal to or greater than the Guideline Limit.

Key:
 LOD = Limit of Reporting
 ^ = This result is computed from individual analyte detections at or above the level of reporting
 B = ALS is not accredited for these tests.
 - = Indicates an estimated value



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

Jl. Raya Jakarta Bogor KM. 27, RT 005/04, Cicaung, Depok, Jawa Barat 16412
 Telp.: 021- 25629393-94, Fax: 021- 25625355 Website: www.anslabcertify.com, Email: marketing@anslabcertify.com.
 A Member Of Saraswanti Group.

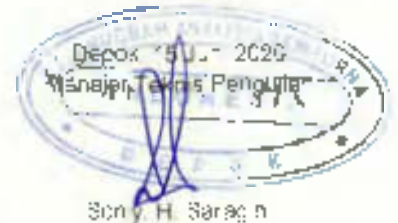


LAPORAN HASIL PENGUJIAN

Result of Analysis

No: AAS.LHP.VI.2020.0930

<u>Nomor Order</u> (Order Number)	AAS.KUV.2020.0930	<u>Mauk Sampel</u> (Sample Mauk)	At Limbah
<u>Nama Pelanggan</u> (Customer Name)	PT Nusa Buana Cipta	<u>Parameter Analisa</u> (Parameter)	Analisa Total Cadmium
<u>Alamat</u> (Address)	Jl. Tebel Utara 1B No. 3, Jakarta - 12820	<u>Tgl. Penerimaan</u> (Received Date)	04 Jun 2020
<u>Telepon/Faks</u> (Phone/Fax)	021 8303718	<u>Tgl. Analisa</u> (Analysis Date)	25 Jun 2020
<u>Persnial Penghubung</u> (Contact Person)	Ibu Soraya	<u>No. Lab</u> (Lab No.)	2020-0184



No. Formulir 28.17-11/5MM-AAA
Revisi 3



Jl. Raya Jakarta Bogor KM. 37, RT 005/04, Cikubing, Depok, Jawa Barat 16412.

Telp. 021-29629393-94, Fax. 021-29629395 Website www.aashlaboratory.com, Email: marketing@aslaboratory.com.

4 Number Of Saraswanti Group.

LAPORAN HASIL PENGUJIAN

Nomor AAS : HP VI 2020 0330

Nama Pelanggan PT. Baku B. Jawa Tengah
Consumer Name
Pembayaran Analisa Total Cashless
Parameter

Tanggal Sampling 28 Juni 2020
Sampling Date
Waktu Sampling 14.35 WIB
Sampling Time

No	No Sample	Kode sample	Parameter Uji	HASIL	Kadar Maksimum	Satuan	Metode Pengukuran	Keterangan
1	006.0086	WAC-1 Domestik Kantor Lapangan PLTGU N. 0° 32' 15,11" E: 101° 31' 14,57"	Total Cairan	16000	3000	mg/liter / l/cm ³	API-A 822' B 2012 (APM)	

Keterangan

1. Kadar Maksimum Mengacu Pada Formir-L-K No P. 68/Mon/In/Bakair/Kor.1/822/S. Lembar Baku Waku Air Jernih Domestik, Lampiran I.
Pengambilan contoh yg mengacu pada 28 Desember 2015

REPORTEM

Fasilitas URL LPL Transmisi SUT MIPA Terapan Tahap Keseluruhan

Tempat

Mesra, Rauh Power Baku - JGI



LABORATORY ANALYSIS REPORT

Laboratory Sample ID	OS.1512023.1	OS.1512023.2	OS.1512023.3				
Customer Sample ID	N-1	N-2	N-3				
Matrix	Noise	Noise	Noise				
Date of Sampling	27/11/2019 to 28/11/2019	28/11/2019 to 29/11/2019	29/11/2019 to 30/11/2019				
Time of Sampling	15.16 – 15.26 WIB	15.10 – 15.10 WIB	15.41 – 15.41 WIB				
Sampling Point Coordinate	9° 00' 37" 26" 119° 01' 32" 29"	9° 00' 37" 32.61" 119° 01' 29" 38.45"	9° 00' 37" 43.35" 119° 01' 28" 36.75"				
Temperature at Sampling Point (°C)	26,3	20,1	34,5				
Humidity at Sampling Point (%RH)	79,4	78,1	54,9				
Windspeed at Sampling Point (m/s)	0,2	0,1	0,7				
Atmospheric Pressure at Sampling Point (mmHg)	717	715	720				
Wind Direction	East to West	East to West	North to south				
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Det. Limit	Reg. Limit	Result	Result	Result
Noise L1	OW-AA11 (Sound level meter)	dBA	---	---	72	71	70
Noise L2	OW-AA11 (Sound level meter)	dBA	---	---	76	72	71
Noise L3	OW-AA11 (Sound level meter)	dBA	---	---	77	76	83
Noise L4	OW-AA11 (Sound level meter)	dBA	---	---	65	60	69
Noise L5	OW-AA11 (Sound level meter)	dBA	---	---	67	60	66
Noise L6	OW-AA11 (Sound level meter)	dBA	---	---	65	60	66
Noise L7	OW-AA11 (Sound level meter)	dBA	---	---	64	60	64
Noise L8	Calculation	dBA	---	---	73	71	76
Noise L9	Calculation	dBA	---	---	65	60	65
Noise L10	Calculation	dBA	---	---	71	69	75

LABORATORY ANALYSIS REPORT

Report Number : QSL1917107
Number of Pages : 2 Including Cover
Sample(s) Description : Noise
Customer Sample(s) Identity : N-1 to N-3
Sampled by : Laboratory Customer
Date of Sample(s) Reception : December 07, 2019
Date of Analysis Finished : January 10, 2020
Customer Name : PT. Nusa Buana Cipta
Customer Category : Company Government Institution School/University
 Private Individual Others
Customer Address : Jl. Tebet Utara 1B No.3 Tebet – Jakarta Selatan (17870)
Customer Contact Person : Mr. Budi Prasetyo
Report On : Pemantauan Lingkungan AMDAL PLTGU Riau Tahap Konstruksi
Attention : PT. Medco Ratch Power Riau –JGI

Authorized by,

Yadi Bachtiar, S.Si
Technical Manager
January 10, 2020

Terms and Conditions

a) This report may not be reproduced for any reason except in full and with permission from PT. Organo Science Laboratory; b) In any case PT. Organo Science Laboratory is not responsible for misuse of the contents of this report; c) This report related only to sample(s) received and analyzed if sampling procedure has been done by other party(ies); d) If Sample(s) had already taken by other party(ies) or taken not in accordance with the stated method, the report result related to ISO/IEC 17025 accreditation requirements will be affected as described in the quotation previously agreed; e) Any complaint will be responded immediately within 48 hours. Complaint received within 2 months after this Report received by the Customer will be followed up as soon as possible. Complaints coming afterwards will not be guaranteed; f) Samples will be disposed one month after Customer received this Report (unless requested to be returned upon agreement); g) This report contain marks in the form of singular number within bracket and other form of marks that need to be known, as follows:

* (1) is sign for substracted test parameter; * (2) is sign for non accredited test parameter or test parameter become unaccredited due to different sample matrix; * (3) is sign for air sample reporting result unit, ppm= (mg/m³ value)/(24,45/Molecular weight); * (4) is sign for parameter related to sample(s) taken by other party as described in point a; * (5) is sign for parameter related to sample(s) taken not in accordance with the stated method as described in point a; (6) is sign for in situ test parameter; * NA mean Not Available or Not Applicable

LABORATORY ANALYSIS REPORT

Laboratory Sample ID	OSL1912107-1	OSL1912107-2	OSL1912107-3				
Customer Sample ID	N-1	N-2	N-3				
Matrix	Noise	Noise	Noise				
Date of Sampling	17-12-2019 to 19-12-2019	18-12-2019 to 20-12-2019	16-12-2019 to 18-12-2019				
Time of Sampling	12.02 – 12.02 WIB	08.20 – 08.22 WIB	14.21 -14.21 WIB				
Sampling Point Coordinate	N: 00°30'57.60" E: 101°31'51.6"	N: 00°30'57.60" E: 101°30'57.60"	N: 00°31'51.60" E: 101°29'38.4"				
Temperature at Sampling Point (°C)	NA	NA	NA				
Humidity at Sampling Point (%RH)	NA	NA	NA				
Windspeed at Sampling Point (m/s)	NA	NA	NA				
Atmospheric Pressure at Sampling Point (mmHg)	NA	NA	NA				
Wind Direction	NA	NA	NA				
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Det. Limit	Reg. Limit	Result	Result	Result
Noise L1	OWI-AA11 (sound level meter)	dBA	—	—	54	39	54
Noise L2	OWI-AA11 (sound level meter)	dBA	—	—	43	40	45
Noise L3	OWI-AA11 (sound level meter)	dBA	—	—	57	56	53
Noise L4	OWI-AA11 (sound level meter)	dBA	—	—	62	40	38
Noise L5	OWI-AA11 (sound level meter)	dBA	—	—	49	35	31
Noise L6	OWI-AA11 (sound level meter)	dBA	—	—	59	35	34
Noise L7	OWI-AA11 (sound level meter)	dBA	—	—	38	31	31
Noise Lx	Calculation	dBA	—	—	58	49	50
Noise Lm	Calculation	dBA	—	—	55	34	33
Noise Lsm	Calculation	dBA	—	—	57	47	48

**CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON**

Work Order	: JW1904087	Page	: 1 of 5
Amendment	: 1		
Client	: PT. NUSA BUANA CIPTA	Laboratory	: PT ALS INDONESIA
Contact	: MS RORO BORAYA	Contact	: Tamara Dayu
Address	: Jl . TERLET UTARA 1B, NO. 3 JAKARTA 12B20	Address	: SENTUL INDUSTRIAL ARFA CAHAYA RAYA ROAD BLOK K BOGOR WEST JAVA Indonesia 16810
E-mail	: lab@nusabuanacipta.com	E-mail	: Tamara.Dayu@alglobal.com
Telephone	: 0218303718	Telephone	: +62 21 29415151
Facsimile	: ---	Facsimile	: +62 21 29415152
Project	: PEMANTAUAN LINGKUNGAN AMDAL PLTGU RIAU TAHAP KONSTRUKSI	Quote number	: JW2018NBCDD01 (WATER - PERMENKES 32/2017 & PP No. 82 Thn. 2001, Class III)
Order number	: ---	QC level	: ALS Indonesia Quality Control Schedule (Standard)
C-O-C number	: ---		
Site	: ---		
Sampled by	: CI IFNT		
Issue Date	: 21-Jan-2020 17:24	No. of samples received	: 4
Date Samples Received	: 23-Dec-2019 17:00	No. of samples analyzed	: 4

General Comments

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Where a reported less than (<) result is higher than the LQR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

When no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component.

**Signatories**

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Signatories	Position
Daniel Primanto	R & D Chemist
Sisca Nurhaffa	Laboratory Manager



Analytical Results

Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-1 UPSTREAM SUNGAI TENAYAM			
JW1904087-001			
N= 102°32'38.40" E= 1011°30'14.40"	PP No B2 Year 2011, Class III		
19-Dec-2019 09:30			

Compound	Method	LOD	Unit	Result	Low	High	Unit
Aggregate Organics							
Oil & Grease	APHA 5520 G	1	mg/L	<1	—	1	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3500-Cr B	0.010	mg/L	<0.010	—	0.05	mg/L
Metal and Major Cations-Dissolved							
Chromium - Hexavalent	APHA3500Cr	0.010	mg/L	<0.010	—	0.05	mg/L
Mercury	APHA 3112 B	0.00005	mg/L	<0.00005	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0201	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L
Metal and Major Cations-Total							
Mercury	APHA 3112 B	0.00005	mg/L	<0.00005	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0202	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0188	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L

Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-1 UPSTREAM SUNGAI TENAYAM			
JW1904087-001			
N= 102°32'38.40" E= 1011°30'14.40"	Guideline comparison not requested for sample		
19-Dec-2019 09:30			

Compound	Method	LOD	Unit	Result	Low	High	Unit
Metal and Major Cations-Dissolved							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.448	—	—	—
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Metal and Major Cations-Total							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	0.0372	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	1.42	—	—	—
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—



Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SU-2 DOWNSTREAM SUNGAI TEMAYAN

JW1904087-002

N= 00°35'37.40" E-
 101°30'19.00"
 19-Dec-2018 11:00

PP No B2 Year 2011, Class III

Compound	Method	LOR	Unit	Result	Low	High	Unit
Aggregate Organics							
Oil & Grease	APHA 5520 C	1	mg/L	<1	—	1	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3500-Cr B	0.010	mg/L	<0.010	—	0.05	mg/L
Metal and Major Cations-Dissolved							
Chromium - Hexavalent	APHA3500Cr	0.010	mg/L	<0.010	—	0.05	mg/L
Mercury	APHA 3112 B	0.00005	mg/L	<0.00005	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0156	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APIA 3125 B	0.0050	mg/L	<0.0050	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L
Metal and Major Cations-Total							
Mercury	APHA 3112 B	0.00005	mg/L	<0.00005	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0173	—	1	mg/L
Copper	APIA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0131	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APIA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L

Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SU-2 DOWNSTREAM SUNGAI TEMAYAN

JW1904087-002

N= 00°33'32.40" E=
 101°30'19.00"
 19-Dec-2018 11:00

Guideline comparison not requested for sample

Compound	Method	LOR	Unit	Result	Low	High	Unit
Metal and Major Cations-Dissolved							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.482	—	—	—
Nickel	APIA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Metal and Major Cations-Total							
Chromium	APIA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	0.0280	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	1.84	—	—	—
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—



Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-3 UPSTREAM BUNGAJI GIAK			
JW1904087-003			
N= 00°34'38.40" E= 101°30'46.80"	PP No B2 Year 2011, Class III		
19-Dec-2018 11:30			

Compound	Method	LOR	Unit	Result	Low	High	Unit
Aggregate Organics							
Oil & Grease	APHA 5520 C	1	mg/L	<1	—	1	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3500-Cr B	0.010	mg/L	<0.010	—	0.05	mg/L
Metal and Major Cations-Dissolved							
Chromium - Hexavalent	APHA3500Cr	0.010	mg/L	<0.010	—	0.05	mg/L
Mercury	APHA 3112 B	0.00005	mg/L	<0.00005	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0200	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0101	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L
Metal and Major Cations-Total							
Mercury	APHA 3112 B	0.00005	mg/L	<0.00005	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0200	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0134	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L

Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-3 UPSTREAM BUNGAJI GIAK			
JW1904087-003			
N= 00°34'38.40" E= 101°30'46.80"	Guideline comparison not requested for sample		
19-Dec-2018 11:30			

Compound	Method	LOR	Unit	Result	Low	High	Unit
Metal and Major Cations-Dissolved							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	0.0146	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.444	—	—	—
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Metal and Major Cations-Total							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	0.0332	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.795	—	—	—
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—



Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

BW-4 DOWNSTREAM SUNGAI BIAK

JW1904087-004

N= 00°34'01.20" E=
 101°31'12.00"
 19-Dec-2018 11:46

PP No B2 Year 2011, Class III

Compound	Method	LOR	Unit	Result	Low	High	Unit
Aggregate Organics							
Oil & Grease	APHA 5520 C	1	mg/L	<1	—	1	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3500-Cr B	0.010	mg/L	<0.010	—	0.05	mg/L
Metal and Major Cations-Dissolved							
Chromium - Hexavalent	APHA3500Cr	0.010	mg/L	<0.010	—	0.05	mg/L
Mercury	APHA 3112 B	0.00005	mg/L	<0.00005	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0257	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0085	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L
Metal and Major Cations-Total							
Mercury	APHA 3112 B	0.00005	mg/L	<0.00005	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0257	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0254	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L

Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

BW-4 DOWNSTREAM SUNGAI BIAK

JW1904087-004

N= 00°34'01.20" E=
 101°31'12.00"
 19-Dec-2018 11:46

Guideline number not requested for sample

Compound	Method	LOR	Unit	Result	Low	High	Unit
Metal and Major Cations-Dissolved							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	0.0202	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.418	—	—	—
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Metal and Major Cations-Total							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	0.0381	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.776	—	—	—
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—

Note: Bold and Italicized font is applied where the result is equal to or greater than the Guideline Limit.

- Key:
- LOR - Limit of reporting
 - * - This result is computed from individual analyte detections at or above the level of reporting
 - g - AI B is not accredited for these tests
 - = Indicates an estimated value.

LABORATORY ANALYSIS REPORT

Report Number : QSL1917108
Number of Pages : 4 Including Cover
Sample(s) Description : Surface Water
Customer Sample(s) Identity : SW-1 Upstream sungai Tenayan, SW-2 Downstream sungai Tenayan, SW-3 Upstream sungai Siak, SW-4 Downstream sungai siak
Sampled by : Laboratory Customer
Date of Sample(s) Reception : December 23, 2019
Date of Analysis Finished : January 09, 2020
Customer Name : PT Nusa Buana Cipta
Customer Category : Company Government Institution School/University
 Private Individual Others
Customer Address : Jl. Tebet Utara 1B No.3 Jakarta 12820
Customer Contact Person : Mr. Budi Prasetyo
Report On : Pemantauan Lingkungan - AMCAI - LTGU Riau Tahap Konstruksi
Attention : PT. Medco Patch Power Riau - JGI

Authorized by,

Yadi Bachtiar, S.Si
Technical Manager
January 09, 2020

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* (1) is sign for substracted test parameter; * (2) is sign for non accredited test parameter or test parameter become unaccredited due to different sample matrix; * (3) is sign for air sample reporting result unit, ppm = (mg/m³ value)/(24,45/Molecular weight); * (4) is sign for parameter related to sample(s) taken by other party as described in point a; * (5) is sign for parameter related to sample(s) taken not in accordance with the stated method as described in point a; (6) is sign for in situ test parameter; * NA mean Not Available or Not Applicable

LABORATORY ANALYSIS REPORT

Parameter(s) of Analysis	Method	Unit	Det. Limit	Reg. Limit	Result	Result	Result
pH (6)	SNI 06-6989.11.2004	-	NA	6 – 9*	6,12	5,95	5,71
Total Suspended Solids	SNI 06-6989.3.2004	mg/l	1	400*	178	81	35
Biochemical Oxygen Demand	APHA 22 nd , 5210 C (2012)	mg/L	2	6*	8	6	6
Chemical Oxygen Demand	APHA 22 nd , 5220 U (2012)	mg/L	5	50*	24	18	19
Ammonia	APHA 22 nd , 4500 NH ₃ F (2012)	mg/L	0,07	NA*	0,36	0,19	0,15
Fluoride	APHA 22 nd , 4500 F D (2012)	mg/L	0,1	1,5*	0,3	0,3	0,3
Total Nitrogen (2)	OWI-WQ31 (Spectrophotometer)	mg/L	0,5	—	2,2	1,6	1,6
Nitrate	APHA 22 nd , 4500 NO ₃ F (2012)	mg/L	0,003	20*	0,316	0,347	0,158
Nitrite	APHA 22 nd , 4500 NO ₂ B (2012)	mg/L	0,005	0,06*	0,047	0,036	0,033
Phosphorus	APHA 22 nd , 4500 P A, B&E (2012)	mg/L	0,05	1	0,09	0,05	0,10
Temperature (6)	APHA 21 st , 2250.B (2005)	°C	NA	Regulation 3*	25,5	26,2	27,8
Conductivity	SNI 06-6989.1 (2004)	µmhos/cm	1	—	62	49	50
Turbidity	APHA 22 nd , 2130 A&B (2012)	NTU	25	—	433	203	16

LABORATORY ANALYSIS REPORT

Laboratory Sample ID		DS11912108-4	---	---			
Customer Sample ID		SW-2	---	---			
Matrix		Downstream Sungai Siak	---	---			
Date of Sampling		Surface Water	---	---			
Time of Sampling		19-12-2019	---	---			
Sampling Point Coordinate		11.45 WIR	---	---			
		N: 102°34'01,20";	---	---			
		E: 101°31'12,50"	---	---			
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Det. Limit	Reg. Limit	Result	Result	Result
pH (6)	SNI 06-6980.11.2004	-	NA	6 - 9*	5,66	---	---
Total Suspended Solids	SNI 06-6989.3.2004	mg/L	1	400*	56	---	---
Biochemical Oxygen Demand	APHA 22 ⁹¹ , 5210 C (2012)	mg/L	2	6*	8	---	---
Chemical Oxygen Demand	APHA 22 ⁹¹ , 5220 D (2012)	mg/L	5	50*	22	---	---
Ammonia	APHA 22 ⁹¹ , 4500 NH ₃ F (2012)	mg/l	0,07	NA*	0,16	---	---
Fluoride	APHA 22 ⁹¹ , 4500 F D (2012)	mg/l	0,1	1,5*	0,3	---	---
Total Nitrogen (2)	QWA WQ31 (Spectrophotometer)	mg/L	0,5	---	3,34	---	---
Nitrate	APHA 22 ⁹¹ , 4500 NO ₃ B (2012)	mg/L	0,003	20*	1,59	---	---
Nitrite	APHA 22 ⁹¹ , 4500 NO ₂ B (2012)	mg/L	0,005	0,05*	0,022	---	---
Phosphorus	APHA 22 ⁹¹ , 4500 P A, H&E (2012)	mg/L	0,03	1	0,09	---	---
Temperature (6)	APHA 21 ⁹¹ , 2250 B (2005)	°C	NA	Deviation 3*	27,8	---	---
Conductivity	SNI 06-6980.1 (2004)	µmho/cm	1	---	54	---	---
Turbidity	APHA 22 ⁹¹ , 2130 A&B (2012)	NTU	25	---	79	---	---

(*) Regulation Limit Refer to PP 82/2001 Class III

LABORATORY ANALYSIS REPORT

Reported Quality Control				
<i>We show only part of the whole quality control parameters that we have done.</i>				
<i>All quality control parameters that we did already meet the requirements. Figures shown in blank sample column indicate Detection Limit (DL).</i>				
Parameter(s) of Analysis	Confident Conclusion	Verification Standard/CRM (% Recovery)	Standard Spike to Sample (% Recovery)	Replicate (% RPD)
pH (6)	NA	NA	NA	NA
Total Suspended Solids	NA	NA	NA	3,5
Biochemical Oxygen Demand	NA	NA	NA	7,4
Chemical Oxygen Demand	0,9999	100	97	1,6
Ammonia	1,0000	100	94	4,8
Fluoride	0,9998	115	95	10,0
Total Nitrogen (2)	1,0000	95	104	13
Nitrate	0,9993	109	113	0,5
Nitrite	0,9995	100	90	1,6
Phosphorus	0,9991	93	98	13,1
Temperature (C)	NA	NA	NA	NA
Conductivity	NA	101	NA	1,6
Turbidity	NA	100	NA	0,5

DRAFT



PT. ANUGRAH ANALISIS SEMPURNA

One Line Laboratory Services



Jl. Anyelokoro Engar KM. 37, Rt IIIb/III, Cibeleg, Depok, Jawa Barat 16117
Telp.: 021-29629393-94, Fax: 021-29629393, Website: www.asaleburday.com, Email: marketing@asaleburday.com
A Member of Saraswanti Group.

LAPORAN HASIL PENGUJIAN

No. AAS_LHPJ_2020_002

Nama Pelanggan: PT. Nusa U. Kim Glass
Instansi/Alam:
Parameter Analisa: Air Permukaan
Pencoba:

Tanggal Sampel: 12 Desember 2019
Tanggal Pengambilan Sampel: 09 10 WIB
Sampel Total:

No	No. Sample	Kode sampel	Parameter Uj	HASIL	Baku Mutu	Satuan	Metode Pengukuran	Keterangan
1	001.0341	SW-1 Upstream Sungai Taman N: 00° 32' 38.40" E: 101° 20' 14.97"	Total Coliform	1000	1000	1.1.1.1000/l	AP-4 3222-A-2017 (Number File)	

Kontak:
K. Baku Mutu Kesehatan Lingkungan RTR No. 82 Tahun 2010, Kolom 1
Klasifikasi: 1.1.1.1000/l (Number File) 09-10-2019-002

REVISI:
Parameter: 1.1.1.1000/l (Number File) RTR No. 82 Tahun 2010, Kolom 1

PT. Anugrah Analisis Sempurna
PT. Medca Batch No. 101 - 101





PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services



Jl. Raya Jakarta-Dugur KM. 37, RT 005/04, Gludang, Bekasi, Jawa Barat 16412.
 Telp.: 021 - 29629395-94, Fax: 021 - 29629395, Website: www.ouslaboratory.com, Email: marketing@ansahratemy.com.
 A Member Of Saraswanti Group.

LAPORAN HASIL PENGUJIAN
 No: AAS / HP / 2020/002

Nama Pengirim: PT Mecca Bazaar Fatch Rizki
 Destinasi/Name: PT Mecca Bazaar Fatch Rizki
 Parameter Analisa: Air Potable
 Tanggal Sampling: 19 Desember 2019
 Waktu Sampling: 11:00 WIE
 Lokasi Sampling: -

No.	No. Sampel	Kode Sampel	Parameter Uji	HASIL	Saku Mutu	Satuan	Kategori Pengukuran	Keterangan
1	021.0342	SW-2 Duanatrisan Smpel Terayun N: 60° 53' 32,42" E: 101° 30' 18,00"	Tota Coliform	170	10000	MPN/100ml	AIR HAS 8/22-4/2017 (Membatasi 100)	

Alamat:
 Gedung Mulu Komplek Gedung 116 No. 52 Lela 02021 Bekasi
 Ronggowalimulya Kabupaten Ronggowalimulya - 25745-5004-444

REP/RT ON
 Alamat: Komplek Pengolahan AMDAL LITS, Kedu Tengah, Klaten

Alamat:
 PT Mecca Bazaar Fatch Rizki - 101





PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services



II Anugraha Raya Bangor Blok 37, RT 005/04, Ciocong, Depok, Jawa Barat 16419
 Telp. 021-29629393-94, Fax: 021-29629395, Website: www.cashkhantry.com, Email: marketing@cashkhantry.com
 A Member Of Saraswanti Group.

LAPORAN HASIL PENGUJIAN
 No. AAS-LIIP.. 2020-002

Nama Pelanggan: PT. N. sa Buana Citra
 Lokasi Sampel: A.1. Tembung
 Alamat: A.1. Tembung

Tanggal Sampling: 18 Desember 2019
 Sampel Dikirim: 11:30 WIB
 Waktu Sampling: 11:30 WIB

No	No. Sampel	Kode sampel	Parameter Uji	HASIL	Dasar Mutu	Bahan	Metode Pengukuran	Keterangan
1	DS1.0343	BW-1 Ubcraan Sungai Siak No: 001 541 03 401 E: 10° 30' 46,50"	Tekstur	1000	1000	J-1000-1	A-HA 5222 4-2017 (Murni) (100%)	

Revisi: 01
 di: Balai Kimia Negara, Gedung 433, No. RT Tembung 2001, Jalan 1
 Pagarjati, Jakarta Barat 12160-5000-4000

REPORT ON
 Analisis Mutu Uji: 1000 ANUGRAH ANALISIS SEMPURNA

Subjek:
 PT. N. sa Buana Citra





PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services



Jl. Raya Inkarnasi Bangsa KM. 17, Rt 005/04, Lincang, Depok, Jawa Barat 16412.
 Telp.: 021-29629393-94, Fax: 021-29629395, Website: www.ous-abc-otus.com, Email: marketing@pt-anugrah-analisis.com
 A Member Of Saraswanti Group.

LAPORAN HASIL PENGUJIAN
 No. AAS.LHP.1.2020.0021

Nama Pelanggan: PT. Medco Fresh Power Circle
 Customer Name
 Parameter Analisa: Air Permulakan
 Parameter

Tanggal Sampung: 10 Desember 2020
 Sampling Date
 Waktu Sampung: 11:45 WIB
 Sampling Time

No	No. Sampung	Kode sampel	Format UJ	HASIL	Batas Mutu	Satuan	Metode Pengukuran	Keterangan
1	001.0044	SW-4 Dimensi: 5' tinggi Sirkel N: 00° 34' 01,20" E: 101° 1' 12,00"	Total Coliform	130	1000	J-PT001	APHA 5229 A-7.17 (Membran Filter)	

Keterangan:
 a. Teknik Mutu Mikroba, pada PPS No. 05 Tahun 2010 - Edisi 1
 b. Standar Mutu: SNI 6969:2006 (JIS S 5035:2005)

REPORT ON
 Parameter: uji pengujian AMBA - PT. Medco Fresh Power Circle

Ata-Uti
 PT. Medco Fresh Power Circle - JCI





ALS Life Sciences

CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON

Table with 4 columns: Field, Value, Field, Value. Includes Work Order (JW2000598), Client (PT NIRA BUANA CIPTA), Laboratory (PT ALS INDONESIA), Issue Date (20-Mar-2020 09:22), and Date Samples Received (09-Mar-2020 0:20).

General Comments

This report supersedes any previous reports with this reference. Results apply to the samples as submitted. All steps of this report have been checked and approved for release.

The analytical procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures. In-house developed procedures are employed in the absence of documented standards or by client request.

When a result is less than (or) equal to or higher than the LOR, this may be due to primary sample extrinsic data dilution and/or insufficient sample for analysis.

When no sampling time is provided, the sampling time will default to 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component.



Signatories

This laboratory is accredited under KOMITE AKREDITAS NASIONAL. The tests reported herein have been performed in accordance with laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below. Electronic signing has been carried out in compliance with procedure specified in 21-CHR-PAI-11.

Table with 2 columns: Signatory, Position. Row 1: Block Nuzhatfa, Laboratory Manager.

Handwritten signature and blue stamp of PT. ALS Indonesia.



Analytical Results

Substrate: SURFACE WATER

Client Sample ID:	BW-1 UPSTREAM SUNGAI TENAYAN		
Laboratory Sample ID:	JWS000898-001		
Sample Description:	AK 02°32'58.40" S E 101°30'14.40" E	PP No B2 Year 2001, Class II	
Sampling Date/Time:	05-Mar-2020 17:12		

Constituent	Method	LOR	Unit	Result	Low	High	Unit
Aggregate Properties							
Oil & Grease	APHA 552 C	1	mg/L	0	---	1	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3500-Cr B	0.010	mg/L	<0.010	---	0.05	mg/L
Metal and Major Cations-Dissolved							
Chromium - Hexavalent	APHA3500Cr	0.010	mg/L	<0.010	---	0.05	mg/L
Mercury	APHA 3112 B	0.0005	mg/L	<0.0005	---	0.002	mg/L
Barium	APHA 3125 B	1.0050	mg/L	0.0034	---	1	mg/L
Copper	APHA 3125 E	0.0050	mg/L	<0.0050	---	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0062	---	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	---	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	---	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	---	0.01	mg/L
Metal and Major Cations-Total							
Mercury	APHA 3112 B	0.0005	mg/L	0.0007	---	0.002	mg/L
Barium	APHA 3125 B	1.0050	mg/L	0.0056	---	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	---	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0261	---	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	0.0011	---	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	---	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	---	0.01	mg/L

Substrate: SURFACE WATER

Client Sample ID:	BW-1 UPSTREAM SUNGAI TENAYAN		
Laboratory Sample ID:	JWS000898-001		
Sample Description:	N= UT 02°38'43" S E = 101°35'14.40" E	Guideline comparison not requested for sample	
Sampling Date/Time:	05-Mar-2020 17:12		

Constituent	Method	LOR	Unit	Result	Low	High	Unit
Metal and Major Cations-Dissolved							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---
Manganese	APHA 3125 B	0.0050	mg/L	0.0154	---	---	---
Iron	APHA 3125 B	0.0050	mg/L	1.68	---	---	---
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---
Metal and Major Cations-Total							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---
Manganese	APHA 3125 B	0.0050	mg/L	0.0051	---	---	---
Iron	APHA 3125 B	0.0050	mg/L	1.81	---	---	---
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---



Sub Matrix: SURFACE WATER

Client Sample ID
Laboratory Sample ID
Sample Description
Sampling Date/Time

SW-2 DOWNSTREAM SUNGAI TENAYAN
JW2000538-002
N= 00°33'32.40"
E= 101°30'18.00"
05-Mar-2020 15:33
D.A.S. (M) on pack material requested for sample

Compound	Method	LOD	Unit	Result	Low	High	Unit
Aggregate Organics							
Oil & Grease	APHA 5520 C	1	mg/L	<1	---	1	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3500-Cr 5	0.010	mg/L	<0.010	---	0.05	mg/L
Metal and Major Cations Dissolved							
Chromium - Hexavalent	APHA3500Cr	0.010	mg/L	<0.010	---	0.05	mg/L
Mercury	APHA 3142 B	0.00005	mg/L	<0.00005	---	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0218	---	1	mg/L
Copper	APHA 3125 D	0.0050	mg/L	<0.0050	---	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0067	---	0.10	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	---	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	---	0.01	mg/L
Lead	APHA 3125 D	0.0050	mg/L	<0.0050	---	0.03	mg/L
Metal and Major Cations Total							
Mercury	APHA 3142 B	0.00005	mg/L	0.00009	---	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0221	---	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	---	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0134	---	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	---	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	---	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	---	0.03	mg/L

Sub Matrix: SURFACE WATER

Client Sample ID
Laboratory Sample ID
Sample Description
Sampling Date/Time

SW-2 DOWNSTREAM SUNGAI TENAYAN
JW2000538-002
N= 00°33'32.40"
E= 101°30'18.00"
05-Mar-2020 15:33
D.A.S. (M) on pack material requested for sample

Compound	Method	LOD	Unit	Result	Low	High	Unit
Metal and Major Cations Dissolved							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---
Manganese	APHA 3125 B	0.0050	mg/L	0.0231	---	---	---
Cobalt	APHA 3125 D	0.0050	mg/L	0.248	---	---	---
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---
Metal and Major Cations Total							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---
Manganese	APHA 3125 B	0.0050	mg/L	0.0339	---	---	---
Iron	APHA 3125 B	0.0050	mg/L	1.23	---	---	---
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---



Sub-Mat: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SIN-3 UPSTREAM BUNGA: SIAK
 JW2000599-003
 N= 00°24'09.42";
 E= 101°30'48.97"
 05-Mar-2020 16:53
 PP No 82 Year 2001, Class III

Compound	Method	LOD	Unit	Result	Low	High	Unit
Aggregate Organics							
Oil & Grease	APHA 5520 C	1	mg/L	<1	—	1	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3000-Cr B	0.010	mg/L	<0.010	—	0.05	mg/L
Metal and Major Cations-Dissolved							
Chromium - Hexavalent	APHA3000Cr	0.010	mg/L	<0.010	—	0.05	mg/L
Mercury	APHA 5112 B	0.00005	mg/L	<0.00005	—	0.002	mg/L
Boron	APHA 3125 D	0.0050	mg/L	0.0257	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0075	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.05	mg/L
Metal and Major Cations-Total							
Mercury	APHA 5112 B	0.00005	mg/L	0.00007	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0212	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0118	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.05	mg/L

Sub-Mat: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SIN-3 UPSTREAM BUNGA: SIAK
 JW2000599-003
 N= 00°24'06.40";
 E= 101°30'46.80"
 05-Mar-2020 16:53
 Guideline comparison not requested for sample

Compound	Method	LOD	Unit	Result	Low	High	Unit
Metal and Major Cations-Dissolved							
Chloride	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	0.0253	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.402	—	—	—
Nitrate	APHA 3125 D	0.0050	mg/L	<0.0050	—	—	—
Metal and Major Cations-Total							
Chloride	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	0.0256	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.788	—	—	—
Nitrate	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—



Sub-Station: SURFACE WATER				Client Sample ID	SW-2 DOWNSTREAM SUNGAI SIAK			
				Laboratory Sample ID	JV2000598-004			
				Sample Description	N= 073451 (2.1)	PP No 92 Year 2001, Class II		
				Sampling Date/Time	E= 1013112.007			
					05-Mar-2020 18:11			
Compound	Method	LOR	Unit	Result	Low	High	Unit	
Aggregate Organics								
Oil & Grease	APHA 5520 C	1	mg/L	<1	---	1	mg/L	
Metal and Major Cations								
Chromium - Hexavalent	APHA3500-C; B	0.010	mg/L	<0.010	---	0.05	mg/L	
Metal and Major Cations-Dissolved								
Chromium - Hexavalent	APHA3500-C	0.010	mg/L	<0.010	---	0.05	mg/L	
Mercury	APHA 8112 B	0.0005	mg/L	<0.00005	---	0.002	mg/L	
Boron	APHA 3125 B	0.0050	mg/L	0.0269	---	1	mg/L	
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	---	0.02	mg/L	
Zinc	APHA 3125 B	0.0050	mg/L	0.0031	---	0.05	mg/L	
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	---	1	mg/L	
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	---	0.01	mg/L	
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	---	0.01	mg/L	
Metal and Major Cations-Total								
Mercury	APHA 8112 B	0.0005	mg/L	0.00006	---	0.002	mg/L	
Boron	APHA 3125 B	0.0050	mg/L	0.0264	---	1	mg/L	
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	---	0.02	mg/L	
Zinc	APHA 3125 B	0.0050	mg/L	0.0119	---	0.05	mg/L	
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	---	1	mg/L	
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	---	0.01	mg/L	
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	---	0.01	mg/L	

Sub-Station: SURFACE WATER				Client Sample ID	SW-4 DOWNSTREAM SUNGAI SIAK			
				Laboratory Sample ID	JV2000598-004			
				Sample Description	N= 073451 (2.1)	Guideline concentration not requested for sample		
				Sampling Date/Time	E= 1013112.007			
					05-Mar-2020 18:11			
Compound	Method	LOR	Unit	Result	Low	High	Unit	
Metal and Major Cations-Dissolved								
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---	
Manganese	APHA 3125 B	0.0050	mg/L	0.0262	---	---	---	
Iron	APHA 3125 B	0.0050	mg/L	0.341	---	---	---	
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---	
Metal and Major Cations-Total								
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---	
Manganese	APHA 3125 B	0.0050	mg/L	0.0273	---	---	---	
Iron	APHA 3125 B	0.0050	mg/L	0.345	---	---	---	
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	---	---	---	

Note: Round and adjusted factor is applied when the result is equal to or greater than the Guideline Limit

- Key:
- LOR = Limit of Reporting
 - 4 = This result is computed from individual analyte detections at or above the Limit of Reporting
 - g = N/A - is not accredited for these tests.
 - ~ = Indicates an estimated value

QUALITY CONTROL REPORT

Work Order	: JW2000598	Page	: 1 of 6
Client	: PT. NUSA BUANA CIPTA	Laboratory	: PT ALS INDONESIA
Contact	: MS HODO SORAYA	Contact	: Tamara Dayu
Address	: JL. TEBEL UTARA 1B NO. 3 JAKARTA 14243	Address	: SENTUL INDUSTRIAL AREA CAJAYA RAYA ROAD BLOK B ROJOPUR WEST JAVA Indonesia 16810 Tamara.Dayu@alsglobal.com
E-mail	: bb@nusabuanacipta.com	E-mail	: Tamara.Dayu@alsglobal.com
Telephone	: 021 8203718	Telephone	: +62 21 29415151
Fax/fine	: --	Fax/fine	: +62 21 29415157
Project	: FEMANTAIAN LINGKUNGAN AMDA PLTGU RIRU LAHAP KONS. RUKSI TRIMULANI TAHUN 2020	QC Level	: ALS Indonesia Quality Control Schedule (Standard)
Order number	: --	Order Samples Received	: 05-Mar-2022
QC# Number	: --	Issue Analysis Certificate	: 10-Mar-2022
Sampler	: CLIENT	Issue Date	: 20-Mar-2022
Site	: --	No. of Samples received	: 4
Quota number	: WATER - PERMENKES 32/2017 & PP No. 02 Tahun 2001 - Class II	No. of samples analyzed	: 4

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted.

This Quality Control Report contains the following information:

- Laboratory Duplication (DLR) Report: Relative Percent Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (CS) Report: Recovery and Acceptance Limits
- Matrix Spike (MS) Report: Recovery and Acceptance Limits



Signatories

This laboratory is accredited under KOMITE AKREDITASI NASIONAL. The tests reported herein have been performed in accordance with laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below. Electronic signing has been carried out in compliance with procedure specified in 21 CFR Part 11.

Signatories

Position

Bleca Kuthuffa

Laboratory Manager





Qual Comments

Analyst procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures or house developed procedures and employed in the absence of documented methods or by client request.

Most data determination has been performed results is reported on a dry weight basis.

As reported in section 5.4 which is higher than the LOR, this may be due to primary sample extracted/grossed dilution analyzer in multiple of samples for analysis. While the LOR of a reported result differs from standard LOR, this may be due to high

Anonymous = Refers to samples which are not specifically part of this work order, but former part of the QC process lab

CAS Number = CAS registry number from database maintained by Chemical Abstracts Service. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of Reporting

RPE = Relative Percentage Difference

= Incidence based (2)

QFL = Quality Funding Limit

MPN = Most Probable Number

PM = Probable Maximum

Result <LOR = Not Detectable (ND)



Order No: 3 (15)
 M2070536
 P: NUSA BUKITA
 PEMANTAUAN LINGKUNGAN AMDAL PLTSU 5 AJ TAHAP KONSTRUKSI TIRUAN I TA-III, 2023

Laboratory Duplicate (DUP) Report

Laboratory Duplicate refers to a randomly selected interlaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges of Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in A.S. Method SOP-Q0-23 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: RPD Result between 10 and 20 times LOR: 0% - 50% Result > 20 times LOR: 0% - 20%.

Laboratory Duplicate (DUP) Report									
Laboratory Sample ID	Client Sample ID	Compound	QAS Number	LOD	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
and Major Cations - APHA 3500-Cl (Chromium (VI) by UV-Vis Spectrophotometer)									
00570-001	Anonymika	Chromium - Hexavalent	---	0.002	mg/L	<0.010	<0.010	0.00	No Limit
and Major Cations-Dissolved : APHA / Total Mercury (Unfiltered) by FIMS									
00565-001	SAM1 UPSTREAM SUNGAI TENAYAN N= 00'32'36.40" ; E= 101'30'14.40"	Mercury	7439-97-6	0.00005	mg/L	<0.0005	<0.0005	0.00	No Limit
and Major Cations-Dissolved : APHA / Total Metals (Dissolved) by ICP-MS									
00568-001	SAM1 UPSTREAM SUNGAI TENAYAN N= 00'32'36.40" ; E= 101'30'14.40"	Boron	7440-42-8	0.005	mg/L	0.0004	0.0006	1.14	No Limit
		Chromium	7440-47-3	0.006	mg/L	<0.0050	<0.0050	0.00	No Limit
		Manganese	7439-96-5	0.005	mg/L	0.0454	0.0480	5.37	No Limit
		Iron	7439-89-6	0.001	mg/L	0.1669	0.165	2.16	0% - 20%
		Nickel	7440-02-0	0.005	mg/L	<0.0050	<0.0050	0.00	No Limit
		Copper	7440-50-9	0.005	mg/L	<0.0050	<0.0050	0.00	No Limit
		Zinc	7440-66-6	0.005	mg/L	0.0082	0.0087	5.94	No Limit
		Arsenic	7440-08-2	0.001	mg/L	<0.0010	<0.0010	0.00	No Limit
		Cadmium	7440-43-0	0.001	mg/L	<0.0010	<0.0010	0.00	No Limit
		Lead	7439-92-1	0.002	mg/L	<0.0020	<0.0020	0.00	No Limit
and Major Cations-Dissolved : APHA 3500-Cl (Dissolved Chromium (VI) by UV-Vis Spectrophotometer)									
00566-001	SAM1 UPSTREAM SUNGAI TENAYAN N= 00'32'36.40" ; E= 101'30'14.40"	Chromium - Hexavalent	---	0.01	mg/L	<0.010	<0.010	0.00	No Limit
and Major Cations-Total : APHA / Total Mercury by FIMS (APHA 3112-B)									
00568-001	SAM1 UPSTREAM SUNGAI TENAYAN N= 00'32'36.40" ; E= 101'30'14.40"	Mercury	7439-97-6	0.00005	mg/L	0.00007	0.00006	0.00	No Limit
and Major Cations-Total : APHA / Total Metals by ICP-MS (APHA 3125-B)									
00568-001	SAM1 UPSTREAM SUNGAI TENAYAN N= 00'32'36.40" ; E= 101'30'14.40"	Boron	7440-42-8	0.005	mg/L	0.0058	0.0061	0.88	No Limit
		Chromium	7440-47-3	0.005	mg/L	<0.0050	<0.0050	0.00	No Limit
		Manganese	7439-96-5	0.005	mg/L	0.0661	0.0648	0.45	0% - 50%
		Iron	7439-89-6	0.005	mg/L	1.61	1.64	1.98	0% - 20%
		Nickel	7440-02-0	0.005	mg/L	<0.0050	<0.0050	0.00	No Limit
		Copper	7440-50-9	0.005	mg/L	<0.0050	<0.0050	0.00	No Limit
		Zinc	7440-66-6	0.005	mg/L	0.0231	0.0285	1.70	No Limit



Order # 4019
Lab# 2018538
P.T. NUSA BUKANA DIPTA
PEMERINTAH DAERAH LINGKUNGAN HIDUP SURABAYA (TAHAP KONSTRUKSI TRIMULIHANI TAHUN 2025)

WATER			Laboratory Duplicate (DUP) Report						
Analysis Code	Client Sample ID	Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limit(s) (%)
Imp Metals - Metals Total - A T T A / Total Metals by ICP-MS (A T T A 21252) - continued									
00000001	SW1 UPSTREAM SUNEM TENAYAN KM 00 5230.10" P = 1013014.40	Arsenic	7440-20-2	0.001	mg/L	0.0011	0.0010	0.00	No Limit
		Calcium	7440-49-9	1.001	mg/L	<0.0010	<0.0010	0.00	No Limit
		Lead	7439-92-1	0.005	mg/L	<0.0050	<0.0050	0.00	No Limit



Method Blank (MB) and Laboratory Control Spike (LCS) Report

Quality control for Method / Laboratory Blank refers to an analysis free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC step is to monitor potential laboratory contamination. The quality control for Laboratory Control Spike (LCS) refers to a certified reference material, or a known concentration free matrix spiked with target analyte. The purpose of this QC measure is to monitor method precision and accuracy independent of sample matrix. Data and Recovery Limits are based on statistical evaluation of processed LCS.

Method	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Spike Concentration	Spike Recovery (%)		
						LCS	Low	High
and Major Cations - APHA 2000 (Dissolved Chloride) by ORION								
Freeze	—	1	mg/L	<1	21 mg/L	104	83.3	140
and Major Cations - APHA 2006 (Dissolved Vanadium) by UV-Vis Spectrophotometer								
Freeze	—	0.002	mg/L	<0.002	0.1 mg/L	88.0	80.0	120
and Major Cations - Dissolved - APHA Total Mercury (Dissolved) by FIMS								
Freeze	7439-97-8	0.00005	mg/L	<0.00005	0.004 mg/L	88.8	80.0	120
and Major Cations - Dissolved - APHA Total Metals (Dissolved) by ICP-MS								
Freeze	7440-42-8	0.005	mg/L	<0.0050	0.02 mg/L	83.7	80.0	120
Freeze	7440-47-3	0.005	mg/L	<0.0050	0.02 mg/L	98.4	80.0	120
Freeze	7439-96-5	0.005	mg/L	<0.0050	0.02 mg/L	98.5	80.0	120
Freeze	7439-89-6	0.005	mg/L	<0.0050	0.02 mg/L	91.1	80.0	120
Freeze	7440-02-0	0.005	mg/L	<0.0050	0.02 mg/L	88.0	80.0	120
Freeze	7440-80-8	0.005	mg/L	<0.0050	0.02 mg/L	80.3	80.0	120
Freeze	7440-86-6	0.005	mg/L	<0.0050	0.02 mg/L	98.6	80.0	120
Freeze	7440-39-0	0.005	mg/L	<0.0050	0.02 mg/L	93.3	80.0	120
Freeze	7440-43-8	0.005	mg/L	<0.0050	0.02 mg/L	104	80.0	120
Freeze	7439-92-1	0.005	mg/L	<0.0050	0.02 mg/L	97.0	80.0	120
and Major Cations - Dissolved - APHA 2000 (Dissolved Chromium VI) by UV-Vis Spectrophotometer								
Freeze	—	0.01	mg/L	<0.010	0.1 mg/L	87.0	80.0	120
and Major Cations - Total - APHA Total Mercury by FIMS (APHA 3112 B)								
Freeze	7439-97-8	0.00005	mg/L	<0.00005	0.004 mg/L	97.7	80.0	120
and Major Cations - Total - APHA Total Metals by ICP-MS (APHA 3125 D)								
Freeze	7440-42-8	0.005	mg/L	<0.0050	0.02 mg/L	98.7	80.0	120
Freeze	7440-47-3	0.005	mg/L	<0.0050	0.02 mg/L	98.4	80.0	120
Freeze	7439-96-5	0.005	mg/L	<0.0050	0.02 mg/L	97.7	80.0	120
Freeze	7439-89-6	0.005	mg/L	<0.0050	0.02 mg/L	90.7	80.0	120
Freeze	7440-02-0	0.005	mg/L	<0.0050	0.02 mg/L	87.6	80.0	120
Freeze	7440-80-8	0.005	mg/L	<0.0050	0.02 mg/L	89.5	80.0	120
Freeze	7440-86-6	0.005	mg/L	<0.0050	0.02 mg/L	98.6	80.0	120
Freeze	7440-39-0	0.005	mg/L	<0.0050	0.02 mg/L	97.4	80.0	120
Freeze	7440-43-8	0.005	mg/L	<0.0050	0.02 mg/L	98.0	80.0	120
Freeze	7439-92-1	0.005	mg/L	<0.0050	0.02 mg/L	95.2	80.0	120

Matrix Spike (MS) Report



6.15
 JMSX.01549
 PT. NISSA BUANA DIRTA
 PEMANAJAN LINGKUNGAN AMDAL PL GU RIAU TAHAP KONSTRUKSI TRIMESTER I TAHUN 2020

Quality control term Matrix Spike (MS) refers to an in-laboratory split sample method with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects or recoveries. Spike Recovery Limits per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges generally are defined in the form of sample matrix concentrations.

Matrix: WATER

Matrix Spike (MS) Report		
Spike	Spike Recovery (%)	Recovery Limit (%)
Concentration	MS	Low High

Lab Sample ID	Client Sample ID	Compound	CAS Number	Concentration	MS	Low	High
---------------	------------------	----------	------------	---------------	----	-----	------

and Major Cations-Dissolved - APHA Total Mercury (Dissolved) by FIMS

100589-002	SW-2 DOWNSTREAM SUNGAI TENAYAN N= 00°33'32.40" ; E= 101°30'18.00"	Mercury	7439-97-6	0.004 mg/L	89.5	80.0	120
------------	---	---------	-----------	------------	------	------	-----

and Major Cations-Dissolved - APHA Total Metals (Dissolved) by ICP-MS

100588-002	SW-2 DOWNSTREAM SUNGAI TENAYAN N= 00°33'32.40" ; E= 101°30'18.00"	Asbestos	7440-88-2	0.07 mg/L	84.0	80.0	120
		Boron	7440-42-8	0.06 mg/L	110	80.0	120
		Cadmium	7440-43-8	0.02 mg/L	95.9	80.0	120
		Chromium	7440-47-3	0.02 mg/L	88.0	80.0	120
		Copper	7440-50-8	0.02 mg/L	85.0	80.0	120
		Lead	7439-92-1	0.02 mg/L	88.5	80.0	120
		Manganese	7439-96-5	3.02 mg/L	86.2	80.0	120
		Nickel	7440-00-0	0.07 mg/L	84.6	80.0	120
Zinc	7440-66-8	0.02 mg/L	90.7	80.0	120		

and Major Cations-Total - APHA Total Mercury by FIMS (APHA 3112 D)

100588-002	SW-2 DOWNSTREAM SUNGAI TENAYAN N= 00°33'32.40" ; E= 101°30'18.00"	Mercury	7439-97-6	0.004 mg/L	53.2	80.0	120
------------	---	---------	-----------	------------	------	------	-----

and Major Cations-Total - APHA Total Metals by ICP-MS (APHA 3125 B)

100588-002	SW-2 DOWNSTREAM SUNGAI TENAYAN N= 00°33'32.40" ; E= 101°30'18.00"	Asbestos	7440-88-2	0.02 mg/L	87.0	80.0	120
		Boron	7440-42-8	0.02 mg/L	68.0	80.0	120
		Calcium	7440-43-8	0.02 mg/L	95.1	80.0	120
		Chromium	7440-47-3	0.02 mg/L	87.1	80.0	120
		Copper	7440-50-8	0.02 mg/L	89.7	80.0	120
		Lead	7439-92-1	0.02 mg/L	85.8	80.0	120
		Nickel	7440-00-0	0.07 mg/L	90.8	80.0	120
		Zinc	7440-66-8	0.02 mg/L	80.4	80.0	120

LABORATORY ANALYSIS REPORT

Laboratory Sample ID		OSL2023035-1	OSL2023035-2	OSL2023035-3			
Customer / Sample ID		SW-1 Upstream Sungai Terayati	SW-2 Downstream Sungai Terayati	SW-3 Upstream Sungai Siak			
Matrix		Surface Water	Surface Water	Surface Water			
Date of Sampling		05-03-2023	05-03-2023	05-03-2023			
Time of Sampling		07:17 WIB	08:39 WIB	15:53 WIB			
Sampling Point Coordinate		R: 00°32'38,40" E: 101°37'14,89"	R: 00°33'32,40" E: 101°30'18,03"	R: 00°34'08,40" E: 101°30'46,30"			
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Det. Limit	Reg. Limit	Result	Result	Result
pH (°C)	SNI 05-6589.1.1.21.04	—	NA	6-9*	5,81	5,58	6,72
Total Suspended Solid	SNI 05-5888.3.2014	mg/L	1	400*	254	13	14
Biochemical Oxygen Demand	APHA 22 nd , 5210 C (2012)	mg/L	2	6*	<2	<2	<2
Chemical Oxygen Demand	APHA 22 nd , 5220 D (2012)	mg/l	5	50*	21	10	33
Ammonia	APHA 22 nd , 4500 NH ₃ F (2012)	mg/l	0,07	NA*	0,97	0,36	0,52
Fluoride	APHA 22 nd , 4500 F D (2012)	mg/L	0,1	1,5*	<0,1	0,2	0,2
Total Nitrogen (T)	SW/ WQS1 (Spectrophotometry)	mg/L	0,5	—	3,7	2,7	2,9
Nitrate	APHA 22 nd , 4500 NO ₃ -N (2012)	mg/L	0,005	20*	0,425	0,270	0,270
Nitrite	APHA 22 nd , 4500 NO ₂ -N (2012)	mg/l	0,005	0,06*	0,210	0,057	0,046
Phosphorus	APHA 22 nd , 4500 P A, 846 F (2012)	mg/L	0,01	1*	0,18	0,13	0,12
Temperature (L)	APHA 21 st , 2250 B (2012)	°C	NA	Deviation 3*	29,8	30,6	30,9
Conductivity	SNI 06-6989.1 (2004)	µmho/cm	1	—	135	64	60
Turbidity	APHA 22 nd , 2150 A & B (2012)	NTU	25	—	1,70	57	32

LABORATORY ANALYSIS REPORT

Laboratory Sample ID		OSL0003055-4		---	---		
Customer Sample ID		SW-4		---	---		
Matrix		Downstream Sungai Slak		---	---		
Date of Sampling		08-05-2020		---	---		
Time of Sampling		10.11 WIB		---	---		
Sampling Point Coordinate		N: 00°21' 01.20"		---	---		
E: 101°31' 16.00"				---	---		
Laboratory Analysis Result							
Parameter(s) of Analysis	Method	Unit	Det. Limit	Reg. Unit	Result	Res. I	Res. II
pH (6)	SNI 06-6989.1.2004	-	NA	6-9*	5,71	---	---
Total Suspended Solids	SNI 06-6989.2.2004	mg/L	1	400*	19	---	---
Biochemical Oxygen Demand	APHA 22 nd , 5100 C (2012)	mg/L	2	6*	<2	---	---
Chemical Oxygen Demand	APHA 22 nd , 5200 D (2012)	mg/L	5	50*	15	---	---
Ammonia	APHA 22 nd , 4500 NH ₃ F (2012)	mg/L	0,02	NA*	0,53	---	---
Fluoride	APHA 22 nd , 4500 F D (2012)	mg/L	2,1	1,5*	0,3	---	---
Total Nitrogen (T)	OW/140/33 (Spectrophotometer)	mg/L	0,5	---	2,4	---	---
Nitrate	APHA 22 nd , 4500 NO ₃ E (2012)	mg/L	0,004	20*	0,189	---	---
Nitrite	APHA 22 nd , 4500 NO ₂ D (2012)	mg/L	0,005	0,05*	1,058	---	---
Phosphorus	APHA 22 nd , 4500 P A, B&F (2012)	mg/L	0,03	1*	0,14	---	---
Temperature (3)	APHA 21 st , 2250 B (2015)	°C	NA	Deviation 3*	29,3	---	---
Conductivity	SNI 06-6989.1 (2004)	µmho/cm	1	---	58	---	---
Turbidity	APHA 22 nd , 7190 AOR (2012)	NTU	25	---	34	---	---

(*): Regulation Limit Refer to PP 57/2001 Class III

LABORATORY ANALYSIS REPORT

Reported Quality Control				
We show only part of the whole quality control parameters that we have done.				
All quality control parameters that we did already meet the requirements. Values shown in black sample column in range Detection Limit (DL)				
Parameter(s) of Analysis	Coefficient Correlation	Verification Standard (CRM) (% Recovery)	Standard Spike to Sample (% Recovery)	Rep. rate (% SPD)
pH (A)	NA	NA	NA	NA
Total Suspended Solids	NA	NA	NA	10
Biochemical Oxygen Demand	NA	95	NA	0
Chemical Oxygen Demand	1,000	99	100	2,5
Ammonia	0,9557	100	88	3,5
Fluoride	0,7996	106	107	4,8
Total Nitrogen (2)	0,8899	92	86	3,1
Nitrate	0,5994	98	107	1,9
Nitrite	0,9993	104	94	2,0
Phosphorus	0,5997	99	94	6,4
Temperature (C)	NA	NA	NA	NA
Conductivity	NA	96	NA	2,3
Turbidity	NA	100	NA	8,8



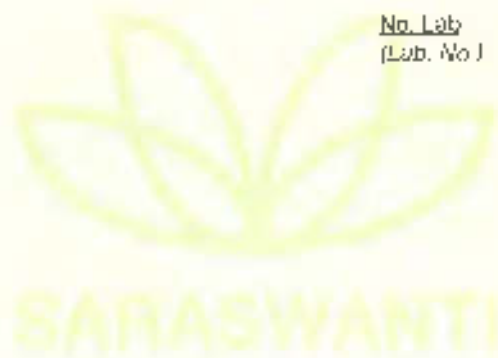
PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

Jl. Raya Jakarta Bogor KM. 37, RT 005/04, Cidang, Depok, Jawa Barat 16412
 Telp : 021- 29629393-94, Fax.: 021- 29629395, Website: www.auslaboratory.com, E-mail: marketing@auslaboratory.com.
 A Member Of Saraswanti Group.



LAPORAN HASIL PENGUJIAN
Result of Analysis
No: AAS.LHP.III.2020.0473

<u>Number Order</u> (Order Number)	⊖ AAS.K.: III.2020.0473	<u>Mat. x Sampel</u> (Sample Matrix)	⊖ Air Permukaan
<u>Nama Pelanggan</u> (Customer Name)	⊖ PT Nisa Buana Cipta	<u>Parameter Analisa</u> (Parameter)	⊖ Analisa Mikrobiologi
<u>Alamat</u> (Address)	⊖ Jl. Tebet Utara 1B No. 3, Jakarta - 12820	<u>Tgl. Penerimaan</u> (Receive Date)	⊖ 10 Maret 2020
<u>Telepon/Faks</u> (Phone/Fax)	⊖ 021- 8333710	<u>Tgl. Analisis</u> (Analysis Date)	⊖ 11 Maret 2020
<u>Personil Penghubung</u> (Contact Person)	⊖ Ibu Soreya	<u>No. Lab</u> (Lab. No.)	⊖ 003.0738 - 003.0739



No. Formulir ⊖ 28.117-PP/SM-AAS
 Revisi ⊖ 3

Hasil uji ini hanya berlaku pada contoh yang diuji.

Hal 1 dari 5

Dilarang menyalin, memperbanyak dan/atau mempublikasikan isi sertifikat ini tanpa ijin dari PT. Anugrah Analisis Sempurna

The Results shown in this report refer only to the samples tested. It is prohibited to copy, reproduce and/or publish the contents of this Certificate without PT. Anugrah Analisis Sempurna approval



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

Jl. Raya Jatiaris Begor Km. 37, RT 005/04, Cendang, Depok, Jawa Barat 16412.
 Telp.: 021- 29629393 94, Fax.: 021- 29629395. Website: www.aaslaboratory.com, Email: marketing@aaolaboratory.com.
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LAPORAN HASIL PENGLUJIAN

No: AAS111F II 2020 0473

Nama Pelanggan: PT Nusa Buana Cipta
 Customer Name:
 Parameter Analisa: Air Permukaan
 Parameter:

Tanggal Sampling: 05 Maret 2020
 Sampling Date:
 Waktu Sending: 17:12 WIB
 Sampling Time:

NO	No. Sample	Kode sampel	Parameter Uji	HASIL	Baku Mutu	Satuan	Metode Pengukuran	Keterangan
1	003.0726	SW-1 Luarstream Sungai Tenayan N: 00° 32' 30,40" E: 101° 30' 14,40"	Total Coliform	FWJ	10000	CFU/100ml	APHA 9221 B (APM) 2012	

Keterangan

a) Baku Mutu Mengacu pada PPRI No. 02 Tahun 2001 (Ke-54)
 Pengambilan contoh uji mengacu pada S3 7005MM 003

ISI PPHH UK

Pemeriksaan Lingkungan AMDA, DITOL 1001, Tahap Konstruksi, Tahap 1 tahun 2020

Akhiran

PT Medco Reten Power (Pers) Tbk





PT. ANUGRAH ANALISIS SEMPURNA

One Line Laboratory Services

Jl. Raya Jakarta Bagor KM. 31, RT 005/04, Gledang, Depok, Jawa Barat 16412
 Telp.: 021-29629393-94, Fax: 021-29629395. Website: www.aaslaboratory.com, Email: marketing@aaaskbn.com.
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LAPORAN HASIL PENGUJIAN

No: AAS-LI-P112020.0473

Nama Pelanggan: PT Nusa Buana Optia
 Customer Name:
 Parameter Analisa: Air Permukaan
 Parameter:

Tanggal Sampling: 05 Maret 2020
 Sampling Day:
 Waktu Sampling: 15:33 WIB
 Sampling Time:

No	No. Sample	Kode sampel	Parameter Uji	HASIL	Batas Mutu	Satuan	Metode Pengukuran	Keterangan
1	002.0737	SW-2 Downstream Sungai Tenayan N: 00° 33' 32,40" E: 101° 30' 18,00"	Total Coliform	360	10000	Jml/100ml	APHA 9211 U (AMJ) 2012	

Keterangan:
 as (SAS) M.L. Mengetahui pada 19/10/2019 No. 32 Tahun 2011 Kelas III
 Pengambilan sampel di lapangan pada: 20-744/S/04/AAS

REPORT ON
 Fakturisasi Laporan hasil ANALISA P. TGGURK. Yang di kirim oleh ke website 1 tahun 2020

Alasan:
 PT Medca Ratch Power Risk - JCI





PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services



Jl. Raya Jakarta Bogor Km. 37, RT 005/04, Cincing, Depok, Jawa Barat 16412.

Telp.: 021-29629393-94, Fax.: 021-29629395. Website: www.aaslaboratory.com, Email: marketing@uaslaboratory.com.
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LAPORAN HASIL PENGUJIAN

No: AAS LHP III 2020 0473

Nama Pelanggan: PT Nusa Ombak Oplus
 Customer Name
 Parameter Analisis: Air Perikanan
 Parameter

Tanggal Sampung: 06 Maret 2023
 Sampling Date
 Waktu Sampung: 10:53 WIB
 Sampling Time

No	No. Sample	Kode sample	Parameter Uji	HASIL	Baku Mutu	Satuan	Metode Pengukuran	Keterangan
1	003.0738	SW-3 Upstream Sungai Siak N: 00° 34' 00.40" E: 101° 30' 46.80"	Total Coliform	170	10000	Jml/100ml	APHA 9221 B (AFM) 2012	

Keterangan:
 a) Baku Mutu: Mengacu pada PPRI No. 02 Tahun 2001, Kelas III
 Pengambilan contoh di lapangan pada: 26 Februari 2023 AAS

REPORT ON:
 Pemeriksaan Lingkungan AIR (A) - 11411/Kel. 1-Subj. Kontrol Kualitas Air Laut Tahun 2022

Alamat:
 PT Medca Rald Power Res. - JCI



LAPORAN HASIL PENGUJIAN

No. AAS.LHP.I.2020.0473

Nama Pelanggan: PT Nusa Buana Cipta
 Customer Name:
 Parameter Analisa: Air Permukiman
 Parameter:

Tanggal Sampling: 05 Maret 2020
 Sampling Date:
 Waktu Sampling: 16.11 WIB
 Sampling Time:

No	No. Sample	Kode sample	Parameter Uji	HASIL	Baku Mutu	Satuan	Metode Pengukuran	Keterangan
1	003.0733	SW-4 Downstream Sungai Siak N: 00° 34' 01.20" E: 101° 31' 12.00"	lata Coliform	1600	10000	Jml/100ml	APHA 2021 B (APV) 2012	

Keterangan:
 di Baku Mutu mengacu pada PPRI No. 52 tahun 2001, Kelas II
 Pengambilan contoh air sungai pada 05.75KSM/AAS

Revisi: 001/01
 Parameter uji pengujian AAS/01/11/2019/1611 WIB/05.75KSM/AAS

Autoriser:
 PT Media Rata Power Riau - 021



**CERTIFICATE OF ANALYSIS with GUIDELINE COMPARISON**

Work Order	: JW2001114	Page	: 1 of 9
Client	: PT. NUÇA BUANA CIPTA	Laboratory	: PT ALS INDONESIA
Contact	: MS RORO SORAYA	Contact	: Sonya Agung
Address	: JL. TEBET UTARA 1B NO. 3 JAKARTA 12820	Address	: SENTUL INDUSTRIAL AREA CAHAYA RAYA ROAD RI OK K BOGOR WEST JAVA Indonesia 16810
E-mail	: lab@nusabuanacipta.com	E-mail	: Sonya.Agung@ALSglobal.com
Telephone	: 0218303718	Telephone	: +62 21 29415151
Facsimile	: ---	Facsimile	: +62 21 29415152
Project	: PEMANTAUAN I INGKUNGAN AMDAL PLTGU RIAU TAHAP KONSTRUKSI SEMESTER I TAHUN 2020	Quote number	: JW2018NR0001 (IQT5711 WATER - PCRMONKCS 32/2017 & PP No. 82 Ttn. 2001, Class III)
Order number	: ---	QC Level	: ALS Indonesia Quality Control Schedule (Standard)
C-O-C number	: ---		
Site	: ---		
Sampled by	: CLIENT		
Issue Date	: 03-Jun-2020 17:58	No. of samples received	: 4
Date Samples Received	: 13-May-2020 13:40	No. of samples analysed	: 4

General Comments

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

The analytical procedures used by the PT ALS Indonesia have been developed from established internationally recognized procedures. In-house developed procedures are employed in the absence of documented standards or by client request.

Where a reported less than (<) result is higher than the LQR, this may be due to primary sample concentration/dilution and/or insufficient sample for analysis.

When no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component.

**Signatories**

This laboratory is accredited under KOMITE AKREDITASI NASIONAL. The tests reported herein have been performed in accordance with laboratory's Terms of Accreditation. This document has been electronically signed by authorized signatories indicated below. Electronic signing has been carried out in compliance with procedure specified in 21 CFR Part 11.

Signature	Position
Daniel Primiano	R & D Chemist



Work Order Specific Comments

- Dissolved / Total metal by ICMS (APHA 3125B) analysis was subcontracted due to instrument breakdown.

Analytical Results

Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

BW-1 UPSTREAM SUNGAI TENAYAN	
JW2001114-001	
N= 00°32'38.40" ; E= 101°30'14.40"	PP No 82 Year 2001, Class III
12-May-2020 14:40	

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Total Suspended Solids	APHA 2540 D	0.5	mg/L	34.0	—	400	mg/L
In Situ Measurement							
pH - Field	APHA 4500-H	0.1	pH Unit	6.26	6	9	pH Unit
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	<2.0	—	6	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	<10	—	50	mg/L
Oil & Grease	APHA 5520 C	1	mg/L	<1	—	1	mg/L
Nutrient							
Phosphate as PO4-P	APHA 4500-P E	0.005	mg/L	0.062	—	1	mg/L
Nitrate as N	APHA 4500-NO3E	0.005	mg/L	0.022	—	20	mg/L
Nitrite as N	APHA 4500-NO2B	0.001	mg/L	0.047	—	0.06	mg/L
Inorganic and Non-Metallic Properties							
Fluoride	APHA 4500-F C	0.02	mg/L	0.31	—	1.5	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3500-Cr B	0.010	mg/L	<0.010	—	0.05	mg/L
Metal and Major Cations-Dissolved							
Chromium - Hexavalent	APHA3500Cr	0.010	mg/L	<0.010	—	0.05	mg/L
Mercury	APHA 3112 B	0.00005	mg/L	<0.00005	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0400	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0200	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L
Metal and Major Cations-Total							
Mercury	APHA 3112 B	0.00005	mg/L	0.00005	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0517	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0216	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L

Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-1 UPSTREAM SUNGAI TENAYAN	
JW2001114-001	
N= 00°32'38.40" ; E= 101°30'14.40"	Guideline comparison not requested for sample
12-May-2020 14:40	

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Conductivity	APHA 2510 B	1	µS/cm	67	—	—	—
Turbidity	API IA 2130 B	0.6	NTU	77.6	—	—	—
In Situ Measurement							
Temperature	API IA 2550B	0.1	°C	30.5	—	—	—



Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

BUN-1 UPSTREAM BUNGA TEMAYAN

JW2001114-001

N= 00°57'38.40"
 E= 101°30'14.40"
 12-May-2020 14:40

Qualitative comparison not requested for sample

Compound	Method	LOD	Unit	Result	Low	High	Unit
Nutrient							
Ammonia as N	APHA 4500-NH3D	0.02	mg/L	0.16	—	—	—
Total Nitrogen as N	Calculation	0.02	mg/L	0.33	—	—	—
Metal and Major Cations-Dissolved							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	0.0294	—	—	—
Iron	API IA 3125 B	0.0050	mg/L	0.880	—	—	—
Nickel	API IA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Metal and Major Cations-Total							
Chromium	API IA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3125 B	0.0050	mg/L	0.0305	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	2.20	—	—	—
Nickel	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—



Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-2 DOWNSTREAM BUNQAI TENAYAN

JW2001114-002

N= 00°33'32.40"
 E= 101°30'18.00"
 12-May-2020 12:03

PP No 82 Year 2001, Class III

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Total Suspended Solids	APHA 2540 D	0.5	mg/L	29.0	—	400	mg/L
In Situ Measurement							
pH - Field	APHA 4500-H	0.1	pH Unit	6.54	6	9	pH Unit
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	8.4	—	6	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	20	—	50	mg/L
Oil & Grease	APHA 5520 C	1	mg/L	<1	—	1	mg/L
Nutrient							
Phosphate as PO4-P	APHA 4500-P E	0.005	mg/L	0.057	—	1	mg/L
Nitrate as N	APHA 4500-NO3E	0.005	mg/L	0.010	—	20	mg/L
Nitrite as N	APHA 4500-NO2B	0.001	mg/L	0.003	—	0.06	mg/L
Inorganic and Non-Metallic Properties							
Fluoride	APHA 4500-F C	0.02	mg/L	0.47	—	1.5	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3500-Cr B	0.010	mg/L	<0.010	—	0.05	mg/L
Metal and Major Cations-Dissolved							
Chromium - Hexavalent	APHA3500Cr	0.010	mg/L	<0.010	—	0.05	mg/L
Mercury	APHA 3112 B	0.00005	mg/L	0.00006	—	0.0002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0400	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0200	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L
Metal and Major Cations-Total							
Mercury	APHA 3112 B	0.00005	mg/L	0.00007	—	0.002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0514	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	0.0075	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0566	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L

Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-2 DOWNSTREAM BUNQAI TENAYAN

JW2001114-002

N= 00°33'32.40"
 E= 101°30'18.00"
 12-May-2020 12:03

Guideline comparison not requested for sample

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Conductivity	APHA 2510 B	1	µS/cm	42	—	—	—
Turbidity	APHA 2150 B	0.5	NTU	49.1	—	—	—
In Situ Measurement							
Temperature	APHA 2550B	0.1	°C	30.7	—	—	—
Nutrient							
Ammonia as N	APHA 4500-NH3D	0.02	mg/L	<0.02	—	—	—
Total Nitrogen as N	Calculation	0.02	mg/L	<0.02	—	—	—
Metal and Major Cations-Dissolved							



Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-2 DOWNSTREAM SUNGAI TENAYAM

JW2001114-002

N= 00°53'30" 40"
 E= 101°30'18.00"
 12-May-2020 12:00

Guideline comparison not requested for sample

Compound	Method	LOD	Unit	Result	Low	High	Unit
Metal and Major Cations-Dissolved - Continued							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3175 B	0.0050	mg/L	0.0428	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	1.790	—	—	—
Nickel	API IA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Metal and Major Cations-Total							
Chromium	API IA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	API IA 3125 B	0.0050	mg/L	0.0168	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	1.05	—	—	—
Nickel	APHA 3175 B	0.0050	mg/L	<0.0050	—	—	—



Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-3 UPSTREAM BUNGAH BIAK

JW2001114-003

N= 00°34'08.40" ;
 E= 101°30'46.80"
 12-May-2020 12:21

PP No 82 Year 2001, Class III

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Total Suspended Solids	APHA 2540 D	0.5	mg/L	34.0	—	400	mg/L
In Situ Measurement							
pH - Field	APHA 4500-H	0.1	pH Unit	5.95	6	9	pH Unit
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	25.3	—	6	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	54	—	50	mg/L
Oil & Grease	APHA 5520 C	1	mg/L	<1	—	1	mg/L
Nutrient							
Phosphate as PO4-P	APHA 4500-P E	0.005	mg/L	0.082	—	1	mg/L
Nitrate as N	APHA 4500-NO3E	0.005	mg/L	0.008	—	20	mg/L
Nitrite as N	APHA 4500-NO2B	0.001	mg/L	0.003	—	0.06	mg/L
Inorganic and Non-Metallic Properties							
Fluoride	APHA 4500-F C	0.02	mg/L	0.55	—	1.5	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3500-Cr B	0.010	mg/L	<0.010	—	0.05	mg/L
Metal and Major Cations-Dissolved							
Chromium - Hexavalent	APHA3500Cr	0.010	mg/L	<0.010	—	0.05	mg/L
Mercury	APHA 3112 B	0.00005	mg/L	0.00006	—	0.0002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0500	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0400	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L
Metal and Major Cations-Total							
Mercury	APHA 3112 B	0.00005	mg/L	0.00006	—	0.0002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0556	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0466	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L

Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-3 UPSTREAM BUNGAH BIAK

JW2001114-003

N= 00°34'08.40" ;
 E= 101°30'46.80"
 12-May-2020 12:21

Guideline comparison not requested for sample

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Conductivity	APHA 2510 B	1	µS/cm	41	—	—	—
Turbidity	APHA 2150 B	0.5	NTU	24.8	—	—	—
In Situ Measurement							
Temperature	APHA 2550B	0.1	°C	30.7	—	—	—
Nutrient							
Ammonia as N	APHA 4500-NH3D	0.02	mg/L	<0.02	—	—	—
Total Nitrogen as N	Calculation	0.02	mg/L	<0.02	—	—	—
Metal and Major Cations-Dissolved							



Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

BW-3 UPSTREAM SUNGAI BIAK

JW2001114-003

N= 00°34'08.40"
 E= 101°30'46.80"
 12-May-2020 12:21

Qualitative comparison not
 requested for sample

Compound	Method	LOD	Unit	Result	Low	High	Unit
Metal and Major Cations-Dissolved - Continued							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3175 B	0.0050	mg/L	0.0458	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.470	—	—	—
Nickel	API IA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Metal and Major Cations-Total							
Chromium	API IA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	API IA 3125 B	0.0050	mg/L	0.0458	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.720	—	—	—
Nickel	APHA 3175 B	0.0050	mg/L	<0.0050	—	—	—



Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

BW-4 DOWNSTREAM SUNGAI BIAK

JW2001114-004

N= 00°34'01.20" ;
 E= 101°31'12.00"
 12-May-2020 12:39

PP No B2 Year 2001, Class III

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Total Suspended Solids	APHA 2540 D	0.5	mg/L	37.0	—	400	mg/L
In Situ Measurement							
pH - Field	APHA 4500-H	0.1	pH Unit	5.67	6	9	pH Unit
Aggregate Organics							
Biochemical Oxygen Demand	APHA 5210 B	2.0	mg/L	6.5	—	6	mg/L
Chemical Oxygen Demand	APHA 5220 D	10	mg/L	16	—	50	mg/L
Oil & Grease	APHA 5520 C	1	mg/L	<1	—	1	mg/L
Nutrient							
Phosphate as PO4-P	APHA 4500-P E	0.005	mg/L	0.073	—	1	mg/L
Nitrate as N	APHA 4500-NO3E	0.005	mg/L	0.008	—	20	mg/L
Nitrite as N	APHA 4500-NO2B	0.001	mg/L	0.003	—	0.06	mg/L
Inorganic and Non-Metallic Properties							
Fluoride	APHA 4500-F C	0.02	mg/L	0.52	—	1.5	mg/L
Metal and Major Cations							
Chromium - Hexavalent	APHA3500-Cr B	0.010	mg/L	<0.010	—	0.05	mg/L
Metal and Major Cations-Dissolved							
Chromium - Hexavalent	APHA3500Cr	0.010	mg/L	<0.010	—	0.05	mg/L
Mercury	APHA 3112 B	0.00005	mg/L	0.00006	—	0.0002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0400	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0100	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L
Metal and Major Cations-Total							
Mercury	APHA 3112 B	0.00005	mg/L	0.00006	—	0.0002	mg/L
Boron	APHA 3125 B	0.0050	mg/L	0.0489	—	1	mg/L
Copper	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.02	mg/L
Zinc	APHA 3125 B	0.0050	mg/L	0.0187	—	0.05	mg/L
Arsenic	APHA 3125 B	0.0010	mg/L	<0.0010	—	1	mg/L
Cadmium	APHA 3125 B	0.0010	mg/L	<0.0010	—	0.01	mg/L
Lead	APHA 3125 B	0.0050	mg/L	<0.0050	—	0.03	mg/L

Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

BW-4 DOWNSTREAM SUNGAI BIAK

JW2001114-004

N= 00°34'01.20" ;
 E= 101°31'12.00"
 12-May-2020 12:39

Guideline comparison not requested for sample

Compound	Method	LOR	Unit	Result	Low	High	Unit
Physical and Aggregate Properties							
Conductivity	APHA 2510 B	1	µS/cm	43	—	—	—
Turbidity	APHA 2130 B	0.5	NTU	25.1	—	—	—
In Situ Measurement							
Temperature	APHA 2550B	0.1	°C	31.0	—	—	—
Nutrient							
Ammonia as N	APHA 4500-NH3D	0.02	mg/L	<0.02	—	—	—
Total Nitrogen as N	Calculation	0.02	mg/L	<0.02	—	—	—
Metal and Major Cations-Dissolved							



Sub-Matrix: SURFACE WATER

Client Sample ID
 Laboratory Sample ID
 Sample Description
 Sampling Date/Time

SW-4 DOWNSTREAM BUNGAI GIAK

JW2001114-004

N= 00°34'01.20"
 E= 101°31'12.00"
 12-May-2020 12:39

Guideline comparison not requested for sample

Compound	Method	LOR	Unit	Result	Low	High	Unit
Metal and Major Cations-Dissolved - Continued							
Chromium	APHA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	APHA 3175 B	0.0050	mg/L	0.0451	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.470	—	—	—
Nickel	API IA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Metal and Major Cations-Total							
Chromium	API IA 3125 B	0.0050	mg/L	<0.0050	—	—	—
Manganese	API IA 3125 B	0.0050	mg/L	0.0508	—	—	—
Iron	APHA 3125 B	0.0050	mg/L	0.550	—	—	—
Nickel	APHA 3175 B	0.0050	mg/L	<0.0050	—	—	—

Note: Bold and Italicised font is applied where the result is equal to or greater than the Guideline Limit.

- Key:
- LOR = Limit of reporting
 - ^ = This result is computed from individual analyte detections at or above the level of reporting
 - ~ = ALS is not accredited for these tests.
 - v = Indicates an estimated value.



LAPORAN HASIL PENGUJIAN
Result of Analysis
No: AAS.LHP.V.2020.0806

<u>Number Order</u> <i>(Order Number)</i>	AAS.KU.V.2020.0806	<u>Matric Sampel</u> <i>(Sample Matrix)</i>	Art Perumahan
<u>Nama Pelanggan</u> <i>(Customer Name)</i>	PT Nusa Bahari Group	<u>Parameter Analisa</u> <i>(Parameter)</i>	Acidisa Mikrobiologi
<u>Alamat</u> <i>(Address)</i>	Jl. Tegal Uluca 15 No. 3 Jakarta - 12920	<u>To Penerimaan</u> <i>(Received Date)</i>	13 Mei 2020
<u>Telepon/Faks</u> <i>(Phone/Fax)</i>	: 021- 8303719	<u>To Analisa</u> <i>(Analysis Date)</i>	14 Mei 2020
<u>Persona Penghubung</u> <i>(Contact Person)</i>	Ibu Sriyati	<u>No Lab</u> <i>(Lab. No.)</i>	025.0238 - 065.0211

Depnk, 28 Mei 2020
 Supervisor Laboratorium

Stamet Tri Anyanik



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services

Jl. Raya Jakarta Utara KM. 37, Rt 005/04, Giliwang, Depok, Jawa Barat 16117
 Telp. 021-29679393-94, Faks. 021-29679395. Website: www.aaslaboratory.com, Email: marketing@aaslaboratory.com.
 A Member Of Saraswanti Group.



LAPORAN HASIL PENGUJIAN
 No. AAS.LHP.V.2020.0606

Nama Pelanggan: PT Nusa Bwana Optis
 Customer Name
 Parameter Analisa: Air Permukaan
 Parameter

Tanggal Sampel: 12 Mei 2020
 Sampling Date
 Waktu Sampel: 14.40 WIB
 Sampling Time

No	No. Sample	Letak sampel	Parameter Uji	HASIL	Baku Mutu	Setoran	Metode Pengukuran	Keterangan
1	006.0238	SW-1 Upstream Sungai Tenayan N: 00° 32' 38.40" E: 101° 30' 14.40"	TSS Uniform	1600	1000	100%	APHA 521 B (APM); 20'2	

Keterangan:
 Uji TSS Uniform dilakukan pada 11 Mei 2020 Kelas II
 Pengambilan dilakukan menggunakan 25 liter SWM-445

REPORT ON
 Penelitian Lingkungan AKMAL PITSU Hutan Dalam Kawasan Industri Kawasan 2000

Analisis
 PT Medra: Rendi Purwa Baku - JCI



Depok, 28 Mei 2020
 Supervisor Laboratorium

Stamela Tri Nugraha

Hasil uji ini hanya berlaku pada contoh yang diuji.

Hal 2 dari 2

Dilarang menyalin, memperbanyak dan/atau mempublikasikan isi sertifikat ini tanpa izin dari PT. Anugrah Analisis Sempurna
 The Results shown in this report refer only to the sample(s) tested. It is prohibited to copy, reproduce and/or publish the content of this Certificate without
 PT Anugrah Analisis Sempurna approval



PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services



Jl. Raya Jakarta Bogo KM. 37, RT 003/04, Cincang, Depok, Jawa Barat 16112.
 Telp. 021 - 29629393-94, Fax. 021 - 29629395 Website: www.aaslabaru.com, Email: marketing@aaslabaru.com,
 A. Member Of Sarawati Group.

LAPORAN HASIL PENGUJIAN
 No: AAS LHP V 2020 0606

Nama Pelanggan: PT Nusa Buana Cipta
 Customer Name:
 Parameter Analisa: Air Perumahan
 Parameter:

Tanggal Sampel: 12 Mei 2020
 Sampling Date:
 Waktu Sampling: 12.03 WIB
 Sampling Time:

No	No. Sampel	Kode sampel	Parameter Uji	HASIL	Skala Mutu	Satuan	Metode Pengukuran	Keterangan
1	008-0238	SW-2 Downstream Sungai Tenayan N: 60° 33' 02,40" E: 101° 30' 18,00"	Total Coliform	1556	10000	1ml/100ml	APHA 5221 B (APM) 2012	

Catatan:
 Di Bawah Mula Mula pada PMP No. 85 Tahun 2001 Pasal 11
 Pengambilan sampel air sungai, maka 20-200000/100

REPORT ON
 Penuntutan lingkungan Ak/DAs PLTSU Ribu Teras Korstas, Sevelesti Tahun 2020

Alamat:
 PT Medco Kalah Power Kudu - JB





PT. ANUGRAH ANALISIS SEMPURNA
One Line Laboratory Services



Jl. Raya Jakarta Depok KM. 37, RT 005/04, Ciandang, Depok, Jawa Barat 16412.
 Telp. 021- 25629393-94, Fax: 021- 25629395 Website: www.znsilabratoy.com, Email: ms.kati@g@nsilabratoy.com.
 Anggota Di Saraswati Group.

LAPORAN HASIL PENGUJIAN
 No. AAB LHP.V.2020 0805

Nama Pelanggan: PT Nusa Utama Groc
 Customer Name
 Pengembar Analisa: Adi Permatasari
 Parameter

Tanggal Sampling: 12 Mei 2020
 Sampling Date
 Waktu Sampling: 12:21 WIB
 Sampling Time

No	No. Sample	Kode sample	Parameter Uji	HAZEL	Baku Mula	Satuan	Metode Pengukuran	Keterangan
1	005.0240	S71-3 Upstream Sungai Sial N: 00° 34' 05,40" E: 101° 30' 46,80"	Total Coliform	920	10000	MPN/100ml	APHA 9221 B (AFM) 2012	

Keterangan:
 of Baku Mula Mengikuti pada PPR No. 22 Tahun 2001, Kelas I
 Pengawasan daerah by lingkungan hidup 25-709/S/2004/448

REPORT ON:
 Perusahaan Lingkungan AMDAL P. I Gu. Riv. Tanah Kersudasi Sempurna : Tahun 2020

Work on:
 PT Medco Ratan Power Riau - IGI





LAPORAN HASIL PENGUJIAN

NO. AAS LHP V 0020 0305

Nama Pelanggan: PT Nusa Utama Gaze
 Lokasi: Nama: Air Perumahan
 Parameter Analisa: Air Perumahan

Tanggal Sampung: 12 Mei 2020
 Sampling Date: 12.30 WIB
 Waktu Sampling: 12.30 WIB
 Sampling Time:

No	No. Sample	Kode sample	Parameter Uji	HASIL	Baku Mutu	Satuan	Metoda Pengukuran	Keterangan
1	005.0241	SW-4 Cemaran air Sungai Sirk N 00° 54' 01,20" E 101° 51' 12,60"	Total Coliform	1600	10000	Jumlah per liter	APHA 2021 B (APM) 2012	

Kemampuan
 uji kimia MILU Kemendiknas RI No. 57 Tahun 2007 Kelas II
 Program/kejuruan uji kimia pada : 25-ANALISIS KIMIA

REPORT ON
 Pemecahan Lingkungan AMCAI, PTGS, Rwa. Tanjung Koyonua Sarawati I (peta 2020)

Alamat:
 PT. Usaha Bina Pawa Riku - JCI

Depok 28 Mei 2020
 Sarawati Laboratory

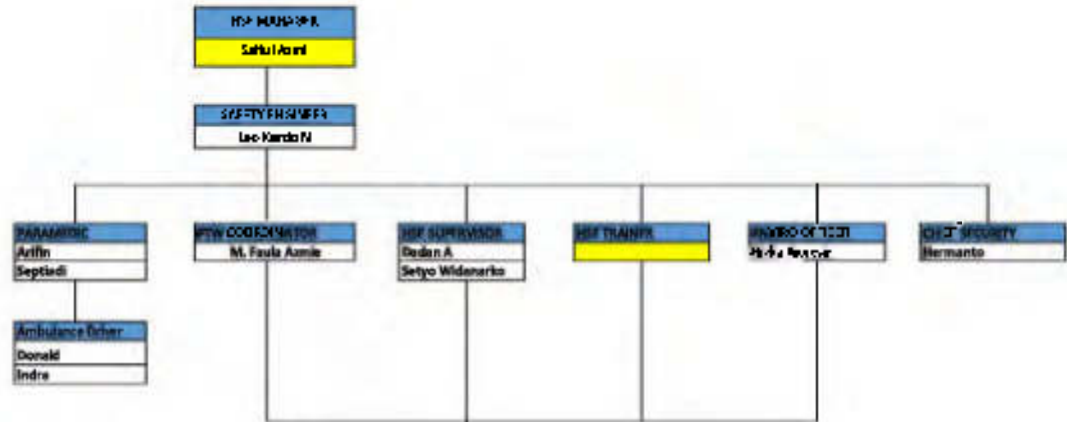
 Simeon Prayogo

APPENDIX B.
LEC-HK HSE Organization

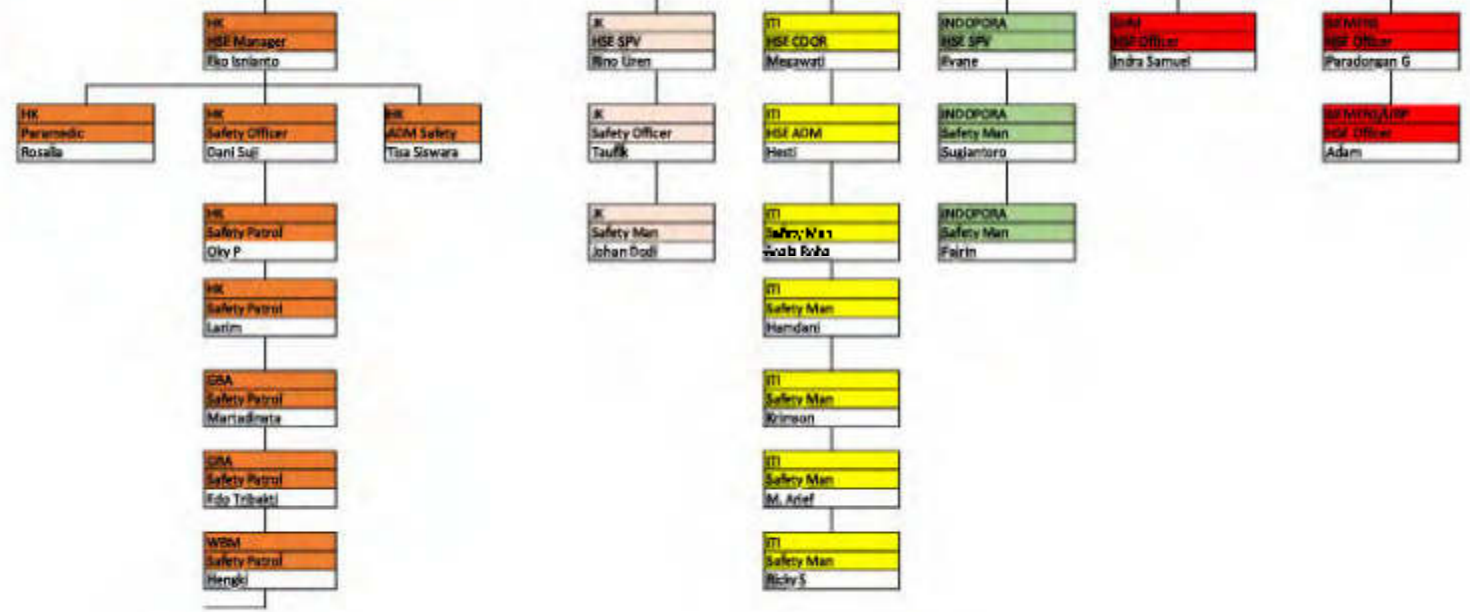


INDONESIA 275 MW IPT PROJECT
HSE ORGANIZATION CHART

- HK Hukam Karyo
- KFF Karyawan Pabrik Listrik
- WTM Wabawa Kerja Mabel
- ITM Insan Tenaga Mabel
- Indapurna Industri Peralatan Daya
- WKM Wabawa Kerja Konvensional
- IS Jaya Sarana
- ISRM Saha Harjo Mabel



HSE SUBCONTRACTOR



APPENDIX C
Training Log
ESMS Refreshment



TRAINING REPORT

Project	: Riau GFPP 275 IPP Project
Company	: HK, GBA, SIC, MTI
Venue	: HK Site Office
Day / Date	: Wednesday / April 15, 2020
Number of Attendees	: 10 Person
Training	: ESMS Socialization
Trained by	: M. Faula Azmie

Subject :

- Pest and weed management
- Waste management
- Hazardous substances management
- Soil and erosion management
- Air quality management and monitoring
- Traffic management
- Biodiversity management
- Site security

Photo Documentation :


Prepared by	Acknowledge by
 M. Faula Azmie HSE Supervisor	 Leo KN HSE Manager



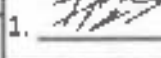





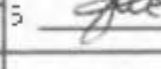
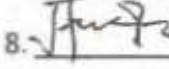
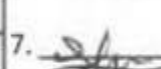
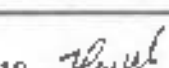

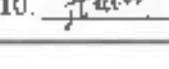





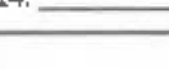
Day/Date : Kelompok / 15 April 2020

Project : Riau GFPP 275 MW

Time : 10.30 am

Location : HK Site Office

Subject : Esas Sosialisasi

No	Name	Company/Position	Signature	
1	CARLEI H SIMANJUNTAN	PT. HUTAMA KARYA/HAMAM	1. 	2. 
2	ELVIN HIDAYAT	GBA	1. 	2. 
3	ARDIKO SAPUTRA	GBA	3. 	4. 
4	ADYK PUTRA	PT. MULTITERAINDO	3. 	4. 
5	REYA RAHMADI	PT. MULTI TERINDO	5. 	6. 
6	Siska Y Holin	PT. Multi Terindo	5. 	6. 
7	M. KAMAL	PT. UBP	7. 	8. 
8	ODRARDREMI	PT. UBP	7. 	8. 
9	IPUL	PT. UBP	9. 	10. 
10	Gausayel	PT. Hutama Karya	9. 	10. 
11			11. _____	12. _____
12			11. _____	12. _____
13			13. _____	14. _____
14			13. _____	14. _____
15			15. _____	16. _____
16			15. _____	16. _____
17			17. _____	18. _____
18			17. _____	18. _____
19			19. _____	20. _____
20			19. _____	20. _____
21			21. _____	22. _____
22			21. _____	22. _____
23			23. _____	24. _____
24			23. _____	24. _____
25			25. _____	26. _____
26			25. _____	26. _____
27			27. _____	28. _____
28			27. _____	28. _____
29			29. _____	30. _____
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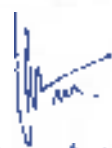

TRAINING REPORT

Project	: Riau GFPP 275 IPP Project
Company	: HK, ITI, SIE
Venue	: HK Site Office
Day / Date	: Wednesday / April 22, 2020
Number of Attendees	: 15 Person
Training	: ESMS Socialization
Trained by	: M. Faula Azmie

Subject :

- Pest and weed management
- Waste management
- Hazardous substances management
- Soil and erosion management
- Air quality management and monitoring
- Traffic management
- Biodiversity management
- Site security

Photo Documentation :


Prepared by	Acknowledge by
 M. Faula Azmie HSE Supervisor	 Leo KN HSE Manager

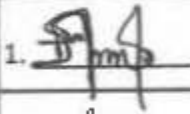




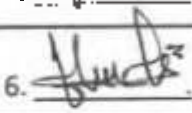


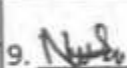
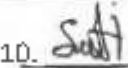

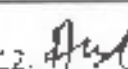

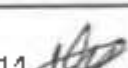
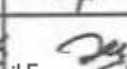
Day/Date : Wednesday / 22 April 2020

Project : Pau GPP 275 MW

Time : 11.00 am

Location : AK 212 OJONG

Subject : Plant Socialization

No	Name	Company/Position	Signature	
1	M. Ubaidillah	ITI WELDER	1. 	2. 
2	FACHRUL ROZY	ITI / ELEKTRIK	3. 	4. 
3	Deeta Sonia	PT. SIEMENS	5. 	6. 
4	Iwan. Parmana	PT. SMS	7. 	8. 
5	RISBY NURHANIAD	PT. SMS	9. 	10. 
6	Hamidi	PT. ITI	11. 	12. 
7	SOBAR	PT. SMS	13. 	14. 
8	RYAN. DIKAREN	PT. SMS	15. 	16. _____
9	NURDIN	PT. SMS	17. _____	18. _____
10	SAEPUL. BAHRI	PT. SMS	19. _____	20. _____
11	TEDI ERLANGGA	PT. SMS	21. _____	22. _____
12	AMRILL RIZWAN	PT. SMS	23. _____	24. _____
13	WAWAN. SETIAWAN	PT. ITI WELDER	25. _____	26. _____
14	OPING	PT. SMS	27. _____	28. _____
15	Samsa	PT. ITI / Lead erit tank	29. _____	30. _____
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Basic HSE Training for All

Perlindungan Lingkungan

8 Aug 2019



Environmental & Social Management

Equator Principles/ADB Safeguards

IFC Performance Standards

Government of Indonesia Legislative Requirements

Project Environmental and Social Management System

Policies

Management Program

- Environmental and Social Management Plan
- ESMP Sub Plans, such as:
- Emergency Preparedness and Response Plan
- Livelihood Restoration Plan
- Traffic Management Plan
- Environmental and Social Monitoring

Planning

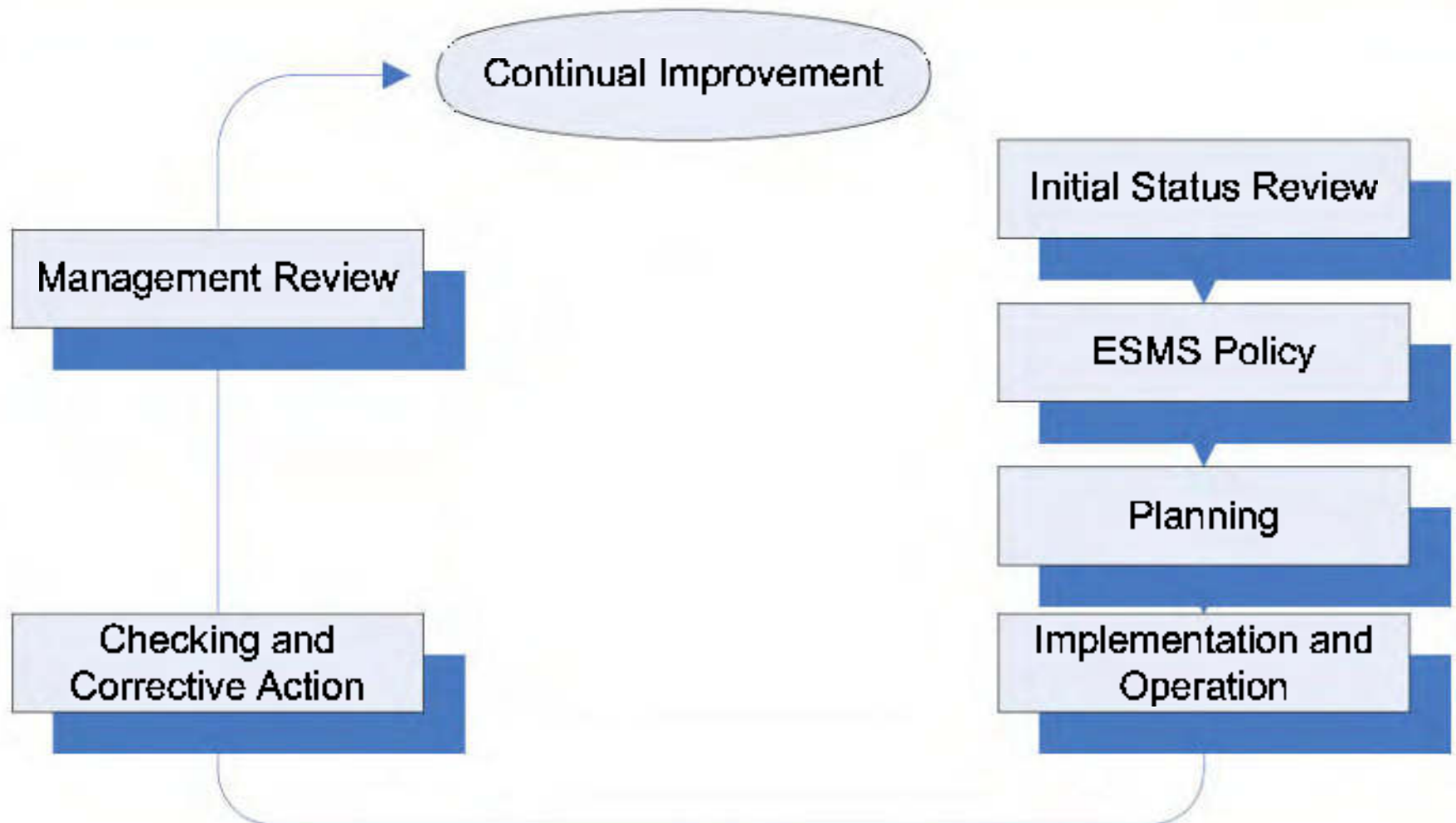
- Risk identification
- Legal compliance
- Document control
- Monitoring and review

Organisational Capacity and Competency

- Roles and Responsibilities
- Training program

Stakeholder Engagement

- Stakeholder Analysis and Planning
- Disclosure and dissemination of information
- Consultation
- Grievance Mechanism(s)
- Reporting to Affected Communities



UUD 1945, Pasal 28H, ayat (1):

"Setiap orang berhak hidup sejahtera lahir dan batin, bertempat tinggal, dan mendapatkan lingkungan hidup yang baik dan sehat serta berhak memperoleh pelayanan kesehatan"

International Finance Corporation (IFC) Equator Principles:

Principle 4: Company is required to develop or maintain an Environmental and Social Management System (ESMS).

International Finance Corporation (IFC) Performance Standards:

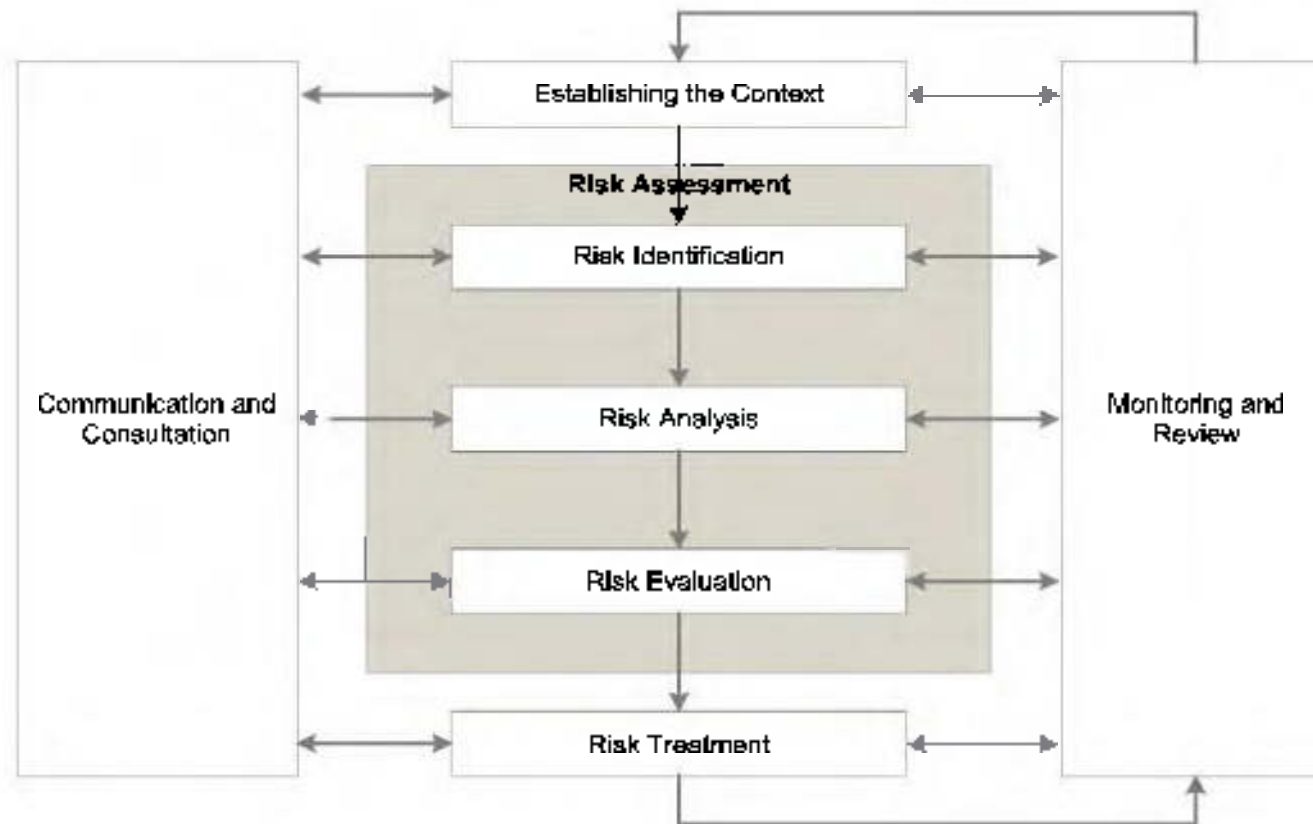
An effective Environmental and Social Management System (ESMS) is a dynamic and continuous process initiated and supported by management, and involves engagement between the client, its workers, local communities directly affected by the project (the Affected Communities) and, where appropriate, other stakeholders.

World Bank Environmental, Health, and Safety (EHS) Guidelines:

The Company will achieve the performance levels and measures that are normally acceptable to the IFC and are generally considered to be achievable in new facilities at reasonable costs by existing technology.

Dokumen Risk Assessment:

ESIA, AMDAL (Power Plant), UKL-UPL (Gas Pipeline)



ESMS Environmental Control Procedures



- Pest and Weed Management
- Waste Management
- Hazardous Substances Management
- Soil and Erosion Management
- Air Quality Management and Monitoring
- Emergency Preparedness and Response
- Noise and Vibration Management and Monitoring
- Traffic Management
- Groundwater Management and Monitoring
- Biodiversity Management
- Community Health and Safety
- Vessel Management and Emergency Spill Response
- Incident Investigation and Reporting
- Site Security
- Review and Auditing of the ESMS

- **Pest** → Hama
- ¹Hewan atau binatang pengganggu dan merusak tanaman.
- ²Hewan yang menyebabkan kerusakan pada ekosistem alami atau menjadi agen penyebaran penyakit. Contoh: serangga, moluska, dan mamalia.



- **Weed** → Gulma
- Tumbuhan yang tumbuh tidak sesuai dengan tempatnya dan tidak dikehendaki serta mempunyai nilai negatif. Contoh: Ilalang, putri malu, dll



Penyebaran Gulma dan Hama harus dicegah (membersihkan kendaraan, alat berat dan kapal pengangkut)

- **Melakukan pemilahan limbah dan membuang limbah sesuai peraturan:**
 - Limbah Organik: Kayu, kertas, sisa makanan, dll
 - Limbah Anorganik: Plastik, kaca, metal, dll
 - Limbah Bahan Berbahaya dan Beracun (B3): Oli bekas, toner bekas, bahan kimia terkontaminasi, obatan kadaluarsa, limbah medis, diesel fuel terkontaminasi, sarung tangan dan majun terkontaminasi B3, dll
- **Melakukan penyimpanan limbah B3, pengangkutan limbah B3 dan pemunahan limbah B3 sesuai peraturan lingkungan hidup**



- **Melakukan program 3R:**
 - *Reduce*, mengurangi pemakaian alat dan bahan yang berpotensi menjadi limbah
 - *Re-use*, menggunakan kembali alat/peralatan yang tidak sekali pakai
 - *Re-cycle*, mengolah kembali limbah menjadi dapat dimanfaatkan

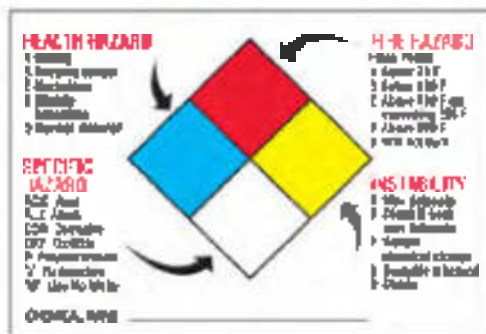


Dilarang!

**Melakukan pembuangan limbah tanpa izin
Melakukan pembakaran limbah**

Hazardous Substances Management

- **Bahan Berbahaya dan Beracun** → Bahan yang dapat membahayakan kesehatan atau kelangsungan hidup manusia, makhluk lain, dan atau lingkungan hidup pada umumnya
- **Bahaya yang diakibatkan misalnya:**
 - Beracun, Korosif, Mudah Terbakar, Reaktif, Radioaktif, Mudah meledak, Beracun bagi lingkungan atau kombinasi
- **Melakukan program:**
 - Pembuatan **Hazardous Substance List**
 - Pendokumentasian, penyimpanan dan Penanganan B3 sesuai **Material Safety Data Sheet (MSDS)**
 - Pembuatan SOP dan Pelatihan
 - Penggunaan APD yang sesuai



Soil and Erosion Management

- **Potensi Erosi ditimbulkan oleh:**
 - Limpasan air yang tidak terkontrol
 - Pergesekan tanah dengan kendaraan
 - Pekerjaan penggalian, pengupasan permukaan dan penggalian parit.
- **Usaha pencegahan erosi:**
 1. Pengarahan aliran air menghindari lereng dan permukaan tanah terbuka
 2. Penanaman tanaman penutup seperti rumput, dll.
 3. Penutupan tanah sementara dengan bahan penutup seperti terpal, dll
 4. Pemasangan *Silt Fence*
 5. Penguatan lereng dengan Riprap batu, gabion atau bronjong
 6. Pembuatan Sediment Pond



Silt Fence



Riprap



Penanaman Rumput



Sediment Pond

- **Potensi Polusi Udara ditimbulkan oleh:**
 - Debu kegiatan dan kendaraan
 - Emisi mesin, alat berat dan kendaraan
- **Usaha pencegahan polusi udara:**
 1. Pencucian roda kendaraan
 2. Penyiraman jalan dan lokasi kerja
 3. Pembatasan kecepatan kendaraan
 4. Penutupan truk tanah dengan terpal
 5. Penutupan area kerja blasting
 6. Pelarangan kegiatan *open burning*
 7. Perawatan mesin untuk menjaga emisi berada dibawah baku mutu lingkungan
 8. Melakukan pemantauan kualitas udara ambien.



Pembatasan
Kecepatan



Penutupan dengan Terpal



Penyiraman Jalan



Pencucian ban kendaraan

Noise Management

- **Potensi Polusi Bising ditimbulkan oleh:**
 - Mesin, alat berat dan kendaraan
 - Kegiatan konstruksi
- **Usaha pencegahan polusi bising:**
 1. Menggunakan generator *silent-type*
 2. Melakukan kegiatan hanya pada siang hari
 3. Pemeliharaan peralatan untuk mencegah bising
 4. Berkendaraan melalui jalan utama dan mengurangi pemakaian klakson
 5. Melakukan pemantauan dan sosialisasi noise



Mengurangi penggunaan klakson



Melakukan kegiatan siang hari



Silent Type Generator



Monitoring Noise

Traffic Management

- **Resiko Lalu-Lintas ditimbulkan oleh:**
 - Transportasi orang dan material melalui jalan darat
 - Transportasi peralatan melalui sungai
- **Usaha pencegahan resiko lalu-lintas:**
 1. Menghindari waktu lalu-lintas padat
 2. Pemeriksaan dan perawatan kendaraan
 3. Road risk-assessment dan Journey Management Plan
 4. Menyediakan lahan parkir yang aman
 5. Melakukan seleksi dan training bagi pengemudi
 6. Melakukan pembatasan kecepatan
 7. Menyediakan pedestrian yang aman



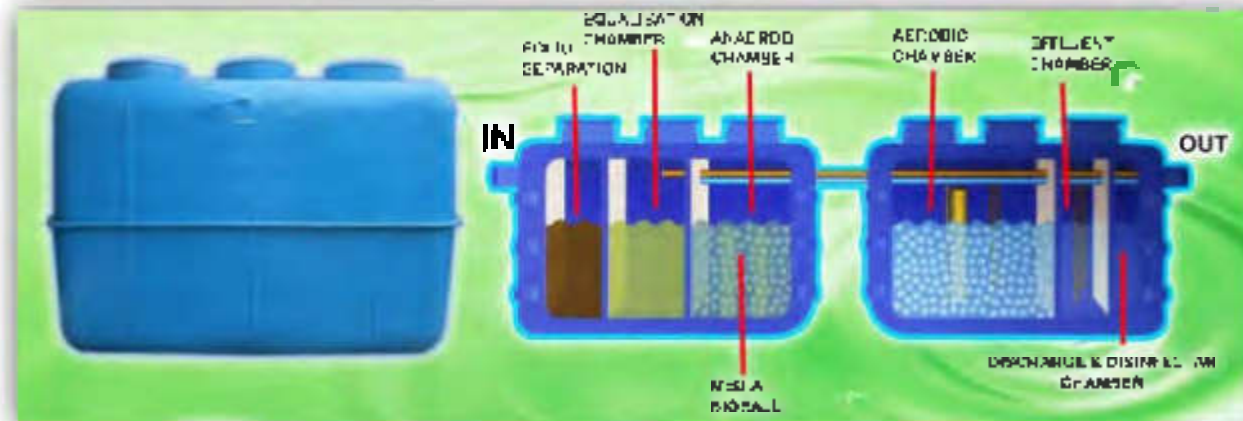
Hindari waktu lalu-lintas padat

Journey Management Plan		Job Description		Name of Person(s) for LPH		Approved Driver? (Y/N)	
Is the trip necessary? Why?		All req.		1.			
Can it be combined with another trip? If not				2.			
Is there a need for night driving? If so, why?				3.			
Name & Signature of Journey Manager		Phone		4.			
Departure Date	Vehicle ID	Name of Main Driver		Vehicle Condition: • Working - maintenance Y/N • Working Hours Y/N • Tyres correctly inflated Y/N • N N • Airbags equipped Y/N • ABS Y/N • Working Seatbelts Y/N		Driver's Condition: • Valid: Issued & valid Y/N • DDC tested & valid Y/N • Under influence of Drugs / Alcohol? Y/N • Well rested? Y/N • Not on mobile Y/N • Mobile phone off Y/N	
Business / Client / User / Job		Customer / End User / Medical / Contact number /					
Route / Destination / Real Area(s)	Expected Time	Actual Time	Time Break?	Is it driver required?	Special issues in assessment / Particulars / Any other information		

- **Potensi Polusi Air Tanah ditimbulkan oleh:**
 - Site office, laydown area dan storage, camp pekerja, dll
 - Kegiatan konstruksi
- **Usaha pencegahan polusi air tanah:**
 1. Pengelolaan air buangan kegiatan konstruksi
 2. Penyimpanan bahan kimia sesuai standar
 3. Pengelolaan air limbah domestik pekerja



Sediment Pond



Unit Pengelolaan Air Limbah Domestik

Dilarang!

**Membuang air limbah tanpa pengelolaan
Membuang air limbah ke tanah / bawah tanah**

Biodiversity Management

- **Potensi Rusaknya Keanekaragaman Hayati ditimbulkan oleh:**
 - Kegiatan konstruksi
 - Penangkapan dan perburuan
 - Kebakaran
- **Usaha pencegahan polusi udara:**
 1. Pemantauan sebelum kegiatan
 2. Menggiring hewan dari lokasi konstruksi
 3. Training dan sosialisasi kepada pekerja perihal keanekaragaman hayati
 4. Membatasi kecepatan kendaraan
 5. Bekerja hanya di area batas konstruksi
 6. Mengembalikan lokasi kerja ke kondisi asal

Jenis Hewan / Tumbuhan yang Dilindungi



Trenggiling



Owa Ungko



Mersawa



Kupang



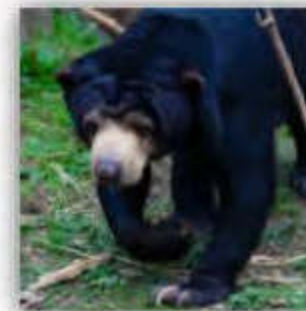
Puyuh Hitam



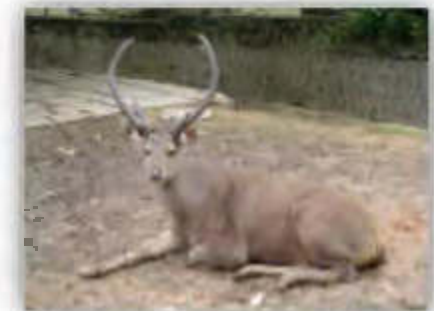
Sikatan Biru



Beruk



Beruag Madu



Rusa Sambar

Vessel & Spill Management

- **Potensi Tumpahan Minyak ditimbulkan oleh:**
 - Mesin, alat berat dan kendaraan dalam kegiatan konstruksi
 - Penggunaan transportasi sungai
- **Usaha pencegahan tumpahan minyak:**
 1. Pelaksanaan prosedur keselamatan dalam transportasi melalui sungai / kapal.
 2. Pencegahan tumpahan saat menangani minyak atau bahan kimia
 3. Pelaksanaan sistem tanggap darurat tumpahan minyak
 4. Penanganan tanah terkontaminasi tumpahan



Tabrakan Barge



Sistem Tanggap Darurat Tumpahan



Penanganan Tanah Terkontaminasi

Thank You

PT Medco Ratch Power Riau
The Energy Building 7th Floor
Sudirman Central Business District Lot 11A
Jl. Jend Sudirman Kav 52-53
South Jakarta 12190

Tel +62 21 2995 3300
Fax +62 21 2995 3301



TRAINING REPORT

Project	: Riau GFPP 275 IPP Project
Company	: HK, JK, SIE, Truba
Venue	: HK Site Office
Day / Date	: Wednesday / April 08, 2020
Number of Attendees	: 11 Person
Training	: ESMS Socialization
Trained by	: M. Fauza Azmie

Subject :

- Pest and weed management
- Waste management
- Hazardous substances management
- Soil and erosion management
- Air quality management and monitoring
- Traffic management
- Biodiversity management
- Site security

Photo Documentation :


Prepared by	Acknowledge by
 M. Fauza Azmie HSE Supervisor	 HSE Manager

Day/Date : Wednesday / 08 - April 2020
 Time : 09.30 am
 Subject : Bsmg Socialization

Project : Riau GFPP 275 MW
 Location : HRK Site Office

No	Name	Company/Position	Signature	
1	Mariyati	PT. JK	1. <u>[Signature]</u>	2. <u>[Signature]</u>
2	ERA PUTRA SANTORO	PT. TRUBA		
3	Triyanto	PT. JK	3. <u>[Signature]</u>	4. <u>[Signature]</u>
4	BEDI, B	PT. JK		
5	K. A. G. S. O. N. G.	PT. JK	5. <u>[Signature]</u>	6. _____
6	Sertani	PT. JK		
7	SUCIPTO	KV. K	7. <u>[Signature]</u>	8. <u>[Signature]</u>
8	RIAN - GIANFARI	PT. SIEMENS SPU		
9	SUCIPTO FUSIYANTO	PT. SHAM	9. <u>[Signature]</u>	10. <u>[Signature]</u>
10	MANGASIH	PT. JK		
11	Muh. Lutfi	PT. JK	11. <u>[Signature]</u>	12. _____
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Minutes of Capacity Building

Subject : Capacity Building for CPM Worker about ESMS/Sub-plan
Venue : MRPR Site Office
Day/Date : Tuesday, 12 November 2019
Time : 13.00 to 15.45 WIB
Organized By : Medco Power Indonesia and Medco Ratch Power Riau
Presenter :

1. Agus Mulyana (Opening Speech),
2. Dewi Permata Ifadiana (Environmental Section),
3. Saiful Amin (Social Section)
4. Nanang Sugianto (Health and Safety Sections)

Attendees : CPM Workers
(List of Attendance is Attached)

1. Opening Speech by Agus Mulyana

This capacity building is one of our commitment to ensure our project executed in line with the international standards. We cannot achieve zero incident both in social and environmental without participation from the entire worker who involved in this construction activity.

For example, we have to comply with one of the procedure namely Chance Find Procedure that ensure we are protect, preserve and maintain when we found some object or building that there are indicated as cultural heritage both living heritage or pre-historic.

Please follow this capacity building with proactive and do not hesitate to raise your hand when you have question or want share or discussion.

2. Safety Moment

22 Aug 2019, at approx. 05.30 hrs, there was medical treatment case, when Security Officer was bitten by a snake, while cleaning the cigarette butts, at Pusaka Site, Cianjur.





















Based on the sharing, please be aware that our project area is living place of snake. Ensure you are use the proper PPE (personal protective equipment). Report immediately if you feel like getting a poisonous snakebite.

3. Summary Question and Answer (Q&A) and Sharing and Discussion (S&D) raised During Socialization

No.	Items
1.	<p>Q: from bu Pak Parno, how the safe distance when we met the vehicle with the dangerous sign? A: please more than 10 meters.</p>
2.	<p>Sharing from Pak Junaidi that when welding many children and local residents who approached because they were curious about the welding work. We must warn the community not to approach because the sparks from welding work are quite dangerous.</p> <p>In addition, there are currently many complaints and questions from the community regarding the pipe installation work, especially in km 14. They feel that they have not yet been socialized. Actually the socialization has been done several times, but there may still be some that have not been reached.</p>
3.	<p>Pak Agus Mulyana conveyed that as explained earlier that we have procedures for handling community complaints. Therefore, when hearing or receiving complaints from the community, it must be immediately reported to the external relation. If urgent, you can contact the emergency contact as stated in this material.</p> <p>Another example is the possibility of complaints against noise.</p>

Attachment 1: Attendance List

















PT. MEDCO RATCHIL POWER RIAU			
HRD FORM			
LIST OF ATTENDANCE			
NO. JSC: PR HR 14	Page 1/1	Revisi: 01	Prepared by: Document Control Approved by: LHS MH
Day/Date	Tuesday, 2 October 2019		Time 13.00
Meeting Title	Venue Meeting Room MRPR		
Agenda	Jadwal: Training kelas to policy CPM		

No.	Name	Company	Profession	Email	Signature
1.	Chafiq Amri	MRPR	HRD	chafiq.amri@medco.com	
2.	Ismael	PT. CPM	HRD	ismael@yoloo.co.id	
3.	DEWI HARWATI	PT. CPM	CONTROLLER		
4.	Andriyanto	PT. CPM	DRIVER	andriyanto@medco.com	
5.	Supriyadi	PT. CPM	HRD	supriyadi@medco.com	
6.	Adi Satriadi	PT. CPM	HRD	adisatriadi1001@gmail.com	
7.	Alimuddin	PT. CPM	HRD	alimuddin@gmail.com	
8.	Pranika	PT. CPM	HRD	pranika@medco.com	
9.	Joko Pramono	PT. CPM	HRD	joko.pramono@medco.com	
10.	Jusmaning	PT. CPM	Mechanic	jusmaning@medco.com	
11.	S. Umar	PT. CPM	OPR		
12.	Suparman	PT. CPM			
13.	Rizki Satrio	PT. CPM	HRD	rizki.satrio@medco.com	
14.	Supriyanto	PT. CPM	HRD		
15.	S. Umar	PT. CPM	HRD	umar@medco.com	
16.	Jeffri	PT. CPM	HRD		
17.	Siripada	PT. CPM	HRD		
18.	Andriyanto	PT. CPM	HRD		
19.	Rizki Satrio	PT. CPM	HRD		
20.	Satrio	PT. CPM	OPR		

PT. MEDCO RATCH POWER RIAU			
-RD FORM			
LIST OF ATTENDANCE			
No Doc: FR-IR-14	Page: 1/1	Prepared by: Document Control	
	Revision: 00	Approved by: Q-13-MR	
Day/Date	:	Time	:
Meeting no	:	Venue	:
Agenda	:		

No.	Name	Company	Position	Email	Signature
21	LEONLY LARICHI	PT. CPM	DRIVER	laricchi25@gmail.com	
22	Alinda R.P.	PT. CPM	Driver	alindar@gmail.com	
23	Dora Susanto	PT. CPM	Driver		
24	VANSAIDI	PT. CPM	SPT	vanang15@gmail.com	
25	MUSTAWA	PT. CPM	TRUCKER		
26	Buddy	PT. CPM	CONDUCTOR		
27	TUNGKAL YATI	PT. CPM	OPERATOR		
28	S. P. S. S. S.	CPM	GRINDER		
29	RAPLI	CPM	P-FITTER		
30	ALBERTO	PT. CPM	OPERATOR		
31	ARIANTO SANDRA	PT. CPM	HELPER		
32	YANDRA	CPM	HELPER		
33	TRIKUN BOKO	CPM	RC	trikunboko@gmail.com	
34	SHODIN MUGEN	CPM	FRIGERATOR		
35	BIMBUWAN	CPM	COATER		
36	IRIS KURNIAWAN	CPM	HELPER		
37	HERMAN/ONGKI	CPM	PLA-CRAN		
38	JOJO WABOWO	CPM	RIGGER	jojo.official@gmail.com	
39	SUSCHMAN	CPM	TRUCKER		
40	EDICHA PAKPAM	CPM	CRANE PE 70 40-6		

PT MEDCO RATCH POWER RIAU		
HRD FORM		
LIST OF ATTENDANCE		
No. Dst: FR-HR-14	Page 1/1 Revision 00	Prepared by: One man Control Approved by: GIS-GR
Day/Date	1	Time
Meeting Title		Venue
Agenda		

No.	Name	Company	Position	Email	Signature
41	Samsul Laha	CPM	Helper		
42	ROSAD		Kulivator		
43	SHERZAD		DRIVER		
44	DIMAS DIMAS	CPM	CALLER		
45	FIRMANUS	CPM	STATIONARY		
46	TAHAPLEHIN	CPM	Flu konding		
47	ABDUL HADI	CPM	DRIVER		
48	EKA SATRIA	CPM	CONTR		
49	ANINDA SPALYKA	CPM	DRIVER		
50	AMANDA IRFAN	CPM	DRIVER		
51	GUSRIYATI	CPM	LOGGING		
52	MANTIK SUSTANAWA	MIPA	MSK		
53	Ardika Kusumanah	MIPA	MSK		
54	Mahatmah	MRPR	Env. Spv		
55	Masha Wardhani	MRPP	SDO Spv	masha.wardhani@medcoenergi.com	
56	Eraditorbo S	MRPP			

Attachment 2: Photo Documentation



Opening Speech by pak Agus Mulyana



Pak Saiful presenting the Social related Procedure



Bu Dewi presenting the EHS related Procedure



The participant following the each session with enthusiastic and active



The participants read the material shared



Attachment 3: Capacity Building Materials

 <p>Environmental and Social Management System</p> <p>MRPR ESMS Socialization for All</p> <p>Pelindungan Sosial dan Lingkungan</p>	<p>Struktur dan Persyaratan</p> <p>UMC 1945 (Pasal 28, ayat 1)</p> <p>“Setiap orang mempunyai hak dan kewajiban untuk mendapatkan lingkungan hidup yang baik dan sehat serta berhak berpartisipasi dalam pengelolaan lingkungan hidup”</p> <p>Quality Principles (QPs)</p> <p>Overhead: “Company is committed to leading in providing an Environmental and Social Management System (ESMS)”</p> <p>International Finance Corporation (IFC) Performance Standards</p> <p>“The IFC Performance Standards (PS) are a set of standards and principles that provide a framework for environmental and social risk management and are designed to help companies manage risks to their people, the environment, and society. The PS are developed by the IFC and are based on the IFC’s Environmental and Social Framework (ESF)”</p> <p>Asian Development Bank (ADB) Safeguard Policy Statement</p> <p>“The ADB Safeguard Policy Statement (SPS) is a set of standards and principles that provide a framework for environmental and social risk management and are designed to help companies manage risks to their people, the environment, and society. The SPS are developed by the ADB and are based on the ADB’s Environmental and Social Framework (ESF)”</p> <p>World Bank Environmental, Health, and Safety (EHS) Guidelines</p> <p>The Company will adhere to performance levels and measures that are necessary, reasonable, and feasible to the EPC and are generally considered to be achievable in similar facilities of comparable scale, by applying technology</p>
<p>Kebijakan Medco Power Indonesia</p> 	<p>Keajaiban Perusahaan</p> 
<p>Environmental Risk Assessment</p> <p>Jobman Risk Assessment (Job, Activity, Time, Place, Hazard, and Control)</p> 	<p>Where is the position of E&S?</p>  <p>E&S Management Systems</p> <ul style="list-style-type: none"> Environmental Management System (EMS) Health and Safety Management System (HSMS) Quality Management System (QMS) Process Management System (PMS) Facility Management System (FMS) Community Development Program (CDP) Performance Measurement System (PMS)

Hazardous Substances Management


- Bahan Berbahaya dan Beracun (B3) di Dalam atau diluar lingkungan kerja beracun jika mempunyai titik leleh rendah, mudah terbakar, beracun, atau bersifat korosif.
- Bahaya yang ditimbulkan meliputi:
 - Merusak Kulit, Mata, Kelopak Mata, Kulit, Membran Mukosa Kelopak Mata, dan Sistem Pernafasan.
 - Corrosive (Irritant), dan lain-lain.
- Preparasi B3
 - Merusak Kulit, Membran Mukosa Mata
 - Merusak Kulit, Mata, Kelopak Mata, Kulit, Membran Mukosa Kelopak Mata, dan Sistem Pernafasan
 - Merusak Kulit, Membran Mukosa Mata
 - Merusak Kulit, Membran Mukosa Mata


Pest & Weed Management


- Pest: Hama
- Threats to A&P: gangguan & penyakit.
- Resistensi serangga dan tanaman pada tindakan pengendalian dapat terjadi jika digunakan secara terus-menerus.



- Pengendalian Hama dan Gulma
 - Pencegahan penyebaran hama dan gulma
 - Penggunaan pestisida yang tepat dan efektif
 - Penggunaan pestisida yang tepat dan efektif
 - Penggunaan pestisida yang tepat dan efektif

- Weed: Gulma
- Threats to A&P: gangguan & penyakit.
- Resistensi serangga dan tanaman pada tindakan pengendalian dapat terjadi jika digunakan secara terus-menerus.



Pencegahan penyebaran hama dan gulma dapat dilakukan dengan cara berbudidaya yang tepat.

Waste Management


- Melakukan pemilahan limbah dan membuang limbah sesuai permintan:
 - Urahan limbah B3, limbah kimia, limbah organik
 - Urahan limbah B3, limbah kimia, limbah organik
- Lakukan pemilahan limbah B3 dan membuang limbah B3 sesuai permintan lingkungan hidup.

- Melakukan program B3
 - Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3
 - Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3
 - Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3



Lakukan pemilahan limbah B3 dan membuang limbah B3 sesuai permintan lingkungan hidup.


Emergency Preparedness and Response


- Kemampuan
 - Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3
 - Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3
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- Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3


Air Quality Management


- Power Factor tidak melebihi nilai:
 - Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3
 - Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3
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- Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3


Soil, Erosion and Water Management


- Power Factor tidak melebihi nilai:
 - Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3
 - Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3
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- Identifikasi, manajemen pemilahan limbah B3, dan pengendalian limbah B3



Vessel & Spill Management

MRPR 1.1.2017

- Melakukan survey dan inspeksi terhadap kapal
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh



Tabukan Bangsi



Sistem Tangap Darurat Tumpahan



Penanganan Tumpahan

Traffic Management

MRPR 1.1.2017

- Melakukan inspeksi terhadap kapal
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh




Noise Management and Monitoring Procedure

MRPR 1.1.2017

- Melakukan inspeksi terhadap kapal
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh



Noisy Area



Monitoring Equipment



Monitoring Data

Occupational Safety and Health

MRPR 1.1.2017

- Melakukan inspeksi terhadap kapal
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh



Safety Signs




Safety Meeting

BGH Calculation

MRPR 1.1.2017

Program dan Rincian Kerja

- Melakukan inspeksi terhadap kapal
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh



Groundwater Management

MRPR 1.1.2017

- Melakukan inspeksi terhadap kapal
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh
- Melakukan inspeksi terhadap kapal yang akan berlabuh



Groundwater Management Diagram



Water Treatment Diagram

Dilarang
Dilarang melakukan kegiatan yang dapat menimbulkan pencemaran lingkungan

Biodiversity Management

1/10/2022



- Rencana Rencana Keberagaman Hayati di Indonesia
 - 1. Habitat
 - 2. Konservasi dan pelestarian
 - 3. Restorasi
- Uraian program-program utama
 - 1. Pemantauan satwa liar
 - 2. Kemitraan dengan masyarakat
 - 3. Training dan edukasi kepada petani
 - 4. Rehabilitasi satwa liar
 - 5. Konservasi habitat satwa liar
 - 6. Kemitraan dan kolaborasi dengan masyarakat

J. Ardiansyah, P. H. dan S. P. (2018)



Livelihood Restoration Plan

1/10/2022



- Tujuan
 - 1. Meningkatkan pendapatan masyarakat
 - 2. Meningkatkan kualitas lingkungan
 - 3. Meningkatkan keberlanjutan
 - 4. Meningkatkan ketahanan pangan
 - 5. Meningkatkan kualitas sumber daya manusia
- Strategi Yang Diambil
 - 1. Meningkatkan kemampuan masyarakat dalam mengelola sumber daya alam
 - 2. Meningkatkan kapasitas masyarakat dalam mengelola sumber daya alam
 - 3. Meningkatkan kualitas sumber daya manusia



No Kontak PIC dari MRPR Untuk Pelaporan HSE dan Social/HR/Security

HSE:

- HSE Emergency Contact MRPR PIC
- The Emergency Contact MRPR PIC

Social/HR/Security:

- Social/HR/Security Contact MRPR PIC
- The Emergency Contact MRPR PIC

Full ESMS document can be accessed in relevant HSE Personnel/MRPR Site Office

- Full ESMS document can be accessed in the MR and PIC website**
- HSE Emergency Contact MRPR PIC
 - HSE Emergency Contact MRPR PIC
 - HSE Emergency Contact MRPR PIC
 - HSE Emergency Contact MRPR PIC
 - HSE Emergency Contact MRPR PIC
 - HSE Emergency Contact MRPR PIC

Thank You

MRPR
Medan Riskin Power, Ris.



Minutes of Socialization

Subject : Capacity Building for Lotte Worker Regarding ESMS/Procedure
Venue : MRPR Site Office
Day/Date : Wednesday, 13 November 2019
Time : 09.00 to 17.00 WIB
Organized By : Medco Power Indonesia
Presenter :

1. Mahastuti Tjokronegoro
2. Dewi Permata Ifadiana
3. Saiful Amin
4. Nanang Sugianto

Attendees : Lotte Worker
(List of Attendance is Attached)

1. Opening Speech by Mahastuti Tjokronegoro

Workers are an inseparable part of the system, including project commitments. So that if there are workers who are not aligned with commitments and procedures, it will result in delayed funding.

Therefore, to be considered every material that will be presented. Remember that our commitment to cultural heritage, protection of biodiversity and compliance with work safety. Mr. Nanang, Saiful and Mrs. Dewi will explain the details.

To ensure that this activity is effective and productive, be sure to raise questions, share experiences and inputs related to future improvements. Thank you for your coming.

2. Safety Moment

Pak Setyo from HSE Lotte said that many snakes were found at the SFG site during a manual excavation. Some asked that the snake be killed but after consultation it was decided that the snake was allowed to stay alive and returned to its habitat. In accordance with the BAP document, this decision is correct.

Based on the sharing, please be aware that our project area is living place of snake. Ensure you are use the proper PPE (personal protective equipment). Report immediately if you feel like getting a poisonous snakebite.



3. Summary Question and Answer (Q&A) and Sharing and Discussion (S&D) raised During Socialization

No.	Items
1.	Pak Kumia shared experiences related to the dry season which caused dusty roads so that vehicles should not be too fast and do regular watering. Drivers are also asked to be careful for the road uphill and given a refreshment and tool box meeting to ensure there are no accidents or complaints from residents.
2.	Pak Surya said that we had an incident with the status of first aid, but in statistics there were no nearmiss figures. Therefore, please look again at the HSE Card to ensure charging correctly if there is a nearmiss, then the nearmiss category must be written.
3.	<p>Question: The question from Mr. Putra is that he is very appreciative of this project because he has a high concern for social and environmental issues. Also to be included are the HP PIC contacts who are responsible for social emergencies and HSE issues.</p> <p>Answer: The PIC contacts are included in the last slide and have been posted in strategic places and also in the community.</p>
4	To increase the water availability and room prayer due to the worker will be increased.



PT. MEDCC RATCH
Power

Attachment 1: Attendance List

PT. MEDCC RATCH POWER RIAD			
HRD FORM			
LIST OF ATTENDANCE			
No. Doc	FR-HR-14	Page: 1/1	Prepared by: Document Control
		Revision: 00	Approved by: QHS-MR
Day/Date	MCP 12.11.19		Time : 09.00 - 12.00
Meeting Title			venue : RPPR
Agenda	Capacity Building on KEMAS for Lottowater Testing Room		

No	Name	Company	Position	Email	Signature
1	KAWANG SUGIANTO	MARU	ISE	kawang.kawangk...@gmail.com	
2	SURYA PRATMA	LEC	ETI	suryapra@gmail.com	
3	KURNIA HIDAYAT	LEC	Mechanical	kurniahidayat@gmail.com	
4	Niko Rizaldi	LEC	QC	nikorizaldi@gmail.com	
5	SATYA S	LEC	EC	satya.s@gmail.com	
6	Suryan	LEC	SE	suryan.s@gmail.com	
7	Syamsil M	JK	QC	syamsil.m@gmail.com	
8	Riska Agnestianaya	LEC	HSE	riska.agnestianaya@gmail.com	
9	Jepri Alimadi	TEE	HSE	jepri.alimadi@gmail.com	
10	SETYO W	LEC	PAE	setyo.w@gmail.com	
11	WIRA WONGKA	LEC	IEEST	wira.wongka@gmail.com	
12	MUR HUSIP	TFA	ACT-Led	murhusip@gmail.com	
13	Agus Idris Sidiq	D'Parik	Besi		
14	Ardiansanto	Indana	Surabaya		
15	Johan Didi	JK	HSE	johandidi@gmail.com	
16	SIGIT JUSC	JK	elektronik		
17	RESLY OKSTANED	JK	ELEKTRONIK		
18	KUSWARA-1		BESI		
19	HARJANO KO		BESI		
20	ESK. WAAJANA		BESI		



	PT. MEDCO RATCH POWER KIAU		
	HRD FORM		
	LIST OF ATTENDANCE		
No Doc	FR I R 14	Page: 1/1 Revisi on: 00	Prepared by: Document Control Approved by: DIIS MR.
Day/Date	:	/	Title
Meeting Title	:		Venue
Agenda	:		

No.	Name	Company	Position	Email	Signature
21	ENORA K.	TFA	Besi		
22	Sukarya	TFA	Theryo		
23	Arifin	JK	warehouse		
24	Siman	JK	Stafoldr		
25	Arip Septiano	JK	warehouse		
26	AZRI KALAM	SECURITY JK	AMBON		
27	ALIF	JK	JK		
28	DETO USMAN D	Soc/Arto	PTIKOBA		
29	Zaenal Arifin	JK	Electrical		
30	Minal Nursalin	JK	- - -		
31	A-A-R-Q	JK	- - -		
32	Mitshari	WKK	- - -		
33	Durul Jari	TFA	Ca:		
34	Fajri ZALANI	JK	kondur		
35	BERVICIANUS BAWITA	JK	INSTURMEN		
36	IKBAI SORUWA	JK	INSTURMEN		
37	HUSAINO	JK	electrical		
38	Paid	WKK	KAYO		
39	ROHMAD	WKK	- - -		
40	ALVIN R	TFA	HELPER		



	PT MEDCO RAYON POWER RIAU		
	HRD FORM		
	LIST OF ATTENDANCE		
No. Doc: HR-444	Page: 1	Prepared by: Document Control	
	Revision: 02	Approved by: QHS MR	
Day/Date	:	:	Time
Meeting Title	:	:	Venue
Agenda	:	:	

No.	Name	Company	Position	Email	Signature
41	RISUALAN SAKI	TFA	HELPER		
42	HASZ HULIM	TFA	HELPER		
43	Ahmad Han H. J	TFA	HELPER		
44	Ahmad Nursetyo	TFA	carpenter		
45	Desi Permana	TFA	T. Civil		
46	Soliman F.	TFA	carpenter		
47	RACHMAD JUMAL	LTC	HR		
48	Suwardo	TFA	carpenter		
49	Fajar Aripriant	JK	electrical		
50	Toni Suprianto	TFA	scaffolder		
51	HASYIM	TFA	carpenter		
52	PRIN	TFA	carpenter		
53	LAJUNDI	P. BAT	security		
54	Doni Mulyadi	P. BAT	security		
55	Ayu Widi	P. BAT	security		
56		MEPR	HR		
57	Latif Amin	MPI	HESS		
58	Doni Permana	MPI	HESS		
59	A. Idris	MEPR	HR		
60	Maheshi	MEPR	Gen. Spc.		



MNCI NERGI
POWER

Attachment 2: Photo Documentation



Pak Nanang presenting the ESMS on EHS Sides



Bu Dewi presenting the Environmental related ESMS



Pak Suryo Dono have additional explanation on the related topic



Bu Haati share her experience when engage with the Lenders during L&S commitment implementation



The overall situation during the capacity building activities



Attachment 3: Capacity Building Materials

	<p>Peraturan dan Persyaratan</p> <p>UUC 1644, Pasal 284, ayat (1)</p> <p>"Setiap orang yang akan melakukan atau akan melaksanakan kegiatan yang menimbulkan dampak lingkungan wajib melaksanakan prosedur lingkungan."</p> <p>Quality Principles (QPs)</p> <p>Prinsip-prinsip yang diterapkan di Proyek ini sesuai dengan Environmental and Social Management System (ESMS).</p> <p>International Finance Corporation (IFC) Performance Standards</p> <p>Prinsip-prinsip Lingkungan dan Sosial Management System (ESMS) yang diterapkan dalam proyek ini sesuai dengan persyaratan yang ditetapkan oleh IFC dan IFC Performance Standard.</p> <p>Asian Development Bank (ADB) Safeguard Policy Statement</p> <p>Prinsip-prinsip yang diterapkan di Proyek ini sesuai dengan Safeguard Policy Statement (SPS) yang ditetapkan oleh ADB.</p> <p>World Bank Environmental, Health, and Safety (EHS) Guidelines</p> <p>The Document will address the minimum levels and requirements are normally applicable to the EFC and accordingly essential to be achievement and further of overall health by working accordingly.</p>
<p>Kebijakan MPPR Power Indonesia</p>	<p>Kebijakan Perusahaan</p>
<p>Environmental Risk Assessment</p> <p>Solusi dan Mitigasi</p> <p>(dari MPPR Power dan MPPR Power System)</p>	<p>Where is the position of ESMS?</p>



Hazardous Substances Management

MSK-001-01-001



- Bahan Berbahaya dan Beracun (BBB) adalah senyawa kimia yang berpotensi menimbulkan bahaya kesehatan manusia, lingkungan, dan makhluk hidup lainnya jika digunakan atau disimpan dengan cara yang tidak benar.
- Bahaya yang dibawakan oleh bahan beracun:
 - Bahan Beracun, Bahan Beracun Korosif, Berbahaya Untuk Lingkungan, dan Bahan Beracun yang Berpotensi Menyebabkan Kanker.
- Penggunaan BB
 - Penyakit dan Kanker, Perlemakan Hati
 - Merusakkan lingkungan, pencemaran air tanah, pencemaran udara, pencemaran tanah, pencemaran laut, pencemaran sungai, pencemaran air permukaan
 - Merusakkan 90% hutan Indonesia
 - Penggunaan yang tidak sesuai



Pest & Weed Management

MSK-001-01-002



- Pest & Weed
- Merusakkan lingkungan, pencemaran air tanah, pencemaran udara, pencemaran tanah, pencemaran laut, pencemaran sungai, pencemaran air permukaan
- Penggunaan yang tidak sesuai

- Resistensi Organisme
- Terdapat beberapa jenis hama yang resisten terhadap pestisida, sehingga perlu dilakukan rotasi pestisida yang berbeda-beda.



Pencegahan dan kontrol hama dan penyakit tanaman: berfokus pada pencegahan, pengendalian, dan pemulihan.

Waste Management

MSK-001-01-003



- Melakukan pemilahan limbah dan pemrosesan limbah sesuai prosedur:
 - Penyakit dan Kanker, Perlemakan Hati
 - Merusakkan lingkungan, pencemaran air tanah, pencemaran udara, pencemaran tanah, pencemaran laut, pencemaran sungai, pencemaran air permukaan
 - Merusakkan 90% hutan Indonesia
 - Penggunaan yang tidak sesuai
- Melakukan pemilahan limbah B3 dan pengaliran limbah B3 sesuai peraturan lingkungan hidup

- Melakukan pemilahan limbah:
 - Penyakit dan Kanker, Perlemakan Hati
 - Merusakkan lingkungan, pencemaran air tanah, pencemaran udara, pencemaran tanah, pencemaran laut, pencemaran sungai, pencemaran air permukaan
 - Merusakkan 90% hutan Indonesia
 - Penggunaan yang tidak sesuai



Waste Management: berfokus pada pencegahan, pengendalian, dan pemulihan.

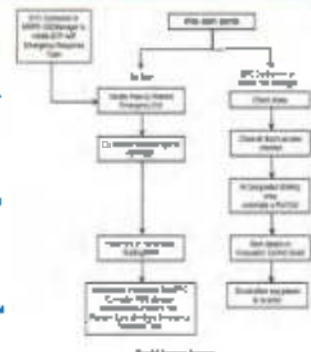


Emergency Preparedness and Response

MSK-001-01-004



- Kesiapan dan tanggap darurat:
 - Penyakit dan Kanker, Perlemakan Hati
 - Merusakkan lingkungan, pencemaran air tanah, pencemaran udara, pencemaran tanah, pencemaran laut, pencemaran sungai, pencemaran air permukaan
 - Merusakkan 90% hutan Indonesia
 - Penggunaan yang tidak sesuai
- Kelembagaan:
 - Penyakit dan Kanker, Perlemakan Hati
 - Merusakkan lingkungan, pencemaran air tanah, pencemaran udara, pencemaran tanah, pencemaran laut, pencemaran sungai, pencemaran air permukaan
 - Merusakkan 90% hutan Indonesia
 - Penggunaan yang tidak sesuai



Air Quality Management

MSK-001-01-005



- Batas Maksimum Baku Mutu (Baku Mutu) adalah batas maksimum yang ditetapkan untuk melindungi kesehatan manusia, lingkungan, dan makhluk hidup lainnya jika digunakan atau disimpan dengan cara yang tidak benar.
- Uraian pengendalian kualitas udara:
 - Penyakit dan Kanker, Perlemakan Hati
 - Merusakkan lingkungan, pencemaran air tanah, pencemaran udara, pencemaran tanah, pencemaran laut, pencemaran sungai, pencemaran air permukaan
 - Merusakkan 90% hutan Indonesia
 - Penggunaan yang tidak sesuai
- Melakukan pemilahan limbah B3 dan pengaliran limbah B3 sesuai peraturan lingkungan hidup



Soil Erosion and Water Management

MSK-001-01-006



- Pencegahan dan kontrol erosi tanah:
 - Penyakit dan Kanker, Perlemakan Hati
 - Merusakkan lingkungan, pencemaran air tanah, pencemaran udara, pencemaran tanah, pencemaran laut, pencemaran sungai, pencemaran air permukaan
 - Merusakkan 90% hutan Indonesia
 - Penggunaan yang tidak sesuai
- Uraian pengendalian erosi tanah:
 - Penyakit dan Kanker, Perlemakan Hati
 - Merusakkan lingkungan, pencemaran air tanah, pencemaran udara, pencemaran tanah, pencemaran laut, pencemaran sungai, pencemaran air permukaan
 - Merusakkan 90% hutan Indonesia
 - Penggunaan yang tidak sesuai





Vessel & Spill Management

- **Prosedur Tanggapan Milyok** diklasifikasikan oleh:
 - Milyok, yang berwujud dalam bentuk cairan
 - Padatan yang terdistribusi di laut
- **Urutan penanganan tanggapannya** adalah:
 1. Pengalihan lokasi tumpukan minyak
 2. Pengalihan lokasi tumpukan minyak ke lokasi pemrosesan
 3. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan
 4. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan



Tangkapan Minyak



Sistem Tanggapan Darurat Tanggapan



Penanganan Tumpah Sekelompok



Traffic Management

MRPP 01010101



- **Prosedur** untuk mengatur lalu lintas kapal:
 1. Pengalihan lokasi tumpukan minyak
 2. Pengalihan lokasi tumpukan minyak ke lokasi pemrosesan
 3. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan
 4. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan



Tangkapan Minyak

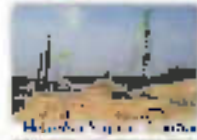


Noise Management and Monitoring Procedure

MRPP 04010101



- **Prosedur** untuk mengelola kebisingan:
 1. Pengalihan lokasi tumpukan minyak
 2. Pengalihan lokasi tumpukan minyak ke lokasi pemrosesan
 3. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan
 4. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan



Monitoring Kebisingan



Sound Level Meter

Occupational Safety and Health

MRPP 01010101



- **Prosedur** untuk mengelola keselamatan kerja:
 1. Pengalihan lokasi tumpukan minyak
 2. Pengalihan lokasi tumpukan minyak ke lokasi pemrosesan
 3. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan
 4. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan



Safety Signs



Staff Photo

GHG Calculation

MRPP 01010101



- **Prosedur** untuk menghitung emisi gas rumah kaca:
 1. Pengalihan lokasi tumpukan minyak
 2. Pengalihan lokasi tumpukan minyak ke lokasi pemrosesan
 3. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan
 4. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan

As a guide, the following table shows the GHG emissions factors for various activities:

Activity	GHG Emissions Factor (kg CO ₂ e/kg)
1. Fuel combustion	...
2. Electricity generation	...
3. Process emissions	...
4. Land use change and forestry	...
5. International aviation and shipping	...
6. Fugitive emissions	...

Groundwater Management

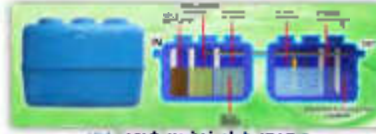
MRPP 01010101



- **Prosedur** untuk mengelola air tanah:
 1. Pengalihan lokasi tumpukan minyak
 2. Pengalihan lokasi tumpukan minyak ke lokasi pemrosesan
 3. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan
 4. Pengalihan lokasi tumpukan minyak ke lokasi pembuangan



Groundwater Well



Groundwater Monitoring System

MRPP 01010101



Review and Auditing ESMS

MS-001-01-001



- Untuk memastikan ESMS telah berjalan sesuai prosedur. Langkah, Pengegk partik yang dilakukan adalah:
 - 1. Menentukan lingkup dan periode yang akan dilakukan audit internal
 - 2. Audit internal dilakukan secara berkala yang melibatkan semua manajemen untuk memastikan bahwa tidak ada kelemahan yang terdapat
- Berdasarkan Audit internal:
 1. Melakukan pembaruan
 2. Melakukan audit internal dan melakukan audit eksternal
 3. Melakukan pembaruan secara berkala LKSP, manual prosedur, Dokumen PMS, dan PMS
- Kebutuhan yang dikehendaki:
 1. Melakukan audit untuk memastikan kepatuhan PMS
 2. Mengetahui kelemahan yang

No	Item	Detail	Kelemahan
1	1.1	1.1.1	1.1.1.1
2	2.1	2.1.1	2.1.1.1
3	3.1	3.1.1	3.1.1.1
4	4.1	4.1.1	4.1.1.1
5	5.1	5.1.1	5.1.1.1
6	6.1	6.1.1	6.1.1.1
7	7.1	7.1.1	7.1.1.1
8	8.1	8.1.1	8.1.1.1
9	9.1	9.1.1	9.1.1.1
10	10.1	10.1.1	10.1.1.1
11	11.1	11.1.1	11.1.1.1
12	12.1	12.1.1	12.1.1.1
13	13.1	13.1.1	13.1.1.1
14	14.1	14.1.1	14.1.1.1
15	15.1	15.1.1	15.1.1.1
16	16.1	16.1.1	16.1.1.1
17	17.1	17.1.1	17.1.1.1
18	18.1	18.1.1	18.1.1.1
19	19.1	19.1.1	19.1.1.1
20	20.1	20.1.1	20.1.1.1
21	21.1	21.1.1	21.1.1.1
22	22.1	22.1.1	22.1.1.1
23	23.1	23.1.1	23.1.1.1
24	24.1	24.1.1	24.1.1.1
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31	31.1	31.1.1	31.1.1.1
32	32.1	32.1.1	32.1.1.1
33	33.1	33.1.1	33.1.1.1
34	34.1	34.1.1	34.1.1.1
35	35.1	35.1.1	35.1.1.1
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37	37.1	37.1.1	37.1.1.1
38	38.1	38.1.1	38.1.1.1
39	39.1	39.1.1	39.1.1.1
40	40.1	40.1.1	40.1.1.1
41	41.1	41.1.1	41.1.1.1
42	42.1	42.1.1	42.1.1.1
43	43.1	43.1.1	43.1.1.1
44	44.1	44.1.1	44.1.1.1
45	45.1	45.1.1	45.1.1.1
46	46.1	46.1.1	46.1.1.1
47	47.1	47.1.1	47.1.1.1
48	48.1	48.1.1	48.1.1.1
49	49.1	49.1.1	49.1.1.1
50	50.1	50.1.1	50.1.1.1

Incident Investigation

MS-001-01-002



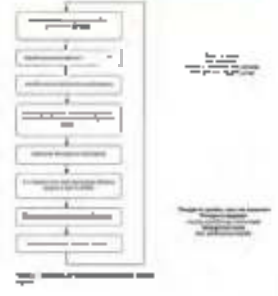
- Investigasi insiden
 - 1. Mengetahui penyebab insiden
 - 2. Mengetahui tindakan preventif yang harus dilakukan untuk mencegah terjadinya insiden yang sama
 - 3. Mengetahui tindakan korektif yang harus dilakukan untuk memperbaiki kerusakan yang terjadi
- Untuk penanganan insiden:
 1. Mengetahui penyebab insiden
 2. Mengetahui tindakan preventif yang harus dilakukan untuk mencegah terjadinya insiden yang sama
 3. Mengetahui tindakan korektif yang harus dilakukan untuk memperbaiki kerusakan yang terjadi

Aspects Requier Identification and Assessment

MS-001-01-003



- Kategori Aspek:
 - 1. Lingkungan Usaha, termasuk lokasi, kondisi, dan
 - 2. Sumber tenaga kerja, termasuk jumlah, jenis, dan kualifikasi
 - 3. Fasilitas, termasuk kondisi dan perawatan
 - 4. Manajemen Perawatan
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- Hal yang perlu dipertimbangkan:
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- Kebutuhan yang dikehendaki:
 1. Melakukan audit untuk memastikan kepatuhan PMS
 2. Mengetahui kelemahan yang



General Human Resources

MS-001-01-004



- Hal-hal umum yang perlu diperhatikan:
 - 1. Kondisi
 - 2. Kondisi
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Training Policy

MS-001-01-005



- Tujuan:
 - 1. Meningkatkan kemampuan dan keterampilan karyawan
 - 2. Meningkatkan produktivitas dan efisiensi kerja
 - 3. Meningkatkan kualitas layanan kepada pelanggan
 - 4. Meningkatkan kemampuan berinovasi dan berkreasi
 - 5. Meningkatkan kemampuan beradaptasi dengan perubahan
 - 6. Meningkatkan kemampuan berkolaborasi dan bekerja sama
 - 7. Meningkatkan kemampuan beretika dan berperilaku baik
 - 8. Meningkatkan kemampuan berprestasi dan berprestasi
 - 9. Meningkatkan kemampuan berkeadilan dan berkeadilan
 - 10. Meningkatkan kemampuan berkeadilan dan berkeadilan
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 - 50. Meningkatkan kemampuan berkeadilan dan berkeadilan
- Langkah-langkah yang dilakukan:
 1. Penetapan kebutuhan pelatihan
 2. Penetapan anggaran pelatihan
 3. Penetapan metode pelatihan
 4. Penetapan lokasi pelatihan
 5. Penetapan waktu pelatihan
 6. Penetapan instruktur pelatihan
 7. Penetapan materi pelatihan
 8. Penetapan evaluasi pelatihan
 9. Penetapan laporan pelatihan
 10. Penetapan tindak lanjut pelatihan
 11. Penetapan tindak lanjut pelatihan
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Worker Policy and Code of Conduct

MS-001-01-006



- Kebijakan perusahaan meliputi:
 - 1. Kebijakan perusahaan
 - 2. Kebijakan perusahaan
 - 3. Kebijakan perusahaan
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- Kebijakan perusahaan meliputi:
 - 1. Kebijakan perusahaan
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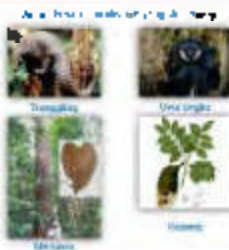


Biodiversity Management

MRPR 2017-2021



- Melakukan Pengawasan terhadap kegiatan di lokasi di kawasan MUKI
 - Melakukan pemantauan
 - Melakukan pengendalian polusi
 - Melakukan
- Melakukan pengendalian polusi udara
 - 1. Melakukan pemantauan kualitas udara
 - 2. Melakukan pemantauan kualitas udara
 - 3. Melakukan pemantauan kualitas udara
- Melakukan pemantauan kualitas air
 - 1. Melakukan pemantauan kualitas air
 - 2. Melakukan pemantauan kualitas air



Livelihood Restoration Plan

MRPR 2017-2021



- Melakukan
 - 1. Melakukan pemantauan kualitas udara
 - 2. Melakukan pemantauan kualitas udara
 - 3. Melakukan pemantauan kualitas udara
- Melakukan
 - 1. Melakukan pemantauan kualitas udara
 - 2. Melakukan pemantauan kualitas udara
 - 3. Melakukan pemantauan kualitas udara
- Melakukan
 - 1. Melakukan pemantauan kualitas udara
 - 2. Melakukan pemantauan kualitas udara
 - 3. Melakukan pemantauan kualitas udara



No Kontak PIC dari MRPR Untuk Pelaporan HSE dan Social/HR/Security

- Melakukan
 - 1. Melakukan pemantauan kualitas udara
 - 2. Melakukan pemantauan kualitas udara
 - 3. Melakukan pemantauan kualitas udara
- Melakukan
 - 1. Melakukan pemantauan kualitas udara
 - 2. Melakukan pemantauan kualitas udara
 - 3. Melakukan pemantauan kualitas udara

Full ESMS document can be accessed in relevant HSE Personnel/MRPR Site Office

Thank You

Full ESMS document can be accessed in the MRH and PIC website

- Melakukan
 - 1. Melakukan pemantauan kualitas udara
 - 2. Melakukan pemantauan kualitas udara
 - 3. Melakukan pemantauan kualitas udara
- Melakukan
 - 1. Melakukan pemantauan kualitas udara
 - 2. Melakukan pemantauan kualitas udara
 - 3. Melakukan pemantauan kualitas udara
- Melakukan
 - 1. Melakukan pemantauan kualitas udara
 - 2. Melakukan pemantauan kualitas udara
 - 3. Melakukan pemantauan kualitas udara

Minutes of Capacity Building

Subject : Capacity Building for HK Worker on ESMS/Procedure
Venue : MRPR Site Office
Day/Date : Wednesday, 13 November 2019
Time : 13.30 to 16.00 WIB
Organized By : Medco Power Indonesia and Medco Ratch Power Riau
Presenter :

1. Dewl Ifadlana
2. Mahastuti Tjokronegoro
3. Nanang Sugianto
4. Saiful Amin

Attendees : HK Workers
(List of Attendance is Attached)

1. Opening Speech by Saiful Amin

Thank you for your time to join this required capacity building. Please note that your active participation is expected and as one indicator of the success of this activity.

All the guidance to ensure all of you inline with the project E&S commitment will be explained by Bu Hasti and Pak Nanang. Raise up your hand if you have any inquiry. Do not hesitate to share your experience and convey your idea and input to improve our achievement.

Next lenders visit probably one of you will be interviewed. Please convey what your knowledge based this capacity building or socialization. Let together bring this project in line with the Lenders requirement.

2. Safety Moment

There is someone who has a stroke despite having a healthy lifestyle. But after a medical examination it turns out that the person has a habit of holding thirst. Therefore, let us protect our body from dehydration because it is very dangerous for our health.

Another safety moment that has been tripped due to poor housekeeping


3. Summary Question and Answer

No.	Items
1.	<p>We need to watch out for the movement of the muster point so that when emergencies occur the workers have no difficulty finding the muster point</p> <p>Muster point switching must always be updated</p>
2.	<p>Question from Pak Sugiharto, can poisonous snakes be killed?</p> <p>Answer: poisonous snakes should not be killed because they maintain the balance of habitat as the guardian of the food chain.</p>
3.	<p>Pak Saiful conveyed that all worker should be have contribution on the HSE Card and care to each other's. Worker complaints must be reported because up to now the statistics of worker complaints are still zero. Including statistics for nearmiss also must be considered when filling HSE Cards.</p>


Attachment 1: Attendance List

MRPR	PT. MEDCO RAPI POWER R SU		
	HRD FORM		
	LIST OF ATTENDANCE		
	No. Doc: MRHR-14	Page: 1/1	Prepared by: Document Control
		Revisi: 00	Approved by: GHS-MR
Day/Date	: Wed / 21-10-2023		Time : 18.30
Meeting Title	:		Venue : MRPR on site
Agenda	: temp doc. ac. review / training for IIR creation Form filling		


No.	Name	Company	Position	Email	Signature
1	Jairifal Amin	KPI	IIR		[Signature]
2	Rossyris Adima	HR	SECURITY		[Signature]
3	Marcus M. S	HR	SECURITY		[Signature]
4	M. Syafiq	HR	SECURITY		[Signature]
5	Juniardi	HR	SECURITY		[Signature]
6	M. Sabirin	HR	Helper		[Signature]
7	Trijandi cher	HR	HSE K3		[Signature]
8	BUSTAMI	HR	HSE K3		[Signature]
9	Kamalulhaziq Hassan	HR	HSE K3		[Signature]
10	M. N. F. I. J. S.	HR	HSE K3		[Signature]
11	Ade Hadruskiatis	HR	HSE K3		[Signature]
12	Juwana Hasan	HR	Helper		[Signature]
13	SAHARUDIN	HR	Helper		[Signature]
14	JULIANI S	HR	Helper		[Signature]
15	R. I. I. H. I. S.	HR	Helper		[Signature]
16	Mahir Sadun	HR	BESI		[Signature]
17	PAHRUL	HR	BESI		[Signature]
18	S. I. D. A. I.	HR	BESI		[Signature]
19	I. G. S. O. M. A.	HR	KY.		[Signature]
20	A. R. I. S. K. I.	-			[Signature]






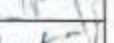







	PT. MEDCO RATCH POWER REAL		
	HRD FORM		
	LIST OF ATTENDANCE		
	No. Doc. PR/HR-14	Page: 1/1 Revision: 03	Prepared by: Document Control Approved by: QH-S-MH
Day/Date	: 10/1/19		Time
Meeting Title	:		Venue
Agenda	:		

No.	Name	Company	Position	Email	Signature
21	Dyala Susanto	HK	Presi		[Signature]
22	S. M. K. M.	WJH	Bea		[Signature]
23	A. ASKOFI	HK	Bea		[Signature]
24	WASTA	HK	Bea		[Signature]
25	ANASRI	HK	Bea		[Signature]
26	PRIN. JUKI	HK	HOLDER		[Signature]
27	SUGI HARTO	HK	MEKAWIK		[Signature]
28	SAUKANI	HK	Bea		[Signature]
29	ERWIN SYAH	HK	Bea	[Email]	[Signature]
30	M. SURI H	HK	Presi		[Signature]
31	K. S. O.	HK			[Signature]
32	Y. S. P.	HK			[Signature]
33	DHY P. S.	HK	Bea		[Signature]
34	BERIMALDI	HK	Bea		[Signature]
35	MARJUNO YADRI	HK	Bea		[Signature]
36	K. P. S.	HK	Bea		[Signature]
37	YULIASRI	HK	Bea		[Signature]
38	DAMIANO	HK	Bea		[Signature]
39	SUNYTO	HK	Bea		[Signature]
40	M. H. H.	HK	Bea		[Signature]

 MRPR	PT. MEDCO BATCH POWER RIAU		
	HRD FORM		
	LIST OF ATTENDANCE		
	No. Per. FR HR 14	Page. 1/1 Revisi on: 0/0	Prepared by: Document Control Approved by: QHS-MR
Date:	13-11-19		Time:
Meeting Title:			Venue:
Agenda:			

No.	Name	Company	Position	Email	Signature
41	Amalia	TK	PR		[Signature]
42	Andi	H	PR		[Signature]
43	Syahrul	TK	TK		[Signature]
44	Kiyuwanto	TK	HK		[Signature]
45	Pusyo	TK	HK		[Signature]
46	Gudelmak	TK	HK		[Signature]
47	Wahar Agus G	TK	HK		[Signature]
48	Parimor	TK	PT HK		[Signature]
49	Babus H	TK	HK		[Signature]
50	Gudarswi	TK	HK		[Signature]
51	Khamrin	TK	HK		[Signature]
52	T. M. S. M. S.	TK	-		[Signature]
53	Wahar	TK	PR		[Signature]
54	Dan	TK	HK		[Signature]
55	Muragand	TK	HK		[Signature]
56	T. M. S. M. S.	TK	HK		[Signature]
57	Hercot Sitompa	TK	HK		[Signature]
58	Supriyanto	TK	HK		[Signature]
59	Pr. M. S.	TK	HK		[Signature]
60	M. S. S.	TK	-		[Signature]

	PT. MEDCO RANTAU POWER RIAU		
	HRD FORM		
	LIST OF ATTENDANCE		
	No. Doc: PRG-HR-14	Page: 1/1 Revisi: 00	Prepared by: Document Control Approved by: CHS-MR
Day/Date	:	13 - 11 - 11	Time
Meeting Title	:		venue
Agenda	:		

No.	Name	Company	Position	Email	Signature
61	Wahidi	HR	HRD		
62	Rusman	HR	HRD		
63	P. L. ABDI	HR			
64	Indri Darsi				
65	Kasim				
66	Ahmad Jus	HR			
67	M. RZANI	HR			
68	Iyana	HR			
69	Ardina Y	MRPR	HSE		
90	Nakong S	MRPR	HSE		
71	Mahwath	MRPR	Env. Sd		
72	Machka Wardhani	MRPR	Sec. Gpr.	machka-wardhani@medcoenergi.com	
73	Erci Harto. S	MRPR			

Attachment 2: Photo Documentation



Prayer before capacity building commenced



Pak Nanang explained the ESMS



The participant focus

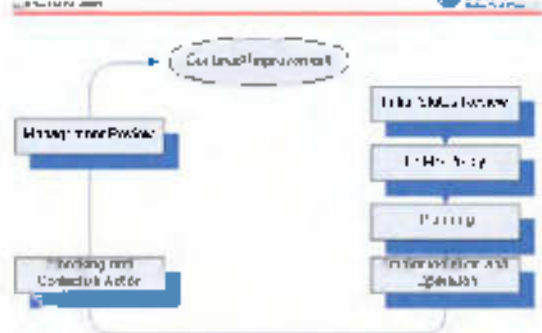
Attachment 3: Capacity Building Materials

	<p>Peraturan dan Persyaratan</p> <p>UMC 1946, Pasal 281, ayat (1) "Korporasi wajib melaksanakan dan memastikan tercapainya tujuan dan sasaran yang ditetapkan dalam rencana bisnis dan kebijakan lingkungan perusahaan yang bersangkutan"</p> <p>Quality Principles (QPs) Overview: "Company is committed to Quality to maintain an Environmental and Social Management System (ESMS)"</p> <p>International Finance Corporation (IFC) Performance Standards An effective Environmental and Social Management System (ESMS) is a system and approach which enables and supports the Company and Project to comply with applicable laws in order to meet the requirements of the project and to manage the project in a way that is consistent with applicable laws and standards."</p> <p>Asian Development Bank (ADB) Safeguard Policy Statement "As a condition of loan or other financial assistance, the borrower shall comply with the World Bank Environmental, Health, and Safety (EHS) Guidelines."</p> <p>World Bank Environmental, Health, and Safety (EHS) Guidelines "The Company will ensure the performance levels are consistent with and comply with the EHS and are generally considered to be achievable in the facilities, of reasonable reach, by applying technology"</p>
<p>Kebijakan Medan Power Indonesia</p> 	<p>Kebijakan Perusahaan</p> 
<p>Environmental Risk Assessment</p> <p>Obtaining Risk Assessment (SMP, AMDAL, PRA, PAM, dan/atau Dokumen Lain)</p> 	<p>Where is the position of E&S?</p> 

Environment and Social Management System (ESMS)

1. Kebijakan umum
2. Struktur organisasi
3. Misi & Visi perusahaan
4. Konsultasi dengan Masyarakat
5. Mekanisme komunikasi manajemen internal
6. Misi & Visi lingkungan
7. Struktur organisasi
8. Mekanisme komunikasi manajemen internal
9. Kebijakan lingkungan
10. Kebijakan sosial
11. Kebijakan lingkungan & sosial
12. Kebijakan lingkungan & sosial
13. Kebijakan lingkungan & sosial
14. Kebijakan lingkungan & sosial
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40. Kebijakan lingkungan & sosial

Overarching ESMS



Overarching ESMS



Change: Find Procedure

1. Melakukan inspeksi lapangan secara berkala
2. Melakukan inspeksi lapangan secara berkala
3. Melakukan inspeksi lapangan secara berkala
4. Melakukan inspeksi lapangan secara berkala
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37. Melakukan inspeksi lapangan secara berkala
38. Melakukan inspeksi lapangan secara berkala
39. Melakukan inspeksi lapangan secara berkala
40. Melakukan inspeksi lapangan secara berkala



Worker's Grievance Mechanism

1. Project telah menyediakan saluran untuk menerima keluhan Pekerja dengan jenis:
 - Surat
 - Email
 - Papan pengumuman
 - Papan pengumuman
2. Cara untuk menerima keluhan:
 - Melalui surat
 - Melalui email
 - Melalui papan pengumuman
 - Melalui papan pengumuman
3. Cara untuk menerima keluhan:
 - Melalui surat
 - Melalui email
 - Melalui papan pengumuman
 - Melalui papan pengumuman
4. Cara untuk menerima keluhan:
 - Melalui surat
 - Melalui email
 - Melalui papan pengumuman
 - Melalui papan pengumuman



Community Grievance Mechanism

1. Project telah menyediakan saluran untuk menerima keluhan Masyarakat dengan jenis:
 - Surat
 - Email
 - Papan pengumuman
 - Papan pengumuman
2. Cara untuk menerima keluhan:
 - Melalui surat
 - Melalui email
 - Melalui papan pengumuman
 - Melalui papan pengumuman
3. Cara untuk menerima keluhan:
 - Melalui surat
 - Melalui email
 - Melalui papan pengumuman
 - Melalui papan pengumuman
4. Cara untuk menerima keluhan:
 - Melalui surat
 - Melalui email
 - Melalui papan pengumuman
 - Melalui papan pengumuman



Vessel & Spill Management



- Pelanggaran Kapal Nelayan dibuktikan oleh:
 - Menyalakan motor diesel tanpa kegiatan bongkar muat
 - Tidak ada logbook
- Untuk penanganan tumpahan minyak:
 1. Tindakan pencegahan untuk mencegah tumpahan minyak
 2. Tindakan penanganan tumpahan minyak
- Tindakan pencegahan untuk mencegah tumpahan minyak:
 1. Melakukan inspeksi kapal
 2. Melakukan inspeksi awak kapal
- Tindakan penanganan tumpahan minyak:
 1. Melakukan inspeksi kapal
 2. Melakukan inspeksi awak kapal



Tindakan Bangsi



Sistem Tanggapi Darurat Tumpahan



Penanganan Tumpahan Darurat

Traffic Management



- Mencegah tabrakan kapal dengan kapal lain
- Mencegah tabrakan kapal dengan dermaga
- Mencegah tabrakan kapal dengan kapal lain
- Mencegah tabrakan kapal dengan kapal lain
- Mencegah tabrakan kapal dengan kapal lain
- Mencegah tabrakan kapal dengan kapal lain
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- Mencegah tabrakan kapal dengan kapal lain
- Mencegah tabrakan kapal dengan kapal lain
- Mencegah tabrakan kapal dengan kapal lain



Noise Management and Monitoring Procedure



- Protokol Pengendalian Kebisingan:
 1. Mengidentifikasi sumber kebisingan
 2. Mengukur tingkat kebisingan
 3. Menentukan tindakan pengendalian
 4. Melakukan pemantauan
 5. Melakukan evaluasi



Mencegah kebisingan



Mengukur kebisingan



Mengukur kebisingan



Mengukur kebisingan

Occupational Safety and Health



- Mencegah kecelakaan kerja:
 1. Mengidentifikasi bahaya
 2. Menilai risiko
 3. Mengendalikan risiko
 4. Melakukan pemantauan
 5. Melakukan evaluasi



Mencegah kecelakaan kerja



Keamanan

BGH Calculation



- Menghitung BGR (Batas Guna Ruang):
 1. Mengidentifikasi sumber kebisingan
 2. Mengukur tingkat kebisingan
 3. Menentukan tindakan pengendalian
 4. Melakukan pemantauan
 5. Melakukan evaluasi

- Menghitung BGR (Batas Guna Ruang):
 1. Mengidentifikasi sumber kebisingan
 2. Mengukur tingkat kebisingan
 3. Menentukan tindakan pengendalian
 4. Melakukan pemantauan
 5. Melakukan evaluasi

No	Nama	Alamat	Telepon	Fax	Website
1	PT. ABC	Jl. ABC	12345678	87654321	www.abc.com
2	PT. DEF	Jl. DEF	98765432	12345678	www.def.com
3	PT. GHI	Jl. GHI	23456789	98765432	www.ghi.com
4	PT. JKL	Jl. JKL	34567890	12345678	www.jkl.com
5	PT. MNO	Jl. MNO	45678901	98765432	www.mno.com
6	PT. PQR	Jl. PQR	56789012	12345678	www.pqr.com
7	PT. STU	Jl. STU	67890123	98765432	www.stu.com
8	PT. VWX	Jl. VWX	78901234	12345678	www.vwx.com
9	PT. YZA	Jl. YZA	89012345	98765432	www.yza.com
10	PT. BCD	Jl. BCD	90123456	12345678	www.bcd.com

Groundwater Management



- Mencegah pencemaran air tanah:
 1. Mengidentifikasi sumber pencemaran
 2. Menilai risiko
 3. Mengendalikan risiko
 4. Melakukan pemantauan
 5. Melakukan evaluasi



Monitoring Point




Mengukur kebisingan


Dilarang
Membuang sampah ke sungai
Membuang limbah ke laut

Review and Auditing ESMS

MRPR-001-001-001



- Untuk memastikan ESMS sudah berjalan sesuai dengan saat ini, Pelajar perlu mengetahui bahwa:
 1. Menentukan kriteria dan tujuan dari audit internal dan eksternal
 2. Melakukan audit internal dan eksternal yang lebih mendalam mengenai risiko sebagai upaya manajemen dalam pemenuhan dari program internal
 3. Berapa dan siapa yang akan:
 1. Melakukan audit internal
 2. Melakukan audit MRPR dan berfokus pada Sub-Setor
 3. Melakukan audit eksternal untuk LSP, internal, Regulasi, Undang-undang, LSP dan LSP
 4. Kami baik Yang Dirinci:
 - 1. Melakukan internal audit internal
 - 2. Melakukan internal audit




Incident Investigation

MRPR-001-001-002




- Review laporan insiden
 - 1. Menentukan dan memahami insiden yang terjadi
 - 2. Menentukan penyebab insiden yang terjadi
 - 3. Menentukan tindakan yang akan dilakukan untuk mencegah insiden yang sama terjadi lagi
- Untuk penanganan insiden:
 1. Identifikasi insiden yang terjadi
 2. Menentukan tindakan yang akan dilakukan untuk mencegah insiden yang sama terjadi lagi
 3. Menentukan tindakan yang akan dilakukan untuk mencegah insiden yang sama terjadi lagi

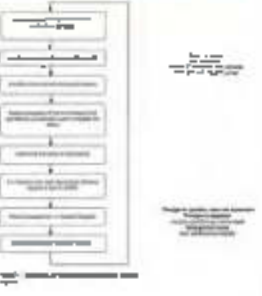


Aspects Register Identification and Assessment

MRPR-001-001-003



- Kategori Aspek:
 - 1. Lingkungan, Objek, dan Ketersediaan
 - 2. Kondisi, Proses, dan Produk
 - 3. Insiden yang terjadi pada perusahaan
- Hal yang perlu diketahui:
 1. Tujuan ESMS
 2. Tujuan ESMS
 3. Aspek yang berkaitan dengan perusahaan
 4. Aspek yang berkaitan dengan perusahaan
 5. Aspek yang berkaitan dengan perusahaan
 6. Aspek yang berkaitan dengan perusahaan
 7. Aspek yang berkaitan dengan perusahaan
 8. Aspek yang berkaitan dengan perusahaan
 9. Aspek yang berkaitan dengan perusahaan
 10. Aspek yang berkaitan dengan perusahaan
- Manajemen Perbaikan:
 - 1. Rincian Perbaikan
 - 2. Rincian Perbaikan
 - 3. Rincian Perbaikan
 - 4. Rincian Perbaikan
 - 5. Rincian Perbaikan
 - 6. Rincian Perbaikan
 - 7. Rincian Perbaikan
 - 8. Rincian Perbaikan
 - 9. Rincian Perbaikan
 - 10. Rincian Perbaikan
- Kontrol Yang Dirinci:
 1. Menentukan insiden yang terjadi
 2. Menentukan insiden yang terjadi
 3. Menentukan insiden yang terjadi
 4. Menentukan insiden yang terjadi
 5. Menentukan insiden yang terjadi
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 8. Menentukan insiden yang terjadi
 9. Menentukan insiden yang terjadi
 10. Menentukan insiden yang terjadi



General Human Resources

MRPR-001-001-004




- Hal-hal umum yang perlu diketahui:
 - 1. Menentukan insiden yang terjadi
 - 2. Menentukan insiden yang terjadi
 - 3. Menentukan insiden yang terjadi
 - 4. Menentukan insiden yang terjadi
 - 5. Menentukan insiden yang terjadi
 - 6. Menentukan insiden yang terjadi
 - 7. Menentukan insiden yang terjadi
 - 8. Menentukan insiden yang terjadi
 - 9. Menentukan insiden yang terjadi
 - 10. Menentukan insiden yang terjadi



Training Policy

MRPR-001-001-005



- Tujuan:
 - 1. Mendukung masyarakat untuk mendapatkan manfaat dari kesempatan menjadi pelaku proyek
 - 2. Meningkatkan CSR sebagai bagian dari hubungan dengan masyarakat yang baik dan meningkatkan hubungan dengan masyarakat
- Langkah-langkah yang dilakukan:
 1. Menentukan insiden yang terjadi
 2. Menentukan insiden yang terjadi
 3. Menentukan insiden yang terjadi
 4. Menentukan insiden yang terjadi
 5. Menentukan insiden yang terjadi
 6. Menentukan insiden yang terjadi
 7. Menentukan insiden yang terjadi
 8. Menentukan insiden yang terjadi
 9. Menentukan insiden yang terjadi
 10. Menentukan insiden yang terjadi

Worker Policy and Code of Conduct

MRPR-001-001-006



- Hal-hal umum yang perlu diketahui:
 - 1. Menentukan insiden yang terjadi
 - 2. Menentukan insiden yang terjadi
 - 3. Menentukan insiden yang terjadi
 - 4. Menentukan insiden yang terjadi
 - 5. Menentukan insiden yang terjadi
 - 6. Menentukan insiden yang terjadi
 - 7. Menentukan insiden yang terjadi
 - 8. Menentukan insiden yang terjadi
 - 9. Menentukan insiden yang terjadi
 - 10. Menentukan insiden yang terjadi



Biodiversity Management

17/03/2022



- Power Plant area Site management harus dibuktikan oleh:
 1. Mengetahui lokasi, bu
 2. Mengetahui lokasi, bu
 3. Mengetahui lokasi, bu
 4. Mengetahui lokasi, bu
- Bagaimana pengelolaan habitat:
 1. Tidak ada perubahan habitat
 2. Tidak ada perubahan habitat
 3. Tidak ada perubahan habitat
 4. Tidak ada perubahan habitat
 5. Tidak ada perubahan habitat
 6. Tidak ada perubahan habitat

17/03/2022



Livelihood Restoration Plan

17/03/2022



- **Detail:**
 - 1. Tidak ada perubahan habitat
 - 2. Tidak ada perubahan habitat
 - 3. Tidak ada perubahan habitat
 - 4. Tidak ada perubahan habitat
 - 5. Tidak ada perubahan habitat
 - 6. Tidak ada perubahan habitat
- **Kontribusi Yang Dituntut:**
 1. Tidak ada perubahan habitat
 2. Tidak ada perubahan habitat
 3. Tidak ada perubahan habitat
 4. Tidak ada perubahan habitat
 5. Tidak ada perubahan habitat
 6. Tidak ada perubahan habitat



No Kontak PIC dari MRPR Untuk Pelaporan HSE dan Social/HR/Security

HSE:

- HSE Emergency Contact MRPR:
 - 1. 7511 HSE Emergency Contact MRPR
 - 2. 7511 HSE Emergency Contact MRPR

Social/HR/Security:

- Social/HR/Security Contact MRPR:
 - 1. 7511 Social/HR/Security Contact MRPR
 - 2. 7511 Social/HR/Security Contact MRPR

Full ESMS document can be accessed in relevant HSE Personnel/MRPR Site Office

Full ESMS document can be accessed in the HR and HSE website

- [http://www.mrpr.com.my/ESMS/ESMS%20Document%20List](#)
- [http://www.mrpr.com.my/ESMS/ESMS%20Document%20List](#)
- [http://www.mrpr.com.my/ESMS/ESMS%20Document%20List](#)
- [http://www.mrpr.com.my/ESMS/ESMS%20Document%20List](#)
- [http://www.mrpr.com.my/ESMS/ESMS%20Document%20List](#)
- [http://www.mrpr.com.my/ESMS/ESMS%20Document%20List](#)

Thank You

MRPR
Medea Rain Power Pte.

Minutes of Capacity Building

Subject : Capacity building for Worker about ESMS/Sub-plans
Venue : MRPR Site Office
Day/Date : Thursday, 14 November 2019
Time : 14.00 to 16.30 WIB
Organized By : Medco Power Indonesia
Presenter :

1. Dewi Permata Ifadiana
2. Saiful Amin
3. Nanang Sugianto

Attendees : Worker from Lotte, HK, JK and its Sub-con
(List of Attendance is Attached)

1. Opening Speech by Saiful Amin

We are have received many comments from the Lenders related to the awareness and understanding from our contractor and worker on social and environmental commitments. So that why, there is reflected on Lender's findings and feedback that many commitments not implemented yet or not implemented properly.

This capacity building very strategic and important as a means to exchange ideas and find out what are the requirements of ESMS. So let's use this good opportunity optimally and productively for the Project.

Thank you for your time to join this required capacity building. Please note that your active participation is expected and as one indicator of the success of this activity. Next lenders visit probably one of you will be interviewed. Please convey what your knowledge based this capacity building or socialization. Let together bring this project in line with the Lenders requirement.

2. Safety Moment


Raihan conveys the slipping incident by suggesting that shoes should be clean and carefully led, especially on the rigbar.

While Aldi find workers on Rigbar who smoke. Already tried to remind, but only partially obeyed

3. Summary Activity














No.	Items and Points of Q&A and S&D
1.	Q: from Citra, who will collect worker complaint cards? A: the filled card will be collect by MRPR and HR of Contractor.
2.	Q: from Pak Dody HSE JK, altitude training must be realized immediately and marked on the helmet? A: Will be implemented immediately.
3.	Q: from Citra, 3R difficult to be Implemented, especially recycle. A: We will look again at the opportunities for the 3R program.
4.	Q: from Pak Indra, what happens if outside the project, is it still our responsibility? A: Depending on the nature of the activity if it relates to transportation, accidents / incidents will remain our responsibility.
5.	Pak Elfin said that we must make an emergency map of the project area because if later the project has progressed so workers can easily find alternatives in the event of an emergency
6.	Pak Raihan conveyed that the driver must be emphasized again in the safety aspect because there were findings of the driver driving speeds above 20 km / h in the site plant

Attachment 1: Attendance List

	PT. MEDCO BATCH POWER RIAU		
	HRD FORM		
	LIST OF ATTENDANCE		
No. Doc: FR-HR-14	Page: 1/1 Revision: 00	Procedural by: Department Control Approval by: CHS-MK	
Day/Date	: KAMIS 11/04/2013	Time	: 14.30
Meeting Title	:	Venue	: MARK OFFICE
Agenda	: EEMC TRAINING		

No.	Name	Company	Position	Email	Signature
1	Ewin	JK	STV		[Signature]
2	Yana	JK	OFFICER		[Signature]
3	DGI	JK	SPU		[Signature]
4	Seonardi	JK	SPV		[Signature]
5	Indrak	JK	SPV		[Signature]
6	Denny S	JK	KE		[Signature]
7	Citra	CPM	ELITE		[Signature]
8	Iedhamyati F S	CPM	ELITE		[Signature]
9	MURTALA	CPM	ELITE		[Signature]
10	Jumelwah	CPM	ELITE		[Signature]
11	Tiphanz Adhara	CPM	ELITE		[Signature]
12	Mahzani Anisa	CPM	ELITE		[Signature]
13	Melati Ruspita AS	CPM	ELITE		[Signature]
14	Wendani	CPM	ELITE		[Signature]
15	TIMELA LABACHATICE	CPM	ELITE		[Signature]
16	Rubi Abdillah	CPM	ELITE		[Signature]
17	Gilang Anggrastama	JK	ELITE	Perkemangilang@sig.com	[Signature]
18	MUEIARTO	JK	ELITE		[Signature]
19	EOT ERMORA	JK	ELITE		[Signature]
20	Gunadi Nara	JK	ELITE		[Signature]

MRPR	PT MEDAN BARAT POWER RIAU		
	HRD FORM		
	LIST OF ATTENDANCE		
	No. Doc: FR-HR-14	Page: 1/1 Revision: 00	Prepared by: Document Control Approved by: OHS-MR
Day/Date	: 2019-05-14 - 14-2019		Time : 14 ³⁰
Meeting Title	:		Venue : MRPR OFFICE
Agenda	: ESMS TRAINING		

No.	Name	Company	Position	Email	Signature
21	PARDIAN	JK	HRD		
22	Dede Otang	JK	SEKEL		
23	FRANS Utunay	JK	HRD		
24	Rino Loman	JK	HRD	rina.loman@mrpr.co.id	
25	Masman	JK			
26	DADI	JK			
27	Wahyu Purmawan	JK	HRD		
28	ADI LAM	JK	HELPER		
29	Teguh	CPM	PIT		
30	M. ALI	JK	HELPER		
31	Rahman Al Fariz	JK			
32	Winni Supto W	JK	FM		
33	Nur Daula	JK	fm		
34	KASWANTO	JK	PEKER		
35	SITI	MRPR	HRD	SITI.DIPEN@mrpr.co.id	
36	NANANG S	MRPR	HRD	nayang.sugianto@mrpr.co.id	

Attachment 2: Photo Documentation



Pak Nanang presenting the ESMSs



Safety Moment delivered by Worker (Raihan and Aldi)



The atmosphere was lively



The participant following the each session with enthusiastic and active inquiring and sharing experiences

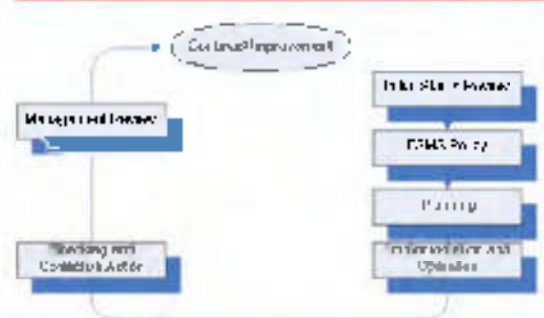
Attachment 3: Capacity Building Materials

 <p>Environmental and Social Management System</p> <p>MRPR ESMS Socialization for All</p> <p>Pelindungan Sosial dan Lingkungan</p>	<p>Peraturan dan Persyaratan</p> <p>UUC 1946, Pasal 28, ayat (1)</p> <p>"Setiap orang bebas untuk mengekspresikan dan menyampaikan pendapat, pikiran, dan keyakinan serta menghormati hak-hak orang lain"</p> <p>Quality Principles (QPs)</p> <p>Principle 3: Zero-impact impact by Quality in accordance Environmental and Social Management System (ESMS)</p> <p>International Finance Corporation (IFC) Performance Standards</p> <p>Environmental and Social Management System (ESMS) is a system and standards which ensure that activities and projects supported by IFC and its affiliate companies adhere to the best practices, international standards and national laws, and IFC's Environmental and Social Requirements and Standards.</p> <p>Asian Development Bank (ADB) Safeguard Policy Statement</p> <p>ADB is committed to ensuring the success of its clients' investments in the social & environment.</p> <p>World Bank Environmental, Health, and Safety (EHS) Guidelines</p> <p>The Drawing will address the minimum levels and requirements are generally applicable to the IFC and consequently essential to the achievement and further of overall its work by lending technology.</p>
<p>Kebijakan Mewakili Indonesia</p> 	<p>Kebijakan Perusahaan</p> 
<p>Environmental Risk Assessment</p> <p>Joban Risk Assessment</p> <p>(Environmental Risk Assessment)</p> 	<p>Where is the position of ESMS?</p> 

Fundamentals and Social Management System (SMS)

1. Identifying CSR
2. Internal Control System
3. Workforce Development
4. Planning of Social Welfare
5. The actual Calculation Management of CSR
6. Internal Audit Management
7. Workforce Control
8. Designing a Specialized Program
9. Community Management and Training
10. Social Welfare and Environmental Management
11. Social Management and Strategic Cycle
12. Internal Control
13. Workforce Development
14. Community Development
15. CSR Calculation and Reporting
16. The actual Management of CSR
17. Internal Control
18. Internal Audit
19. Reporting on the Identification and Assessment
20. Internal Audit
21. Internal Audit
22. Workforce Development of CSR
23. Community Management
24. Internal Control
25. Workforce Development
26. Internal Control
27. Community Development
28. Workforce Development
29. Internal Audit
30. Internal Audit

Overarching ESMS



Overarching ESMS



Change Find Procedure

1. Review the change procedure
2. Review the change procedure
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20. Review the change procedure



Brick/Block



Discs/Components

Worker's Grievance Mechanism

1. Grievance mechanism
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Envelope

Community Grievance Mechanism

1. Grievance mechanism
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19. Grievance mechanism
20. Grievance mechanism



Form Grievance

Vessel & Spill Management

MRPR 1.0.001



- Rencana Tanggapan Milyak dan tumpukan minyak
 - 1. Mengetahui lokasi tumpukan minyak yang terdapat
 - 2. Mengidentifikasi lokasi tumpukan minyak
- Usaha pencegahan tumpukan minyak
 - 1. Mengetahui lokasi tumpukan minyak
 - 2. Mengetahui lokasi tumpukan minyak
- Rencana tanggap darurat tumpukan minyak
 - 1. Mengetahui lokasi tumpukan minyak
 - 2. Mengetahui lokasi tumpukan minyak



Tangkapan Minyak



Pencegahan tumpukan minyak



Rencana Tanggap Darurat tumpukan minyak

Traffic Management

MRPR 1.0.001



- Rencana Lalu Lintas ditinjau dan diperbaiki
 - 1. Mengetahui lokasi lalu lintas
 - 2. Mengetahui lokasi lalu lintas
- Usaha pencegahan kecelakaan lalu lintas
 - 1. Mengetahui lokasi lalu lintas
 - 2. Mengetahui lokasi lalu lintas
- Rencana tanggap darurat kecelakaan lalu lintas
 - 1. Mengetahui lokasi lalu lintas
 - 2. Mengetahui lokasi lalu lintas



Rencana Lalu Lintas



Rencana Tanggap Darurat kecelakaan lalu lintas

Noise Management and Monitoring Procedure

MRPR 1.0.001



- Rencana Pakat Bising ditinjau dan diperbaiki
 - 1. Mengetahui lokasi bising
 - 2. Mengetahui lokasi bising
- Usaha pencegahan polusi bising
 - 1. Mengetahui lokasi bising
 - 2. Mengetahui lokasi bising
- Rencana tanggap darurat polusi bising
 - 1. Mengetahui lokasi bising
 - 2. Mengetahui lokasi bising



Rencana Pakat Bising



Monitoring bising



Sistem Pakat Bising

Occupational Safety and Health

MRPR 1.0.001



- Rencana K3 ditinjau dan diperbaiki
 - 1. Mengetahui lokasi K3
 - 2. Mengetahui lokasi K3
- Usaha pencegahan kecelakaan
 - 1. Mengetahui lokasi kecelakaan
 - 2. Mengetahui lokasi kecelakaan
- Rencana tanggap darurat kecelakaan
 - 1. Mengetahui lokasi kecelakaan
 - 2. Mengetahui lokasi kecelakaan




Rencana K3



Kecelakaan

BGH Calculation


MRPR 1.0.001



Prosedur Kalkulasi Bising

- Mengetahui lokasi Bising
- Mengetahui lokasi Bising
- Mengetahui lokasi Bising
- Mengetahui lokasi Bising
- Mengetahui lokasi Bising
- Mengetahui lokasi Bising

Mengetahui lokasi Bising



Kalkulasi Bising

Groundwater Management

MRPR 1.0.001



- Rencana Pengelolaan Air Tanah ditinjau dan diperbaiki
 - 1. Mengetahui lokasi air tanah
 - 2. Mengetahui lokasi air tanah
- Usaha pencegahan pencemaran air tanah
 - 1. Mengetahui lokasi air tanah
 - 2. Mengetahui lokasi air tanah
- Rencana tanggap darurat pencemaran air tanah
 - 1. Mengetahui lokasi air tanah
 - 2. Mengetahui lokasi air tanah



Rencana Pengelolaan Air Tanah



Kontaminasi Air Tanah

Dilarang
Melakukan aktivitas yang dapat mencemari air tanah

Review and Auditing ESMS

MRPR 2013-2014



- Untuk memastikan ESMS telah berjalan sesuai ekspedisi, Lentera, Paksi perlu mengaudit bahwa:
 - 1. Berjalan dan tidak ada penyimpangan dari perencanaan yang telah ditetapkan
 - 2. Hasil audit dan rekomendasi telah disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 3. Berjalan dan tidak ada penyimpangan
 - 4. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 5. Rekomendasi yang diperlukan telah disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
- Kriteria yang digunakan:
 1. Tidak ada penyimpangan
 2. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 3. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
- Kriteria yang digunakan:
 1. Tidak ada penyimpangan
 2. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan

No	Uraian	Nilai	Revisi
1	Uraian	Nilai	Revisi
2	Uraian	Nilai	Revisi
3	Uraian	Nilai	Revisi
4	Uraian	Nilai	Revisi
5	Uraian	Nilai	Revisi
6	Uraian	Nilai	Revisi
7	Uraian	Nilai	Revisi
8	Uraian	Nilai	Revisi
9	Uraian	Nilai	Revisi
10	Uraian	Nilai	Revisi

Incident Investigation

MRPR 2013-2014



- Tujuan investigasi:
 - 1. Mengetahui penyebab terjadinya insiden
 - 2. Mengetahui dampak dari insiden
 - 3. Mengetahui langkah-langkah yang harus dilakukan untuk mencegah terjadinya insiden yang sama
 - 4. Mengetahui langkah-langkah yang harus dilakukan untuk memperbaiki kerusakan yang disebabkan oleh insiden
- Untuk penanganan insiden:
 1. Mengetahui penyebab terjadinya insiden
 2. Mengetahui dampak dari insiden
 3. Mengetahui langkah-langkah yang harus dilakukan untuk mencegah terjadinya insiden yang sama
 4. Mengetahui langkah-langkah yang harus dilakukan untuk memperbaiki kerusakan yang disebabkan oleh insiden

No	Uraian	Nilai	Revisi
1	Uraian	Nilai	Revisi
2	Uraian	Nilai	Revisi
3	Uraian	Nilai	Revisi
4	Uraian	Nilai	Revisi
5	Uraian	Nilai	Revisi
6	Uraian	Nilai	Revisi
7	Uraian	Nilai	Revisi
8	Uraian	Nilai	Revisi
9	Uraian	Nilai	Revisi
10	Uraian	Nilai	Revisi

Aspects Register Identification and Assessment

MRPR 2013-2014



- Kategori Aspek:
 - 1. Lingkungan Hidup
 - 2. Sosial Masyarakat
 - 3. Kesehatan dan Keselamatan Kerja
 - 4. Kualitas Produk
 - 5. Kualitas Pelayanan
 - 6. Kualitas Lingkungan
 - 7. Kualitas Proses
 - 8. Kualitas Biaya
 - 9. Kualitas Waktu
 - 10. Kualitas Jumlah
 - 11. Kualitas Kualitas
 - 12. Kualitas Kualitas
 - 13. Kualitas Kualitas
 - 14. Kualitas Kualitas
 - 15. Kualitas Kualitas
 - 16. Kualitas Kualitas
 - 17. Kualitas Kualitas
 - 18. Kualitas Kualitas
 - 19. Kualitas Kualitas
 - 20. Kualitas Kualitas
- Hal yang perlu dipertimbangkan:
 1. Tidak ada penyimpangan
 2. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 3. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 4. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
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 7. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 8. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 9. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 10. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
- Rekomendasi yang diperlukan:
 1. Tidak ada penyimpangan
 2. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan



General Human Resources

MRPR 2013-2014



- Hal-hal umum yang perlu diperhatikan:
 - 1. Tidak ada penyimpangan
 - 2. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 3. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 4. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 5. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
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 - 10. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan



Training Policy

MRPR 2013-2014



- Tujuan:
 - 1. Mendukung masyarakat lokal untuk mendapatkan manfaat dari kesempatan menjadi pekerja proyek
 - 2. Meningkatkan CSR kegiatan dan dilaksanakan dengan kerjasama yang baik dan menjaga hubungan konsolidasi dengan masyarakat
- Langkah-langkah yang dilakukan:
 1. Penyiapan tenaga kerja untuk proyek
 2. Pengembangan kemampuan dan keahlian
 3. Mobilisasi keterampilan untuk meningkatkan kinerja
 4. Pengembangan keterampilan untuk meningkatkan kinerja
 5. Pengembangan keterampilan untuk meningkatkan kinerja
 6. Pengembangan keterampilan untuk meningkatkan kinerja
 7. Pengembangan keterampilan untuk meningkatkan kinerja
 8. Pengembangan keterampilan untuk meningkatkan kinerja
 9. Pengembangan keterampilan untuk meningkatkan kinerja
 10. Pengembangan keterampilan untuk meningkatkan kinerja

Worker Policy and Code of Conduct

MRPR 2013-2014



- Prinsip pelaksanaan kebijakan:
 - 1. Tidak ada penyimpangan
 - 2. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 3. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 4. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 5. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 6. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 7. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 8. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 9. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan
 - 10. Laporan audit dan rekomendasi disampaikan kepada pihak yang bertanggung jawab untuk melakukan perbaikan dan pemeliharaan yang diperlukan



Site Security

17/03/2019 (1/2019)



- Mengajukan Keperluan dipekerjakan di lokasi projek
 1. Pekerja keselamatan
 2. Pekerja keselamatan di lokasi projek
- Undang-undang keselamatan
 1. Pekerja keselamatan di lokasi projek
 2. Pekerja keselamatan di lokasi projek
- Pekerja keselamatan di lokasi projek
 1. Pekerja keselamatan di lokasi projek
 2. Pekerja keselamatan di lokasi projek
- Pekerja keselamatan di lokasi projek
 1. Pekerja keselamatan di lokasi projek
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- Pekerja keselamatan di lokasi projek
 1. Pekerja keselamatan di lokasi projek
 2. Pekerja keselamatan di lokasi projek
- Pekerja keselamatan di lokasi projek
 1. Pekerja keselamatan di lokasi projek
 2. Pekerja keselamatan di lokasi projek



Legal Register

17/03/2019 (1/2019)



- Tujuan:
 - Memastikan semua SOP sesuai dengan peraturan
- Langkah-langkah yang dilakukan:
 1. Minimum setiap 8 bulan memastikan Legal Requirement Register
 2. Jika ada perubahan peraturan maka segera diupdate
 3. Review setiap projek regulasi dan undang-undang
 4. Menyangkut mengenai peraturan ekspatriasi, peraturan MAM maupun Korretakar

Retrenchment Plan

17/03/2019 (1/2019)



- Tujuan:
 - Memastikan rencana pengurangan pekerja berjalan dengan lancar
- Langkah-langkah yang dilakukan:
 1. Analisis
 - Pengurangan pekerja melalui mekanisme dengan prosedur
 - Fasilitas dan kesejahteraan penunjang pekerja
 - Uji coba dan pelatihan
 - Program pengurangan secara bertahap
 2. Terminals Benefit (pembayaran cuti tahunan, severance dan lain-lain)

Worker Health Education

17/03/2019 (1/2019)



- Tujuan:
 - Meningkatkan kesadaran pekerja
- Langkah-langkah yang dilakukan:
 1. Program Edukasi Kesehatan untuk Pekerja
 2. Program Edukasi Kesehatan untuk Pekerja
 3. Program Edukasi Kesehatan untuk Pekerja
 4. Program Edukasi Kesehatan untuk Pekerja
 5. Program Edukasi Kesehatan untuk Pekerja
 6. Program Edukasi Kesehatan untuk Pekerja



Community Health and Safety

17/03/2019 (1/2019)



- Tujuan:
 - Meningkatkan kesadaran masyarakat
- Langkah-langkah yang dilakukan:
 1. Meningkatkan kesadaran masyarakat
 2. Meningkatkan kesadaran masyarakat
 3. Meningkatkan kesadaran masyarakat
 4. Meningkatkan kesadaran masyarakat
 5. Meningkatkan kesadaran masyarakat
 6. Meningkatkan kesadaran masyarakat



Stakeholder Engagement Plan

17/03/2019 (1/2019)

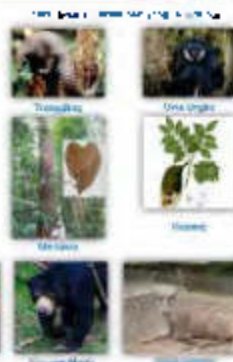


- Tujuan:
 - Meningkatkan kesadaran stakeholder
- Langkah-langkah yang dilakukan:
 1. Meningkatkan kesadaran stakeholder
 2. Meningkatkan kesadaran stakeholder
 3. Meningkatkan kesadaran stakeholder
 4. Meningkatkan kesadaran stakeholder
 5. Meningkatkan kesadaran stakeholder
 6. Meningkatkan kesadaran stakeholder



Biodiversity Management

- Melakukan kegiatan konservasi dan pemertanian di kawasan BUKA/MSI
 1. Melakukan pemertanian
 2. Melakukan konservasi lahan
 3. Melakukan pemertanian
- Melakukan pengendalian polusi udara
 1. Melakukan pemertanian
 2. Melakukan pemertanian
 3. Melakukan pemertanian
 4. Melakukan pemertanian
 5. Melakukan pemertanian
 6. Melakukan pemertanian



Livelihood Restoration Plan

- Melakukan
 - 1. Melakukan kegiatan konservasi dan pemertanian di kawasan BUKA/MSI
 - 2. Melakukan konservasi lahan
 - 3. Melakukan pemertanian
- Melakukan kegiatan konservasi dan pemertanian di kawasan BUKA/MSI
 1. Melakukan pemertanian
 2. Melakukan konservasi lahan
 3. Melakukan pemertanian



No Kontak PIC dari MRPR Untuk Pelaporan HSE dan Social/HR/Security

- Melakukan kegiatan konservasi dan pemertanian di kawasan BUKA/MSI
 1. Melakukan pemertanian
 2. Melakukan konservasi lahan
 3. Melakukan pemertanian

Full ESMS document can be accessed in relevant HSE Personnel/MRPR Site Office

Thank You

- Melakukan kegiatan konservasi dan pemertanian di kawasan BUKA/MSI
 1. Melakukan pemertanian
 2. Melakukan konservasi lahan
 3. Melakukan pemertanian

MRPR
Madinah High Power Raji

PERATURAN MENTERI KESKERTAN
STANDAR PENYEDIAAN
AKOMODASI PEKERJA LAPANGAN



Tujuan

- Sebagai standar acuan penyediaan fasilitas akomodasi pekerja proyek yang memenuhi syarat hygiene dan kesehatan sesuai peraturan perundangan dan persyaratan lain yang diakui perusahaan.
- Sebagai panduan melaksanakan pengelolaan fasilitas akomodasi pekerja proyek konstruksi.

REFERENSI

- Peraturan Menteri Tenaga Kerja Republik Indonesia No. 05 Tahun 2018 Tentang Keselamatan dan Kesehatan Kerja Lingkungan Kerja.
- Permen LHK No. P58/2016 tentang Baku mutu air limbah domestik.
- Permenaker no. 15 Tahun 2008 tentang 13K di tempat kerja.
- *Worker's accommodation: processes and standards, A guidance note by IFC and the EBRD.*
- *IFC WBG EHS General Guidelines.*

- Pemilihan akomodasi pekerja proyek baik pembangunan akomodasi sementara ataupun penyewaan bangunan milik masyarakat dilakukan dengan terlebih dahulu melakukan penilaian dan evaluasi risiko keselamatan, kesehatan kerja, lingkungan hidup, social dan keamanan

Standar Umum Bangunan Akomodasi

- Fasilitas bangunan akomodasi harus bebas dari potensi bencana banjir atau bencana alam lainnya.
- Jarak akomodasi pekerja proyek tidak jauh dari lokasi proyek, jika terdapat jarak yang mengharuskan pekerja memerlukan kendaraan angkutan, perusahaan harus menyediakan angkutan yang aman tanpa biaya bagi pekerja.
- Bangunan akomodasi harus terbuat dari bahan bangunan yang baik, dirawat dengan baik dan terpelihara dari kotoran dan sampah
- Fasilitas akomodasi harus terhindar dari kebisingan, bahaya debu dan temperatur panas
- Bangunan harus memiliki ventilasi yang cukup untuk aliran udara dan memelihara suhu ruangan pada level yang nyaman. Pengkondisian aliran udara dan suhu ruangan dapat dilakukan dengan aliran udara alami dan/atau buatan.
- Bangunan harus memiliki jendela dengan ukuran luas tidak kurang 5% dari luas lantai.
- Bangunan akomodasi harus memiliki penerangan darurat.

Standar Umum Bangunan Akomodasi

- Tangga bangunan harus dilengkapi dengan *handrails* untuk keselamatan dan ka-kon harus dilengkapi dengan pagar penyangga dengan ketinggian yang tidak kurang dari 1 meter.
- Bangunan harus memiliki saluran drainase yang memadai untuk mencegah adanya genangan air.
- Air limbah dari air buangan kamar mandi, toilet, pengolahan makanan dan materi limbah lainnya harus dibuat saluran agar tidak mencemari lingkungan. Air limbah toilet harus dialirkan ke fasilitas septic tank dan dilakukan pengambilan secara rutin oleh pihak ketiga berizin untuk pengolahan air limbah. Air limbah kamar mandi, dapur dan limbah domestik lainnya harus dialirkan ke kolam air limbah untuk dilakukan pengolahan dan dipantau sesuai peraturan perundang-undangan air limbah domestik (Perment HK No. P68/2019 and IFC WRC EHS General Guidelines) sebelum dialirkan ke lingkungan.
- Penampung sampah tersedia dan dikumpulkan secara teratur. Kotak sampah harus dilengkapi tutup dan tersedia sesuai jenis sampah organik dan anorganik.
- Pengendalian vektor harus dilakukan untuk mencegah adanya hewan vektor pembawa vektor penyakit kepada pekerja. Pemusnahan kecoa dan nyamuk dilakukan dengan rutin. Lubang ventilasi harus dilindungi dengan kawat nyamuk.

Standar Ruang Akomodasi

- Ruang akomodasi harus bersih, memiliki aliran udara yang cukup dan dibersihkan secara teratur
- Ruang akomodasi harus memiliki lantai yang mudah dibersihkan
- Tinggi plafon ruangan adalah **minimal 2.75 meter**.
- Ruang hanya dapat ditempati oleh maksimal 8 orang.
- Setiap pintu dan jendela harus dapat dikunci dan ventilasi harus dilengkapi dengan kawat nyamuk.

Standar Ruang Akomodasi

- Ruang tidur harus terpisah antara laki-laki dan perempuan kecuali akomodasi bagi keluarga.
- Terdapat tempat penyimpanan barang pribadi dan terkunci.
- Terdapat tempat penyimpanan terpisah untuk penyimpanan Sepatu, Helm dan alat pelindung diri lainnya.
- Setiap ruangan mendapatkan pencahayaan sesuai standar sesuai peraturan perundangan, sebagaimana terlampir pada lampiran 1.

Standar Tempat Tidur

- Masing-masing pekerja memiliki tempat tidur sendiri. Penggunaan tempat tidur bersama tidak diperkenankan.
- Setiap tempat tidur memiliki kasur/matras, bantal tidur, alas kasur dan dalam kondisi baik dan bersih.
- Alas penutup kasur dan bantal harus dicuci secara teratur.
- Terdapat jarak minimal 1 (satu) meter antara tempat tidur satu dengan yang lainnya.
- Tempat tidur bertingkat tidak disarankan untuk digunakan dengan alasan keselamatan. Jika dalam kondisi tertentu tidak dapat dihindarkan penggunaan tempat tidur bertingkat, maka harus terdapat jarak antara tempat tidur atas dan bawah sekurang-kurangnya 1 meter. Tempat tidur tingkat harus diperiksa fisiknya secara berkala untuk memastikan aman digunakan. Di arang menggunakan tempat tidur tingkat lebih dari 2 tingkat

Sanitasi dan Fasilitas Toilet

- Sanitair dan fasilitas toilet harus dibuat dari bahan yang mudah dibersihkan dan memiliki privasi pada penggunaannya.
- Direkomendasikan menggunakan tipe toilet kering
- Terdapat pemisahan fasilitas sanitair, toilet dan kamar mandi antara laki-laki dan perempuan.
- Sanitair dan fasilitas toilet dirancang untuk tersedia bagi pekerja dengan privasi diantaranya memiliki dinding, atap dan pintu yang dapat dikunci.
- Kamar mandi terpisah dengan fasilitas toilet. Jumlah kamar mandi disediakan minimal 1 untuk setiap 6 orang.
- Fasilitas toilet harus tersedia dengan jumlah 1 toilet (bisa toilet duduk maupun toilet jongkok) untuk setiap 15 orang. Untuk toilet laki-laki yang menyediakan peturasan, jumlah toilet tidak boleh kurang dari 2/3 dari jumlah yang dipersyaratkan

Sanitasi dan Fasilitas Toilet

- Fasilitas toilet harus berlokasi pada tempat yang mudah untuk di akses. Jarak yang memadai 30-60 meter dari ruang akomodasi.
- Fasilitas toilet harus memiliki ventilasi.
- Fasilitas dengan lantai yang kedap air, anti-slip dan mudah untuk dibersihkan.
- Air bersih tersedia dengan cukup untuk kebutuhan mandi dan cuci.
- Ruang cuci harus terpisah dari kamar mandi dan toilet. Ruang cuci terdapat jenis dengan mesin cuci dan ruang cuci dengan pancuran untuk mencuci pakaian sendiri.
- Saluran air sabun sisa cucian dialirkan ke kolam pengendali untuk diolah.
- Ruang jenjur harus memiliki luas yang cukup dan aliran udara yang terbuka untuk penguapan.

Standar Nutrisi dan Keselamatan Makanan

- Bangunan harus menyediakan jumlah air minum yang cukup dan dapat di angkur oleh seluruh penghuni.
- Suplai air minum harus diuji dan lain pengujian kualitas dari Dinas Kesehatan.
- Penyimpanan air minum harus dikelola untuk bebas dari kontaminasi.
- Kualitas air minum harus diuji secara teratur dan didokumentasikan. Hanya air minum yang lulus uji kesehatan yang boleh digunakan oleh pekerja untuk dikonsumsi.
- Fasilitas kantin, ruang masak dan laundry diisolasi untuk mudah dibersihkan.
- Jika pekerja diperbolehkan masak di tempat akomodasi, dapur harus ditempatkan terpisah dari area tidur.
- Kamrin harus cukup luas, sekurang-kurangnya terdapat 1 meter persegi untuk 1 orang pekerja di kantin.
- Penempatan bahan makanan dirancang untuk mencegah terjadinya kontaminasi makanan saat diolah.
- Kantin memiliki wastafel dengan air mengalir untuk cuci tangan.

Standar Nutrisi dan Keselamatan Makanan

- Lantai dapur, atap dan permukaan dinding di tempat pengolahan makanan dibuat dari bahan yang aman, mudah dibersihkan dan bukan bahan beracun.
- Sampah makanan disimpan pada tempat yang tertutup dan langsung dibuang untuk mencegah timbulnya serangga di dapur.
- Perusahaan harus menerapkan praktik keselamatan makanan dan nutrisi:
 - Gunakan air dan bahan makanan yang aman dan sehat.
 - Perhatikan kebersihan bahan makanan
 - Pisahkan bahan makanan sebelum dan sesudah dimasak
 - Memasak dengan matang
 - Jaga temperature makanan
- Petugas Pengolah makanan harus berlisensi dan bersertifikat sebagai pengolah makanan

Fasilitas P3K

- Jumlah P3K memadai sesuai jumlah personil.
- Kotak P3K selalu tersedia dengan isi yang sesuai peraturan Menteri Tenaga Kerja No. 15 tahun 2008 tentang P3K dan setiap isi kotak telah berkurang wajib dilengkapi kembali
- Terdapat personil yang bertugas sebagai Petugas P3K di akomodasi pekerja.
- Setiap kejadian P3K harus tercatat dan dilaporkan
- Terdapat rencana tanggap darurat medis untuk kejadian yang memerlukan tindakan melebihi P3K. Rencana tersebut meliputi jalur komunikasi, pengambilan keputusan, transportasi yang diperlukan untuk korban cedera dan tindakan yang harus dilakukan
- Terdapat pemisahan dan karantina untuk pekerja yang menderita penyakit menular.

Fasilitas Umum

- Fasilitas akomodasi berupa tempat interaksi sosial dan hiburan dapat disediakan berupa sarana pertemuan, sarana olah raga, hiburan video-audio,
- Sarana ibadah dapat disediakan sesuai dengan kebutuhan pekerja agar dapat menjalankan ibadah menurut agama kepercayaannya

Pengelolaan Akomodasi Pekerja

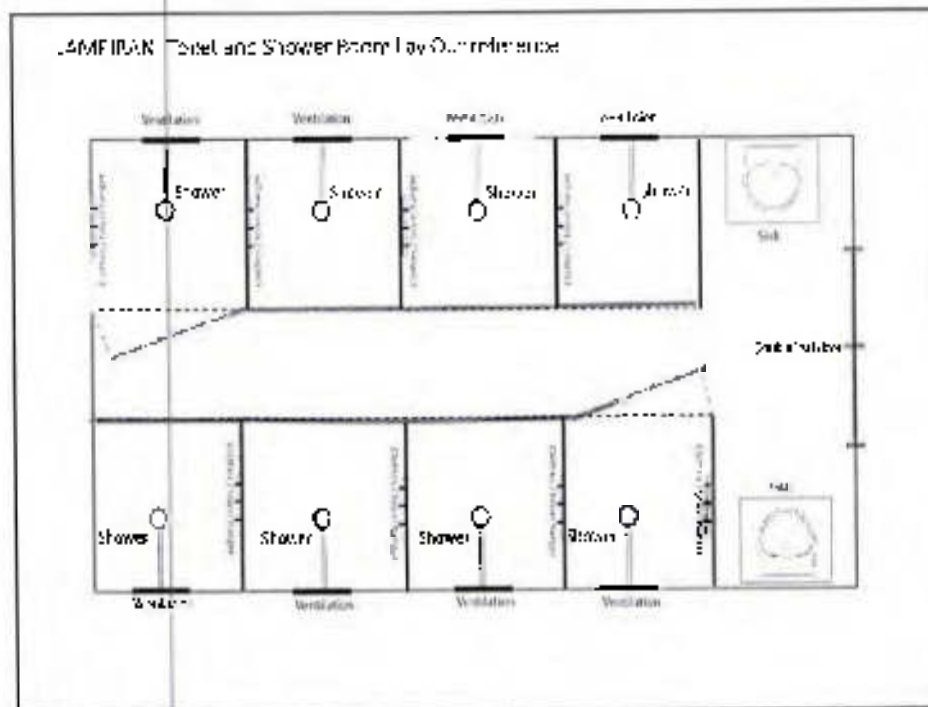
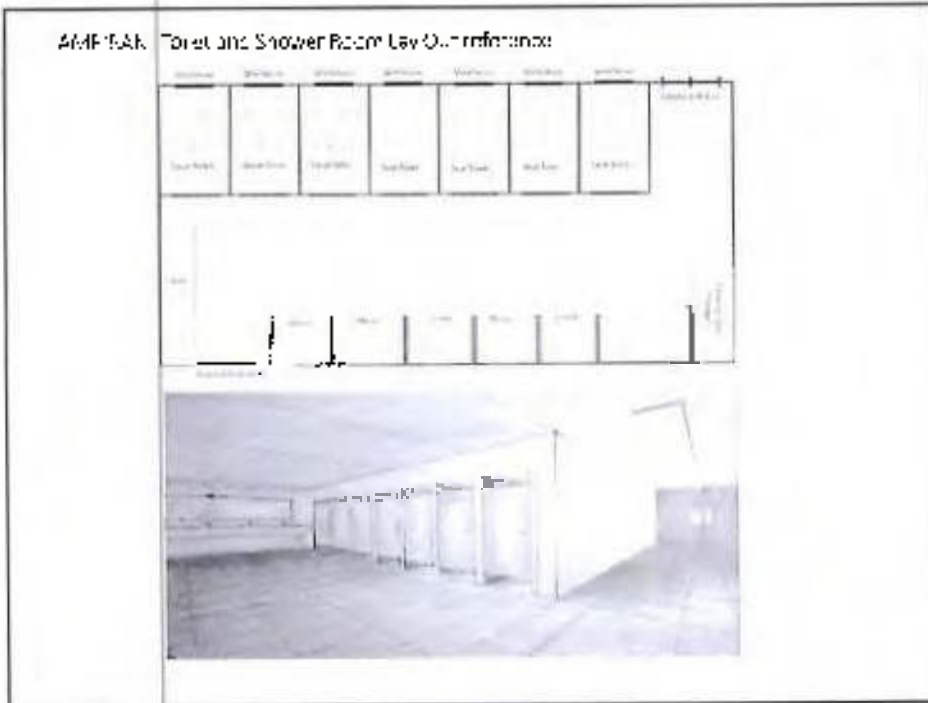
- Pengurus dan Petugas Akomodasi
 - Pengurus harian: pembersihan, inspeksi harian
 - Aktifnya Camp Warden, Fire Warden dan First Aider
- Peraturan di Akomodasi Pekerja
- Mekanisme Keluhan dan Konsultasi
- Pengelolaan Hubungan Masyarakat

HSESS

- Pengelolaan K3 di fasilitas Akomodasi
 - Perusahaan kontraktor harus menyiapkan perencanaan program keselamatan dan kesehatan kerja pada akomodasi pekerja proyek.
 - Inspeksi HSE dilaksanakan secara teratur meliputi: keselamatan listrik, mekanik, struktur bangunan, keselamatan pengolahan material dan alat-alat pemotong tenaga mekanik.
 - Penjuris akomodasi melakukan observasi harian kondisi akomodasi pekerja.
- Gramian Akomodasi Pekerja
 - Petugas keamanan ditempatkan pada akomodasi yang menempatkan personel dalam jumlah besar atau, untuk jumlah lebih dari 100 orang, dalam kluster akomodasi.
- Rencana Tanggap Darurat
 - APAR
 - Muster Point
 - Emergency Plan dan Tim Tanggap Darurat
 - Latihan tanggap darurat

Pengukuran Efektifitas

- Personil yang kompeten dan berwenang melakukan pemantauan harian dan mingguan terhadap pemenuhan persyaratan standar akomodasi pekerja. Kegiatan pemantauan dicatat, direvisi dan hasil pengukuran dianalisis dan dilaporkan kepada Perusahaan Keamanan Akomodasi Pekerja.
- Perusahaan melakukan audit berkala terhadap akomodasi pekerja untuk memastikan pengelolaan akomodasi pekerja memenuhi standar yang dipersyaratkan. Hasil audit dilakukan untuk mendapatkan pemngkhar berkelanjutan.



TERIMAKASIH

**Photo Documentation of Socialization of Worker Accommodation Standard Procedure to Contractor & Sub-Contractors
20 March 2020**



APPENDIX D
Emergency Response

BERITA ACARA PERTEMUAN
EMERGENCY RESPONSE PLAN TO COMMUNITY
PT MEDCO RATCH POWER RIAU
Indonesia Riau GFPP 275MW IPP Project

Lokasi	: Kelurahan Industri Tenayan
Tanggal	: Senin, 2 Desember 2019
Pukul	: 10.00 – 12.00 WIB
Agenda: Emergency Response Plan to Community	
Pembahasan: Sosialisasi rencana langgap darurat untuk masyarakat area sekitar PLTGU 275 MW oleh Riau Joint Operation EPC Contractor (Materi Terlampir)	
Presenter: Bapak Leo Kardo Nainggolan (LEC)	
Tanya Jawab:	
1. Bapak Indra Tanjung Pertanyaan: Jika terjadi kebakaran di area PLTGU Riau 275 MW apakah disertai dengan ledakan dan berapakah radiusnya?	
Jawab : Risiko terjadinya ledakan ada dengan peluang yang sangat kecil karena power plant memiliki alat untuk mendeteksi kebocoran gas yaitu gas detector yang nantinya akan terkoneksi ke Central Control Room dan jika terindikasi kebocoran maka operator CCR akan segera menutup valve supply gas tersebut. Disamping itu PLTGU Riau juga memiliki sistem pemadam kebakaran untuk setiap alat yang beroperasi. Kejadian kobakaran atau ledakan sangat terjadi.	
2. Bapak Arrazi Apakah PLTGU Riau 275 MW akan berdampak kepada kesehatan masyarakat?	
Jawab: Adanya kegiatan konstruksi dan pengoperasian PLTGU tentunya berdampak, akan tetapi kami telah melakukan analisis mengenai dampak tersebut dan telah memiliki matrik atau janji dalam pengendalian dampak tersebut termasuk dampak kesehatan masyarakat. PLTGU Riau memiliki teknologi yang ramah lingkungan dan berlokasi cukup jauh dari pemukiman warga. PLTGU Riau dalam prakteknya juga memonitor udara ambien, air, dan juga hanya menghasilkan limbah berbahaya cair seperti oli yang dikelola terlebih dahulu sehingga dipastikan tidak terdapat sembarangan. Bahan bakar yang digunakan dalam operasi PLTGU adalah gas serta sisa pembakaran juga akan melalui treatment atau perlakuan khusus. Contoh nantinya udara yang keluar dari cerobong kami akan diproses terlebih dahulu sehingga tidak melewati nilai ambang batas sesuai dengan regulasi pemerintah	
3. Bapak Syafar Apakah PLTGU Riau 275 MW akan memiliki limbah berbahaya?	
Jawab: Ya, secara umum Limbah B3 yang dihasilkan dari kegiatan PLTGU Riau yaitu Oli bekas hasil dari perawatan alat itu sendiri. Dan untuk pengendalian PLTGU Riau telah menyediakan tempat penyimpanan limbah tersebut di dalam area proyek dan akan dilakukan.	

4. Bapak Wiyoto

Berapa Kedalaman Pipa yang akan diletakkan pada proyek PLTGU Riau?

Jawab:

Kedalaman Pipa gas antara 1,5 Meter hingga 2,5 Meter dan nantinya untuk titik tertentu akan di pasang papan informasi dan nomor darurat pada lokasi pipa tersebut

5. Bapak Syafar

Apakah masyarakat dapat menggunakan Ambulance yang beroperasi dilokasi PLTGU Riau untuk keperluan sosial?

Jawab:

Ambulance yang tersedia di PLTGU tidak dapat digunakan selain untuk kondisi gawat darurat, ambulance PLTGU Riau harus selalu standby selama ada kegiatan di lokasi proyek. Di karenakan keadaan darurat dapat terjadi sewaktu-waktu tanpa diduga.

6. Bapak Tamlihan

Apakah upaya PLTGU Riau untuk mengurangi tindakan anak-anak, remaja yang berada disekitaran lokasi proyek yang mana masih memiliki rasa ingin tahu yang besar terhadap aktivitas dilokasi proyek yang juga dapat membahayakan mereka sendiri?

Jawab:

Untuk area kerja PLTGU Riau telah dipasang pagar dan juga memiliki penjaga keamanan (security) di pintu masuk lokasi proyek sehingga ketika melihat kehadiran dari anak-anak tersebut dapat langsung di ingatkan. Disamping itu pipa yang digunakan untuk mensupply gas ke PLTGU Riau akan berada di bawah tanah.

Dokumentasi :





PT. MEDCO RATCH POWER RIAU

HRD FORM

LIST OF ATTENDANCE

No. Doc: FR-HR-14

Page: 1/1

Prepared by: Document Control

Revision: 00

Approved by: QHS-MR

Day/Date

: Senin / 2 Desember 2019

Time

: 09.30 - 11.00

Meeting Title

: Emergency response plan to
Community

Venue

: Kelurahan
Industri
Terna-puri

Agenda

No.	Name	Company	Position	Email	Signature
1	SUTIS PRAMATI		RT 03/01		
2	Amir Has		Ket R105/2		
3	ARJUNAN		KET RT01		
4	TAMLIHAN		RT 01/02		
5	M. JAJULI		RT 02/02		
6	T. HIKMALIS		RT. 02/02		
7	SITI ACRYAH		Kc 01		
8	S. LUYA		RT 03/RW 2		
9	SYAFARI. S. AG		SEK RW 02		
10	T. MUSLIM. Pds. S. IP.		01-		
11	NURMAN.		RT. 02.		
12	Indra Tanjung		RT 01		
13	wiyoto		RT. 02		
14.	M. Anip		KI. 01 RW 02		
15	ERNI M. SWIYATI		RT 02		
16	Syuherman.		Kp. 02 RW 09		
17	ZAIMAR		RT 03/01		
18	Mahsun		RT 3/1		
19	Anto		RT. 01/1		
20	Bambang S.		RT 02/1		

PT. RIAU PLTGU

MICOEHSIP RATCH

MRPR
Menteri Perencanaan Nasional RI

LOTTE E&C
H&K

Sosialisasi Rencana Tanggap Darurat

Proyek RIAU PLTGU 275 MW IPP
Kawasan industri tenayan, Pekanbaru
Provinsi Riau



Gambaran Proyek

PT. RIAU PLTGU MPTU LOTTE E&C



Pembangkit listrik tenaga gas uap yang terletak di kawasan industri tenayan dengan luas 9,5 Ha dan memiliki kapasitas 275 MW PLTGU Riau merupakan proyek strategis nasional yang diharapkan akan membantu pertumbuhan ekonomi di Riau.

TUJUAN UTAMA

1. Menyelamatkan jiwa termasuk Regu penanggulangan keadaan darurat dan siapa saja yang terancam jiwanya
2. Mengendalikan keadaan darurat
3. Meminimalkan kerugian harta benda
4. Meminimalkan kerugian lingkungan

Apa itu keadaan darurat?

- Situasi atau kondisi atau kejadian yang tidak normal
- Terjadi tiba – tiba
 - Mengganggu kegiatan atau organisasi atau komunitas
 - Perlu segera ditanggulangi

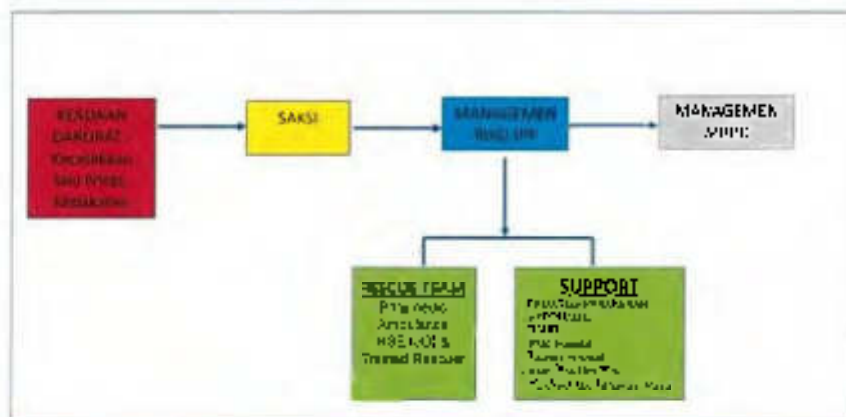
JENIS-JENIS KEADAAN DARURAT

1. Banjir
2. Kekeringan
3. Angin topan
4. Gempa
5. Kebakaran dan ledakan
6. Kecelakaan kerja atau lalu lintas
7. Dan lain-lain

APA Yang Harus Kita Lakukan

1. Jangan Panik
2. Pastikan posisi kita dalam keadaan aman
3. Jika anda terlatih berikan bantuan untuk korban (jika ada)
4. Minta bantuan segera mungkin
5. Dengarkan instruksi dari orang yang berwenang

PELAPORAN KEADAAN DARURAT



NO DARURAT: 0823 8572 1031 RIAU IPP JO

Jalur Evakuasi Di Area Power Plant



TERIMAKASIH



**EPC GAS PIPELINE OF 275 MW OR RIAU GAS FIRED
COMBINED CYCLE POWER PLANT PROJECT**



**EMERGENCY RESPONSE
DRILL SCENARIO
(Medivac Drill with Local People)**

2019



**EPC GAS PIPELINE OF 275 MW OR RIAU GAS FIRED
COMBINED CYCLE POWER PLANT PROJECT**



LOCATION	DATE/ TIME
Tualang, Siak Superintendent: Junaidi	Sunday, 15th of December 2019 10.00 wib

EMERGENCY	EVENT POINT
Local resident fell into trenching pit	Emergency Response process
- Response	Emergency Contact preparedness
- Evacuation Process	Process of evacuation to medical facility

EVENT SCENARIO

On Sunday, 05th January 2020 around 11.00 wib at KP 0+300, Kuala Gasib, Siak, a local resident from nearby community riding a motorcycle passing through sectional valve pit when suddenly he lose control and fall into the pit causing him to passed out

POINT OF EVALUATION

Date	Time Plan	From	Target	Event Description/ Scenario	Expected Action	Test Element	Simulation
D5 Jan 2020	11.00	Simulator as Victim	<ul style="list-style-type: none"> CPM workers nearby location 	Simulator passing through CPM work site and fall into the pit	<ul style="list-style-type: none"> Response of CPM personnel nearby 	<ul style="list-style-type: none"> Immediate emergency situation response of CPM worker ERT roles functioned Reporting / communication flow 	Simulator passed out inside pit
	11.10	Incident Notifier/ Witness	<ul style="list-style-type: none"> All CPM workers Paramedics and standby ambulance 	Notifier/witness notify nearby CPM team about the incident	<ul style="list-style-type: none"> Nearby CPM workers immediately response to information 	<ul style="list-style-type: none"> Correct emergency response procedure to incident involving community 	<ul style="list-style-type: none"> Notifier goes to nearby CPM Work site
	11.15		<ul style="list-style-type: none"> First aider/ paramedic Evacuation Team Ambulance 	Evacuating victim from inside the trench and to medical facility	<ul style="list-style-type: none"> First aider to examine victim condition prior evacuation 	<ul style="list-style-type: none"> Safe and prompt evacuation process 	<ul style="list-style-type: none"> Victim Evacuation from inside trench to ambulance

POINT OF EVALUATION

Date	Time Plan	From	Target	Event Description	Expected Action	Test Element	Simulation
	11.15		<ul style="list-style-type: none"> ERT Leader 	All workers already assemble at Muster Point.	<ul style="list-style-type: none"> Reporting to Commander (DPM/PM) 	<ul style="list-style-type: none"> Emergency situation reporting flow 	<ul style="list-style-type: none"> ERT Leader contacting onsite commander Worker stop work
	11.15	ERT Leader	<ul style="list-style-type: none"> Onsite Commander 	Get notification from ERT Leader by phone call of incident	<ul style="list-style-type: none"> Received notification call, ensure clear situation on location Report to Incident Commander Report to MRPR 	<ul style="list-style-type: none"> Emergency situation response and communication 	Received notification call

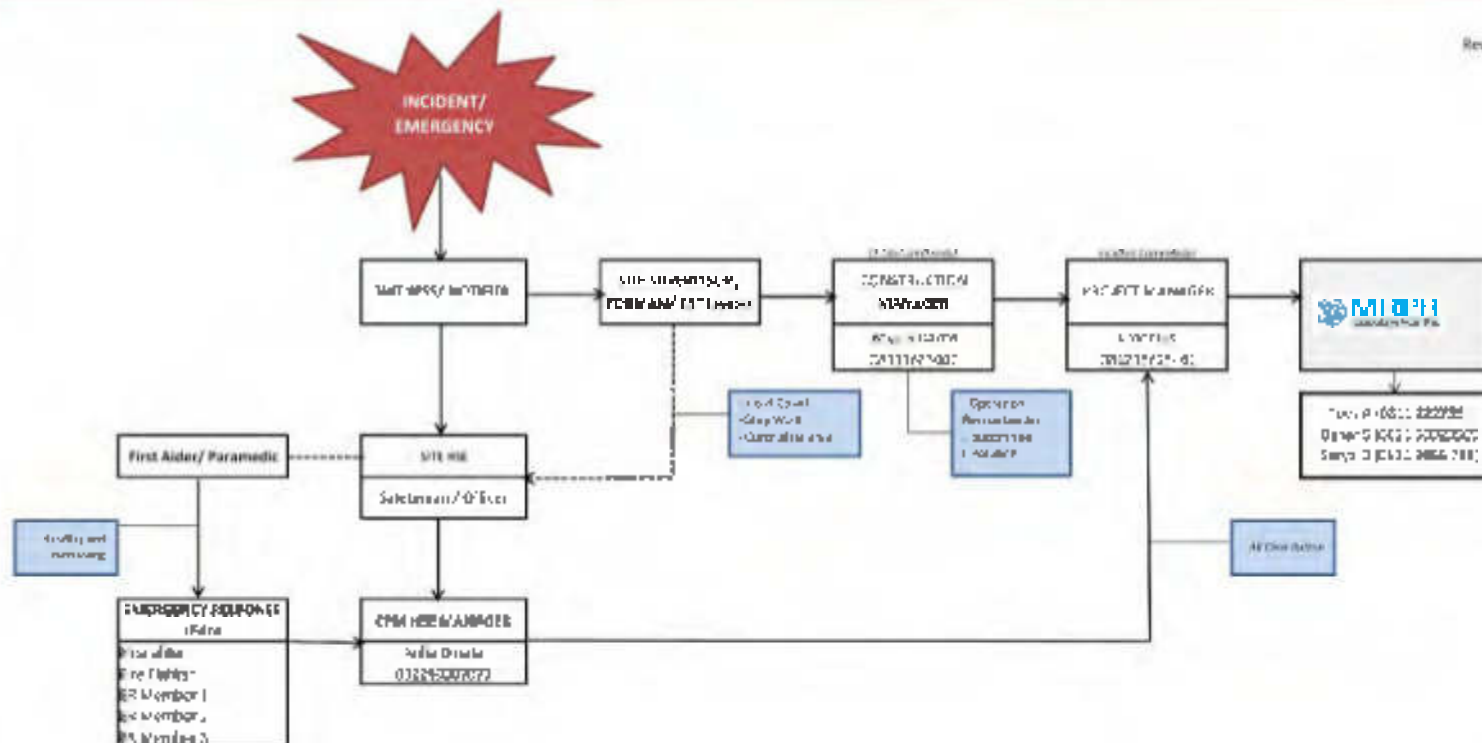
EVENT LOCATION

KP 00+300, Kuala Gasib, Siak



EMERGENCY SITUATION/ INCIDENT RESPONSE FLOWCHART

EMERGENCY SITUATION/ INCIDENT RESPONSE FLOW CHART





**EPC GAS PIPELINE OF 275 MW OR RIAU GAS FIRED
COMBINED CYCLE POWER PLANT PROJECT**



EMERGENCY CONTACT NUMBER FOR LOCAL COMMUNITY



**JASA PERANCANGAN, PENGADAAN DAN KONSTRUKSI
PEMBANGUNAN PIPA TRANSMISI GAS 12" PLTGU RIAU
DARI KOTO GASIB - INDUSTRI TENAYAN RAYA**



**APABILA MEMPUYAI KELUHAN, SARAN MAUPLN TERJADI KEACAAN
DARURAT TERKAIT PELAKSANAAN PEKERJAAN
MOHON AGAR MENGHUBUNGI NOMOR DIBAWAH INI :**

NOMOR KONTAK DARURAT

**MRPR
HUMAS**

**Erdiharto Sucahyadi 0812 6848 9387
Mastika W 0812 1277 9745**

**CPM
HUMAS**

**Murtala Ade 0823 6414 4005
Abdul Ajis S 0813 7197 4604**

HSE Site

Aulia Dinala 0822 4930 7077

**Manajemen Proyek
MRPR - CPM**

EMERGENCY DRILL REPORT

Location : KP 00+300, Sectional Valve Pit Location
Date : 5-Jan-20

Drill Type : Medivac for Local Community
resident

POINT OF EVALUATION

Date	Time Plan	Duration	From	Target	Event Description/ Scenario	Expected Action	Actual Action	Test Element	Simulation	Remarks
5-Jan-20			Simulator as incident victim Simulator as victim: Audi - local resident at Riau Gasib	All CPM workers nearby location PNT	While passing through abandoned site location, a local resident fall into the sectional valve pit area	Response of emergency CPM workers	All workers responded the incident notifiers with serious action, and parts of ERT team including paramedics and ambulance move to incident location.	Immediate emergency situation response of CPM personnel ERT roles functional Reporting/ communication flow	Simulator incident report	Abandoned site location (open pit for sectional valve at KP 00+300) where the incident occurred already protected with baricade and safety sign
			Incident Notifier Simulator as Notifier: Iph. Munte (head community unit (Kecua RT) at location)	All CPM workers nearby location ERT Team (paramedic & evacuation team)	Notifier/ witness notify nearby CPM team about the incident	Immediately call or contacting Project emergency contact number Ind nearby CPM representative at location	Simulator run to nearby CPM working location to inform about the incident Foreman crew (Merlyanto) Immediately rushed into the incident location with several workers in response to the notification Working its scope	Notification system Correct emergency response procedure and role function from CPM in case of community emergency event	Notification system	CPM workers and paramedic immediately reach the location as soon as the notifier informed them
			Paramedic and standby ambulance		Evacuating victim from inside the pit	That while to examine victim condition prior evacuation	Victim evacuated from the pit to safe area and paramedic perform examination to assess victim condition	Safe and prompt evacuation process Correct First Aid procedure	Victim Evacuation from inside trench to ambulance	Evacuation process performed prior First Aid procedure due to unsafe condition (height) (to evacuate victim to safe place)
			First Aid from workers/ participation from other workers		Helping paramedic performing First Aid procedure and evacuation process	One worker with ambulance take first aid action to normalize victim before evacuation to nearest clinic	ERT team assist victim with broken leg with splint board and evacuate with ambulance	Participation from CPM workers in case of incident involving community	First Aid for injuries of broken bones and open wound/scratches	Workers highly participate during emergency situation response and able to perform first aid procedure correctly
				ERT Leader	All workers already assemble at muster point	Reporting to Commander (DPM/PM)	Team leader make emergency center and report the situation as per ERP flow chart	Emergency situation reporting flow	ERT Leader contacting onsite commander Worker stop work	All workers immediately stop work to help the response process

EMERGENCY DRILL REPORT

Location : KP 00+300, Sectional Valve Pit Location

Date : 5-Jan-20



 Drill Type : Medivac for Local Community
 resident

POINT OF EVALUATION								
		mobile commander	get notification from ERT leader by phone call at midnight	Received notification call, ensure clear situation on location Report to Incident Commander Report to MRPR	All communication line working properly and case scenario reported to all parties involved event on ERT flow chart	Situation response and communication	Received notification call	Received notification call
	ERT Leader							

RECOMMENDATION/ NOTES :

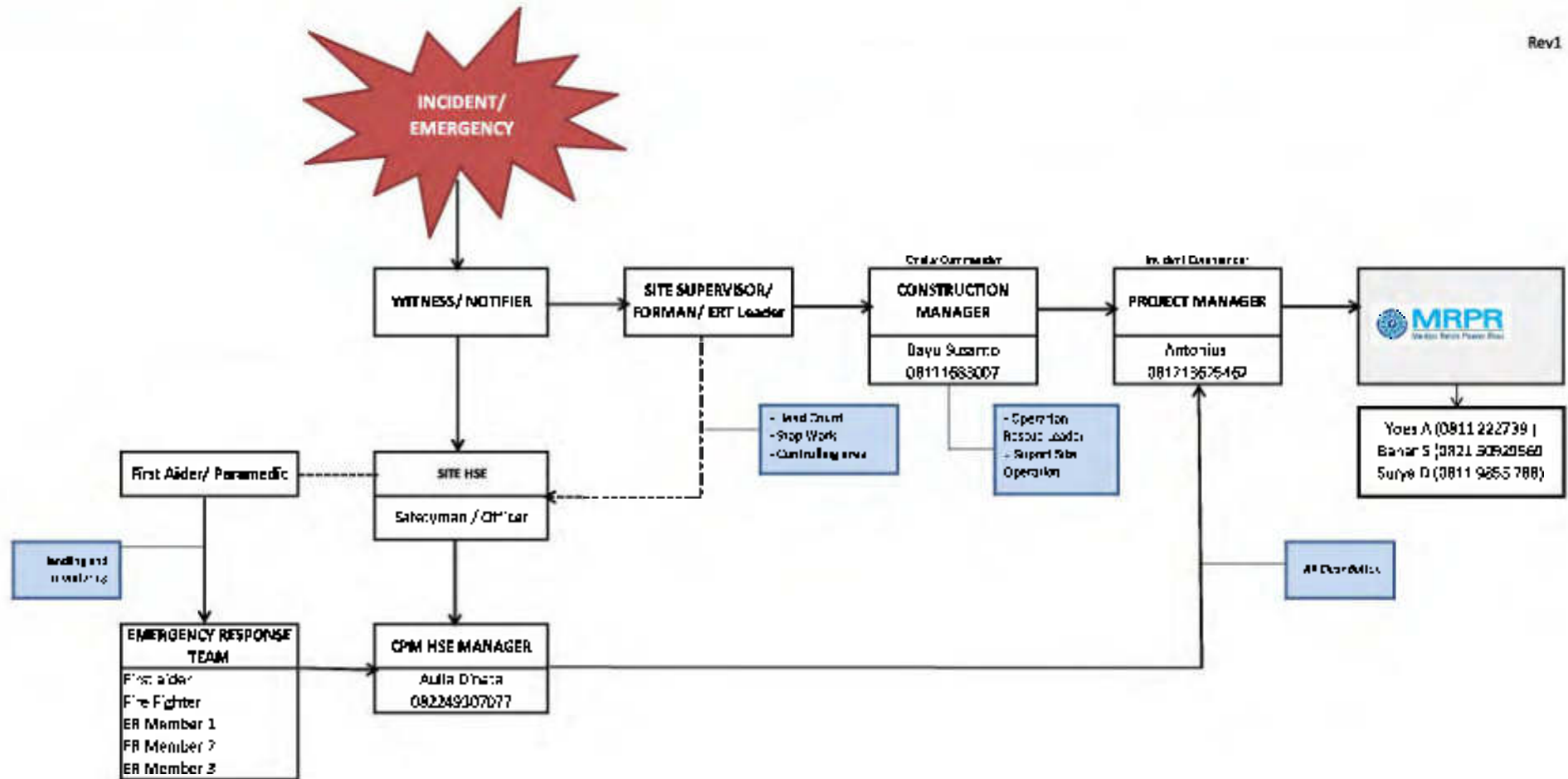
- 1 Project emergency contact number have been provided and displayed at Chief Village houses
- 2 Conduct more socialization regarding emergency event to community in case of any incident involving CPM activity to ensure correct handling

Pekanbaru, 19 Juli 2019

Prepared by	Approved by
	
Melati Puspita HSE Admin	Aulia Dînata Site HSE Manager

EMERGENCY SITUATION/ INCIDENT RESPONSE FLOW CHART

Rev1



DOCUMENTATION



Paramedics immediately examine victim



Examination result indicated that victim injured with leg fracture



CPM workers helping paramedic to perform first aid procedure to fractured leg injury



Injured victim ready to evacuate using stretcher



Standby ambulance to immediately take victim to nearby medical facility



During journey to medical facility, paramedic treats victim with portable oxygen

DOCUMENTATION



Paramedic contacting plantation (PT.AIP) security & clinic incase of emergency evacuation process



Victim arrived at Klinik PT. AIP for further medical treatment



Evaluation on site with team, local community representative and MRPR after drill activity is done














Motorcycle & location of event





















Excavation pit beside access road for people nearby












PROGRESS WARNING SIGN

NO	LOCATION (K P)	COORDINATE		BASED ON CONTRACT	BASED ON VOIC	DOCUMENTATION/PHOTO	REMARKS/PROGRESS
		EASTING	NORTHING				
1	KP 00+000	803476.953	71243,097	√			
2	KP 00+047	803470,210	71225,208		√		
3	KP 00+300	803217.687	71231,115		√		Completed (25/06/2020)
4	KP 00+170	803052,943	71225,398		√		Completed (25/06/2020)
5	KP 00+498	803052.680	71192,394	√			Completed (25/06/2020)
6	KP 01+000	802570,723	71178,731	√			Completed (24/06/2020)
7	KP 01+500	802101.781	71178,058	√			Completed (10/06/2020)
8	KP 02+000	801570,748	71178,933	√			Completed (10/06/2020)
9	KP 02+500	801070.801	71177,293	√			Completed (10/06/2020)
10	KP 03+000	800570,621	71177,398	√			Completed (10/06/2020)












11	KP 03+500	800070.846	71178,378	√			Completed (10/06/2020)
12	KP 04+000	788570,692	71178,965	√			Completed (10/08/2020)
13	KP 04+500	799070,947	71177,448	√			Completed (10/06/2020)
14	KP 05+000	788571,090	71177,640	√			Completed (10/08/2020)
15	KP 05+500	796071.143	71178,347	√			Completed (10/06/2020)
16	KP 08+000	787571,184	71177,698	√			Completed (10/08/2020)
17	KP 06+500	797071.308	71178,944	√			Completed (10/06/2020)
18	KP 07+000	786573,502	71208,480	√			Completed (10/08/2020)
19	KP 07+500	796296.417	70621,827	√			Completed (23/06/2020)
20	KP 07+543	786288,070	70670,220		√		Completed (23/08/2020)
21	KP 07+900	796470.444	70630,430	√			Completed (23/06/2020)

22	KP 08+000	796541,367	70561,759	√			Completed (23/06/2020)
23	KP 08+200	798628,875	70384,883		√		Completed (23/06/2020)
24	KP 08+359	796617,768	70227,369		√		Completed (31/07/2020)
25	KP 08+500	798545,720	70107,484	√			Completed (23/06/2020)
26	KP 08+000	796270,409	68736,096	√			Completed (23/06/2020)
27	KP 08+500	798142,810	69423,824	√			Completed (24/06/2020)
28	KP 08+700	796155,660	68231,100		√		Completed (24/06/2020)
29	KP 10+000	795873,446	69171,081	√			Completed (24/06/2020)
30	KP 10+200	795732,836	68080,872		√		Completed (25/06/2020)
31	KP 10+250	795890,832	69053,582		√		Completed (23/06/2020)
32	KP 10+500	795483,840	68864,330	√			Completed (23/06/2020)

33	KP 11+000	796045,365	68648,611	√			Completed (26/06/2020)
34	KP 11+250	784808,872	88455,580		√		Completed (23/08/2020)
35	KP 11+500	794681,855	68328,023	√			Completed (23/06/2020)
36	KP 12+000	784553,165	87860,450	√			Completed (27/08/2020)
37	KP 12+400	794636,386	67476,378		√		Completed (27/06/2020)
38	KP 12+500	784503,660	87391,637	√			Completed (23/08/2020)
39	KP 12+900	794814,017	67082,879		√		Completed (23/06/2020)
40	KP 13+000	784822,027	88968,778	√			Completed (25/08/2020)
41	KP 13+069	794748,769	66882,089		√		Completed (26/06/2020)
42	KP 13+450	784613,363	88640,714		√		Completed (25/08/2020)
43	KP 13+500	794607,370	66640,372	√			Completed (23/06/2020)


44	KP 13+713	794641.153	66374,007		√		Completed (27/06/2020)
45	KP 13+820	784670.120	88145,564		√		Completed (30/08/2020)
46	KP 14+000	794656.301	66083,587	√			Completed (25/06/2020)
47	KP 14+500	784473,644	85620,497	√			Completed (25/08/2020)
48	KP 15+000	794171.859	65236,973	√			Completed (27/06/2020)
49	KP 15+500	783742,815	85231,273	√			Completed (27/08/2020)
50	KP 16+000	793372.747	65084,783	√			Completed (30/06/2020)
51	KP 16+440	783308,455	84738,624		√		Completed (30/08/2020)
52	KP 16+477	793375.436	64703,756		√		Completed (30/06/2020)
53	KP 18+500	783331,692	84673,677	√			Completed (30/08/2020)
54	KP 17+000	792845,367	64435,287	√			Completed (01/07/2020)






55	KP 17+500	792617.791	64389,766	√			Completed (01/07/2020)
56	KP 18+000	792280,761	84082,504	√			Completed (01/07/2020)
57	KP 18+500	791812,581	63680,935	√			Completed (27/06/2020)
58	KP 18+871	791900,495	83720,181		√		Completed (27/08/2020)
59	KP 18+716	791893,329	63683,341		√		Completed (27/06/2020)
60	KP 18+000	791652,474	83663,358	√			Completed (10/07/2020)
61	KP 19+500	791354,583	63237,019	√			Completed (10/07/2020)
62	KP 20+000	791072,395	83005,668	√			Completed (02/07/2020)
63	KP 20+150	791215,200	62979,793		√		Completed (10/07/2020)
64	KP 20+500	791200,681	82708,860	√			Completed (10/07/2020)
65	KP 21+000	791034,323	62284,258	√			Completed (02/07/2020)





66	KP 21+428	791073,587	61905,555	√		Completed (27/06/2020)
67	KP 21+500	790982,070	61633,757	√		Completed (10/07/2020)
68	KP 21+591	790819,580	61782,373	√		Completed (02/07/2020)
69	KP 21+809	790902,070	61785,413	√		Completed (02/07/2020)
70	KP 21+700	790876,811	61704,517	√		Completed (27/06/2020)
71	KP 22+000	790921,410	61415,428	√		Completed (27/08/2020)
72	KP 22+500	790701,989	61083,907	√		Completed (10/07/2020)
73	KP 22+050	790388,464	61120,613	√		Completed (27/08/2020)
74	KP 23+000	790453,789	61033,076	√		Completed (10/07/2020)
75	KP 23+500	790588,687	60693,443	√		Completed (10/07/2020)
76	KP 24+000	790275,641	60286,655	√		Completed (02/07/2020)

77	KP 24+500	789890.407	50154,121	√			Completed (02/07/2020)
78	KP 25+000	789808.488	58672,081	√			Completed (02/07/2020)
79	KP 25+245	789674.683	59656,713		√		Completed (10/07/2020)
80	KP 25+500	789518.628	58371,645	√			Completed (10/07/2020)
81	KP 25+944	789204.234	59153,441		√		Completed (10/07/2020)
82	KP 28+000	788141.688	58148,564	√			Completed (03/08/2020)
83	KP 26+187	788867.628	59158,872		√		Completed (03/06/2020)
84	KP 28+235	788871.542	58157,474		√		Completed (03/08/2020)
85	KP 26+477	788722.642	59074,731		√		Completed (03/06/2020)
86	KP 28+500	788721.862	58055,124	√			Completed (03/08/2020)
87	KP 26+689	788729.031	58885,984		√		Completed (03/06/2020)

88	KP 27+000	785543,541	58688,913	√		Completed (11/07/2020)
89	KP 27+180	786528,650	58545,428	√		Completed (11/07/2020)
90	KP 27+353	786363,629	58477,263	√		Completed (11/07/2020)
91	KP 27+800	787948,028	58164,882	√		Completed (11/07/2020)
92	KP 27+934	787908,355	58146,184	√		Completed (11/07/2020)
93	KP 27+850	787802,398	58134,534	√		Completed (11/07/2020)
94	KP 28+000	787848,817	58120,883	√		Completed (25/06/2020)
95	KP 28+300	787587,605	58012,260	√		Completed (11/07/2020)
96	KP 28+500	787378,240	58006,735	√		Completed (11/07/2020)
97	KP 28+000	786908,000	58091,111	√		Completed (26/08/2020)
98	KP 28+410	786537,547	58230,364	√		Completed (26/06/2020)

99	KP 29+500	785449,481	58203,398	√			Completed (26/06/2020)
100	KP 28+745	786221,208	58237,041		√		Completed (26/08/2020)
101	KP 29+763	785197,140	58240,000		√		
102	KP 30+000	786004,667	58316,138	√			
103	KP 30+500	785971,687	58781,434	√			Completed (11/07/2020)
104	KP 31+000	785600,063	58138,168	√			Completed (11/07/2020)
105	KP 31+085	785742,943	58216,911		√		Completed (12/07/2020)
106	KP 31+500	785415,841	58071,376	√			
107	KP 32+000	784941,580	58979,125	√			
108	KP 32+500	784441,743	58669,562	√			
109	KP 33+000	784042,720	58262,380	√			Completed (12/07/2020)

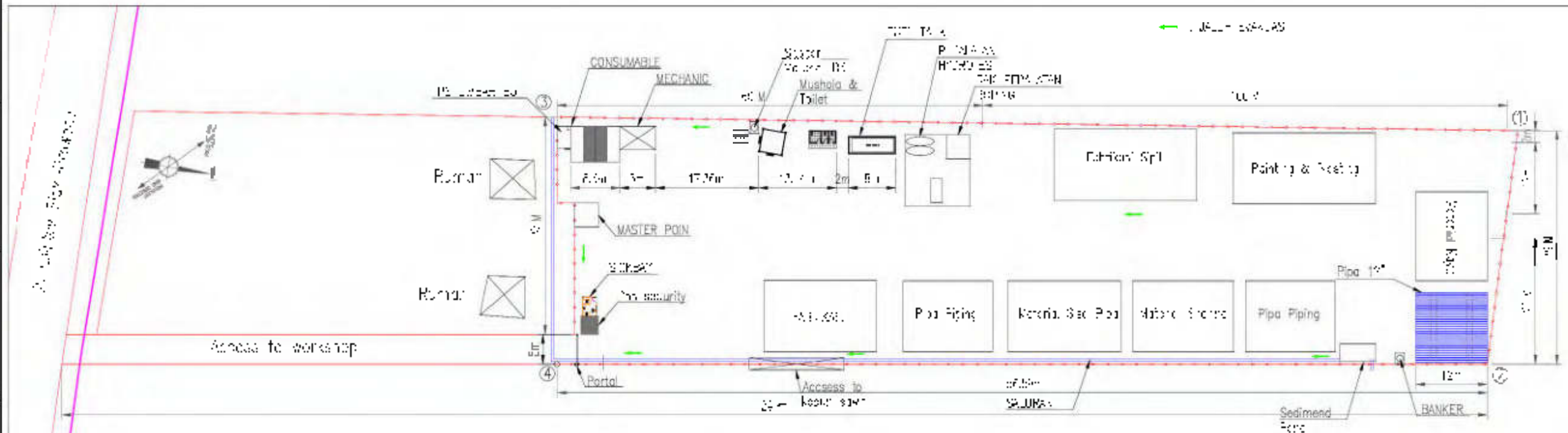
110	KP 33+265	783833,585	59266,813	√		Completed (12/07/2020)
111	KP 33+500	783724,530	58076,730	√		Completed (12/07/2020)
112	KP 34+000	783486,200	58661,814	√		Completed (12/07/2020)
113	KP 34+500	783168,025	58476,847	√		
114	KP 35+000	782864,796	58831,262	√		
115	KP 35+650	782263,872	58067,860	√		Completed (12/07/2020)
116	KP 35+672	782251,241	58103,113	√		Completed (12/07/2020)
117	KP 36+000	781990,842	58297,896	√		
118	KP 36+234	781802,640	58408,062	√		
119	KP 36+500	781702,477	58860,118	√		
120	KP 37+000	781701,888	60160,057	√		

121	KP 37+050	781701,517	60218,116	√		
122	KP 37+150	781625,023	60217,411	√		
123	KP 37+500	781283,272	60195,900	√		Completed (12/07/2020)
124	KP 38+000	780761,897	60167,453	√		Completed (12/07/2020)
125	KP 38+110	780620,190	60159,680	√		Completed (12/07/2020)
126	KP 38+150	780630,477	60128,768	√		Completed (12/07/2020)
127	KP 07+429			√		Muster Point
128	KP 08+000			√		Muster Point
129	KP 09+000			√		Muster Point
130	KP 13+000			√		Muster Point
131	KP 18+931			√		Muster Point

132	KP 26+780			√			Muster Point
133	KP 27+750			√			Muster Point
134	KP 27+070			√			Muster Point
135	KP 28+570			√			Muster Point
136	KP 28+328			√			Muster Point
137	KP 117+150			√			Sectional Valve
138	KP 07+150			√			Sectional Valve
139	KP 20+750			√			Sectional Valve
140	KP 20+750			√			Sectional Valve
141	KP 29+100			√			Sectional Valve
142	KP 29+900			√			Sectional Valve

143	No Location & No Fabrication			√			
144	No Location & No Fabrication			√			
145	No Location & No Fabrication			√			
146	No Location & No Fabrication			√			
147	No Location & No Fabrication			√			
148	No Location & No Fabrication			√			
149	No Location & No Fabrication			√			

APPENDIX E
Hazardous Material Log



- ① X=7884.887 Y=50788.188
- ② X=7884.887 Y=50778.000
- ③ X=7888.491 Y=50773.911
- ④ X=7882.724 Y=50705.430

TOTAL KELOMPOK WORKSHOP
 MPPK : 10000 400 METR

REVISIONS		DATE		DESCRIPTION		DRAFTS		CHECKED		DATE		APPROVAL		DATE		PROJECT		TITLE		
1																	EPC GAS PIPELINE OF 275MW FOR RIAU GAS FIRED COMBINED CYCLE POWER PLANT PROJECT		WORKSHOP - MRPR CFM	
2																	PROJECT NO. : 18.000.000		SCALE : 1:100	
3																	DRAWING NO. : 18.000.000.001		DATE : 15/08/2018	
4																	DRAWN BY : [Signature]		CHECKED BY : [Signature]	
5																	DESIGNED BY : [Signature]		APPROVED BY : [Signature]	
6																	PROJECT MANAGER : [Signature]		SUPERVISOR : [Signature]	
7																	CLIENT : PT. CITRA PALM MANUNGAL		CONTRACT NO. : [Signature]	
8																	PROJECT LOCATION : [Signature]		DRAWING SCALE : [Signature]	
9																	PROJECT NO. : 18.000.000		DRAWING NO. : 18.000.000.001	
10																	PROJECT NO. : 18.000.000		DRAWING NO. : 18.000.000.001	
11																	PROJECT NO. : 18.000.000		DRAWING NO. : 18.000.000.001	
12																	PROJECT NO. : 18.000.000		DRAWING NO. : 18.000.000.001	

SUMMARY OF HAZARDOUS MATERIAL

UPDATE PER : 20 JUNI 2020

No	DESCRIPTION	BRAND	SIZE	Qty In	Unit	Qty Out	Balance	LOCATION	MSDS	NOTE
1	PAINT KUNING	YOKO BLUE	0,7 KG	33	CAN (S)	15	18	WAREHOUSE	AVAILABLE	*) similar product
2	PAINT KUNING	796 YOKO BLUE 3,3LTR	3,5 KG	4	CAN (S)	4	0	WAREHOUSE	AVAILABLE	*) similar product
3	PAINT KUNING - 1218	NIPPON PAINT	3,785 KG	4	CAN (S)	4	0	WAREHOUSE	AVAILABLE	*) similar product
4	PAINT BLUE NP 089	NIPPON PAINT	3,785 KG	4	CAN (S)	3	1	WAREHOUSE	AVAILABLE	*) similar product
5	PAINT BLUE 780	YOKO BLUE	0,7 KG	1	CAN (S)	1	0	WAREHOUSE	AVAILABLE	*) similar product
6	PAINT PUTIH	YOKO PAINT	0,7 KG	1	CAN (S)	1	0	WAREHOUSE	AVAILABLE	*) similar product
7	MULTIPURPOSE LUBRICANTS/DIGREASER/DL-RUS	WD-40	114 ML	25	CAN (S)	13	12	WAREHOUSE	AVAILABLE	
8	CEMENT	SEMENT PADANG	50 KG	784	ZAK	739	45	WAREHOUSE	AVAILABLE	*) similar product
9	THINNER	COBRA	1 LTR	9	CAN (S)	8	1	WAREHOUSE	AVAILABLE	*) similar product
10	THINNER	COBRA	4 LTR	19	CAN (S)	18	1	WAREHOUSE	AVAILABLE	*) similar product
11	THINNER	LABA-LABA	4 LTR	2	CAN (S)	2	0	WAREHOUSE	AVAILABLE	*) similar product
12	GREASE	ROTARY CG 202	15 Kg	5	PAIL (S)	3	2	WAREHOUSE	AVAILABLE	
13	ANODE MAGNESIUM	-	-	226	BAG (S)	213	13	WAREHOUSE	AVAILABLE	*) similar product
14	PORTRAF GAS	WINN GAS	220 GR	80	CAN	56	24	WAREHOUSE	NA	*) See instruction on product
15	SIKASLPANROL	SIKASLPANROL	20 L	1	GALON	1	0	WAREHOUSE	AVAILABLE	
16	MARKER (WHITE)	SNOWMAN	1 BOX	12	EA	12	0	WAREHOUSE	NA	*) See instruction on product
17	HIGH PRESSURE CYLINDER GAS	LPG	50KG	48	BTL	41	7	WAREHOUSE	NA	
18	FUR (SOIAR)	PERTAMINA	L	215735	LITER	208185	7550	WAREHOUSE	AVAILABLE	
19	OIL SAE 40	PERTAMINA	DRUM	677	LITER	535	92	WAREHOUSE	AVAILABLE	
20	OIL SAE 10	PERTAMINA	DRUM	209	LITER	135	74	WAREHOUSE	AVAILABLE	

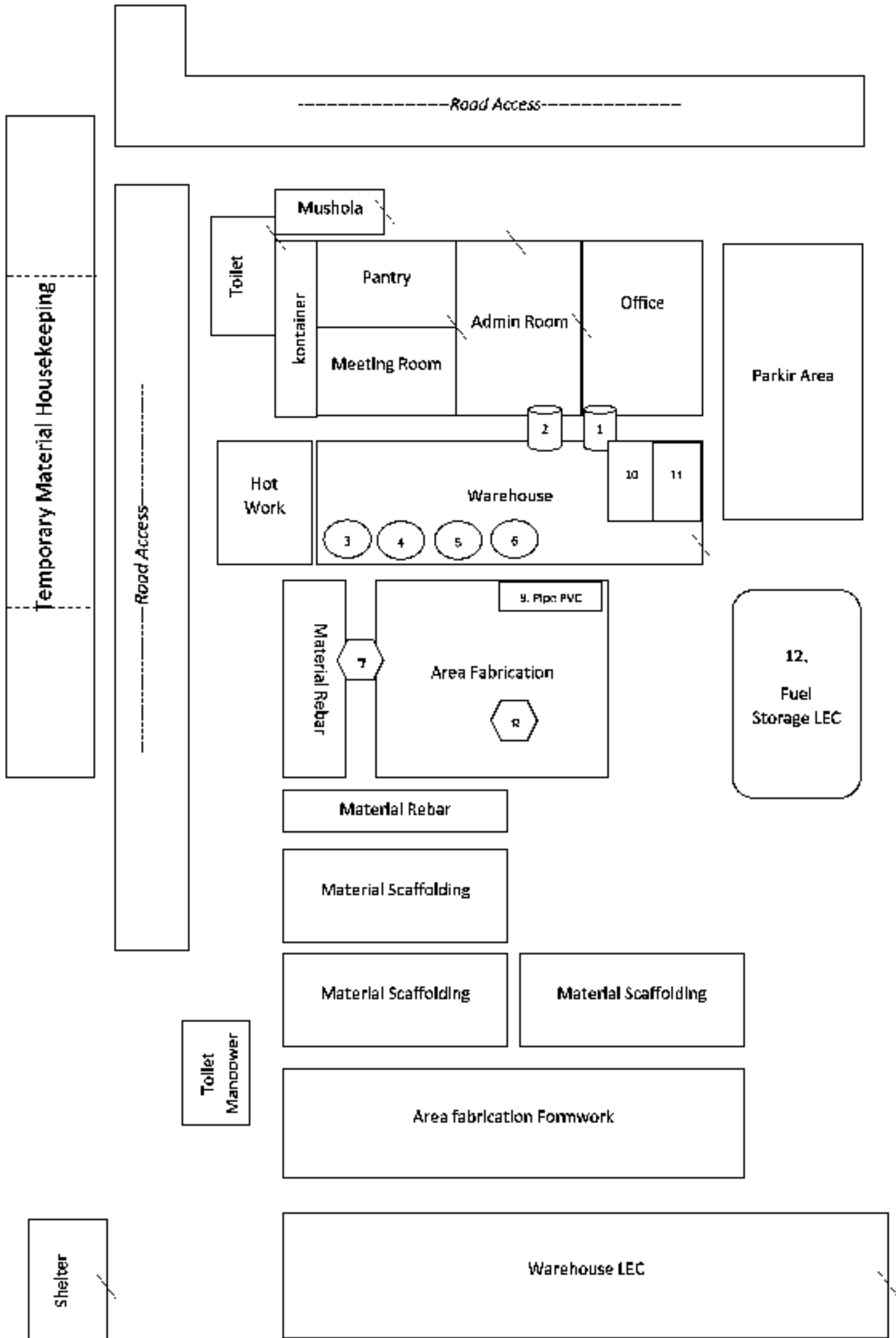
SUMMARY OF HAZARDOUS MATERIAL

UPDATE PER : 20 JUNI 2020

No	DESCRIPTION	BRAND	SIZE	Qty In	Unit	Qty Out	Balance	LOCATION	MSDS	NOTE
21	SIKA ADHESIVE BOND		900 ML	6	GALON	5	1	WAREHOUSE	AVAILABLE	
22	PROPAN FPOXY BOND PWA - 130 (RFSIN)		1 LTR	1	CAN	1	0	WAREHOUSE	NA	
23	PROPAN LPOXY BOND LWA - 130 (HARDENLR)		1 L R	1	CAN	1	0	WAREHOUSE	NA	
24	EPOXY PRIMER POLYKEN	POLYKEN	1 LTR	1	CAN	1	0	WAREHOUSE	NA	
25	LEM AIBON	AIBON	500 MI	1	CAN	1	0	WAREHOUSE	NA	
26	IFM PVC			3	TURE	3	0	WAREHOUSE	NA	
27	BATTERY ACCU BRAND GS, WITH KLPALVA BATTERY		12V-7JAMP	3	EA	3	0	WAREHOUSE	AVAILABLE	
28	TABELING LPG		12 KG	6	KG	6	0	WAREHOUSE	AVAILABLE	3 TABELING WARR IN SITE OFFICE
29	PAINT BIRU LANGIT CAT TEMBOK		5 KG	5	CAN	0	5	WAREHOUSE	NA	
30	PAINT HFAM	PALLAZO	0,7 KG	1	CAN	1	0	WAREHOUSE	NA	
31	SUMILN SIKA GROUP 215	SIKA 215	25KG	3	ZAK	1	2	WAREHOUSE	NA	
32	CAT MINYAK WARNA HITAM	PROPERTY GLOSS	0,8 L R	5	CAN	0	5	WAREHOUSE	NA	
33	CAT MINYAK WARNA MERAH	PROPERTY GLOSS	0,8LTR	1	CAN	0	1	WAREHOUSE	NA	
34	CAT MINYAK WARNA PUTIH	PAI A770	0,8LTR	1	CAN	0	1	WAREHOUSE	NA	
35	SIKA ANCHOR FIX-2	SIKA	330ML	2	CAN	0	2	WAREHOUSE	AVAILABLE	

PT. WAHANA KARYA KONSTRUKSI
Layout Area PT. WKK

1	Tabung Oxygen
2	Tabung Acetyline
3	Olie
4	Bensin
5	Battery
6	Sika Grout
7	Barr Cutting Machine
8	Barr Banding Machine
9	Material Pipa PVC
10	Semen
11	Plywood
12	Fuel Storage LEC



DAFTAR NAMA DAN SIFAT KIMIA SERTA KUANTITAS BAHAN KIMIA BERBAHAYA

PT. Wahana Karya Konstruksi

RIAU GFPP 275 MW IPP PROJECT

30 June 2020

No	Nama Bahan	Titik Nyala (°C)	SIFAT BAHAN KIMIA							KLASIFIKASI BERDASARKAN NFPA			Kuantitas Bahan (satuan)	Keterangan			
			Dacrah Mudah Terbakar		Toksisitas			MAB (BDL)	Oksidatur		Mudah Meledak				H (HEALTH)	F (FIRE)	S (STABILITY)
			Batas Terendah % (LFL)	Batas tertinggi % (UFL)	LD50 (mg/kg RR)	LD50 (mg/kg RR)	LD50 (mg/kg BE)		Ya	Tidak	Ya	Tidak					
1	Acetylene	<23	2.5	100	N/A	N/A	N/A	2500		x	x		1	4	3	9 (m ³)	
2	Oxyger	N/A	N/A	N/A	N/A	N/A	N/A	N/A	x			x	3	0	0	17 (m ³)	
3	Oli Meditran SAC 40	253	N/A	N/A	N/A	N/A	N/A	N/A		x		x	0	1	0	15 (l)	
4	Oli Prima XI ² 20W-50	230	N/A	N/A	N/A	N/A	N/A	N/A		x		x	0	1	0	8 (l)	
5	Battery GS Yuasa	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x		x	2	0	0	3 pcs	
6	Sika Bond NV	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x		x	2	0	0	78 (kg)	
7	Sika Cim Concrete Additive	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x		x	2	0	0	900 (kg)	
8	Sika Grout 215	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x		x	2	0	0	25 (kg)	
9	Solar	60	1.3	6	N/A	N/A	N/A	500		x		x	1	2	1	20 (l)	
10	Lem kayu F0x	16	N/A	N/A	N/A	N/A	N/A	N/A		x		x	2	3	1	10 (kg)	
11	Paint Dulux	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x		x	0	0	0	7 (kg)	
12	MJ-700 SkimWall	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x		x	2	0	0	20 kg & 40 kg	
13	Semen Conch gtrak	N/A	N/A	N/A	N/A	N/A	N/A	N/A		x		x	2	0	0	5 ton	

Catatan :

-LFL (Lower Flammability Limit) : Konsentrasi batas terendah mudah terbakar

-UFL (Upper Flammability Limit) : Konsentrasi batas tertinggi mudah terbakar

-NFPA (National Fire Protection Association)

-RR : Berat Badan

-H (Health) : Bahaya kesehatan

-F (Fire) : Bahaya kebakaran

-S (Stability) : Bahaya reaktifitas bahan

PIPING
SPOOL
STORAGE



ACCESS WAY (BY LEO)



Piping and
Mechanical
Material



PAINTING
SHOP



No	Nama Bahan	Titik Nyala (°C)	SIFAT BAHAN KIMIA						KELASIFIKASI BERDASARKAN NFPA			Kuantitas Bahan (satuan)	Keterangan				
			Mudah Mudah Terbakar		Toksisitas			MAB (Bij)	Oksidator		Mudah Meledak			F (Health)	F (Fire)	S (Stability)	
			ULFL	ULUL	LD50 (oral) mg/kg BB	LD50 (skin) mg/kg BB	LD50 (inhalation) mg/m ³ 4HR		Ya	Tidak	Ya						Tidak
1	LPG	-103	2,1	9,5	N/A	N/A	N/A	3000									
2	Solar	60	1,9	6,0	N/A	N/A	N/A	500									
3	Sandgrout 215 (new)	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
4	Sikardur 42 MP Normal HC	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
5	Oxygen	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
6	Argon	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
7	Ball	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
8	Resist 65 Comp A	16 (Cawan Tertutup)	78,29	117,49	6321,1	8901,5	59,85	N/A									
9	Resist 65 Comp B	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
10	Jalur Thinner No. 4	12 (Cawan Tertutup), 11,85 (Cawan Terbuka)	N/A	N/A	5045	12800	N/A	N/A									
11	Ponguard Midcoat MIO Comp A	25 (Cawan Tertutup)	108	291,9	60119,9	34332,3	174,1	N/A									
12	Ponguard Midcoat Comp B	25 (Cawan Tertutup)	108	189,69	3916,6	10989,6	45,62	N/A									
13	Jalur Thinner No. 17	25 (Cawan Tertutup)	119	155,39	3333,3	5866,7	44	N/A									

Legenda :

- LH (Lower Flammability Limit) : Konsentrasi batas terendah mudah terbakar
- UL (Upper Flammability Limit) : Konsentrasi batas tertinggi mudah terbakar
- NFPA (National Fire Protection Association)
- BB : Berat Badan
- H (Health) : Bahaya kesehatan
- F (Fire) : Bahaya kebakaran
- S (Stability) : Bahaya reaktivitas bahan

Additional Photo

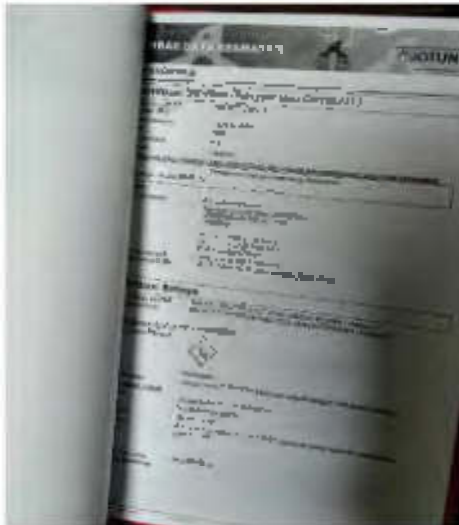
PS Ball



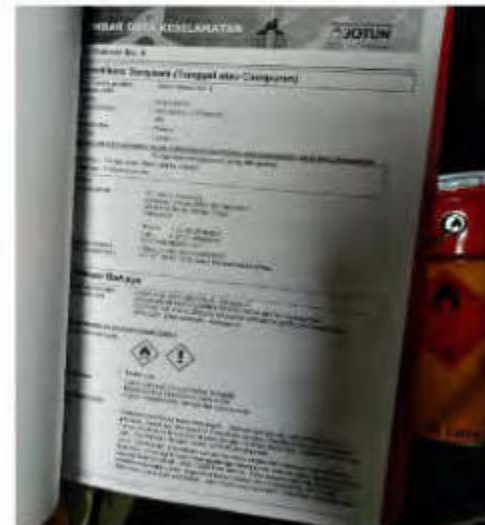
Resist 65 Comp A



Resist 65 Comp B



Jotun Thinner No. 4



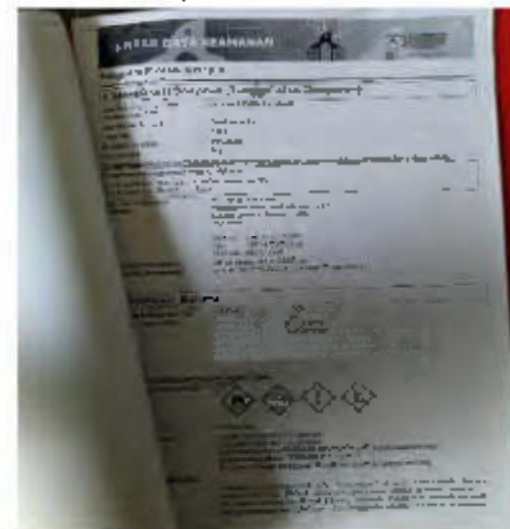
Additional Photo



Penguard Midcoat MIO Comp A



Penguard Midcoat Comp B



Jotun Thinner No. 17



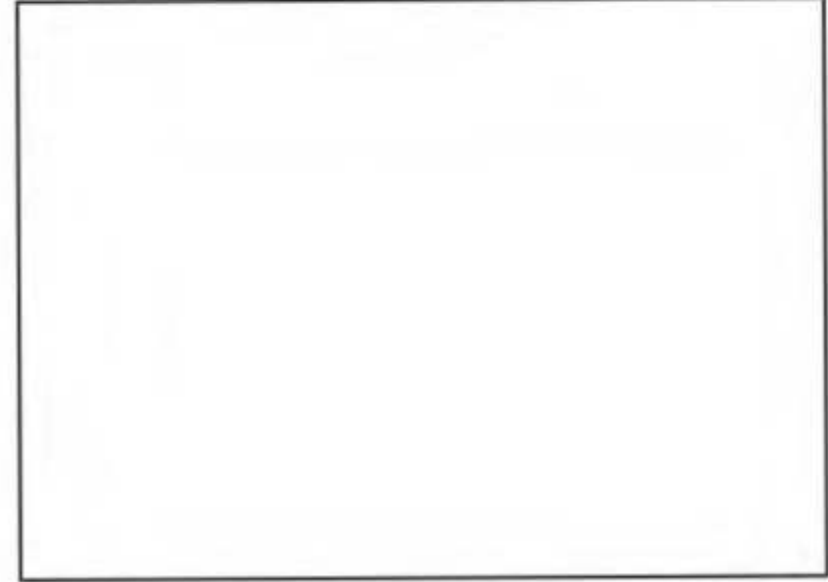
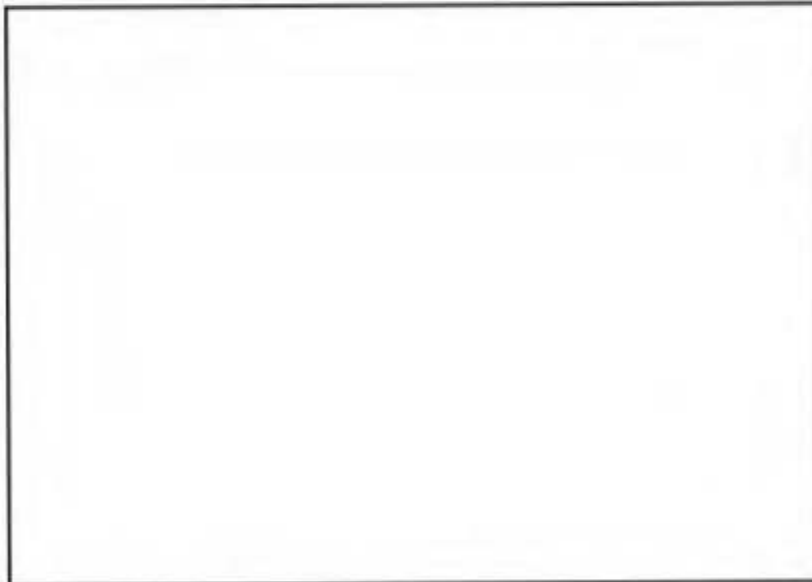
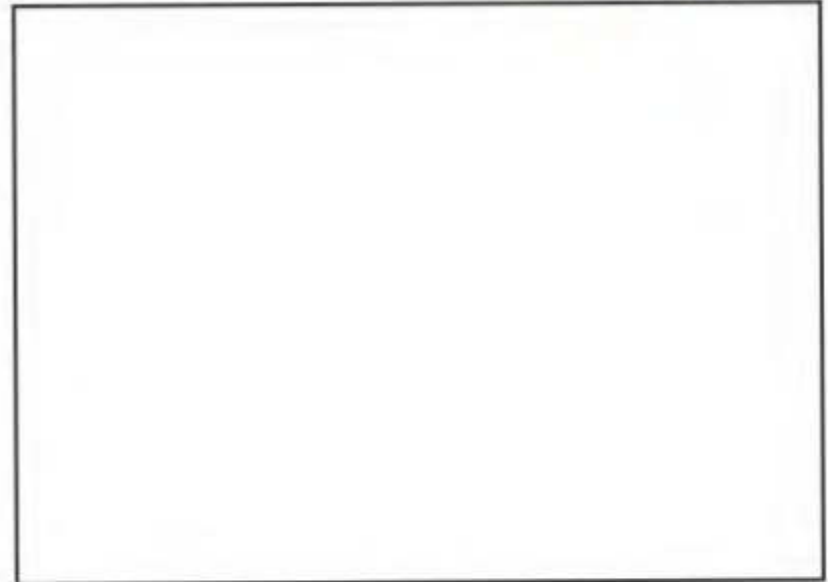
SikaGrout 215 (new)



Additional Photo



Sikadur 42 MP Normal HC



No	Nama Bahan	Titik Nyala (°C)	SIFAT BAHAN KIMIA							KLASIFIKASI BERDASARKAN NFPA			Kuantitas Bahan (satuan)	Keterangan			
			Daerah Mudah Terbakar		Lokalitas			NAB (bpj)	Oksidator		Mudah Meledak				H (HEALTH)	F (FIRE)	S (STABILITY)
			Batas Terendah (LC)	Batas Tertinggi (UL)	IR (Short) (mg/L)	IR (Long) (mg/L)	LD50 (perahu) (mg/L)		Ya	Tidak	Ya	Tidak					
1	LPG	-103	2,1	9,5	N/A	N/A	N/A	1000									
2	Solar	60	1,3	6,0	N/A	N/A	N/A	500									
3	SikaGrout 215 (new)	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
4	Sikadur 42 MP Normal HC	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
5	Oxygen	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
6	Argon	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
7	PS ball	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
8	Resis. 65 Comp A	16 (Cawan Tertutup)	78.29	117.49	6321.1	8901.5	59.85	N/A									
9	Resis. 65 Comp B	N/A	N/A	N/A	N/A	N/A	N/A	N/A									
10	Jocun (hinner No. 4	17 (Cawan Tertutup), 11,85 (Cawan Terbuka)	N/A	N/A	5045	12800	N/A	N/A									
11	Penguar Miccoat MKO Comp A	25 (Cawan Tertutup)	108	231.8	60119.9	34332.3	174.1	N/A									
12	Penguar Miccoat Comp B	25 (Cawan Tertutup)	108	189.69	3936.6	10989.6	45.62	N/A									
13	Jocun Thinner No. 17	25 (Cawan Tertutup)	119	155.30	3333.3	5866.7	44	N/A									

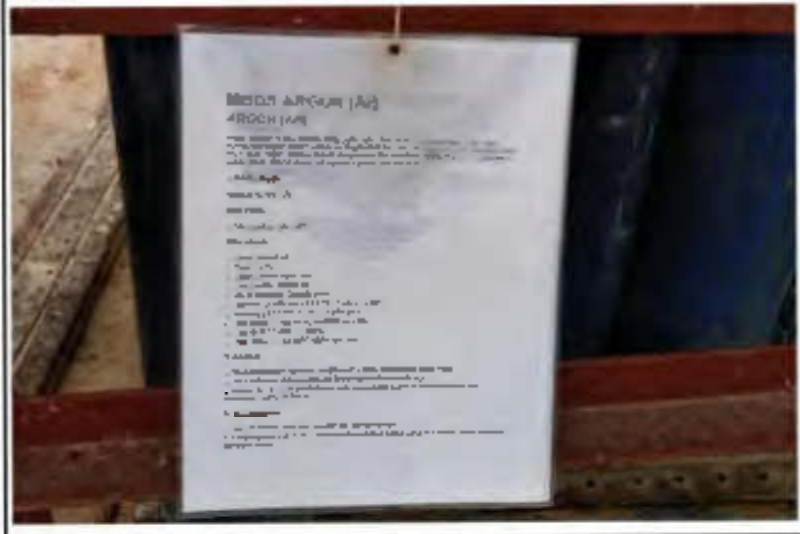
Ca.atan :

- LRL (Lower Flammability Limit) : Konsentrasi batas terendah mudah terbakar
- UFL (Upper Flammability Limit) : Konsentrasi batas tertinggi mudah terbakar
- NFPA (National Fire Protection Association)
- BB : Berat Badan
- H (Health) : Bahaya kesehatan
- F (Fire) : Bahaya kebakaran
- S (Stability) : Bahaya reaktivitas bahan

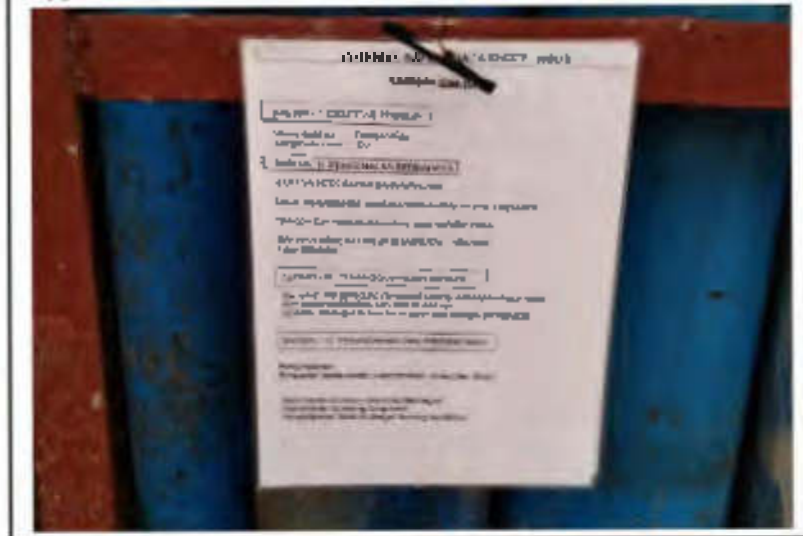
Additional Photo



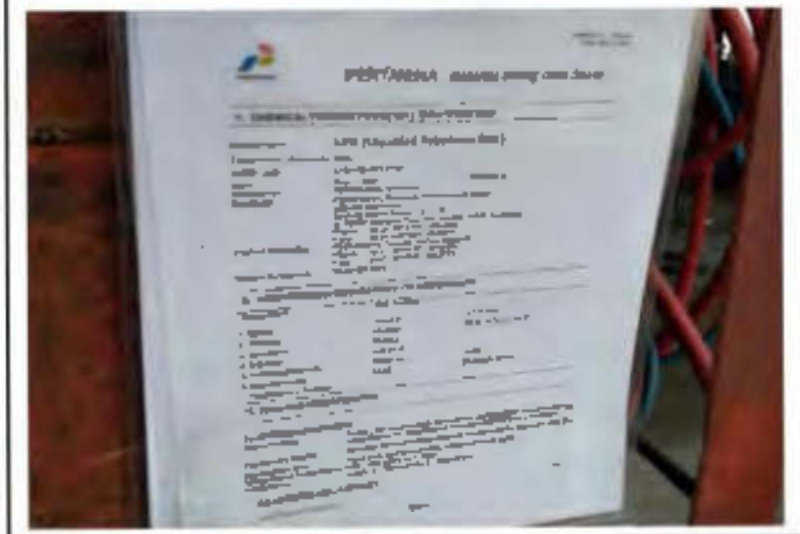
Argon



Oxygen



LPG (Liquefied Petroleum Gas)



Solar

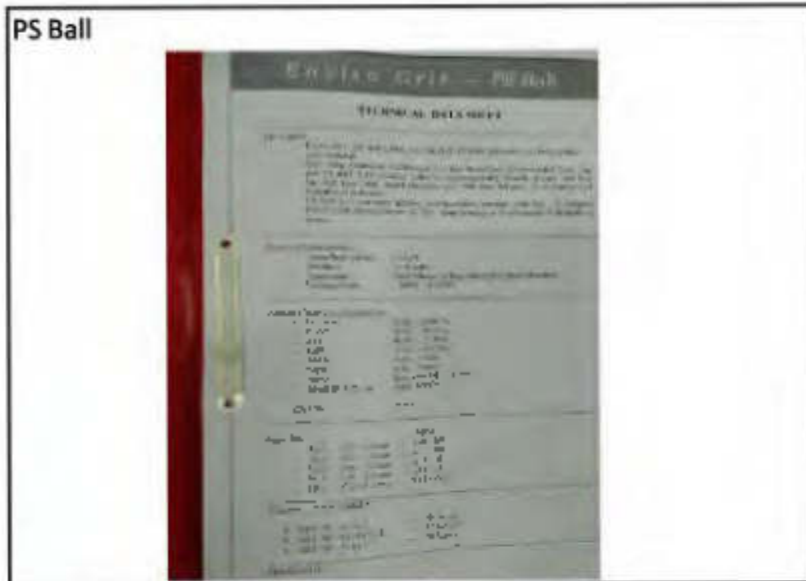


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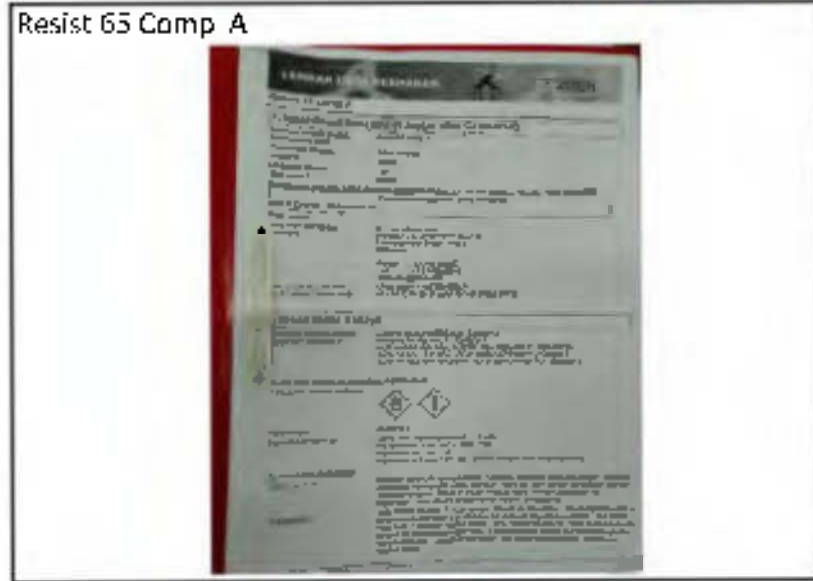


PT. INDA KARYA BINA

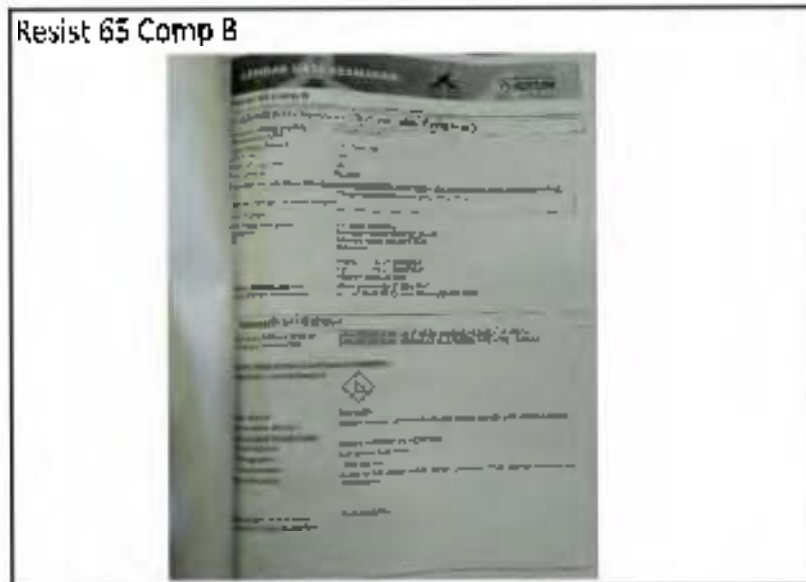
PS Ball



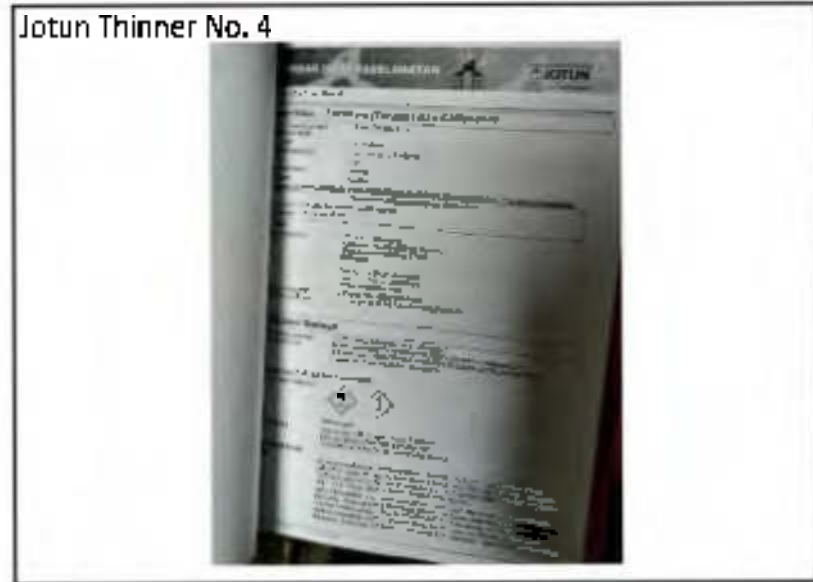
Resist 65 Comp A



Resist 65 Comp B

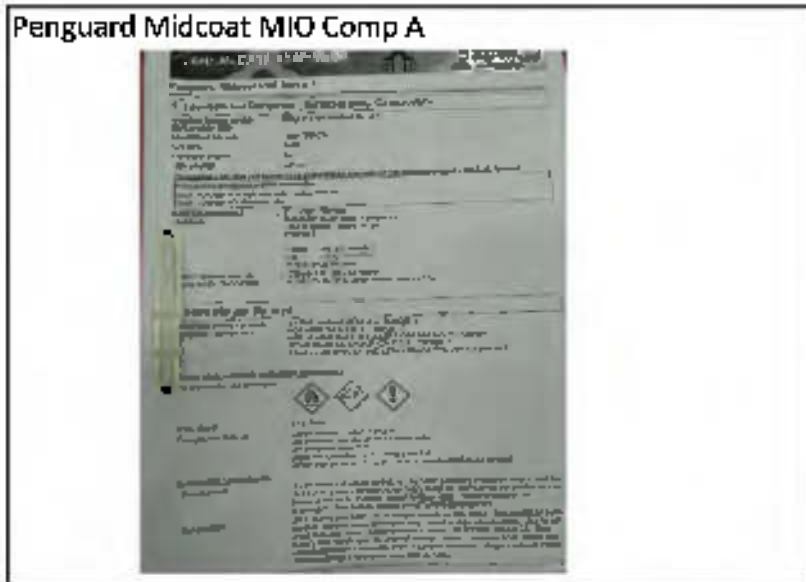


Jotun Thinner No. 4

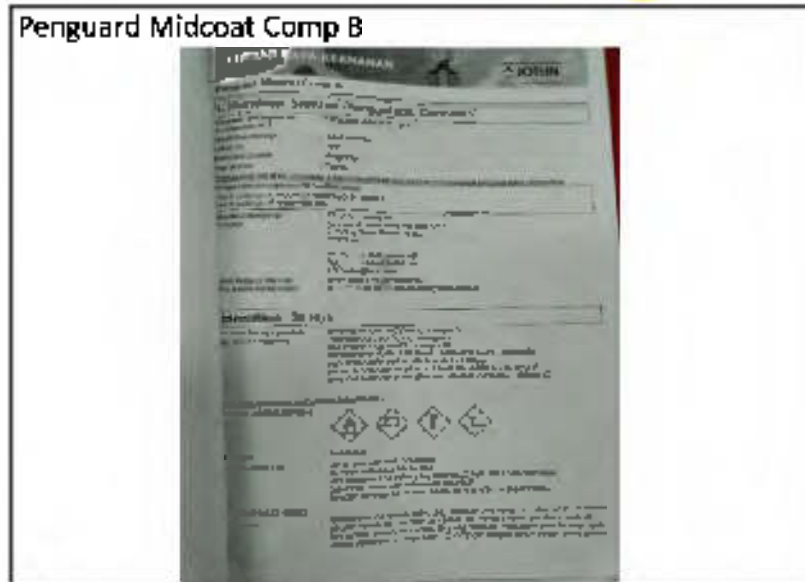


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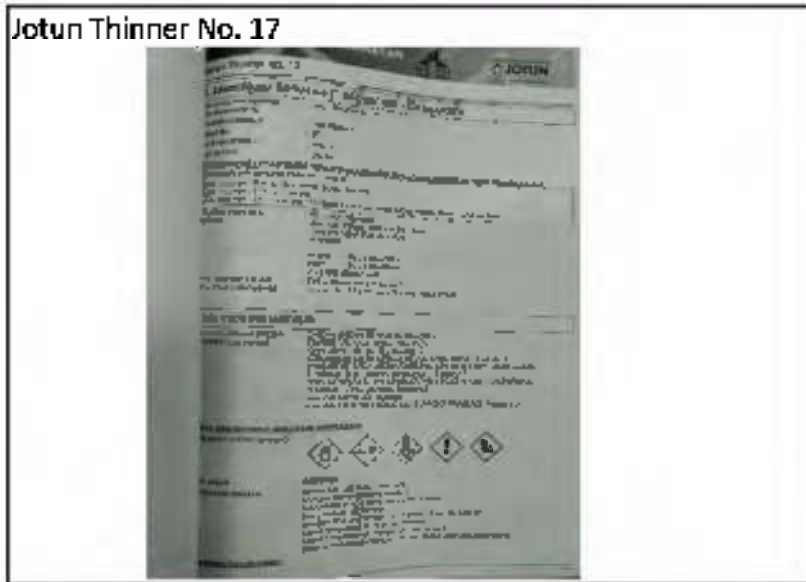
Penguard Midcoat MIO Comp A



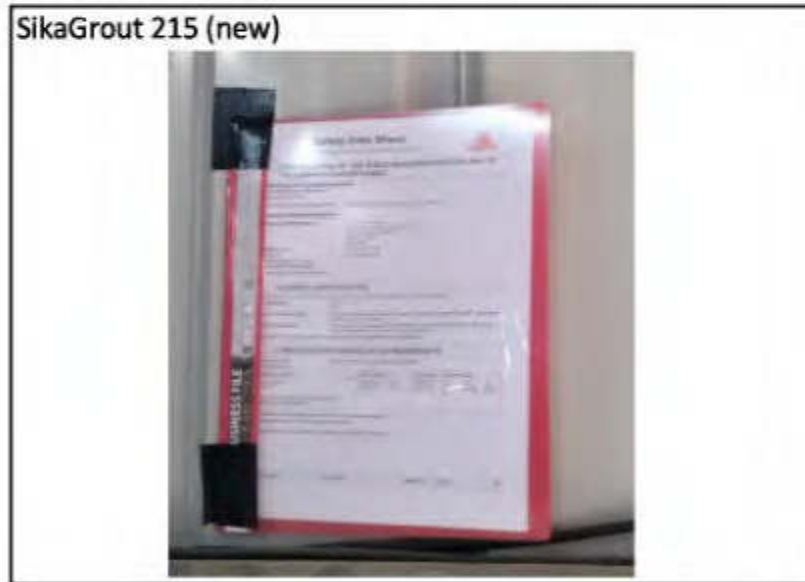
Penguard Midcoat Comp B



Jotun Thinner No. 17



SikaGrout 215 (new)

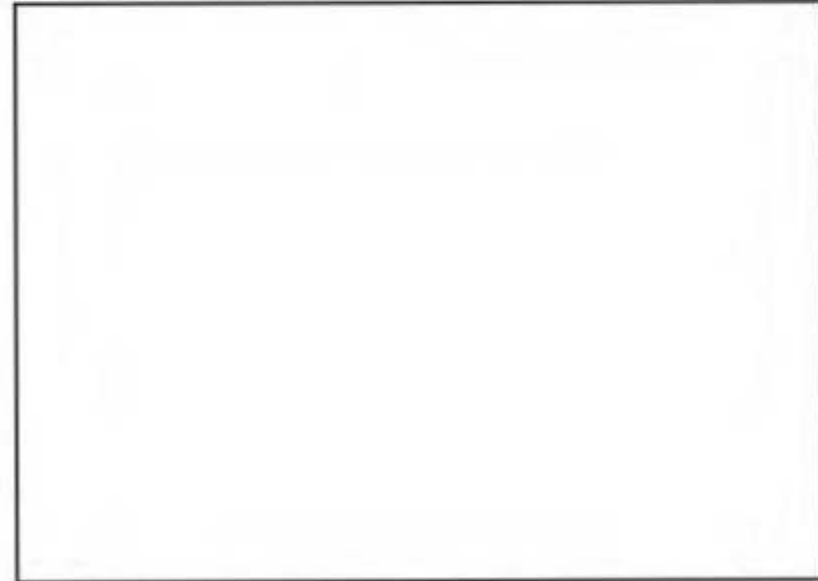
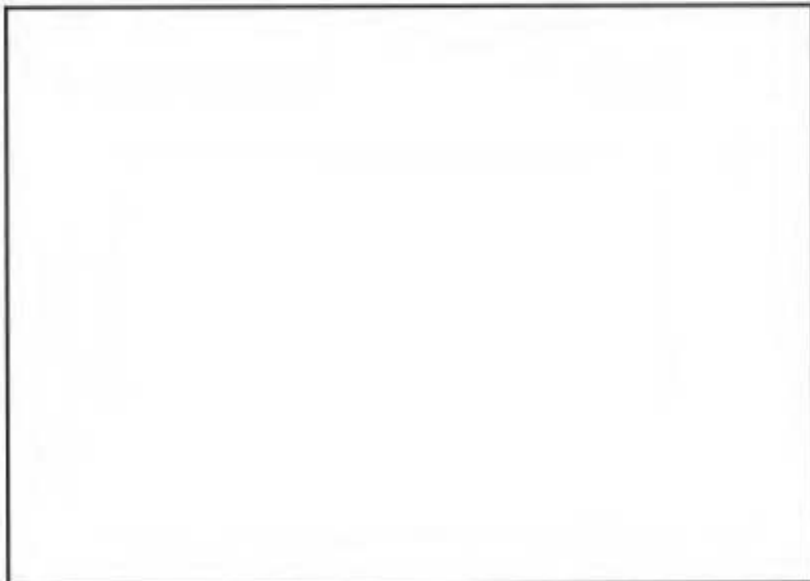
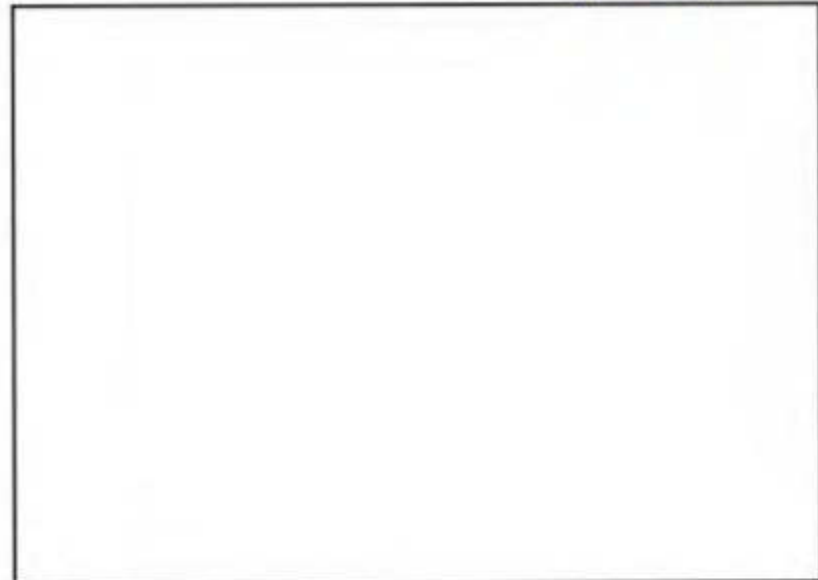
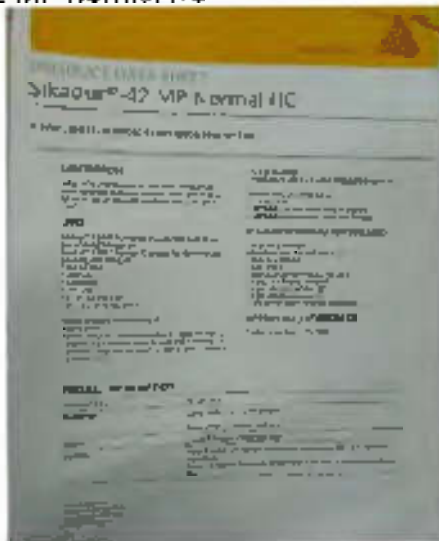


Additional Photo



PT. JAWA LAYANAN TEKNIK

Sikadur 42 MP Normal HC



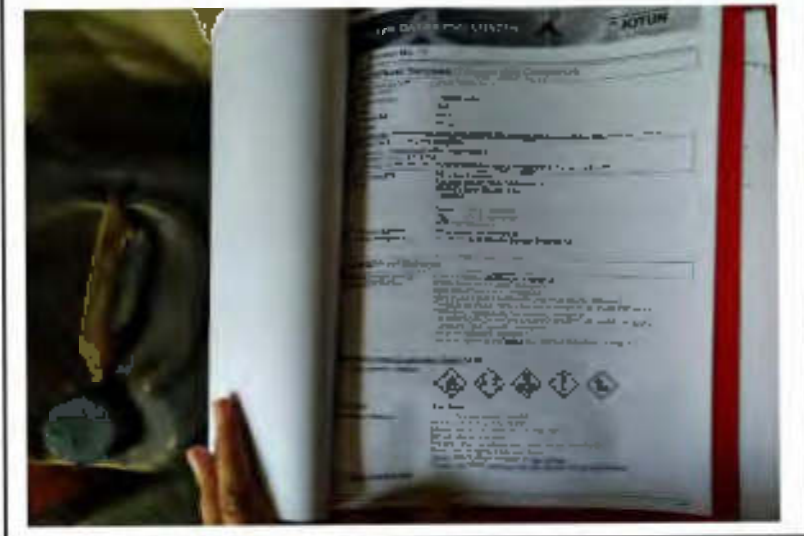
No	Nama Bahan	Titik Nyala (°C)	SIFAT BAHAN KIMIA						Klasifikasi Berdasarkan NFPA			Kuantitas Bahan (satuan)	Keterangan				
			Bahan Mudah Terbakar		Toksisitas			Nama [bpj]	Oksidator		Mudah Meledak			H (HEALTH)	F (FIRE)	S (STABILITY)	
			Lower Flammability Limit (LFL)	Upper Flammability Limit (UFL)	LD50 (oral) mg/kg BB	LD50 (inhalation) mg/kg BB	LD50 (dermal) mg/kg BB		Ya	Tidak	Ya						Tidak
1	LPG	-103	2,1	9,5	N/A	N/A	N/A	1000			✓						
2	Solar	60	1,3	6,0	N/A	N/A	N/A	500									
3	SikaGrout 215 (new)	N/A	N/A	N/A	N/A	N/A	N/A	N/A			✓						
4	Sikadur 47 MP Normal HC	N/A	N/A	N/A	N/A	N/A	N/A	N/A			✓						
5	Oxygen	N/A	N/A	N/A	N/A	N/A	N/A	N/A			✓						
6	Argon	N/A	N/A	N/A	N/A	N/A	N/A	N/A			✓						
7	PS ball	1500-1550	N/A	N/A	N/A	N/A	N/A	N/A			✓						
8	Resist 65 Comp A	16 (Cawan Tertutup)	78,25	117,49	6321,1	8901,5	59,85	N/A			✓						
9	Resist 65 Comp B	N/A	N/A	N/A	N/A	N/A	N/A	N/A			✓						
10	Jalur Thinner No. 4	12 (Cawan Tertutup), 11,8: (Cawan Terbuka)	N/A	N/A	5045	12800	N/A	N/A			✓						
11	Penguard Midcoat MID Comp A	25 (Cawan Tertutup)	108	231,9	60119,9	34332,3	174,1	N/A			✓						
12	Penguard Midcoat Comp U	25 (Cawan Tertutup)	108	189,69	3916,6	10989,6	45,62	N/A			✓						
13	Jalur Thinner No. 17	25 (Cawan Tertutup)	119	155,39	3333,3	5866,7	44	N/A			✓						
14	Hardtop XP Comp A	30 (Cawan Tertutup)	126	136,43	N/A	10083,8	75,74	N/A			✓						
15	Hardtop XP Comp B	47 (Cawan Tertutup)	126	N/A	N/A	N/A	1672	N/A			✓						
16	Jalur Thinner No. 10	27 (Cawan Tertutup)	126	135	N/A	1629,6	21,56	N/A			✓						

Catatan :

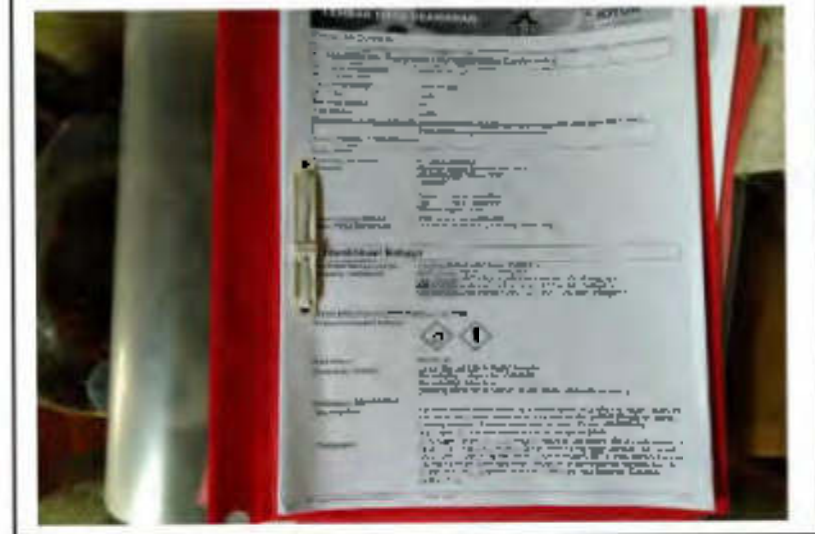
- LFL (Lower Flammability Limit) : Konsentrasi batas terendah mudah terbakar
- UFL (Upper Flammability Limit) : Konsentrasi batas tertinggi mudah terbakar
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Additional Photo

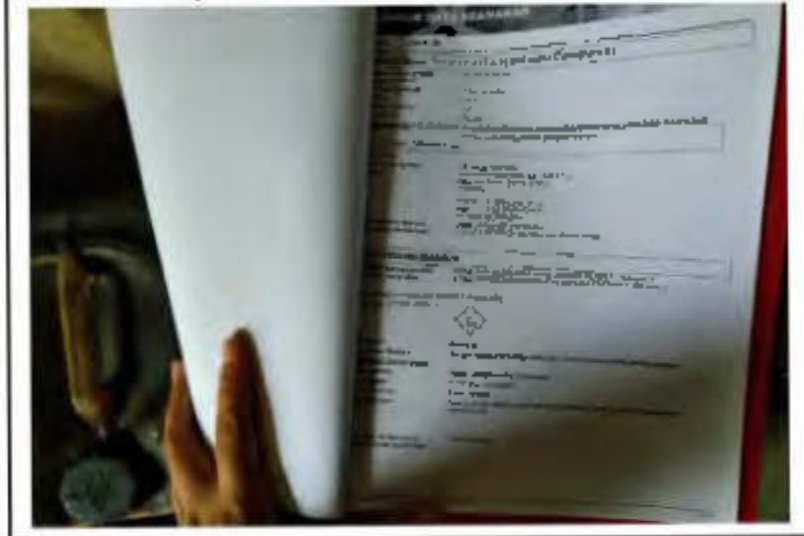
PS Roll



Resist 65 Comp A



Resist 65 Comp B



Joctun Thinner No. 4



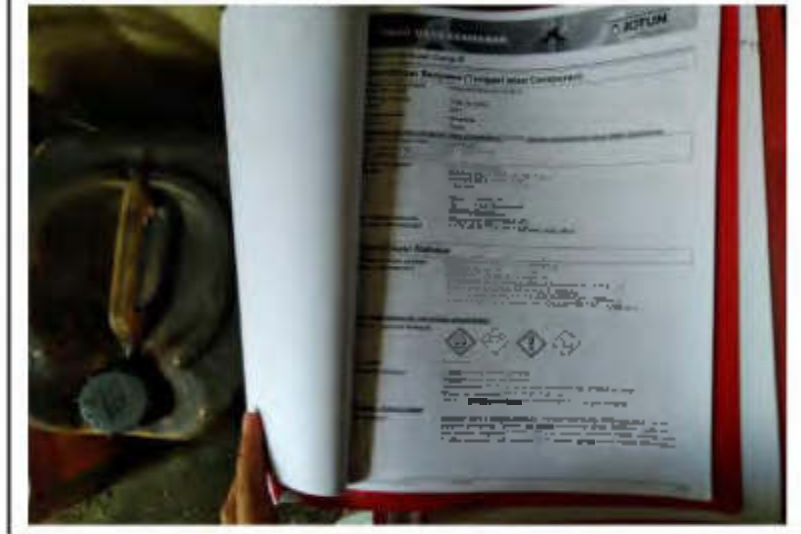
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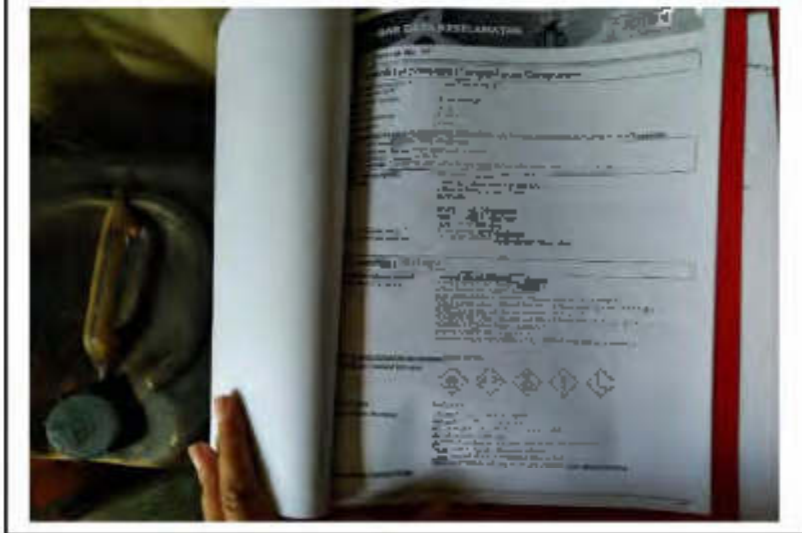
Penguard Midcoat MIO Comp A



Penguard Midcoat Comp B



Jotun Thinner No. 17



SikaGrout 215 (new)

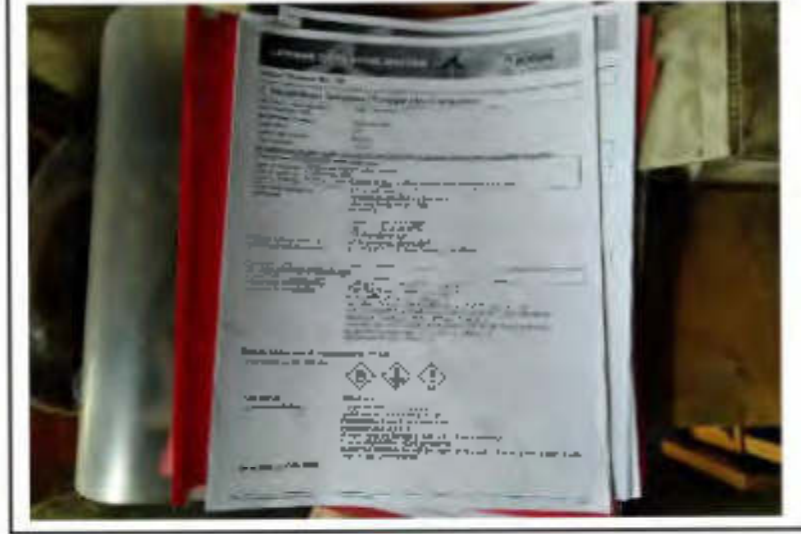


Additional Photo

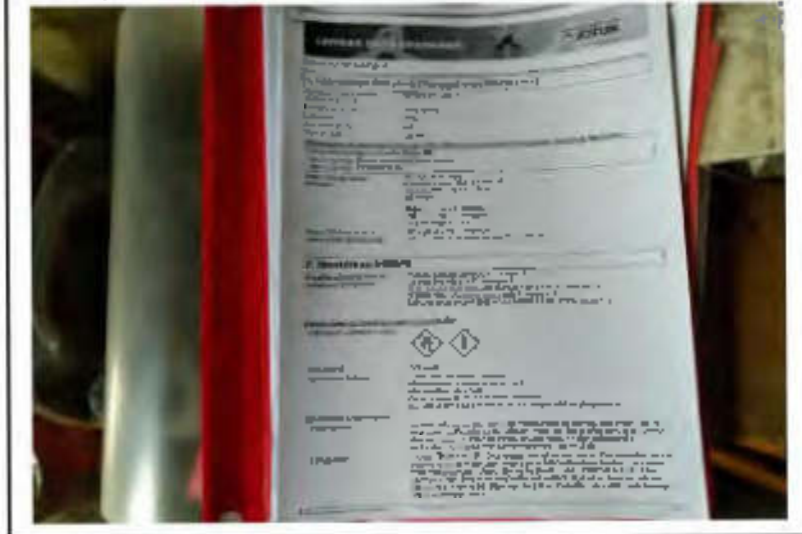
Sikadur 42 MP Normal HC



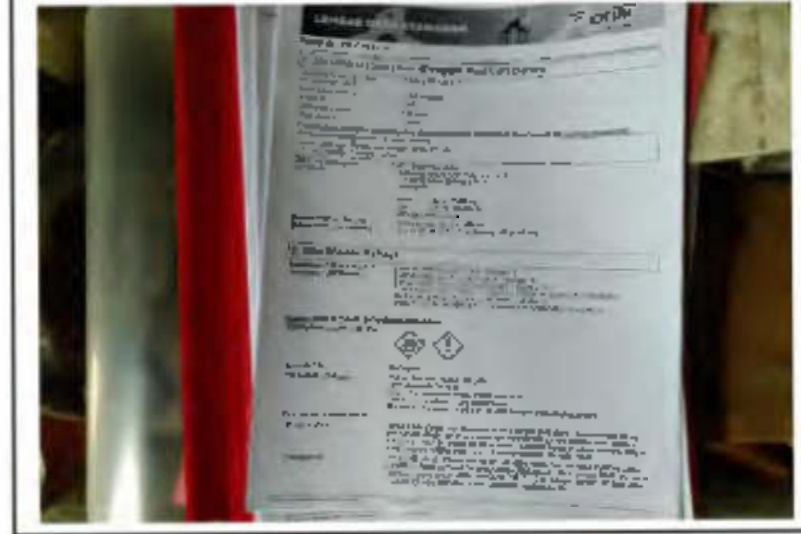
Jotun Thinner No. 10



Hardtop XP Comp A



Hardtop XP Comp B



PEMAKAIAN SOLAR
PT.INDO TEHNIK INDUSTRI



Batu GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
1	Generator 62,5	1-Apr-20	35	
2	Crane 50 I	1-Apr-20	70	
3	Generator 62,5	1-Apr-20	35	
4	Generator 16	1-Apr-20	20	
5	Generator 62,5	2-Apr-20	35	
6	Generator 16	2-Apr-20	20	
7	Generator 62,5	2-Apr-20	35	
8	Generator 62,5	3-Apr-20	35	
9	Generator 62,5	4-Apr-20	35	
10	Generator 62,5	4-Apr-20	35	
11	Generator 62,5	6-Apr-20	35	
12	Generator 62,5	6-Apr-20	35	
13	Generator 62,5	6-Apr-20	35	
14	Generator 16	6-Apr-20	20	
15	Generator 62,5	7-Apr-20	35	
16	Generator 62,5	7-Apr-20	35	
17	Generator 62,5	7-Apr-20	35	
18	Generator 62,5	8-Apr-20	35	
19	Crane 50 T	8-Apr-20	70	
20	Generator 62,5	9-Apr-20	35	
21	Generator 62,5	10-Apr-20	70	
22	Generator 62,5	10-Apr-20	35	
23	Crane 50 T	11-Apr-20	70	
24	Generator 62,5	11-Apr-20	50	
25	Generator 16	11-Apr-20	20	
26	Generator 62,5	11-Apr-20	35	
27	Generator 62,5	11-Apr-20	35	
28	Generator 62,5	12-Mar-20	35	
29	Generator 16	13-Apr-20	15	
30	Generator 62,5	13-Apr-20	20	
31	Forklip	13-Apr-20	210	
32	Generator 62,5	14-Apr-20	70	
33	Generator 62,5	14-Apr-20	35	
34	Generator 16	14-Apr-20	20	
35	Crane 50 T	14-Apr-20	70	
36	Generator 62,5	15-Apr-20	35	
37	Crane 500 I	15-Apr-20	500	
38	Crane 300T	15-Apr-20	300	
39	Crane 70T	15-Apr-20	70	
40	Crane 55T	15-Apr-20	150	
41	Trailer 40 I	15-Apr-20	200	
42	Generator 62,5	16-Apr-20	70	
43	Crane 50T	16-Apr-20	70	
44	Forklip	16-Apr-20	70	
45	Generator 62,5	16-Apr-20	35	
46	Generator 16	16-Apr-20	20	
47	Generator 15	16-Apr-20	15	
48	Generator 62,5	17-Apr-20	35	
49	Crane 70 I	17-Apr-20	140	
50	Generator 62,5	17-Apr-20	35	
51	Generator 62,5	18-Apr-20	70	

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Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liber)		REMARK
		Tanggal	Keluar	
52	Generator 16	18-Apr-20	20	
53	Generator 15	18-Apr-20	15	
54	Crane 50T	18-Apr-20	70	
55	Forklift	18-Apr-20	70	
56	Generator 62,5	18-Apr-20	35	
57	Generator 62,5	19-Apr-20	50	
58	Generator 15	19-Apr-20	20	
59	Forklift	19-Apr-20	105	
60	Generator 62,5	19-Apr-20	35	
61	Generator 62,5	20-Apr-20	70	
62	Crane 70T	20-Apr-20	70	
63	Generator 15	20-Apr-20	20	
64	Forklift	20-Apr-20	70	
65	Crane 300T	20-Apr-20	315	
66	Compressor	21-Apr-20	70	
67	Generator 62,5	21-Apr-20	70	
68	Generator 150 KVA	21-Apr-20	70	
69	Generator 150 KVA	21-Apr-20	105	
70	Crane 50T	21-Apr-20	70	
71	Forklift	21-Apr-20	70	
72	Generator 62,5	22-Apr-20	70	
73	Generator 62,5	22-Apr-20	35	
74	Generator 15	22-Apr-20	20	
75	Generator 150 KVA	22-Apr-20	120	
76	Crane 70T	22-Apr-20	70	
77	Crane 55T	22-Apr-20	175	
78	Forklift	22-Apr-20	70	
79	Generator 150 KVA	22-Apr-20	105	
80	Crane 70T	23-Apr-20	70	
81	Generator 150 KVA	23-Apr-20	70	
82	Generator 62,5	23-Apr-20	70	
83	Forklift	23-Apr-20	70	
84	Generator 150 KVA	23-Apr-20	105	
85	Generator 62,5	23-Apr-20	35	
86	Crane 50T	23-Apr-20	70	
87	Generator 150 KVA	23-Apr-20	70	
88	Generator 150 KVA	23-Apr-20	70	
89	Generator 62,5	24-Apr-20	70	
90	Generator 62,5	24-Apr-20	35	
91	Generator 15	24-Apr-20	15	
92	Crane 300T	24-Apr-20	350	
93	Forklift	24-Apr-20	105	
94	Generator 150 KVA	24-Apr-20	105	
95	Generator 150 KVA	25-Apr-20	105	
96	Generator 62,5	25-Apr-20	70	
97	Forklift	25-Apr-20	70	
98	Compressor	25-Apr-20	70	
99	Crane 50T	25-Apr-20	70	
100	Generator 150 KVA	25-Apr-20	70	
101	Generator 150 KVA	25-Apr-20	70	
102	Generator 62,5	25-Apr-20	35	

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Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
103	Generator 16	25-Apr-20	20	
104	Genset	26-Apr-20	70	
105	Generator 62,5	26-Apr-20	35	
106	Generator 62,5	26-Apr-20	35	
107	Generator 16	26-Apr-20	20	
108	Forklip	26-Apr-20	70	
109	Pick Up RM 9199 PF	27-Apr-20	15	
110	Generator 62,5	27-Apr-20	70	
111	Generator 150 KVA	27-Apr-20	70	
112	Compresor	27-Apr-20	70	
113	Forklip	27-Apr-20	70	
114	Compresor	27-Apr-20	35	
115	Generator 62,5	28-Apr-20	35	
116	Crane 50T	28-Apr-20	70	
117	Forklip	28-Apr-20	105	
118	Generator 62,5	28-Apr-20	35	
119	Generator 150 KVA	28-Apr-20	70	
120	Generator 62,5	28-Apr-20	35	
121	Generator 150 KVA	28-Apr-20	70	
122	Generator 150 KVA	28-Apr-20	70	
123	Generator 62,5	29-Apr-20	70	
124	Crane 50T	29-Apr-20	70	
125	Forklip	29-Apr-20	70	
126	Crane 55T	29-Apr-20	200	
127	Crane 70T	29-Apr-20	105	
128	Crane 300T	29-Apr-20	300	
129	Crane 500T	29-Apr-20	400	
130	Genset	29-Apr-20	70	
131	Generator 150 KVA	29-Apr-20	70	
132	Forklip	30-Apr-20	70	
133	Generator 150 KVA	30-Apr-20	70	
134	Generator 150 KVA	30-Apr-20	70	
135	Generator 62,5	30-Apr-20	35	
136	Generator 62,5	30-Apr-20	70	
137	Generator 150 KVA	30-Apr-20	70	
138	Forklip	30-Apr-20	35	
	TOTAL USAGE IN APRIL		10.130	
139	Generator 62,5	3-May-20	70	
140	Crane 70T	3-May-20	105	
141	Compresor	3-May-20	70	
142	Generator	3-May-20	105	
143	Generator 62,5	3-May-20	35	
144	Generator 150 KVA	3-May-20	35	
145	Crane 50T	4-May-20	70	
146	Generator 62,5	4-May-20	35	
147	Compresor	4-May-20	70	
148	Generator 150 KVA	4-May-20	70	
149	Generator 150 KVA	4-May-20	35	
150	Generator 62,5	4-May-20	35	
151	Generator 150 KVA	4-May-20	70	

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Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
152	Genset	4 May 20	35	
153	Compressor	5-May-20	70	
154	Trailer 40T	5-May-20	140	
155	Generator 62,5	5-May 20	35	
156	Crane 50T	5-May 20	70	
157	Forklift	5-May-20	35	
158	Generator 150 KVA	5-May-20	105	
159	Generator 150 KVA	5 May 20	70	
160	Generator 150 KVA	5 May 20	70	
161	Generator 62,5	5-May-20	70	
162	Genset	5-May-20	70	
163	Generator 62,5	6-May-20	70	
164	Forklift	6-May-20	70	
165	Compressor	6-May-20	70	
166	Genset	6-May-20	70	
167	Generator 150 KVA	6-May-20	70	
168	Generator 62,5	6-May 20	35	
169	Crane 70T	6-May-20	70	
170	Genset	7-May-20	70	
171	Crane 50T	7 May 20	70	
172	Generator 150 KVA	7-May 20	70	
173	Generator 150 KVA	7-May-20	105	
174	Generator 62,5	7-May-20	70	
175	Generator 62,5	7-May 20	35	
176	Generator 150 KVA	7-May-20	70	
177	Crane 70T	7-May-20	70	
178	Crane 55'	8-May-20	200	
179	Crane 300T	8-May 20	300	
180	Crane 500T	8-May-20	400	
181	Generator 150 KVA	8-May-20	70	
182	Generator 150 KVA	8-May-20	105	
183	Compressor	8-May 20	35	
184	Generator 62,5	8-May-20	35	
185	Generator 16	9-May-20	35	
186	Genset	9-May-20	70	
187	Generator 150 KVA	9-May 20	105	
188	Generator 150 KVA	9-May-20	70	
189	Generator 62,5	9-May-20	70	
190	Generator 150 KVA	9 May-20	70	
191	Crane 50T	9-May 20	70	
192	Generator 150 KVA	10-May-20	70	
193	Generator 150 KVA	10-May-20	70	
194	Generator 62,5	10-May-20	35	
195	Crane 70T	10-May 20	105	
196	Generator 150 KVA	10-May-20	70	
197	Genset	10-May-20	70	
198	Compressor	10-May-20	70	
199	Compressor	11-May 20	70	
200	Generator 150 KVA	11-May-20	70	
201	Generator 150 KVA	11-May-20	70	
202	Generator 100 KVA	11-May 20	70	

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Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
203	Forklip	11-May-20	35	
204	Generator 150 KVA	11-May-20	70	
205	Generator 62,5	11-May-20	70	
206	Crane 50	11-May-20	70	
207	Generator 62,5	12-May-20	70	
208	Crane 50	12-May-20	70	
209	Crane 70t	12-May-20	140	
210	Generator 150 KVA	12-May-20	70	
211	Generator 150 KVA	12-May-20	70	
212	Generator 100 KVA	12-May-20	35	
213	Compresor	12-May-20	70	
214	Compresor	12-May-20	70	
215	Generator 16	12-May-20	35	
216	Generator 150 KVA	12-May-20	70	
217	Traller 40t	12-May-20	140	
218	Generator 62,5	13-May-20	70	
219	Generator 150 KVA	13-May-20	70	
220	Compresor	13-May-20	70	
221	Generator 150 KVA	13-May-20	70	
222	Generator 150 KVA	13-May-20	70	
223	Generator 100 KVA	13-May-20	35	
224	Generator 16	13-May-20	20	
225	Crane 500t	13-May-20	400	
226	Crane 300T	13-May-20	300	
227	Compresor	14-May-20	70	
228	Generator 150 KVA	14-May-20	70	
229	Generator 150 KVA	14-May-20	70	
230	Generator 100 KVA	14-May-20	35	
231	Generator 150 KVA	14-May-20	70	
232	Generator 62,5	14-May-20	70	
233	Crane 70T	14-May-20	140	
234	Crane 50T	14-May-20	70	
235	Forklip	14-May-20	35	
236	Genset	14-May-20	70	
237	Compresor	15-May-20	70	
238	Generator 62,5	15-May-20	35	
239	Generator 150 KVA	15-May-20	70	
240	Generator 150 KVA	15-May-20	70	
241	Generator 150 KVA	15-May-20	70	
242	Generator 100 KVA	15-May-20	35	
243	Generator 16	15-May-20	20	
244	Crane 50t	15-May-20	70	
245	Generator 150 KVA	16-May-20	70	
246	Generator 150 KVA	16-May-20	70	
247	Generator 100 KVA	16-May-20	35	
248	Generator 150 KVA	16-May-20	70	
249	Generator 62,5 KVA	16-May-20	70	
250	Generator 16	16-May-20	20	
251	Genset	16-May-20	70	
252	Compresor	16-May-20	70	
253	Compresor 390 S	16-May-20	70	

PEMAKAIAN SOLAR

PT. INDO TEHNIK INDUSTRI



Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
254	Crane 100T	16-May-20	105	
255	Generator 62,5	17-May-20	35	
256	Generator 150 KVA	17-May-20	70	
257	Cleaning Material	17-May-20	10	
258	Crane 70T	17-May-20	140	
259	Comprasor	17-May-20	70	
260	Generator 100 KVA	17-May-20	35	
261	Generator 150 KVA	17-May-20	105	
262	Generator 150 KVA	17-May-20	35	
263	Generator 16	17-May-20	15	
264	Crane 500I	18-May-20	400	
265	Crane 300T	18-May-20	300	
266	Generator 62,5	18-May-20	70	
267	Generator 150 KVA	18-May-20	70	
268	Generator 150 KVA	18-May-20	70	
269	Generator 150 KVA	18-May-20	70	
270	Generator 100 KVA	18-May-20	35	
271	Comprasor	18-May-20	70	
272	Crane 50I	18-May-20	70	
273	Crane 25T	18-May-20	105	
274	Generator 16	18-May-20	20	
275	Fordilp	19-May-20	35	
276	Generator 150 KVA	19-May-20	105	
277	Generator 150 KVA	19-May-20	70	
278	Generator 100 KVA	19-May-20	35	
279	Comprasor	19-May-20	105	
280	Generator 150 KVA	19-May-20	70	
281	Generator 62,5	19-May-20	70	
282	Genset	19-May-20	105	
283	Boomtruck 15I	19-May-20	70	
284	Generator 16	19-May-20	15	
285	Comprasor	19-May-20	105	
286	Generator 150 KVA	19-May-20	70	
287	Comprasor	20-May-20	105	
288	Generator 150 KVA	20-May-20	105	
289	Generator 150 KVA	20-May-20	70	
290	Generator 100 KVA	20-May-20	35	
291	Traller 40I	20-May-20	140	
292	Crane 70T	20-May-20	140	
293	Crane 50	20-May-20	70	
294	Crane 25T	20-May-20	105	
295	Generator 150 KVA	20-May-20	70	
296	Generator 62,5	20-May-20	70	
297	Comprasor	20-May-20	105	
298	Generator 150 KVA	21-May-20	70	
299	Generator 150 KVA	21-May-20	70	
300	Generator 100 KVA	21-May-20	35	
301	Comprasor	21-May-20	35	
302	Boomtruck 15T	21-May-20	70	
303	Comprasor	21-May-20	70	
304	Genset	21-May-20	70	

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Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
305	Generator 62,5	21-May-20	35	
306	Vibro	21-May-20	105	
307	Forklip	21-May-20	70	
308	Generator 150 KVA	21-May-20	70	
309	Generator 16	21-May-20	15	
310	Generator 150 KVA	22-May-20	70	
311	Generator 150 KVA	22-May-20	140	
312	Generator 100 KVA	22-May-20	35	
313	Compressor	22-May-20	70	
314	Crane 50T	22-May-20	70	
315	Crane 75 & Generator	22-May-20	105	
316	Compressor	22-May-20	70	
317	Boomtruck 15T	22-May-20	70	
318	Generator 150 KVA	22-May-20	70	
319	Generator 62,5	22-May-20	70	
320	Vibro	22-May-20	105	
321	Generator 16	22-May-20	15	
322	Generator 150 KVA	23-May-20	35	
323	Generator 100 KVA	23-May-20	35	
324	Generator 16	23-May-20	15	
325	Generator 62,5	23-May-20	35	
326	Generator 150 KVA	23-May-20	70	
327	Crane 70T	23-May-20	105	
328	Generator 150 KVA	24-May-20	105	
329	Compressor	24-May-20	70	
330	Boomtruck 15T	26-May-20	70	
331	Crane 50T	26-May-20	70	
332	Generator 150 KVA	26-May-20	70	
333	Generator 62,5	26-May-20	70	
334	Generator	26-May-20	70	
335	Compressor	26-May-20	105	
336	Generator 100 KVA	26-May-20	70	
337	Vibro	26-May-20	105	
338	Generator 150 KVA	26-May-20	70	
339	Generator 150 KVA	26-May-20	70	
340	Compressor	26-May-20	35	
341	Generator 62,5	27-May-20	70	
342	Generator 150 KVA	27-May-20	70	
343	Compressor	27-May-20	70	
344	Crane 70T	27-May-20	105	
345	Crane 300T	27-May-20	300	
346	Crane 500T	27-May-20	400	
347	Cleaning Booth	27-May-20	10	
348	Crane 25T	27-May-20	70	
349	Boomtruck 15T	27-May-20	70	
350	Generator 150 KVA	27-May-20	105	
351	Generator 150 KVA	27-May-20	70	
352	Generator 100 KVA	27-May-20	70	
353	Compressor	27-May-20	70	
354	Generator 150 KVA	28-May-20	140	
355	Generator 150 KVA	28-May-20	105	

PEMAKAIAN SOLAR

PT. INDO TECHNIK INDUSTRI



Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
356	Generator 100 KVA	28-May-20	70	
357	Generator 150 KVA	28-May-20	70	
358	Generator 62,5	28-May-20	70	
359	Crane 50	28-May-20	105	
360	Trailer 40T	28-May-20	140	
361	Fork lip	28-May-20	70	
362	Compressor	28-May-20	105	
363	Compressor	28-May-20	35	
364	Boomtruck 31	29-May-20	70	
365	Generator 150 KVA	29-May-20	70	
366	Generator 62,5	29-May-20	70	
367	Generator 150 KVA	29-May-20	140	
368	Generator 150 KVA	29-May-20	70	
369	Generator 100 KVA	29-May-20	70	
370	Crane 70T	29-May-20	140	
371	Compressor	29-May-20	70	
372	Vibro	29-May-20	105	
373	Gense	29-May-20	105	
374	Roomtruck 15T	30-May-20	70	
375	Generator 150 KVA	30-May-20	70	
376	Generator 62,5	30-May-20	70	
377	Crane 50	30-May-20	70	
378	Generator 62,5	30-May-20	35	
379	Compressor	30-May-20	70	
380	Forklip	30-May-20	35	
381	Generator 150 KVA	30-May-20	105	
382	Generator 150 KVA	30-May-20	70	
383	Generator 100 KVA	30-May-20	35	
384	Compressor	30-May-20	35	
385	Vibro	31-May-20	105	
386	Genset	31-May-20	105	
387	Generator 150 KVA	31-May-20	70	
388	Generator 62,5 KVA	31-May-20	35	
389	Generator 62,5 KVA	31-May-20	35	
390	Generator 150 KVA	31-May-20	70	
391	Generator 150 KVA	31-May-20	70	
392	Generator 100 KVA	31-May-20	35	
TOTAL USAGE IN MAY			20.010	
393	Generator 150 KVA	1-Jun-20	70	
394	Generator 150 KVA	1-Jun-20	70	
395	Generator 150 KVA	1-Jun-20	70	
396	Generator 100 KVA	1-Jun-20	35	
397	Generator 62,5	1-Jun-20	70	
398	Generator 62,5	1-Jun-20	35	
399	Compressor	1-Jun-20	35	
400	Roomtruck 15T	1-Jun-20	70	
401	Crane 55T	1-Jun-20	175	
402	Crane 50T	1-Jun-20	105	
403	Crane 70T	1-Jun-20	105	
404	Generator 150 KVA	2-Jun-20	105	

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Riau GPPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel [Litar]		REMARK
		Tanggal	Keluar	
405	Generator 150 KVA	2 Jun 20	140	
406	Generator 150 KVA	2-Jun-20	70	
407	Generator 100 KVA	2-Jun-20	70	
408	Generator 62,5 KVA	2-Jun-20	70	
409	Compresor	2 Jun 20	70	
410	Crane 300t	2-Jun-20	300	
411	Trailer 40T	2-Jun-20	140	
412	Generator	2-Jun-20	70	
413	Crane 25T	2 Jun 20	70	
414	Generator 62,5 KVA	2-Jun-20	35	
415	Generator 62,5 KVA	3-Jun-20	70	
416	Generator 150 KVA	3-Jun-20	70	
417	Generator 150 KVA	3 Jun 20	140	
418	Generator 150 KVA	3-Jun-20	105	
419	Generator 100 KVA	3-Jun-20	70	
420	Compresor	3-Jun-20	70	
421	Crane 50T	3 Jun 20	70	
422	Boomtruck 15t	3-Jun-20	70	
423	Forklip	3-Jun-20	70	
424	Genset	3-Jun-20	70	
425	Vibro	3 Jun 20	105	
426	Generator 150 KVA	4-Jun-20	140	
427	Generator 150 KVA	4-Jun-20	105	
428	Generator 150 KVA	4 Jun 20	70	
429	Generator 100 KVA	4-Jun-20	70	
430	Generator 62,5 KVA	4-Jun-20	70	
431	Forklip	4-Jun-20	70	
432	Crane 70T	4 Jun 20	140	
433	Compresor	4-Jun-20	105	
434	Genset	4-Jun-20	70	
435	Boomtruck 15T	5-Jun-20	70	
436	Generator 150 KVA	5 Jun 20	105	
437	Generator 150 KVA	5-Jun-20	105	
438	Generator 100 KVA	5-Jun-20	70	
439	Generator 150 KVA	5-Jun-20	140	
440	Generator 62,5 KVA	5 Jun 20	70	
441	Compresor	5-Jun-20	35	
442	Genset	5-Jun-20	105	
443	Crane 50T	5-Jun-20	105	
444	Crane 55T	5 Jun 20	175	
445	Crane 300t	5-Jun-20	305	
446	Crane 500T	5-Jun-20	500	
447	Generator 150 KVA	6-Jun-20	70	
448	Generator 62,5 KVA	6 Jun 20	70	
449	Compresor	6-Jun-20	105	
450	Genset	6-Jun-20	105	
451	Generator 150 KVA	6-Jun-20	70	
452	Generator 150 KVA	6 Jun 20	70	
453	Generator 100 KVA	6-Jun-20	35	
454	Compresor	6-Jun-20	35	
455	Crane 50	7-Jun-20	70	

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PT. INDO TEHNIK INDUSTRI



Riau GPPP [275 MW] IPP Project

No.	Item	Control Sheet Fuel [Litar]		REMARK
		Tanggal	Keluar	
456	Generator 150 KVA	7 Jun 20	70	
457	Generator 150 KVA	7-Jun-20	35	
458	Compresor	7-Jun-20	35	
459	Vibro	7-Jun-20	105	
460	Forklip	7 Jun 20	70	
461	Crane 70t	7-Jun-20	140	
462	Generator 62,5	7-Jun-20	70	
463	Boomtruck 15T	7-Jun-20	70	
464	Generator 150 KVA	8 Jun 20	140	
465	Generator 150 KVA	8-Jun-20	140	
466	Generator 100 KVA	8-Jun-20	70	
467	Compresor	8-Jun-20	70	
468	Generator 150 KVA	8 Jun 20	70	
469	Generator 62,5 KVA	8-Jun-20	70	
470	Vibro	8-Jun-20	105	
471	Crane 70T	8-Jun-20	105	
477	Crane 100T	8 Jun 20	210	
473	Crane 300t	8-Jun-20	300	
474	Crane 500T	8-Jun-20	400	
475	Genset	8-Jun-20	70	
476	Generator 150 KVA	9 Jun 20	105	
477	Generator 62,5 KVA	9-Jun-20	70	
478	Crane 55T	9-Jun-20	210	
479	Generator 150 KVA	9 Jun 20	140	
480	Generator 150 KVA	9-Jun-20	35	
481	Generator 100 KVA	9-Jun-20	105	
482	Compresor	9-Jun-20	35	
483	Boomtruck 15T	9 Jun 20	70	
484	Genset	9-Jun-20	105	
485	Crane 50T	9-Jun-20	105	
486	Generator 150 KVA	10-Jun-20	105	
487	Generator 62,5 KVA	10 Jun 20	70	
488	Generator 150 KVA	10-Jun-20	70	
489	Generator 150 KVA	10-Jun-20	140	
490	Generator 100 KVA	10-Jun-20	70	
491	Compresor	10 Jun 20	70	
492	Genset	10-Jun-20	140	
493	Trailer 40T	10-Jun-20	140	
494	Crane 50T	11-Jun-20	70	
495	Crane 70T	11 Jun 20	140	
496	Generator 150 KVA	11-Jun-20	70	
497	Generator 62,5 KVA	11-Jun-20	35	
498	Generator 150 KVA	11-Jun-20	105	
499	Generator 150 KVA	11 Jun 20	70	
500	Generator 100 KVA	11-Jun-20	105	
501	Forklip	11-Jun-20	70	
502	Boomtruck 15T	11-Jun-20	70	
503	Generator 150 KVA	12 Jun 20	175	
504	Generator 150 KVA	12-Jun-20	140	
505	Generator 100 KVA	12-Jun-20	105	
506	Generator 150 KVA	12-Jun-20	105	

PEMAKAIAN SOLAR

PT. INDO TEHNIK INDUSTRI



Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
507	Generator 62,5 KVA	12 Jun 20	70	
508	Crane 100t	12-Jun-20	175	
509	Genset	12-Jun-20	105	
510	Generator 150 KVA	13-Jun-20	70	
511	Generator 62,5 KVA	13 Jun 20	35	
512	Boomtruck 15t	13-Jun-20	70	
513	Crane 50T	13-Jun-20	105	
514	Crane 70T	13-Jun-20	140	
515	Crane 300T	13 Jun 20	300	
516	Crane 500t	13-Jun-20	400	
517	Forklift	13-Jun-20	35	
518	Compresor	13-Jun-20	70	
519	Genset	13 Jun 20		
520	Genset	13-Jun-20	105	
521	Generator 150 KVA	13-Jun-20	105	
522	Generator 100 KVA	13-Jun-20	35	
523	Generator 150 KVA	14 Jun 20	105	
524	Generator 150 KVA	14-Jun-20	70	
525	Generator 62,5 KVA	14-Jun-20	70	
526	Crane 55T	14-Jun-20	175	
527	Crane 100T	14 Jun 20	175	
528	Generator 150 KVA	14-Jun-20	105	
529	Generator 100 KVA	14-Jun-20	35	
530	Pick Up	14 Jun 20	35	
531	Boomtruck 15t	15-Jun-20	70	
532	Generator 150 KVA	15-Jun-20	140	
533	Generator 62,5 KVA	15-Jun-20	70	
534	Generator	15 Jun 20	105	
535	Generator 150 KVA	15-Jun-20	70	
536	Generator 100 KVA	15-Jun-20	70	
537	Trailer 40T	15-Jun-20	35	
538	Compresor	15 Jun 20	35	
539	Trailer 40t	16-Jun-20	140	
540	Crane 100T	16-Jun-20	175	
541	Boomtruck 15T	16-Jun-20	70	
542	Crane 50T	16 Jun 20	105	
543	Compresor	16-Jun-20	70	
544	Crane 70T	16-Jun-20	140	
545	Genset	16-Jun-20	105	
546	Generator 150 KVA	16 Jun 20	105	
547	Generator 62,5 KVA	16-Jun-20	70	
548	Generator 150 KVA	16-Jun-20	70	
549	Generator 100 KVA	16-Jun-20	70	
550	Forklift	16 Jun 20	70	
551	Generator 150 KVA	17-Jun-20	70	
552	Generator 100 KVA	17-Jun-20	35	
553	Crane 300T	17-Jun-20	315	
554	Genset	17 Jun 20	105	
555	Compresor	17-Jun-20	35	
556	Generator 150 KVA	17-Jun-20	105	
557	Generator 62,5 KVA	17-Jun-20	70	

PEMAKAIAN SOLAR

PT.INDO TECHNIK INDUSTRI



Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
558	Crane 50T	17-Jun-20	105	
559	Compresor	18-Jun-20	70	
560	Genset	18-Jun-20	70	
561	Boomtruck 15t	18-Jun-20	70	
562	Generator 150 KVA	18-Jun-20	70	
563	Generator 62,5 KVA	18-Jun-20	70	
564	Generator 150 KVA	18-Jun-20	70	
565	Generator 150 KVA	18-Jun-20	70	
566	Generator 100 KVA	18-Jun-20	70	
567	Generator 150 KVA	19-Jun-20	105	
568	Generator 62,5 KVA	19-Jun-20	70	
569	Crane 55	19-Jun-20	175	
570	Cleaning Booth	19-Jun-20	10	
571	Genset	19-Jun-20	105	
572	Forklip	19-Jun-20	35	
573	Generator 150 KVA	19-Jun-20	105	
574	Generator 150 KVA	19-Jun-20	140	
575	Generator 100 KVA	19-Jun-20	70	
576	Generator 150 KVA	20-Jun-20	70	
577	Generator 150 KVA	20-Jun-20	70	
578	Generator 100 KVA	20-Jun-20	70	
579	Boomtruck 15T	20-Jun-20	70	
580	Crane 50T	20-Jun-20	105	
581	Generator 150 KVA	20-Jun-20	70	
582	Generator 62,5 KVA	20-Jun-20	70	
583	Crane 70T	20-Jun-20	140	
584	Compresor	20-Jun-20	70	
585	Genset	20-Jun-20	70	
586	Crane 300T	21-Jun-20	315	
587	Generator 62,5	21-Jun-20	35	
588	Generator 150 KVA	21-Jun-20	70	
589	Generator 150 KVA	21-Jun-20	70	
590	Genset	21-Jun-20	105	
591	Crane 50T	22-Jun-20	70	
592	Generator 150 KVA	22-Jun-20	105	
593	Generator 62,5 KVA	22-Jun-20	70	
594	Generator 150 KVA	22-Jun-20	140	
595	Generator 150 KVA	22-Jun-20	105	
596	Generator 100 KVA	22-Jun-20	105	
597	Genset	22-Jun-20	105	
598	Forklip	22-Jun-20	35	
599	Crane 70T	22-Jun-20	140	
600	Crane 55T	23-Jun-20	140	
601	Generator 150 KVA	23-Jun-20	140	
602	Generator 150 KVA	23-Jun-20	140	
603	Generator 100 KVA	23-Jun-20	35	
604	Boomtruck 15t	23-Jun-20	70	
605	Trailer 40T	23-Jun-20	140	
606	Genset	23-Jun-20	70	
607	Compresor	23-Jun-20	105	
608	Generator 150 KVA	23-Jun-20	70	

PEMAKAIAN SOLAR

PT. INDO TEKNIK INDUSTRI



Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
609	Generator 62,5 KVA	23-Jun-20	70	
610	Forklift	23-Jun-20	70	
611	Crane 50T	24-Jun-20	105	
612	Generator 150 KVA	24-Jun-20	105	
613	Generator 62,5 KVA	24-Jun-20	70	
614	Genset	24-Jun-20	105	
615	Compressor	24-Jun-20	105	
616	Boomtruck 15t	24-Jun-20	70	
617	Generator 150 KVA	24-Jun-20	105	
618	Generator 150 KVA	24-Jun-20	105	
619	Generator 100 KVA	24-Jun-20	70	
620	Crane 300t	24-Jun-20	315	
621	Crane 70T	25-Jun-20	140	
622	Generator 150 KVA	25-Jun-20	70	
623	Generator 62,5 KVA	25-Jun-20	70	
624	Compressor	25-Jun-20	105	
625	Generator 150 KVA	25-Jun-20	70	
626	Generator 150 KVA	25-Jun-20	70	
627	Generator 100 KVA	25-Jun-20	35	
628	Forklift	25-Jun-20	35	
629	Generator 150 KVA	26-Jun-20	105	
630	Generator 150 KVA	26-Jun-20	105	
631	Generator 100 KVA	26-Jun-20	70	
632	Crane 50T	26-Jun-20	105	
633	Generator 150 KVA	26-Jun-20	105	
634	Generator 62,5 KVA	26-Jun-20	70	
635	Boomtruck 15t	26-Jun-20	70	
636	Generator 16 KVA	26-Jun-20	10	
637	Genset	26-Jun-20	70	
638	Compressor	26-Jun-20	70	
639	Forklift	27-Jun-20	70	
640	Generator 150 KVA	27-Jun-20	70	
641	Generator 62,5 KVA	27-Jun-20	70	
642	Crane 70T	27-Jun-20	140	
643	Genset	27-Jun-20	70	
644	Compressor	27-Jun-20	70	
645	Generator 150 KVA	27-Jun-20	70	
646	Generator 150 KVA	27-Jun-20	70	
647	Generator 100 KVA	27-Jun-20	35	
648	Generator 150 KVA	28-Jun-20	70	
649	Generator 62,5 KVA	28-Jun-20	70	
650	Boomtruck 15T	28-Jun-20	70	
651	Crane 50t	28-Jun-20	70	
652	Generator 150 KVA	28-Jun-20	70	
653	Generator 150 KVA	28-Jun-20	70	
654	Generator 100 KVA	28-Jun-20	35	
655	Genset	28-Jun-20	70	
656	Compressor	28-Jun-20	70	
657	Generator 16 KVA	29-Jun-20	10	
658	Generator 150 KVA	29-Jun-20	70	
659	Generator 62,5 KVA	29-Jun-20	35	

PEMAKAIAN SOLAR

PT. INDO TEHNIK INDUSTRI



Riau GFPP (275 MW) IPP Project

No.	Item	Control Sheet Fuel (Liter)		REMARK
		Tanggal	Keluar	
660	Generator 150 KVA	29 Jun 20	105	
661	Generator 150 KVA	29-Jun-20	105	
662	Generator 100 KVA	29-Jun-20	70	
663	Genset	29-Jun-20	105	
664	Compresor	29 Jun 20	105	
665	Crane 300t	29-Jun-20	315	
666	Crane 55T	29-Jun-20	175	
667	Crane 90T	29-Jun-20	170	
668	Crane 100T	29 Jun 20	175	
669	Forklift	29-Jun-20	35	
670	Boomtruck 15T	30-Jun-20	70	
671	Crane 50T	30-Jun-20	105	
672	Crane 70T	30 Jun 20	140	
673	Trailer 40t	30-Jun-20	140	
674	Generator 150 KVA	30-Jun-20	70	
675	Generator 150 KVA	30-Jun-20	70	
676	Generator 100 KVA	30 Jun 20	35	
677	Generator 150 KVA	30-Jun-20	70	
678	Generator 62,5 KVA	30-Jun-20	35	
679	Compresor	30-Jun-20	70	
680	Genset	30 Jun 20	70	
TOTAL USAGE IN JUNE			27.590	
TOTAL USAGE APRIL-JUNE				57.730

WASTE CONTROL

PT. INDO TEHNIK INDUSTRI



PT. INDO TEHNIK INDUSTRI

Riau GFPP (275 MW) IPP Project

NO.	DATE	LOCATION	WASTE	
			ORGANIC (Kg)	ANORGANIC (Kg)
1	01-Apr-20	Office, Workshop, Site	7,80	14,70
2	02-Apr-20	Office, Workshop, Site	7,95	15,80
3	03-Apr-20	Office, Workshop, Site	7,00	16,20
4	04-Apr-20	Office, Workshop, Site	7,40	15,30
5	05-Apr-20	Office, Workshop, Site	6,20	11,80
6	06-Apr-20	Office, Workshop, Site	8,20	15,80
7	07-Apr-20	Office, Workshop, Site	8,55	16,30
8	08-Apr-20	Office, Workshop, Site	9,70	17,30
9	09-Apr-20	Office, Workshop, Site	8,80	17,20
10	10-Apr-20	Office, Workshop, Site	9,30	18,30
11	11-Apr-20	Office, Workshop, Site	9,20	17,90
12	12-Apr-20	Office, Workshop, Site	6,90	12,40
13	13-Apr-20	Office, Workshop, Site	10,20	18,20
14	14-Apr-20	Office, Workshop, Site	10,40	19,40
15	15-Apr-20	Office, Workshop, Site	10,40	19,80
16	16-Apr-20	Office, Workshop, Site	11,50	21,60
17	17-Apr-20	Office, Workshop, Site	11,90	23,40
18	18-Apr-20	Office, Workshop, Site	11,40	23,90
19	19-Apr-20	Office, Workshop, Site	7,80	16,70
20	20-Apr-20	Office, Workshop, Site	14,00	25,30
21	21-Apr-20	Office, Workshop, Site	18,00	34,50
22	22-Apr-20	Office, Workshop, Site	18,60	35,20
23	23-Apr-20	Office, Workshop, Site	21,30	38,70
24	24-Apr-20	Office, Workshop, Site	9,90	27,30
25	25-Apr-20	Office, Workshop, Site	11,30	29,60
26	26-Apr-20	Office, Workshop, Site	9,80	28,80
27	27-Apr-20	Office, Workshop, Site	11,70	29,80
28	28-Apr-20	Office, Workshop, Site	12,30	28,70
29	29-Apr-20	Office, Workshop, Site	12,20	29,90
30	30-Apr-20	Office, Workshop, Site	12,60	31,20
TOTAL			313,10	671,00

WASTE CONTROL

PT. INDO TEHNIK INDUSTRI



PT. INDO TEHNIK INDUSTRI

Riau GFPP (275 MW) IPP Project

NO.	DATE	LOCATION	WASTE	
			ORGANIC (Kg)	ANORGANIC (Kg)
1	01-May-20	Office, Workshop, Site	12,20	29,60
2	02-May-20	Office, Workshop, Site	12,60	30,50
3	03-May-20	Office, Workshop, Site	12,70	31,40
4	04-May-20	Office, Workshop, Site	13,10	31,80
5	05-May-20	Office, Workshop, Site	13,60	32,20
6	06-May-20	Office, Workshop, Site	13,90	32,70
7	07-May-20	Office, Workshop, Site	14,10	33,10
8	08-May-20	Office, Workshop, Site	14,40	33,50
9	09-May-20	Office, Workshop, Site	14,90	33,90
10	10-May-20	Office, Workshop, Site	15,20	34,30
11	11-May-20	Office, Workshop, Site	15,50	34,70
12	12-May-20	Office, Workshop, Site	15,60	34,90
13	13-May-20	Office, Workshop, Site	16,30	35,40
14	14-May-20	Office, Workshop, Site	16,50	35,50
15	15-May-20	Office, Workshop, Site	16,80	35,90
16	16-May-20	Office, Workshop, Site	17,10	36,80
17	17-May-20	Office, Workshop, Site	17,50	36,90
18	18-May-20	Office, Workshop, Site	17,80	37,30
19	19-May-20	Office, Workshop, Site	17,90	37,60
20	20-May-20	Office, Workshop, Site	18,20	37,80
21	21-May-20	Office, Workshop, Site	18,50	38,00
22	22-May-20	Office, Workshop, Site	18,60	38,40
23	23-May-20	Office, Workshop, Site	20,30	38,70
24	24-May-20	Office, Workshop, Site	3,00	5,20
25	25-May-20	Office, Workshop, Site	3,20	6,40
26	26-May-20	Office, Workshop, Site	19,80	35,60
27	27-May-20	Office, Workshop, Site	25,70	42,40
28	28-May-20	Office, Workshop, Site	27,80	44,50
29	29-May-20	Office, Workshop, Site	29,20	44,30
30	30-May-20	Office, Workshop, Site	29,80	45,60
31	31-May-20	Office, Workshop, Site	30,50	46,80
TOTAL			532,30	1065,30

WASTE CONTROL

PT. INDO TEHNIK INDUSTRI



Riau GFPP (275 MW) IPP Project

NO.	DATE	LOCATION	WASTE	
			ORGANIC (Kg)	ANORGANIC (Kg)
1	01-Jun-20	Office, Workshop, Site	32,90	48,60
2	02-Jun-20	Office, Workshop, Site	33,40	50,80
3	03-Jun-20	Office, Workshop, Site	35,80	54,60
4	04-Jun-20	Office, Workshop, Site	36,40	55,80
5	05-Jun-20	Office, Workshop, Site	38,30	70,80
6	06-Jun-20	Office, Workshop, Site	38,50	74,40
7	07-Jun-20	Office, Workshop, Site	12,10	33,10
8	08-Jun-20	Office, Workshop, Site	40,30	79,60
9	09-Jun-20	Office, Workshop, Site	40,60	80,40
10	10-Jun-20	Office, Workshop, Site	40,90	83,80
11	11-Jun-20	Office, Workshop, Site	41,20	86,60
12	12-Jun-20	Office, Workshop, Site	43,60	90,30
13	13-Jun-20	Office, Workshop, Site	44,90	92,20
14	14-Jun-20	Office, Workshop, Site	14,50	35,50
15	15-Jun-20	Office, Workshop, Site	41,30	88,70
16	16-Jun-20	Office, Workshop, Site	42,60	89,30
17	17-Jun-20	Office, Workshop, Site	42,80	90,00
18	18-Jun-20	Office, Workshop, Site	43,30	92,10
19	19-Jun-20	Office, Workshop, Site	43,80	94,40
20	20-Jun-20	Office, Workshop, Site	44,20	96,70
21	21-Jun-20	Office, Workshop, Site	15,70	38,00
22	22-Jun-20	Office, Workshop, Site	43,60	90,40
23	23-Jun-20	Office, Workshop, Site	44,20	89,20
24	24-Jun-20	Office, Workshop, Site	45,70	91,20
25	25-Jun-20	Office, Workshop, Site	44,40	90,80
26	26-Jun-20	Office, Workshop, Site	43,40	88,30
27	27-Jun-20	Office, Workshop, Site	43,90	91,50
28	28-Jun-20	Office, Workshop, Site	15,40	39,30
29	29-Jun-20	Office, Workshop, Site	49,40	95,40
30	30-Jun-20	Office, Workshop, Site	47,80	96,70
TOTAL			1144,90	2298,50

PEMAKAIAN AIR

PT. INDO TEHNIK INDUSTRI



Riau GFPP (275 MW) IPP Project

No.	Item	Location	Control Water (Liter)		Remark
			Tanggal	Masuk	
1	Air Bersih	Toilet Manpower	01-Apr-20	1.000	
2	Air Bersih	Toilet Manpower	02-Apr-20	5.000	
3	Air Bersih	Toilet Manpower	04-Apr-20	5.000	
4	Air Bersih	Toilet Manpower	07-Apr-20	5.000	
5	Air Bersih	Toilet Manpower	09-Apr-20	5.000	
6	Air Bersih	Toilet Manpower	11-Apr-20	5.000	
7	Air Bersih	Toilet Manpower	13-Apr-20	5.000	
8	Air Bersih	Toilet Manpower	15-Apr-20	5.000	
9	Air Bersih	Toilet Manpower	17-Apr-20	5.000	
10	Air Bersih	Toilet Manpower	20-Apr-20	5.000	
11	Air Bersih	Toilet Manpower	21-Apr-20	2.500	
12	Air Bersih	Toilet Manpower	22-Apr-20	5.000	
13	Air Bersih	Toilet Manpower	23-Apr-20	5.000	
14	Air Bersih	Toilet Manpower	24-Apr-20	5.000	
15	Air Bersih	Toilet Manpower	25-Apr-20	5.000	
16	Air Bersih	Toilet Manpower	27-Apr-20	4.000	
17	Air Bersih	Toilet Manpower	28-Apr-20	4.000	
18	Air Bersih	Toilet Manpower	29-Apr-20	4.000	
19	Air Bersih	Toilet Manpower	30-Apr-20	4.000	
TOTAL USAGE APRIL				84.500	
1	Air Bersih	Toilet Manpower	03-May-20	4.000	
2	Air Bersih	Toilet Manpower	04-May-20	4.000	
3	Air Bersih	Toilet Manpower	05-May-20	4.000	
4	Air Bersih	Toilet Manpower	06-May-20	2.000	
5	Air Bersih	Toilet Manpower	07-May-20	2.000	
6	Air Bersih	Toilet Manpower	08-May-20	4.000	
7	Air Bersih	Toilet Manpower	09-May-20	4.000	
8	Air Bersih	Toilet Manpower	10-May-20	4.000	
9	Air Bersih	Toilet Manpower	11-May-20	4.000	
10	Air Bersih	Toilet Manpower	12-May-20	4.000	
11	Air Bersih	Toilet Manpower	13-May-20	4.000	
12	Air Bersih	Toilet Manpower	14-May-20	4.000	
13	Air Bersih	Toilet Manpower	15-May-20	4.000	
14	Air Bersih	Toilet Manpower	16-May-20	2.500	
15	Air Bersih	Toilet Manpower	17-May-20	4.000	
16	Air Bersih	Toilet Manpower	18-May-20	4.000	
17	Air Bersih	Toilet Manpower	19-May-20	6.000	
18	Air Bersih	Toilet Manpower	20-May-20	4.000	
19	Air Bersih	Toilet Manpower	21-May-20	6.000	
20	Air Bersih	Toilet Manpower	22-May-20	4.000	
21	Air Bersih	Toilet Manpower	23-May-20	4.000	
22	Air Bersih	Toilet Manpower	24-May-20	2.000	
23	Air Bersih	Toilet Manpower	26-May-20	6.000	
24	Air Bersih	Toilet Manpower	27-May-20	4.000	
25	Air Bersih	Toilet Manpower	28-May-20	8.000	
26	Air Bersih	Toilet Manpower	29-May-20	8.000	
27	Air Bersih	Toilet Manpower	30-May-20	6.000	
28	Air Bersih	Toilet Manpower	31-May-20	6.000	
TOTAL USAGE IN MAY				122.500	

PEMAKAIAN AIR

PT. INDO TEHNIK INDUSTRI



Riau GFPP (275 MW) IPP Project

No.	Item	Location	Control Water (Liter)		Remark
			Tanggal	Masuk	
1	Air Bersih	Toilet Manpower	01-Jun-20	8.000	
2	Air Bersih	Toilet Manpower	02-Jun-20	8.000	
3	Air Bersih	Toilet Manpower	03-Jun-20	6.000	
4	Air Bersih	Toilet Manpower	04-Jun-20	6.000	
5	Air Bersih	Toilet Manpower	05-Jun-20	8.000	
6	Air Bersih	Toilet Manpower	06-Jun-20	8.000	
7	Air Bersih	Toilet Manpower	07-Jun-20	6.000	
8	Air Bersih	Toilet Manpower	08-Jun-20	6.000	
9	Air Bersih	Toilet Manpower	09-Jun-20	8.000	
10	Air Bersih	Toilet Manpower	10-Jun-20	6.000	
11	Air Bersih	Toilet Manpower	11-Jun-20	6.000	
12	Air Bersih	Toilet Manpower	12-Jun-20	8.000	
13	Air Bersih	Toilet Manpower	13-Jun-20	8.000	
14	Air Bersih	Toilet Manpower	14-Jun-20	6.000	
15	Air Bersih	Toilet Manpower	15-Jun-20	10.000	
16	Air Bersih	Toilet Manpower	16-Jun-20	8.000	
17	Air Bersih	Toilet Manpower	17-Jun-20	8.000	
18	Air Bersih	Toilet Manpower	18-Jun-20	10.000	
19	Air Bersih	Toilet Manpower	19-Jun-20	8.000	
20	Air Bersih	Toilet Manpower	20-Jun-20	8.000	
21	Air Bersih	Toilet Manpower	21-Jun-20	4.000	
22	Air Bersih	Toilet Manpower	22-Jun-20	8.000	
23	Air Bersih	Toilet Manpower	23-Jun-20	8.000	
24	Air Bersih	Toilet Manpower	24-Jun-20	8.000	
25	Air Bersih	Toilet Manpower	25-Jun-20	8.000	
26	Air Bersih	Toilet Manpower	26-Jun-20	8.000	
27	Air Bersih	Toilet Manpower	27-Jun-20	8.000	
28	Air Bersih	Toilet Manpower	28-Jun-20	6.000	
29	Air Bersih	Toilet Manpower	29-Jun-20	8.000	
TOTAL USAGE IN JUNE				216.000	
TOTAL USAGE APRIL-JUNE					423.000

APPENDIX F
Hazardous Waste Log

LOG BOOK OF HAZARDOUS WASTE

No	Hazardous Waste	Qty	Unit	Issued From			Issuing Date	Accepted By			Date Storage	Third Party			Manifest No.	Location
				Name	Position	Sign		Name	Position	Sign		Name	Contractor	Sign		
1	Used oil Wastes	100	L	Jumartono	Mechanic		15-Jul-18	Ciba	HSE							
2	Used oil Wastes	100	L	Jumartono	Mechanic		26-Sep-18	Ciba	HSE							
3	Used oil Filter	30	pcs	Ismarova	Warehouse		26-Sep-19	Ciba	HSE							
4	Used oil (from air filter)	2	kg	Ismarova	Warehouse		26-Sep-18	Ciba	HSE							
5	Used oil Wastes	100	L	Jumartono	Mechanic		27-Oct-18	Ciba	HSE							
6	Used oil Wastes	10	L	Susanto	Mechanic		27-Oct-18	Ciba	HSE							
7	Used oil Filter	3	pcs	Eusebio	Mechanic		27-Oct-19	Ciba	HSE							
8	Used oil Wastes	38	L	Susanto	Mechanic		28-Nov-19	Ciba	HSE							
9	Used oil Filter	2	pcs	Susanto	Mechanic		28-Nov-19	Ciba	HSE							
10	Used oil Wastes	8	L	Susanto	Mechanic		28-Nov-19	Ciba	HSE							
11	Used oil Wastes	8	L	Eusebio	Mechanic		28-Nov-19	Ciba	HSE							
12	Used oil Filter	2	pcs	Susanto	Mechanic		28-Nov-19	Ciba	HSE							
13	Used oil Filter	2	pcs	Susanto	Mechanic		28-Nov-19	Ciba	HSE							
14	Used oil Wastes	70	L	Susanto	Mechanic		18-Dec-19	Ciba	HSE							
15	Used oil Filter	12	pcs	Eusebio	Mechanic		18-Dec-19	Ciba	HSE							
16	Used oil Wastes	40	L	Susanto	Mechanic		23-Dec-19	Ciba	HSE							
17	Used oil Filter	20	pcs	Susanto	Mechanic		23-Dec-18	Ciba	HSE							
18	Oil combiners	17	pcs	Susanto	Mechanic		11-Jan-20	Ciba	HSE							
19	Accumulators (oil)	1	unit	Ismarova	Warehouse		11-Jan-20	Ciba	HSE							
20	Used oil Wastes	2	L	Susanto	Mechanic		11-Jan-20	Ciba	HSE							
21	Used oil (from air filter)	1	kg	Susanto	Mechanic		11-Jan-20	Ciba	HSE							
22	Oil combiners (oil)	11	pcs	Susanto	Mechanic		14-Jan-20	Ciba	HSE							
23	Used oil Wastes	100	L	Eusebio	Mechanic		14-Jan-20	Ciba	HSE							
24	Used oil Filter	10	unit	Susanto	Mechanic		14-Jan-20	Ciba	HSE							
25	Accumulators (oil)	4	unit	Ismarova	Warehouse		17-Jan-20	Ciba	HSE							

LOG BOOK OF HAZARDOUS WASTE

No	Hazardous Waste	Qty	Unit	Issued From			Issuing Date	Accepted By			Date Storage	Third Party			Manifest No.	Location
				Name	Position	Sign		Name	Position	Sign		Name	Contractor	Sign		
26	Used a Hygroze	40	L	Amrizon	Mechanic		06-Feb-20	Ciba	HSE							
27	Used a Filter	6	Unit	Amrizon	Mechanic		05-Feb-20	Ciba	HSE							
28	Used a Hygroze	10	L	Suzanto	Mechanic		10-Feb-20	Ciba	HSE							
29	Used a Filter	2	unit	Suzanto	Mechanic		10-Feb-20	Ciba	HSE							
30	Used a Hygroze	25	L	Ismarwa	Warehouse		17-Feb-20	Ciba	HSE							
31	Used a Hygroze	25	L	Amrizon	Mechanic		26-Feb-20	Ciba	HSE							
32	Used a Filter	4	unit	Amrizon	Mechanic		20-Feb-20	Ciba	HSE							
33	Used a Hygroze	80	L	Amrizon	Mechanic		05-Mar-20	Ciba	HSE							
34	Used a Filter	12	unit	Amrizon	Mechanic		05-Mar-20	Ciba	HSE							
35	Used a Hygroze	30	L	Amrizon	Mechanic		03-Mar-20	Ciba	HSE							
36	Used a Filter	1	unit	Amrizon	Mechanic		03-Mar-20	Ciba	HSE							
37	Used a Hygroze	25	L	Amrizon	Mechanic		28-Apr-20	Ciba	HSE							
38	Used a Filter	1	unit	Amrizon	Mechanic		26-Apr-20	Ciba	HSE							
39	Used a Hygroze	14	L	Amrizon	Mechanic		26-Apr-20	Ciba	HSE							
40	Used a Hygroze	35	L	Amrizon	Mechanic		29-Apr-20	Ciba	HSE							
41	Used a Filter	5	unit	Amrizon	Mechanic		24-Apr-20	Ciba	HSE							
42	Used a Hygroze	80	L	Amrizon	Mechanic		19-May-20	Ciba	HSE							
43	Used a Filter	10	unit	Amrizon	Mechanic		18-May-20	Ciba	HSE							
44	Used a Hygroze	40	L	Amrizon	Mechanic		21-May-20	Ciba	HSE							
45	Used a Filter	8	unit	Amrizon	Mechanic		20-May-20	Ciba	HSE							
46	Used can (across=boxed)	2	can	Ismarwa	Warehouse		20-May-20	Ciba	HSE							
47	Oil container (big)	8	pcr	Ismarwa	Warehouse		20-May-20	Ciba	HSE							
48	Falm can	7	pcr	Ismarwa	Warehouse		20-May-20	Ciba	HSE							
49	Fire fuel can	5	pcr	Ismarwa	Warehouse		21-May-20	Ciba	HSE							
50	Used a Hygroze	40	L	Amrizon	Mechanic		23-May-20	Ciba	HSE							
51	Used a Filter	0	pcr	Amrizon	Mechanic		27-May-20	Ciba	HSE							
52	Used a Hygroze	20	L	Amrizon	Mechanic		21-May-20	Ciba	HSE							
53	Used a Filter	4	pcr	Amrizon	Mechanic		27-May-20	Ciba	HSE							



**EPC GAS PIPELINE OF 275 MW FOR RIAU GAS FIRED COMBINED CYCLE
POWER PLANT PROJECT**



LOG BOOK OF HAZARDOUS WASTE

No	Hazardous Waste	Qty	Unit	Issued From			Issuing Date	Accepted By			Date Storage	Third Party			Manifest No.	Location
				Name	Position	Sign		Name	Position	Sign		Name	Contractor	Sign		
53	Jard Oil Filter	40	L	Amirzae	Mechanic		12-Jun-20	Giba	ISEE							
54	Jard oil filter	5	pcs	Amirzae	Mechanic		12-Jun-20	Giba	ISEE							
55	Jard oil filter	40	L	Amirzae	Mechanic		15-Jun-20	Giba	ISEE							
56	Jard oil filter	5	pcs	Amirzae	Mechanic		15-Jun-20	Giba	ISEE							

Update :

15-Jun-20

Prepared by

Approved By

Chris Ramadani-Sepoyana
Environment Officer

Julia Diruba
EPC Site Manager

Neraca Limbah

No.	Hazardous Waste	Total	Issued From			Saving Date	Accept By			Date Storage	Third Party			Manifest No.	Location
			Name	Position	Sign		Name	Position	Sign		Name	Contractor	Sign		
1	Oil Bekas	14 liter				09/08/19	Rizka A.	HSE	<i>Rizka</i>						
2	Filter Oil Bekas	1 Pcs				09/08/19	Rizka A.	HSE	<i>Rizka</i>						
3	Filter Solar	1 Pcs				09/08/19	Rizka A.	HSE	<i>Rizka</i>						
4	Oil Bekas	14 liter				30/08/19	Rizka A.	HSE	<i>Rizka</i>						
5	Oil Bekas	14 liter				12/09/19	Rizka A.	HSE	<i>Rizka</i>						
6	Filter Solar	1 Pcs				13/09/19	Rizka A.	HSE	<i>Rizka</i>						
7	Filter Oil Bekas	1 Pcs				13/09/19	Rizka A.	HSE	<i>Rizka</i>						
8	Oil Bekas	8 liter				05/10/19	Rizka A.	HSE	<i>Rizka</i>						
9	Filter Oil Bekas	1 Pcs				25/10/19	Rizka A.	HSE	<i>Rizka</i>						
10	Oil Bekas	8 liter				25/10/19	Rizka A.	HSE	<i>Rizka</i>						
11	Filter Solar	1 Pcs				25/10/19	Rizka A.	HSE	<i>Rizka</i>						
12	Oil Bekas	8 liter				2/11/19	Rizka A.	HSE	<i>Rizka</i>						
13	Filter Oil Bekas	1 Pcs				11/11/19	Rizka A.	HSE	<i>Rizka</i>						
14	Filter Solar	1 Pcs				11/11/19	Rizka A.	HSE	<i>Rizka</i>						
15	Oil Bekas	20 liter				13/12/19	Rizka A.	HSE	<i>Rizka</i>						

Neraca Limbah

No.	Hazardous Waste	Total	Issued From			Saving Date	Accept By			Date Storage	Third Party			Manifest No.	Location
			Name	Position	Sign		Name	Position	Sign		Name	Contractor	Sign		
16	Filter Solar	1 Pcs				13/12/19	Rizka A	HSE	Rpr						
17	Filter Oli Bekas	1 Pcs				13/12/19	Rizka A	HSE	Rpr						
18	Oli Bekas	10 liter				10/01/20	Rizka A	HSE	Rpr						
19	Oli Bekas	10 liter				12/01/20	Rizka A	HSE	Rpr						
20	Filter Oli	2 Pcs				15/01/20	Rizka A	HSE	Rpr						
21	Filter Solar	2 Pcs				15/01/20	Rizka A	HSE	Rpr						
22	Filter Solar	1 Pcs				17/02/20	Rizka A	HSE	Rpr						
23	Filter Solar II	2 Pcs				17/02/20	Rizka A	HSE	Rpr						
24	Oli Bekas	5 liter				19/02/20	Rizka A	HSE	Rpr						
25	Kain Mijum	5 Pcs				17/02/20	Rizka A	HSE	Rpr						
26	Kain Mijum	2 Pcs				17/02/20	Rizka A	HSE	Rpr						
27	Filter Oli	1 Pcs				25/02/20	Rizka A	HSE	Rpr						
28	Filter Solar I	1 Pcs				25/02/20	Rizka A	HSE	Rpr						
29	Filter Solar II	2 Pcs				25/02/20	Rizka A	HSE	Rpr						
30	Oli Bekas	10 liter				25/02/20	Rizka A	HSE	Rpr						

Neraca Limbah

No.	Hazardous Waste	Total	Issued From			Saving Date	Accept By			Date Storage	Third Party			Manifest No.	Location
			Name	Position	Sign		Name	Position	Sign		Name	Contractor	Sign		
31	Kain Majun	2 Pes				25/04/20	Rizka A	HSE	<i>Rfa</i>						
32	Oil Bekas	10 L				16/03/20	Rizka A	HSE	<i>Rfa</i>						
33	Kain Majun	10 Pes				16/03/20	Rizka A	HSE	<i>Rfa</i>						
34	Oil Bekas	20 L				11/04/20	Rizka A	HSE	<i>Rfa</i>						
35	Filter Udara	1 Pes				11/04/20	Rizka A	HSE	<i>Rfa</i>						
36	Filter Solar I	1 Pes				11/04/20	Rizka A	HSE	<i>Rfa</i>						
37	Filter Solar II	2 Pes				11/04/20	Rizka A	HSE	<i>Rfa</i>						
38	Filter Oli	1 Pes				11/04/20	Rizka A	HSE	<i>Rfa</i>						
39	Kain Majun	8 Pes				11/04/20	Rizka A	HSE	<i>Rfa</i>						
40	Oil Bekas	10 L				14/05/20	Rizka A	HSE	<i>Rfa</i>						
41	Filter oli	2 Pes				14/05/20	Rizka A	HSE	<i>Rfa</i>						
42	Filter Solar I	2 Pes				14/05/20	Rizka A	HSE	<i>Rfa</i>						
43	Filter Solar II	2 Pes				14/05/20	Rizka A	HSE	<i>Rfa</i>						
44	Oil Bekas	10 L				15/05/20	Rizka A	HSE	<i>Rfa</i>						
45	Kain Majun	6 Pes				23/05/20	Rizka A	HSE	<i>Rfa</i>						

APPENDIX G









BAP – Biodiversity Walkover Prior to Gas Pipeline Construction

BIODIVERSITY SURVEY

Location: 24. Bina Plantation KPEB Power Plant Area K1 B5

Document No: MRPR GPP HSE RP-25-014

Rev No: 01

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	DOCUMENTATION	SURVEY RESULT
<p>Project Biodiversity Value/ Species by JACOBS:</p> <ol style="list-style-type: none"> 1. Tenggaling/ Sunda Pango-In (Manis Javanica) 2. Owa Ungko (Hydnocarpus Agilis) 3. Pohon Manggala Tenam (Anisoptera Mangrata) 4. Pohon Kumang/Tanjut Ratum (Afzelia Rhomboides) 5. Puyuh Hitam (Melanoparus niger) 6. Sitalan biru (Cyanus caeruleus) 7. Buruk (Mogata nemestrina) 8. Burung madu (Hirundo melayanus) 9. Rusa sambar (Rusa unicolor) 	20-Oct-19	10.00-11.00	<p>KP 33 - KP 35</p> <p>Survey Point 1 0°32'07"N 101°34'1.59"E</p> <p>Point 2 0°31'56.98"N 101°32'44.35"E</p> <p>Point 3 0°32'11.92"N 101°31'58.15"E</p>	<p>Palm Plantation</p> <p>Rubber Trees plantation</p> <p>Mangrove bushes and ferns</p> <p>access road inside plantation</p>	   	There is no "species of concern" visible at site location during survey activity
<p>Project Biodiversity Value/ Species by JACOBS:</p> <ol style="list-style-type: none"> 1. Tenggaling/ Sunda Pango-In (Manis Javanica) 2. Owa Ungko (Hydnocarpus Agilis) 3. Pohon Manggala Tenam (Anisoptera Mangrata) 4. Pohon Kumang/Tanjut Ratum (Afzelia Rhomboides) 5. Puyuh Hitam (Melanoparus niger) 6. Sitalan biru (Cyanus caeruleus) 7. Buruk (Mogata nemestrina) 8. Burung madu (Hirundo melayanus) 9. Rusa sambar (Rusa unicolor) 	20-Oct-19	11.00 - 12.00	<p>KP 36 - KP 37</p> <p>Survey Point 1 Point 1 0°32'39.14"N 101°32'43.15"E</p> <p>Point 2 0°32'29.74"N 101°31'50.33"E</p> <p>Point 3 0°32'37.85"N 101°32'49.77"E</p> <p>Point 4 0°32'39.22"N 101°32'49.18"E</p>	<p>Open area access road to P(TGLI area (PJPR City Road)</p> <p>small swampy lake</p>	   	There is no "species of concern" visible at site location during survey activity

Reported by,



Ota R
Environment Officer

Approved by,









Azila Dinata
HSE Site Manager

BIODIVERSITY SURVEY

Location : PUPR Area
 KP 07+800 - KP 07+600, Desa Pong Sebatang, Sek. (Out of Normal Activity)



Document No : MRPR-GPPP-HSE-PP-B5-011
 Rev No : 0

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	DOCUMENTATION	SURVEY RESULT	
Project Biodiversity Value/ Species by JACOBUS: 1. Trenggiling/ Sunda Keongin (Manis Javanica) 2. Owa Ungku (Ilyocotes Agilis) 3. Pulon Merana Terai (Anisoptera Marginata) 4. Pohon Kapang/Tanduk Ranum (Albizia Rhomboides) 5. Puyuh hitam (Melanopendix niger) 6. Skatan biru (Cyornis caeruleus) 7. Beruk (Macaca nemestrina) 8. Beruang madu (Ursus malayanus) 9. Rusa sambar (Rusa unicolor)	1 Jan 20	16.00	KP 07+800 Point 1 0°38'18.51"N 101°09'48.14"E Point 2 0°38'18.71"N 101°09'48.40"E Point 3 0°38'19.74"N 101°09'45.31"E	Palm Plantation Rubber Trees plantation Majorly bushes and ferns access road inside plantations	  	  	There is no "species of concern" visible at site location during construction activity Note: Survey conducted only to impacted work area around ROW of pipeline construction

BIODIVERSITY SURVEY

Location : PUPR Area
 KP 074800 - KP 074600, Desa Pang Serantang, Sekeloa (Out of Normal Activity)

Document No : MRPR-GPPP-HSE-PP-B5-013
 Rev No : 0

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	DOCUMENTATION		SURVEY RESULT
Project Biodiversity Value/ Species by JACDBS: 1. Trenggiling/ Sunda Keongolin (Manis Javanica) 2. Owa Ungku (Ilyocotes Agilis) 3. Pulon Merawan Terawan (Anisoptera Marginata) 4. Pohon Kumpang/Tanduk Ranum (Albizia Rhomboides) 5. Puyuh hitam (Melanopodix niger) 6. Skatun biru (Cyornis caeruleus) 7. Beruk (Mussaenda mediana) 8. Beruang madu (Helarctos malayanus) 9. Rusa sambar (Rusa unicolor)	1 Jan 2020	22.00		Palm Plantation			There is no "species of concern" visible at site location during construction activity Note: Survey conducted only to impacted work area around ROW of pipeline construction
	2 Jan 2020	03.00	Point 1 0°38'19.01"N 101°39'46.40"E Point 2 0°38'19.76"N 101°38'45.78"E	Rubber Trees plantation Majorly bushes and ferns Access road inside plantations			

Reported by,

Approved by,







CITRA R
 Environment Officer

AULIA DINATA
 HSE Site Manager

BIODIVERSITY SURVEY

Location : FLFR Area
 KP 07+600 - KP 07+100, Desa Pinang Sebatang, Sias





Document No: MRPR-GPPF-HSE-RP-95-016
 Rev No: 0

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	DOCUMENTATION		SURVEY RESULT
Project Biodiversity Value/ Species by JACOBS: 1. Trenggiling/ Sunda Pangolin (Manis Javanica) 2. Owa Ungka (Hylobates Agilis) 3. Pohon Marsawa Lemam (Anisoptera Marginata) 4. Pohon Kupa ng/Tanduk Barum (Afzelia Rhomboides) 5. Puyuh hitam (Melanopernis niger) 6. Sikatan biru (Cyornis berulatus) 7. Beruk (Macaca nemestrina) 8. Renjang madu (Helanctes malayanus) 9. Rusa sambar (Rusa unicolor)	2-Jan-20	17.00	KP 07+600 Point 1 0°38' 9.90" N 102°39'44.41" E	Residence area at PU/PR Road shoulder			There is no "species of concern" visible at site location during survey activity Note: pre-ecological survey conducted only to impacted work area around ROW of pipeline construction
		16.00	Point 2 0°38'22.77" N 102°39'42.55" E	Palm plantations belong to community PU/PR Road shoulder area			
		16.00	Point 3 0°38'24.26" N 102°39'43.25" E	PU/PR Road shoulder area Land/ yard owned by local community			

BIODIVERSITY SURVEY

Location : MPM Area
 KP 07-403 - KP 07+200, Desa Pinang Sebatang, Siak (out of normal hour activity)

Document No : MPM-CI-PP-051-PP-09-017
 Rev No : 3

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	DOCUMENTATION	SURVEY RESULT
Project Biodiversity Value/ Species by JACOBS: 1. Trenggiling/ Sunda Pangolin (Manis javanica) 2. Gwa Ungko (Hylobates Agilis) 3. Pohon Marsawa Lonam (Anisoptera Marginata) 4. Pohon Kupang/Tanduk Ranum (Afzelia Rhomboides) 5. Puyuh Hitam (Melanopendix niger) 6. Sikatan biru (Cyornis caeruleus) 7. Beruk (Macaca nemestrina) 8. Beruang madu (Helarctos malayanus) 9. Rusa sambar (Rusa unicolor)	3-Jan-20	17.00	KP 07+450 - KP 07+200 Point 1 0°38'28.60"N 101°39'47.28"E	Palm an plantations owned by BOB PT BSP and local community PUPR Road shoulder area	 	There is no "species of concern" visible at site location during survey activity
			Point 2 0°38'34.05"N 101°39'45.06"E	Palm an plantations owned by BOB PT BSP and local community PUPR Road shoulder area	 	

BIODIVERSITY SURVEY

Location : MPM Area
 KP 07-A03 - KP 07+200, Desa Pinang Sebatang, Siak (out of normal hour activity)

Document No : MPM-CI-PH-01-PP-019-017
 Rev No : 3

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	DOCUMENTATION		SURVEY RESULT
Project Biodiversity Value/ Species by IACOBs: 1. Trenggiling/ Sunca Fanggalin (Mantis Javanica) 2. Cwa Ungko (Hylobates Agilis) 3. Pahar Mersawa Tenam (Anisoptera Marginata) 4. Pahar Kupang/Tanduk Ranum (Ariella Rhomboides) 5. Puyuh hitam (Melanopereia niger) 6. Sikatan biru (Cyanitis caeruleus) 7. Beruk (Macaca nemestrina) 8. Buruang madu (Helarctos malayanus) 9. Rusa sambar (Rusa unicorn)	3 - 4 Jan 2019	21.00 - 24.00 01.00 - 03.00	Point 1 0°38'30.37"N 101°39'49.20"E 0°38'32.94"N 101°39'43.31"E Point 2 0°38'25.77"N 101°39'42.48"E	PUPR Road shoulder area Residential area Land/ yard owned by local community Public places (mosque, shops, etc) BOB PT BSP Area			There is no "species of concern" visible at site location during construction activity Note: Survey conducted only to impacted work area around ROW of pipeline construction (PUPR Road shoulder)
							

Reported by,

Approved by,

CITRA R.
 Environment Officer

AULIA DINATA
 HSF Site Manager

BIODIVERSITY SURVEY

Location : MPMI Area
 KP 07-203 Desa Prang Seimbang, Sak (over the activity)

Document No : MPMI-CI-PK-051-PP-019-018
 Rev No : 3

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	DOCUMENTATION		SURVEY RESULT
Project Biodiversity Value/ Species by JACOBS: 1. Trenggiling/ Sunda Pangolin (Manis javanica) 2. Owa Ungko (Hylobates Agilis) 3. Pohon Marsawa Lonam (Anisoptera Marginata) 4. Pohon Kupang/Tanduk Ranum (Afzelia Rhomboidea) 5. Puyuh Hitam (Melanopendix niger) 6. Sikatan biru (Cyornis caeruleus) 7. Beruk (Macaca nemestrina) 8. Beruang madu (Helarctos malayanus) 9. Rusa sambar (Rusa unicorn)	3-Jan-20	17.30	Point 1 0°38'36.23"N 101°39'49.73"E	Residence area at PUPR Road shoulder BDB PT. BSP Area Residential area nearby waterpond			There is no "species of concern" visible at site location during construction activity Note: pre-ecological survey conducted only to impacted work area around ROW of pipeline construction
		18.00	Point 2 0°38'36.52"N 101°39'45.29"E	Residence area at PUPR Road shoulder BDB PT. BSP Area Residential area nearby waterpond			
		16.00	Point 3 0°38'21.25"N 101°39'43.25"E	PUPR Road shoulder area Land/ yard owned by local community			

BIODIVERSITY SURVEY

Location : MPM Area
 KP 07-203 Desa Prang Sebatang, Sak (over time activity)

Document No : MPM-CI-PH-01-PP-019-018
 Rev No : 3

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	DOCUMENTATION		SURVEY RESULT
Project Biodiversity Value/ Species by IACOBs: 1. Trenggiling/ Sunca Fanggalin (Mantis Javanica) 2. Cwa Ungko (Hylobates Agilis) 3. Pahar Mersawa Tenam (Anisoptera Marginata) 4. Pahar Kupang/Tanduk Ranun (A?ella Rhomboida) 5. Puyuh hitam (Melanopereix niger) 6. Sikar biru (Cyanis caeruleus) 7. Beruk (Macaca nemestrina) 8. Buruang madu (Helarctos malayanus) 9. Rusa sambar (Rusa unicorn)	6-Jan-19	19.00 - 22.00	Point 3 0°38'35.16"N 101°39'49.55"E Point 4 0°38'34.75"N 101°39'43.07"E	PUPR Road shoulder area Residential area Land/ yard owned by local community Public places (mosque, shops, etc)			There is no "species of concern" visible at site location during construction activity Note: Survey conducted only to impacted work area around ROW of pipeline construction
							

Reported by,

Approved by,

CITRA R.
 Environment Officer

AULIA D
 HSE Site Manager

BIODIVERSITY SURVEY

Location : PT. SLPP Plantations (K? 27 - RP 29)
IPAK Area , Pasir-an Area (K? 28 & 29 31)

Document No : KRM/0111-3-11-25/009
Rev No : 01

SPECIES OF CONCERN	DATE	TIME	SAMPUNG AREA	AREA TYPE	DOCUMENTATION		SURVEY RESULT
<p>Project Biodiversity Value/ Species by JACOBE:</p> <p>1. Trenggiling/ Sunda Pangolin (<i>Manis javanica</i>) 2. Owa Jingga (<i>Hylobates agilis</i>) 3. Poho- Marsawa Tenam (<i>Antopros Marsawa</i>) 4. Bekon- Kuning/ berbulu hitam (<i>Ailuro Prambakusa</i>) 5. Puyuh Hitam (<i>Melanopodys fidei</i>) 6. Sitalak bini (<i>Cynoris caeruleus</i>) 7. Bek. k. Hitam (<i>Nesotritia nemestrina</i>) 8. Bek. k. putih (<i>Hebeus malaya-usa</i>) 9. R. sa. sombar (<i>Rusa unicorn</i>)</p>	7 Mar 20	08.00 am	<p>0°31'29.37"N 101°3'41.83"E</p> <p>0°31'33.96"N 101°34'30.77"E</p> <p>0°31'33.76"N 101°3'59.92"E</p>	Palm plantations			<p>Species found in pipeline RTA: Rusa (Rusa Sombar/ Rusa Hitam/ Rusa/ Ailuropus proles) (not included in project's biodiversity value) Construction activities already conducted at location</p>
	7 Mar 20	01.13 PM	KP 31+050	School / public spaces			<p>There is no "species of concern" visible at site location during construction activity</p>

BIODIVERSITY SURVEY

Location : PT. SUPP. Plantations (KP 27 - 0123)
IPPKH Area, Pe-Bintan Area (KP 21 & KP 21)

Document No : MRH/0077-02-07-2010
Date : 11

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	DOCUMENTATION		SURVEY RESULT
<p>Species of concern (as per species list attached):</p> <ul style="list-style-type: none"> 1. The red-tailed Black Parrot (Sturnia Sturnioides) 2. The Yellow-billed Cuckoo (Coccyzus coromachus) 3. The Black-billed Cuckoo (Coccyzus melanos) 4. The Black-billed Cuckoo (Coccyzus melanos) 5. The Black-billed Cuckoo (Coccyzus melanos) 6. The Black-billed Cuckoo (Coccyzus melanos) 7. The Black-billed Cuckoo (Coccyzus melanos) 8. The Black-billed Cuckoo (Coccyzus melanos) 9. The Black-billed Cuckoo (Coccyzus melanos) 10. The Black-billed Cuckoo (Coccyzus melanos) 			<p>KP 21-250 0°32'2.77" N 101°33'58" E</p>	<p>IPPKH Area Plantation Area</p>	 	<p>There is no 'species of concern' visible at site location during construction activity</p>	

Reported by,

Approved by,

CITRA R
Environment Officer

AN LIA D
HSF Site Manager

BIODIVERSITY SURVEY

Location : IP2KH Area, Plantations Area (ca-Bina)
 KP 31 - KP 34



Document No : KPM/0111-2014/000
 Rev No : 01

SPECIES OF CONCERN	DATE	TIME	SAMPUNG AREA	AREAL TYPE	DOCUMENTATION	SURVEY RESULT
Project Biodiversity Value/ Species by JACOBE: 1. Trenggiling/ Sunda Pangolin (<i>Manis javanica</i>) 2. Owa Jingga (<i>Hylobates agilis</i>) 3. Poho- Mersawa Tenam (<i>Antopros marsdeni</i>) 4. Poho- Kumpang/ beruk Hanum (<i>Ailuro Prambocica</i>) 5. Puyuh Hitam (<i>Melanopendia fidei</i>) 6. Sitalak bini (<i>Cynoris caeruleus</i>) 7. Bek. k. Hitam (<i>Nesotritia nemestrina</i>) 8. Bur. k. putih (<i>Heteros. malaya-usa</i>) 9. Rusa sambar (<i>Rusa unicorn</i>)	11-Mars-2014	08.00 pm - 06.00 pm	KP 31 - K.P. 34 07326 05'N 1011339 22'E	Palm plantations Rubber tree plantations	   	There is no "species of concern" visible at site location during survey activity. Note: pre-ecological survey conducted on site: impacted work area around ROW of pipeline construction. Annex.

BIODIVERSITY SURVEY

Location : IPPKH Area, Plantations Area (ca-B'ndar
 KP 31 - KP 34

Document No : KPM/0111-2014/000
 Rev No : 01

SPECIES OF CONCERN	DATE	TIME	SWAMP/AREA	AREA TYPE	DOCUMENTATION		SURVEY RESULT
Project Biodiversity Value/ Species by JACOBE: 1. Trenggiling/ Sunda Pangolin (Manis javanica) 2. Owa Jingga (Hylobates Agilis) 3. Poho- Marsava Tenam (Antopros Marsava) 4. Poho- Kuning/ Lemuk Hitam (Alouatta leonina) 5. Puyuh Hitam (Melanopodys fidei) 6. Sitalak bina (Capreolus caeruleus) 7. Beruk Hitam (Nesotrogus) 8. Beruk Putih (Nesotrogus malayanus) 9. Rusa Sombor (Rusa unicolor)	11-Mars-2014	07.00 pm - 08.00 pm	KP 31 - KP 34	Palm plantations Rubber tree plantations IPPKH Area Various vegetation	   	Rain water pipe and ditch for plantation watering. There is no "species of concern" visible at site location during construction activity	

Reported by,

Approved by,







CITRA R
 Environment Officer

AULIA D
 HSC Site Manager

BIODIVERSITY SURVEY

Location : IPEK Area, Plantations Area (Korbinian)
 KP 01 - KP 02







Document No : MRPR-1115-0115-003
 Rev No : 0

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	ALLOCATION	DOCUMENTATION	SURVEY RESULT
Project Biodiversity Value/ Species by IACOB5: 1. Trenggiling/ Sunda Pangolin (Manis Javanica) 2. Owa Ungko (Hylobates Agilis) 3. Pohon Mersawa Tenam (Arisoptera Marginata) 4. Pohon Kupang/Tanduk Rahun (Alzelia Rhombaidea) 5. Puyuh hitam (Melanoperdix niger) 6. Sikatan biru (Cyornis caeruleus) 7. Beruk (Macaca nemestrina) 8. Beruang madu (Helarctos malayarus) 9. Rusa sambar (Rusa unicorn)	17-VIII-2011	01.30 PM - 03.00 PM	KP 01-4-153	ruclaw tree plantations	 	There is no "species of concern" able at site location during construction activity
	17-VIII-2011	01.30 PM - 03.00 PM	KP 01-4-153	ruclaw tree plantations	 	
	17-VIII-2011	01.30 PM - 03.00 PM	KP 01-4-153 0°31'59.75"S 101°33'19.63"E	ruclaw tree plantations	 	Species found at location: Oupang atau Ular sawa gadang (Python curtus) (not included in project's Biodiversity value)

BIODIVERSITY SURVEY

Location : IPEH Area, Plantations Area (Kor-Sin-an)
 KP 31 - KP 32

Document No : MRPR-11152-11-18-203
 Rev No : 2

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	HICATYPC	DOCUMENTATION		SURVEY RESULT
Project Biodiversity Value/ Species by JACOB5: 1. Trenggiling/ Sunda Pangolin (Manis Javanica) 2. Owa Ungko (Hylobates Agilis) 3. Pohon Mersawa Tenam (Arisoptera Marginata) 4. Pohon Kupang/Tanduk Rahun (Alzelia Rhomboides)	18-Mar-20	07.00 PM - 08.00 PM	KP 31+750 0°31'58.53" N 101°33'40.19" E	Palm and rubber tree plantations			
5. Puyuh hitam (Melanoperdix niger) 6. Sikatan biru (Cyornis caeruleus) 7. Beruk (Macaca nemestrina) 8. Beruang madu (Helarctos malayanus)	18-Mar-20	07.00 PM - 08.00 PM	KP 31+750 0°31'58.29" N 101°33'41.69" E	Palm and rubber tree plantations			There is no "species of concern" visible at site location during construction activity
9. Rusa sambar (Rusa unicorn)	18-Mar-20	07.00 PM - 08.00 PM	KP 31+150 0°32'1.33" N 101°33'48.32" E	Palm and rubber tree plantations			



BIODIVERSITY SURVEY

Location : PPH Area, Partitions Area (26-Binuan)
SP 02 - R.P. 02

Document No : M11-3111-000-01-02
Rev No : 0

SPECIES OF ORGANISM	DATE	TIME	SAMPLING AREA	AREA TYPE	DOCUMENTATION	SURVEY RESULT
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Reported by,

Approved by,







CITRA R
Environment Officer

AJUA D
HSE Site Manager

BIODIVERSITY SURVEY

Location : J. 70, PUPR AREA
 KP 36 - 1P 37

Document No : WRM 0-11-30-11-05.003
 Rev No : 0

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	PHOTOGRAPHS		SURVEY RESULT
Project Biodiversity Value/ Species by JACOBS:	1-Apr-20	10.03 WIB	0°27'01.49"N 101°31'53.77"E	PUPR Area, Jl. 70 KUMUDA			There is no "species of concern" visible at site location during ground truthing activity
1. Trenggiling/ Sunda Pangolin (<i>Manis Javanica</i>)							
2. Cwa Ungka (<i>Hylabates Agilis</i>)							
3. Pohon Mersawa Tonam (<i>Ar isotera Marginata</i>)							
4. Pohon Kupang/Tanduk Ranum (<i>Azalia Rhomboides</i>)							
5. Puyuh hitam (<i>Melanoperdix niger</i>)							
6. Sikatan biru (<i>Cyanis caeruleus</i>)							
7. Beruk (<i>Macaca nemestrina</i>)							
8. Berlang macu (<i>Helarctos malayanus</i>)	11-Apr-20	08.12 WIB	0°27'08.65"N 101°31'52.91"E	PUPR Area, Jl. 70 KUMUDA			
9. Rusa sambar (<i>Rusa uricolor</i>)							

Reported by,

Approved by,

CITRA R
 Environment Officer

AJUDA D
 Site Site Manager

BIODIVERSITY SURVEY

Location : EK-GGJ SINTAN
 SP 254-013-SP 35-SM

Document No: NH 14 0011-00 41 23 023
 Rev No: 0

SPECIES OF CONCERN	DATE	TIME	SAN PLING AREA	AREA TYPE	PHOTOGRAPH	SURVEY RESULT
Project Biodiversity Values/Species by MOONS: 1. Ilang-ling/Sumbu Kungiti (Males Javanka) 2. Owa Jangka (Haploceles Agilis) 3. Pohon Me-sawa Tonam (Anisopatera Marghinata) 4. Pohon Kumpang/Tanduk Renu (Males Rhomocoles) 5. Puyuh Hitam (Muscipora nigra) 6. Elkanan biru (Cyanops cyathalis) 7. Buruk/Macaca nemestrina 8. Perisang madu (Helcones malayanus) 9. Kua sambar (Husa sambar)	23-Apr-20	10.00	0 73° 7.88' E 101° 30' 5.57" E	Plantation area		There is no species of concern visible at the location during survey, no biodiversity

Reported by,

Approved by,

OTRAR
 Environment Officer

AUMAD
 HSE Site Manager

BIODIVERSITY SURVEY

Location : PUPIR AREA, RUMAJA
 01/25 - 01/27

Document No : MTR-0011-001-01-2018
 Rev No : 0

SPECIES OF CONCERN	DATE	TIME	SAMPLING AREA	AREA TYPE	PHOTOGRAPH	SURVEY RESULT
Project Biodiversity Values/Species by MOONS: 1. Trenggiling/Sunda Kopekti (Mars Javanka) 2. Owa Jangka (Haplopus Agilis) 3. Pohon Me-sawa Tonam (Anisopoda Marginata) 4. Pohon Kumpang/Tanduk Renu (Mars Rhomboides) 5. Puyuh Hitam (Muraenopsis nigra) 6. Elkanan biru (Cyrtops caerules) 7. Buruk/Macaca nemestrina 8. Perisang madu (Helcones malayanus) 9. Kumbang hitam (Hesperiidae)	14 May 20	10.00	0° 37' 48" N 101° 37' 57" E	Plantation area	   	There is no species of concern visible at the location during survey, no biodiversity

Reported by,

Approved by,

OTRAR
 Environment Officer

AUMAD
 HSE Site Manager

APPENDIX H

Corrective Action Tracking System (CATS) as per 30 June 2020

No ID Temuan	Tanggal Kejadian	Sumbu Temuan	Lokasi / Instalasi	Kelebihan yang berkaitan dengan temuan	Observasi Temuan	Rentang Tingkat Respon/ Risiko	Tindak Lanjut	Tanggung Jawab (PIC)	Tanggal Penyelesaian	Status Temuan	Dokumen	Keterangan
207	23-Mai-19	HS & Landfill	Zone A	Area yang terdapat...	Area yang terdapat...	Moderate	Area yang terdapat...	HS	04-Mai-19	Closed	Photo	
208	23-Mai-19	Management Waste	Zone A	Tempat yang terdapat...	Tempat yang terdapat...	Moderate	Tempat yang terdapat...	LEO	30-Mai-19	Closed	Photo	Tempat yang terdapat...
209	23-Mai-19	Management Waste	Zone B	Area yang terdapat...	Area yang terdapat...	Minor	Area yang terdapat...	WIK	30-Mai-19	Closed	Photo	
210	23-Mai-19	Management Waste	Zone B	Area yang terdapat...	Area yang terdapat...	Minor	Area yang terdapat...	WIK	21-Mai-19	Closed	Photo	
211	23-Mai-19	Management Waste	Zone B	Area yang terdapat...	Area yang terdapat...	Moderate	Area yang terdapat...	WIK	27-Mai-19	Closed	Photo	
212	23-Mai-19	Management Waste	Zone B	Area yang terdapat...	Area yang terdapat...	Moderate	Area yang terdapat...	WIK	27-Mai-19	Closed	Photo	
213	23-Mai-19	Management Waste	Zone B	Area yang terdapat...	Area yang terdapat...	Moderate	Area yang terdapat...	WIK	27-Mai-19	Closed	Photo	
214	23-Mai-19	Management Waste	Zone B	Area yang terdapat...	Area yang terdapat...	Moderate	Area yang terdapat...	WIK	26-Mai-19	Closed	Photo	
215	23-Mai-19	Management Waste	Zone A	Piling Work	Piling Work	Major	Piling Work	HS	17-Jun-19	Closed	Photo	Area yang terdapat...
216	23-Mai-19	Management Waste	Zone A	Piling Work	Piling Work	Major	Piling Work	HS	20-Mai-19	Closed	Photo	
217	23-Mai-19	Management Waste	Zone A	Piling Work	Piling Work	Minor	Piling Work	HS	29-Mai-19	Closed	Photo	
218	23-Mai-19	Management Waste	Zone A	Piling Work	Piling Work	Minor	Piling Work	HS	29-Mai-19	Closed	Photo	
219	24-Mai-19	HS & Landfill	Zone A	Piling Work	Piling Work	Moderate	Piling Work	HS	27-Mai-19	Closed	Photo	
220	24-Mai-19	HS & Landfill	Zone A	Piling Work	Piling Work	Moderate	Piling Work	HS	27-Mai-19	Closed	Photo	
221	24-Mai-19	HS & Landfill	Zone A	Piling Work	Piling Work	Minor	Piling Work	HS	27-Mai-19	Closed	Photo	
222	24-Mai-19	HS & Landfill	Zone A	Earth Drilling	Earth Drilling	Moderate	Earth Drilling	HS	27-Mai-19	Closed	Photo	
223	24-Mai-19	HS & Landfill	Zone B	Temporary Site Office Construction	Temporary Site Office Construction	Major	Temporary Site Office Construction	HS	15-Jun-19	Closed	Photo	
224	24-Mai-19	HS & Landfill	Zone B	Temporary Site Office Construction	Temporary Site Office Construction	Major	Temporary Site Office Construction	WIK	27-Mai-19	Closed	Photo	
225	24-Mai-19	HS & Landfill	Zone B	Temporary Site Office Construction	Temporary Site Office Construction	Major	Temporary Site Office Construction	WIK	27-Mai-19	Closed	Photo	
226	24-Mai-19	HS & Landfill	Zone B	Temporary Site Office Construction	Temporary Site Office Construction	Minor	Temporary Site Office Construction	LEO	15-Jun-19	Closed	Photo	
227	27-Mai-19	HS & Landfill	Zone B	Temporary Site Office Construction	Temporary Site Office Construction	Minor	Temporary Site Office Construction	WIK	27-Mai-19	Closed	Photo	
228	27-Mai-19	HS & Landfill	Zone B	Temporary Site Office Construction	Temporary Site Office Construction	Moderate	Temporary Site Office Construction	WIK	27-Mai-19	Closed	Photo	
229	27-Mai-19	HS & Landfill	Zone A	M&I Activity	M&I Activity	Major	M&I Activity	HS	30-Mai-19	Closed	Photo	
230	27-Mai-19	HS & Landfill	Zone A	M&I Activity	M&I Activity	Minor	M&I Activity	WIK	27-Mai-19	Closed	Photo	
231	27-Mai-19	HS & Landfill	Zone A	Coverage Area	Coverage Area	Minor	Coverage Area	HS	27-Mai-19	Closed	Photo	
232	27-Mai-19	HS & Landfill	Zone A	Coverage Area	Coverage Area	Moderate	Coverage Area	HS	27-Mai-19	Closed	Photo	
233	27-Mai-19	HS & Landfill	Zone A	Piling Work	Piling Work	Moderate	Piling Work	HS	17-Jun-19	Closed	Photo	
234	27-Mai-19	HS & Landfill	Zone A	Planting	Planting	Major	Planting	HS	01-Jun-19	Closed	Photo	
235	16-Jun-19	HS & Landfill	Zone A	Piling Work	Piling Work	Moderate	Piling Work	HS	17-Jun-19	Closed	Photo	
236	16-Jun-19	HS & Landfill	Zone A	Piling Work	Piling Work	Major	Piling Work	HS	17-Jun-19	Closed	Photo	
237	16-Jun-19	HS & Landfill	Zone A	Piling Work	Piling Work	Moderate	Piling Work	HS	17-Jun-19	Closed	Photo	
238	16-Jun-19	HS & Landfill	Zone A	Piling Work	Piling Work	Moderate	Piling Work	HS	17-Jun-19	Closed	Photo	
239	16-Jun-19	HS & Landfill	Zone B	M&I Activity	M&I Activity	Moderate	M&I Activity	WIK	17-Jun-19	Closed	Photo	
240	16-Jun-19	HS & Landfill	Zone B	M&I Activity	M&I Activity	Major	M&I Activity	WIK	17-Jun-19	Closed	Photo	
241	16-Jun-19	HS & Landfill	Zone B	M&I Activity	M&I Activity	Moderate	M&I Activity	WIK & HS	17-Jun-19	Closed	Photo	
242	28-Jun-19	HS & Landfill	Zone A	Piling Work	Piling Work	Major	Piling Work	HS	28-Jun-19	Closed	Photo	
243	27-Jun-19	HS & Landfill	Project site	HS & Landfill	HS & Landfill	Major	HS & Landfill	HS	27-Jun-19	Closed	Photo	
244	27-Jun-19	HS & Landfill	HS & Landfill	HS & Landfill	HS & Landfill	Major	HS & Landfill	HS	30-Jun-19	Closed	Photo	
245	28-Jun-19	HS & Landfill	Project site	HS & Landfill	HS & Landfill	HS	HS & Landfill	HS	28-Jun-19	Closed	Photo	
246	28-Jun-19	HS & Landfill	Project site	HS & Landfill	HS & Landfill	Moderate	HS & Landfill	HS		Closed		
247	28-Jun-19	HS & Landfill	Project site	HS & Landfill	HS & Landfill	Major	HS & Landfill	HS	28-Jun-19	Closed	Photo	
248	28-Jun-19	HS & Landfill	Project site	HS & Landfill	HS & Landfill	HS	HS & Landfill	HS		Closed		
249	28-Jun-19	HS & Landfill	Project site	HS & Landfill	HS & Landfill	Moderate	HS & Landfill	HS	28-Jun-19	Closed	Photo	
250	28-Jun-19	HS & Landfill	HS 2	HS & Landfill	HS & Landfill	Minor	HS & Landfill	HS	28-Jun-19	Closed	Photo	
251	28-Jun-19	HS & Landfill	HS & Landfill	HS & Landfill	HS & Landfill	Major	HS & Landfill	HS	28-Jun-19	Closed	Photo	
252	28-Jun-19	HS & Landfill	Project site	HS & Landfill	HS & Landfill	Moderate	HS & Landfill	HS	28-Jun-19	Closed	Photo	
253	28-Jun-19	HS & Landfill	Project site	HS & Landfill	HS & Landfill	HS	HS & Landfill	HS		Closed		

No. ID Temuan	Tanggal Kejadian	Sumber Temuan	Lokasi / Instalasi	Adaptasi yang berkaitan dengan temuan	Observasi Temuan	Relevansi Tingkat Respon/ Risiko	Tindakan Logis	Tanggapan Jombang (PIC)	Tanggal Verifikasi	Status Temuan	Dokumen	Referensi
274	28-Jun-19	Lain-lain	Zone A	XXXXX XXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	09-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
275	28-Jun-19	Lain-lain	Zone A	XXXXX XXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	09-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
276	28-Jun-19	Lain-lain	Zone A	XXXXX XXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	09-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
277	28-Jun-19	Lain-lain	Zone A	XXXXX XXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	09-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
278	28-Jun-19	Lain-lain	Zone A	XXXXX XXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	09-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
279	28-Jun-19	Lain-lain	Zone A	XXXXX XXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	09-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
280	28-Jun-19	Lain-lain	Zone A	XXXXX XXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	09-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
281	12-Jul-19	HPPI results	Zone A	Site	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	15-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
282	12-Jul-19	ICTPI findings	Zone A	Piling Work	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	15-Jul-19	Closed	Photo	
283	12-Jul-19	HSE Inspection	Zone A	Piling Work	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	15-Jul-19	Closed	Photo	
284	12-Jul-19	HPPI results	Zone A	Piling Work	XXXXXXXXXXXXXXXXXXXX	Minor	XXXXXXXXXXXXXXXXXXXX	OK	15-Jul-19	Closed	Photo	
285	12-Jul-19	ICTPI findings	Zone B	XXXXXXXXXXXXXXXXXXXX	Medium	Medium	XXXXXXXXXXXXXXXXXXXX	OK	15-Jul-19	Closed	Photo	
286	12-Jul-19	Management Walkdown	Zone B	XXXXXXXXXXXXXXXXXXXX	Medium	Medium	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
287	12-Jul-19	Management Walkdown	Zone B	Piling Work	XXXXXXXXXXXXXXXXXXXX	Minor	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
288	12-Jul-19	Management Walkdown	Zone B	Piling Work	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
289	12-Jul-19	Management Walkdown	Zone B	Temporary Site office construction	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	Site observation	
290	12-Jul-19	Management Walkdown	Zone B	XXXXXXXXXXXXXXXXXXXX	Minor	Minor	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	Photo	
291	12-Jul-19	Management Walkdown	Zone A	XXXXXXXXXXXXXXXXXXXX	Minor	Minor	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
292	12-Jul-19	Management Walkdown	Zone B	Fence	XXXXXXXXXXXXXXXXXXXX	Minor	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
293	12-Jul-19	Management Walkdown	Zone A	Piling Work	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
294	12-Jul-19	Management Walkdown	XXXXXXXXXXXXXXXXXXXX	Fuel Storage	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
295	12-Jul-19	Management Walkdown	Zone A	XXXXXXXXXXXXXXXXXXXX	Major	Major	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
296	12-Jul-19	Management Walkdown	Zone A	XXXXXXXXXXXXXXXXXXXX	Medium	Medium	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	XXXXXXXXXXXXXXXXXXXX	
297	12-Jul-19	Lain-lain	XXXXXXXXXXXXXXXXXXXX	Excavation	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	BWA form	
298	12-Jul-19	Lain-lain	Office	XXXXXXXXXXXXXXXXXXXX	Major	Major	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	BWA form	
299	12-Jul-19	Lain-lain	Zone A	XXXXXXXXXXXXXXXXXXXX	Major	Major	XXXXXXXXXXXXXXXXXXXX	OK	28-Jul-19	Closed	BWA form	
300	12-Jul-19	HSE Card	Zone B	Office	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	03-Sep-19	Closed		
301	27-Jul-19	HSE Card	Zone A	XXXXXXXXXXXXXXXXXXXX	Major	Major	XXXXXXXXXXXXXXXXXXXX	OK	28-Aug-19	Closed		
302	28-Jul-19	HSE Card	Zone A	XXXXXXXXXXXXXXXXXXXX	Major	Major	XXXXXXXXXXXXXXXXXXXX	OK	28-Aug-19	Closed	XXXXXXXXXXXXXXXXXXXX	
303	28-Jul-19	HSE Card	All Area	XXXXXXXXXXXXXXXXXXXX	Major	Major	XXXXXXXXXXXXXXXXXXXX	OK	28-Aug-19	Closed		
304	02-Agu-19	HSE Card	Type 10 worker	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	04-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
305	02-Agu-19	HSE Card	Access Road	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	04-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
306	02-Agu-19	HPPI results	HSEG 1	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	04-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
307	02-Agu-19	ICTPI findings	Workshop JK	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Minor	XXXXXXXXXXXXXXXXXXXX	OK	05-Agu-19	Closed	Photo	
308	02-Agu-19	IG...11128888	XXXXXXXXXXXXXXXXXXXX	Lifting activity	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	05-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
309	02-Agu-19	IG...11128888	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	05-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
310	02-Agu-19	HSE Card	Project site	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	21-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
311	02-Agu-19	HPPI results	HSEG 11	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	05-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
312	02-Agu-19	IG...11128888	M.M. XXXXXXX	Excavation	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	06-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
313	02-Agu-19	HSE Inspection	Workshop	Workshop	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	06-Agu-19	Closed	Site observation	
314	02-Agu-19	ICTPI findings	Workshop	Workshop	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	09-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
315	02-Agu-19	IG...11128888	Workshop	Workshop	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	15-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
316	15-Agu-19	HSE Card	Type 10 worker	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	15-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
317	15-Agu-19	HPPI results	CC1 XXXXXXX	CCF XXXXXXX	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	17-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
318	15-Agu-19	HPPI results	Page 1 XXXXXXX	Type 10 worker	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	15-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
319	15-Agu-19	ICTPI findings	CCF XXXXXXX	CCF XXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	15-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
320	15-Agu-19	IG...11128888	J.M. XXXXXXX	J.M. XXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	15-Agu-19	Closed	Photo	
321	15-Agu-19	HSE Card	CCF XXXXXXX	CCF XXXXXXX	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	15-Agu-19	Closed	Photo	
322	15-Agu-19	HPPI results	Workshop	Workshop	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	23-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
323	15-Agu-19	ICTPI findings	Workshop	Workshop	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	17-Sep-19	Closed		
324	15-Agu-19	HSE Card	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Minor	XXXXXXXXXXXXXXXXXXXX	OK	25-Agu-19	Closed	Photo	
325	15-Agu-19	HPPI results	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Minor	XXXXXXXXXXXXXXXXXXXX	OK	25-Agu-19	Closed	Photo	
326	15-Agu-19	HPPI results	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Minor	XXXXXXXXXXXXXXXXXXXX	OK	25-Agu-19	Closed	Photo	
327	15-Agu-19	IG...11128888	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Minor	XXXXXXXXXXXXXXXXXXXX	OK	25-Agu-19	Closed	Photo	
328	15-Agu-19	HSE Card	Laydown JK	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	25-Agu-19	Closed	Photo	
329	15-Agu-19	HSE Card	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	25-Agu-19	Closed	Photo	
330	15-Agu-19	HPPI results	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	23-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
331	15-Agu-19	ICTPI findings	Laydown JK	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	25-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
332	14-Agu-19	HSE Card	Access Road	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK	15-Agu-19	Closed	XXXXXXXXXXXXXXXXXXXX	
333	15-Agu-19	HSE Card	Zone A	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Medium	XXXXXXXXXXXXXXXXXXXX	OK		Closed		
334	20-Agu-19	Management Walkdown	Laydown JK	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Major	XXXXXXXXXXXXXXXXXXXX	OK	02-Sep-19	Closed	Photo	

No ID Temuan	Tanggal Kejadian	Isi Temuan	Lokasi / Instalasi	Adaptasi yang berkaitan dengan temuan	Observasi Temuan	ASPEK / RINGKAS (Rupa dan Rangka)	Tindakan Tergantung	Tanggung Jawab (PIC)	Tanggal Verifikasi	Status Temuan	Dokumen	Keterangan
425	09-11-2019	Lain-lain	Project site	C. gambar, video	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	LEC	31-Oct-19	Closed	See Ref. 425	
426	09-11-2019	Lain-lain	Project site	F. gambar, video	Found regular excavations without backfill material	Moderate	Fill excavations with backfill material	HC	30-Nov-19	Closed	See Ref. 426	
427	09-11-2019	Lain-lain	Project site	C. gambar, video	Found regular excavations without backfill material	Moderate	Fill excavations with backfill material	HC	30-Nov-19	Closed	See Ref. 427	
428	09-11-2019	Lain-lain	Project site	F. gambar, video	Found regular excavations without backfill material	Moderate	Fill excavations with backfill material	HC	29-Oct-19	Closed	See Ref. 428	
429	09-11-2019	Lain-lain	Project site	F. gambar, video	Found regular excavations without backfill material	Moderate	Fill excavations with backfill material	LEC	31-Oct-19	Closed	See Ref. 429	
430	09-11-2019	Lain-lain	Project site	F. gambar, video	Found regular excavations without backfill material	Moderate	Fill excavations with backfill material	HC	30-Nov-19	Closed	See Ref. 430	
431	01-Nov-19	HSE Inspection	HRSG and CCS	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	07-Nov-19	Closed	Photo	
432	01-Nov-19	HSE Inspection	CWI	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	04-Nov-19	Closed	Photo	
433	01-Nov-19	HSE Inspection	GTU	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	04-Nov-19	Closed	Photo	
434	01-Nov-19	HSE Inspection	Switch yard	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	LEC	03-Nov-19	Closed	Photo	
435	01-Nov-19	HSE Inspection	Laydown JK	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	07-Nov-19	Closed	Photo	
436	01-Nov-19	HSE Inspection	Water tank	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	LEC	07-Nov-19	Closed	Photo	
437	01-Nov-19	LD - 11248888	MSW TANK	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	LEC	04-Nov-19	Closed	Photo	
438	01-Nov-19	HSE Inspection	Access Road Zone II	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	LEC	04-Nov-19	Closed	Photo	
439	25-Nov-19	HSE Inspection	CCR	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	25-Nov-19	Closed	Photo	
440	25-Nov-19	LD - 11248888	Laydown JK	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	25-Nov-19	Closed	Photo	
441	25-Nov-19	HSE Inspection	Access Road	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	25-Nov-19	Closed	Photo	
442	25-Nov-19	HSE Inspection	HRSG 11	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	25-Nov-19	Closed	Photo	
443	25-Nov-19	LD - 11248888	HRSG 11	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	25-Nov-19	Closed	Photo	
444	25-Nov-19	HSE Inspection	Access Road	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	25-Nov-19	Closed	Photo	
445	25-Nov-19	HSE Inspection	CCR	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	25-Nov-19	Closed	Photo	
446	30-Nov-19	Management Walkdown	HRSG 12	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	30-Nov-19	Closed	Photo	
447	30-Nov-19	Management Walkdown	HRSG 13	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	03-Dec-19	Closed	Photo	
448	30-Nov-19	Management Walkdown	STO	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	26-Dec-19	Closed	Photo	
449	30-Nov-19	Management Walkdown	CCR	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	03-Dec-19	Closed	Photo	
450	30-Nov-19	Management Walkdown	CCR	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	03-Dec-19	Closed	Photo	
451	30-Nov-19	Management Walkdown	CCR	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	03-Dec-19	Closed	Photo	
452	30-Nov-19	Management Walkdown	HRSG 12	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	03-Dec-19	Closed	Photo	
453	30-Nov-19	Management Walkdown	HRSG 11	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	03-Dec-19	Closed	Photo	
454	30-Nov-19	Management Walkdown	HRSG 11	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	03-Dec-19	Closed	Photo	
455	30-Nov-19	Management Walkdown	HRSG 11	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	03-Dec-19	Closed	Photo	
456	13-Dec-19	HSE Inspection	Access Road	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	14-Dec-19	Closed	Photo	
457	02-Apr-19	HSE Inspection	Access Road	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	14-Dec-19	Closed	Photo	
458	13-Dec-19	HSE Inspection	Access Road Zone II	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	14-Dec-19	Closed	Photo	
459	13-Dec-19	LD - 11248888	Access Road	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	14-Dec-19	Closed	Photo	
460	13-Dec-19	HSE Inspection	Access Road	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	14-Dec-19	Closed	Photo	
461	13-Dec-19	HSE Inspection	Access Road	Site construction	Found pieces of wood pile at work area	Moderate	Remove wood pile from work area	HC	14-Dec-19	Closed	Photo	

No. ID Temuan	Tanggal Inspeksi	Saluran Temuan	Lokasi / Instalasi	Adaptasi yang berkaitan dengan temuan	Observasi Temuan	Referensi/ Tindakan/ Rekomendasi/ Saran	Tindakan Tergantung	Tanggung Jawab (PIC)	Tanggal Verifikasi	Status Temuan	Dokumen	Keterangan
001	14-Mar-20	UPT Inspeksi	Galangan	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	14-Mar-20	Closed	Photo	
002	14-Mar-20	UPT Inspeksi	UPT Inspeksi	Rabat work	Pen. dan pem. sarana dan prasarana di lokasi	Medan	Pen. dan pem. sarana dan prasarana di lokasi	IK	14-Mar-20	Closed	UPT Inspeksi	
003	14-Mar-20	UPT Inspeksi	UPT Inspeksi	Teknikal work	Pen. dan pem. sarana dan prasarana di lokasi	Medan	Pen. dan pem. sarana dan prasarana di lokasi	IK	14-Mar-20	Closed	UPT Inspeksi	
004	14-Mar-20	UPT Inspeksi	UPT Inspeksi	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	14-Mar-20	Closed	Photo	
005	14-Mar-20	UPT Inspeksi	UPT Inspeksi	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	14-Mar-20	Closed	Photo	
006	14-Mar-20	UPT Inspeksi	UPT Inspeksi	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	14-Mar-20	Closed	Photo	
007	14-Mar-20	UPT Inspeksi	UPT Inspeksi	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	14-Mar-20	Closed	Photo	
008	23-Mar-20	Lain-lain	Trade Office	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Trade	03-Mar-20	Closed	UPT Inspeksi	
009	23-Mar-20	Lain-lain	HRSG	Site construction	Rear housekeeping	Medan	Contact housekeeping	IK	23-Mar-20	Closed	Site observation	
010	23-Mar-20	Lain-lain	GTG	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	23-Mar-20	Closed	UPT Inspeksi	
011	23-Mar-20	Lain-lain	GTG	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	23-Mar-20	Closed	UPT Inspeksi	
012	23-Mar-20	Lain-lain	CCR	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	23-Mar-20	Closed	UPT Inspeksi	
013	23-Mar-20	Lain-lain	Switch yard	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	23-Mar-20	Closed	UPT Inspeksi	
014	23-Mar-20	Lain-lain	BBP	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	23-Mar-20	Closed	UPT Inspeksi	
015	23-Mar-20	Lain-lain	WTP	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	23-Mar-20	Closed	UPT Inspeksi	
016	27-Mar-20	Lain-lain	STD Building	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	27-Mar-20	Closed	UPT Inspeksi	
017	27-Mar-20	Lain-lain	CCR	Site construction	Sign board to be done	Medan	Sign board to be done	IK	27-Mar-20	Closed	Photo	
018	27-Mar-20	Lain-lain	Office Trade	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Trade	27-Mar-20	Closed	Photo	
019	28-Mar-20	Lain-lain	GTG	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	28-Mar-20	Closed	UPT Inspeksi	
020	28-Mar-20	Lain-lain	GTG	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	28-Mar-20	Closed	Photo	
021	28-Mar-20	Lain-lain	Switch yard	Form work	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	28-Mar-20	Closed	SWA form	SWA form
022	28-Mar-20	Lain-lain	Lay-out	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Trade	28-Mar-20	Closed		
023	28-Mar-20	Lain-lain	Reinforcing wall	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	28-Mar-20	Closed	UPT Inspeksi	
024	30-Mar-20	Lain-lain	Form work	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	30-Mar-20	Closed	Photo	
025	30-Mar-20	Lain-lain	Site project	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	30-Mar-20	Closed	Photo	
026	30-Mar-20	Lain-lain	Switch yard	Site construction	Rear housekeeping	Medan	Contact housekeeping	IK	30-Mar-20	Closed	Site observation	
027	30-Mar-20	Lain-lain	Workhouse	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	30-Mar-20	Closed	UPT Inspeksi	
028	27-Mar-20	Lain-lain	Form work	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	27-Mar-20	Closed	UPT Inspeksi	
029	27-Mar-20	Lain-lain	Form work	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	27-Mar-20	Closed	UPT Inspeksi	
030	27-Mar-20	Lain-lain	Pipe rack	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	QSA	27-Mar-20	Closed	UPT Inspeksi	
031	27-Mar-20	Lain-lain	RWI	Rabat work	Pen. dan pem. sarana dan prasarana di lokasi	Medan	Pen. dan pem. sarana dan prasarana di lokasi	IK	27-Mar-20	Closed	UPT Inspeksi	
032	27-Apr-20	Lain-lain	CCR	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	10-Apr-20	Closed	UPT Inspeksi	
033	27-Apr-20	Lain-lain	Water tank	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	03-Apr-20	Closed	Photo	
034	02-Apr-20	Lain-lain	Switch yard	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	02-Apr-20	Closed	Photo	
035	02-Apr-20	Lain-lain	Access road	Site construction	Immediate clearing on the access road	Medan	Immediate clearing on the access road	WOK	02-Apr-20	Closed	Photo	
036	03-Apr-20	Lain-lain	Access road	HRSG	Clearing of the access road	Medan	Clearing of the access road	IK	10-Apr-20	Closed	UPT Inspeksi	
037	03-Apr-20	Lain-lain	Site project	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	03-Apr-20	Closed	UPT Inspeksi	
038	04-Apr-20	Lain-lain	STD Building	Formwork work	Reinforcing material hanging on the scaffold structure	Medan	Reinforcing material hanging on the scaffold structure	Trade	04-Apr-20	Closed	Photo	
039	04-Apr-20	Lain-lain	GTG/CCR/CCR	Pipe work	Formwork work	Medan	Formwork work	IK	04-Apr-20	Closed	UPT Inspeksi	
040	04-Apr-20	Lain-lain	Access road	HRSG	Formwork work	Medan	Formwork work	IK	04-Apr-20	Closed	Photo	
041	05-Apr-20	Lain-lain	Switch yard	Rabat work	Formwork work	Medan	Formwork work	IK	10-Apr-20	Closed	UPT Inspeksi	
042	05-Apr-20	Lain-lain	Diagonal post	Civil work	Formwork work	Medan	Formwork work	IK	28-Apr-20	Closed	UPT Inspeksi	
043	05-Apr-20	Lain-lain	Form work	Rabat work	Formwork work	Medan	Formwork work	IK	07-Apr-20	Closed	UPT Inspeksi	
044	05-Apr-20	Lain-lain	Formwork work	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	07-Apr-20	Closed	Photo	
045	10-Apr-20	Lain-lain	GTG/CCR/CCR	Pipe work	Formwork work	Medan	Formwork work	IK	11-Apr-20	Closed	Photo	
046	10-Apr-20	Lain-lain	Formwork work	Pipe work	Formwork work	Medan	Formwork work	IK	10-Apr-20	Closed	Photo	
047	10-Apr-20	Lain-lain	Construction job	Pipe work	Lack of barricade and safety sign	Medan	Proved sign board with specific hazard	IK	11-Apr-20	Closed	Photo	
048	10-Apr-20	Lain-lain	Formwork work	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	QSA	15-Apr-20	Closed	Photo	
049	10-Apr-20	Lain-lain	WTP	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	15-Apr-20	Closed	UPT Inspeksi	
050	10-Apr-20	Lain-lain	STD Building	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	QSA	15-Apr-20	Closed	Photo	
051	10-Apr-20	Lain-lain	CCR	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	17-Apr-20	Closed	UPT Inspeksi	
052	10-Apr-20	Lain-lain	Access road	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	QSA	14-Apr-20	Closed	Photo	
053	10-Apr-20	Lain-lain	WTP	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	20-Apr-20	Closed	UPT Inspeksi	
054	10-Apr-20	Lain-lain	HRSG	Formwork work	Formwork work	Medan	Formwork work	IK	18-Apr-20	Closed	Photo	
055	10-Apr-20	Lain-lain	CCR	Site construction	Open hole area not covered	Medan	Install cover and sign board	IK	20-Apr-20	Closed	Photo	
056	10-Apr-20	Lain-lain	Workhouse	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	18-Apr-20	Closed	UPT Inspeksi	
057	10-Apr-20	Lain-lain	HRSG	Formwork work	Formwork work	Medan	Formwork work	IK	18-Apr-20	Closed	Photo	
058	20-Apr-20	Lain-lain	Switch yard	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	20-Apr-20	Closed	UPT Inspeksi	
059	20-Apr-20	Lain-lain	WTP	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	20-Apr-20	Closed	Photo	
060	22-Apr-20	Lain-lain	Formwork work	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	24-Apr-20	Closed	UPT Inspeksi	
061	23-Apr-20	Lain-lain	HRSG	Formwork work	Formwork work	Medan	Formwork work	IK	24-Apr-20	Closed	Photo	
062	23-Apr-20	Lain-lain	Formwork work	Formwork work	Formwork work	Medan	Formwork work	IK	21-Apr-20	Closed	Photo	
063	23-Apr-20	Lain-lain	Formwork work	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	24-Apr-20	Closed	UPT Inspeksi	
064	23-Apr-20	Lain-lain	GTG	Site construction	Empty frame without cover company	Medan	Completed safety frame with white company	IK	24-Apr-20	Closed	Photo	
065	23-Apr-20	Lain-lain	HRSG	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	24-Apr-20	Closed	Photo	
066	23-Apr-20	Lain-lain	Formwork work	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	27-Apr-20	Closed	UPT Inspeksi	
067	23-Apr-20	Lain-lain	Formwork work	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	20-Apr-20	Closed	UPT Inspeksi	
068	23-Apr-20	Lain-lain	WTP	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	WOK	20-Apr-20	Closed	UPT Inspeksi	
069	23-Apr-20	Lain-lain	STD	Formwork work	Formwork work	Medan	Formwork work	IK	20-Apr-20	Closed	Photo	
070	23-Apr-20	Lain-lain	GTG	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	20-Apr-20	Closed	UPT Inspeksi	
071	27-Mar-20	Lain-lain	HRSG	Formwork work	Formwork work	Medan	Formwork work	IK	03-Mar-20	Closed	UPT Inspeksi	
072	27-Mar-20	Lain-lain	Workhouse	Civil work	Formwork work	Medan	Formwork work	IK	01-Mar-20	Closed	Photo	
073	27-Mar-20	Lain-lain	GTG	Formwork work	Formwork work	Medan	Formwork work	IK	01-Mar-20	Closed	Photo	
074	24-Mar-20	Lain-lain	HRSG	Formwork work	Formwork work	Medan	Formwork work	IK	04-Mar-20	Closed	Photo	
075	24-Mar-20	Lain-lain	HRSG	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	04-Mar-20	Closed	UPT Inspeksi	
076	24-Mar-20	Lain-lain	Formwork work	JM 0018.0100	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	Medan	DAKAR DUA (2) DAN DUA (3) BANGUNAN DI BUKIT BATU	IK	06-Mar-20	Closed	Photo	

No ID Temuan	Tanggal Revisi	Subjek Temuan	Lokasi / Instalasi	Adaptasi yang berkaitan dengan temuan	Observasi Temuan	Rencana Tindakan/Response Strategy	Tindakan Tergantung	Tanggung Jawab (PIC)	Tanggal Penyelesaian	Status Temuan	Dokumen	Keterangan
677	04-Mai-20	Lain-lain	UMI F. 0001.01.01	1. Jalur pemadam kebakaran	Saluran pemadam kebakaran terhalang	Medevac	Completed panel with PIC tag (Name, Phone number, photo)	IT	09-Mai-20	Closed	Photo	
678	07-Mai-20	Lain-lain	Warehouse	Instalasi	Saluran pemadam kebakaran terhalang	Water	Revised and 4 new road	IK	09-Mai-20	Closed	Photo	
679	07-Mai-20	Lain-lain	WTP	Site construction	Saluran pemadam kebakaran terhalang	Medevac	UMI F. 0001.01.01.01	WIK	09-Mai-20	Closed	Site observation	
680	07-Mai-20	Lain-lain	CWI	Site construction	Rear housekeeping	Medevac	Contract housekeeping	IT	09-Mai-20	Closed	Site observation	
681	08-Mai-20	Lain-lain	All Area	Access road	Rear housekeeping on storage of items	Medevac	Contract housekeeping on storage of items	All Parties	09-Mai-20	Closed	Site observation	
682	08-Mai-20	Lain-lain	Layanan	Layanan	Saluran pemadam kebakaran terhalang	Water	UMI F. 0001.01.01.01	JK	09-Mai-20	Closed	Site observation	
683	09-Mai-20	Lain-lain	Switch yard	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	WIK	09-Mai-20	Closed	Site observation	
684	09-Mai-20	Lain-lain	Area di sekitar WTP	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IT	10-Mai-20	Closed	Photo	
685	09-Mai-20	Lain-lain	Access road	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	JK	09-Mai-20	Closed	Photo	
686	10-Mai-20	Lain-lain	STG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IK	10-Mai-20	Closed	Photo	
687	10-Mai-20	Lain-lain	STG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	10-Mai-20	Closed	Photo	
688	10-Mai-20	Lain-lain	WTP Building	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IK	12-Mai-20	Closed	Site observation	
689	10-Mai-20	Lain-lain	Layanan	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	WIK	15-Mai-20	Closed	Site observation	
690	14-Mai-20	Lain-lain	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	15-Mai-20	Closed	Site observation	
691	14-Mai-20	Lain-lain	HRSG 12	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IT	01-Jun-20	Closed	Site observation	
692	15-Mai-20	Lain-lain	STG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	GBA	18-Mai-20	Closed	Photo	
693	15-Mai-20	Lain-lain	UMI F. 0001.01.01.01	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	WIK	01-Jun-20	Closed	Site observation	
694	15-Mai-20	Lain-lain	WTP Building	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IK	01-Jun-20	Closed	Site observation	
695	15-Mai-20	Lain-lain	WTP Building	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IK	01-Jun-20	Closed	Site observation	
696	15-Mai-20	Lain-lain	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	15-Mai-20	Closed	Site observation	
697	15-Mai-20	Lain-lain	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IT	18-Mai-20	Closed	Site observation	
698	15-Mai-20	Lain-lain	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	18-Mai-20	Closed	Site observation	
699	20-Mai-20	Lain-lain	HRSG	Hydrant	Hydrant not completed with whip lock on compressor and labelled tank	Water	Saluran pemadam kebakaran terhalang	IT	28-Mai-20	Closed	Photo	
700	17-Mai-20	Lain-lain	HOPE	Expansion	Expansion area without hand barriers and safety sign	Medevac	Saluran pemadam kebakaran terhalang	JK	18-Mai-20	Closed	Site observation	
701	17-Mai-20	Lain-lain	Rearhouse building	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IK	18-Mai-20	Closed	Site observation	
702	20-Mai-20	Lain-lain	CWI	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IT	21-Mai-20	Closed	Photo	
703	20-Mai-20	Lain-lain	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	21-Mai-20	Closed	Site observation	
704	20-Jun-20	Lain-lain	HRSG	Welding	Welding	Water	Saluran pemadam kebakaran terhalang	IT	02-Jun-20	Closed	Site observation	
705	20-Jun-20	Lain-lain	HRSG	Welding	Welding	Water	Saluran pemadam kebakaran terhalang	IT	02-Jun-20	Closed	Site observation	
706	20-Jun-20	Lain-lain	HRSG	Welding	Welding	Water	Saluran pemadam kebakaran terhalang	IT	02-Jun-20	Closed	Site observation	
707	20-Jun-20	Lain-lain	WTP area	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	JK	06-Jun-20	Closed	Photo	
708	20-Jun-20	Lain-lain	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	10-Jun-20	Closed	Site observation	
709	25-Jun-20	Lain-lain	WTP	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	L2C	06-Jun-19	Closed	Site observation	
710	25-Jun-20	Lain-lain	CCB	Welding	Welding	Water	Saluran pemadam kebakaran terhalang	JK	06-Jun-19	Closed	Photo	
711	25-Jun-20	Lain-lain	HRSG	Grounding	Grounding	Medevac	Saluran pemadam kebakaran terhalang	IT	07-Jun-20	Closed	Photo	
712	28-Jun-20	Lain-lain	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	19-Jun-20	Closed	Photo	
713	07-Jul-20	Lain-lain	CCB	Site construction	Rear housekeeping from food scraps	Medevac	Saluran pemadam kebakaran terhalang	JK	06-Jul-19	Closed	Site observation	
714	07-Jul-20	Lain-lain	Layanan 8	Consulting	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IT	07-Jul-20	Closed	Photo	
715	07-Jul-20	Lain-lain	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IT	19-Jul-20	Closed	Site observation		
716	12-Jul-20	CA PABANG*	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	Medevac	15-Jul-20	Closed	Photo		
717	12-Jul-20	CA PABANG*	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	Medevac	15-Jul-20	Closed	Photo		
718	12-Jul-20	CA PABANG*	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	Medevac	15-Jul-20	Closed	Photo		
719	12-Jul-20	HRSG Inspection	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	WIK	12-Jul-20	Closed	Photo		
720	12-Jul-20	CA PABANG*	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IK	15-Jul-20	Closed	Photo		
721	12-Jul-20	CA PABANG*	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IK	15-Jul-20	Closed	Photo		
722	12-Jul-20	CA PABANG*	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	JK	15-Jul-20	Closed	Photo		
723	12-Jul-20	CA PABANG*	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IK	15-Jul-20	Closed	Photo		
724	12-Jul-20	CA PABANG*	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	L2C	20-Jul-20	Closed	Photo		
725	12-Jul-20	HRSG Inspection	STG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IK	15-Jul-20	Closed	Photo	
726	12-Jul-20	CA PABANG*	STG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IK	15-Jul-20	Closed	Photo	
727	12-Jul-20	CA PABANG*	STG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	15-Jul-20	Closed	Photo	
728	12-Jul-20	CA PABANG*	STG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	14-Jul-20	Closed	Photo	
729	12-Jul-20	CA PABANG*	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IK	15-Jul-20	Closed	Site observation	
730	12-Jul-20	CA PABANG*	Rear yard	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	GBA	15-Jul-20	Closed	Photo	
731	12-Jul-20	CA PABANG*	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	14-Jul-20	Closed	Photo	
732	12-Jul-20	CA PABANG*	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	15-Jul-20	Closed	Site observation	
733	12-Jul-20	CA PABANG*	HRSG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IK	15-Jul-20	Closed	Site observation	
734	18-Jul-20	CA PABANG*	WTP	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IK	20-Jul-20	Closed	Site observation	
735	18-Jul-20	CA PABANG*	STG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IT	17-Jul-20	Closed	Site observation	
736	18-Jul-20	CA PABANG*	STG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	IT	17-Jul-20	Closed	Site observation	
737	18-Jul-20	Lain-lain	STG	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	JK	17-Jul-20	Closed	Site observation	
738	18-Jul-20	Lain-lain	WTP	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	IK	17-Jul-20	Closed	Site observation	
739	18-Jul-20	Lain-lain	Office 21	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	JK	20-Jul-20	Closed	Photo	
740	18-Jul-20	Lain-lain	Tank	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	WIK	20-Jul-20	Closed	Photo	
741	18-Jul-20	CA PABANG*	Water intake	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	Indogun	20-Jul-20	Closed	Document	
742	18-Jul-20	CA PABANG*	Water intake	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	Indogun	20-Jul-20	Closed	Document	
743	18-Jul-20	CA PABANG*	Water intake	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	Indogun	20-Jul-20	Closed	Document	
744	18-Jul-20	CA PABANG*	Water intake	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	Indogun	20-Jul-20	Closed	Photo	
745	18-Jul-20	CA PABANG*	Water intake	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Water	Saluran pemadam kebakaran terhalang	Indogun	20-Jul-20	Closed	Photo	
746	18-Jul-20	CA PABANG*	Water intake	Saluran pemadam kebakaran terhalang	Saluran pemadam kebakaran terhalang	Medevac	Saluran pemadam kebakaran terhalang	Indogun	20-Jul-20	Closed	Photo	

APPENDIX I

Incident Investigation & Corrective Action Plan (CAP)

Incident Investigation Report

Incident title	MTC – Left forefinger pushed by rebar		
Date of Report:	11 March 2020	Investigating team:	<ul style="list-style-type: none"> - Riyo Nugroho - Nurasa - Leokardho N - Surya Dono
Classified As:			
<input type="checkbox"/> First Aid <input checked="" type="checkbox"/> Medical Treatment Beyond First Aid <input type="checkbox"/> Restricted Work <input type="checkbox"/> Days Away from Work <input type="checkbox"/> Fatality <input type="checkbox"/> Safety Observation Report (SDR) <input type="checkbox"/> Near Miss <input type="checkbox"/> Non Work Related			
Date/Time of occurrence:	06 March 2020	Date reported to Jacobs:	
Location:	Construction Project Riau IPP 275 MW	Involved Persons: (include whether Company person, controlled contractor, etc.)	Timur Widiyatmoko (IP), 19 y.o, Construction Helper, PT. Wahana Karya Konstruksi
Incident Summary: Project background, description of the project, site or office including scope of work and other relevant information Describe the Incident	<p>On Friday, March 6, 2020, approximately at 14.22 pm, IP (construction helper) was requested by another crew to bend rebar with diameter 13 mm and with length 15 cm. While IP was using the equipment, suddenly his finger pinched between rebar and equipment. IP got first aid treatment on site clinic, sent to hospital for further treatment, and got two stitch. After the treatment, IP returned to work at site.</p>		
Immediate Actions undertaken: Describe the immediate response to the incident by all parties involved in the response process.	<ol style="list-style-type: none"> 1. IP was brought to the first aid room for the first aid treatment by site paramedic and then send to hospital for further treatment, got 2 stitches and returned to work. 2. Stop all activity at WKK fabrication. 3. Conducted standdown meeting 		
Chronological Timeline of events: Include the events leading up to the incident, the incident itself, and the events following the incident until the scene was secured	Date	Action/Event	
	06/03/2020		
	At 12:00 pm	Personnel of WKK including IP take a rest and lunch time	
	13:00	The IP return to work on site	
	14:00	<p>The carpenter crew who was performing formwork, requested to IP for rebar with length 15 cm to support his job.</p> <p>The IP then went to fabrication workshop, and found no rebar bending equipment operator standby. The carpenter crew asked IP to cut the rebar by himself without informed to Workshop Foremen and waiting the bending equipment operator because he needed the rebar soon.</p> <p>Based on that order, IP got 3 pcs rebar size Ø 16. He operated the equipment to cut rebar for 15 cm length.</p>	
14:22	<p>The IP cut 3 times successfully. While was trying to perform the 4th cutting, he assume the machine was not actuated and he was try to tidy up the rebar on his left hand but was not aware of his hand position.</p> <p>The machine was actuated to cut rebar and rebar on his hand moved and push his hand, he reflex to move his hand however his forefinger was pushed to the edge of machine part.</p>		

	14:25	The IP report to his team and then carried out by Safety Man to First Aid Station and get the first aid treatment by Site Paramedic
	14:45	The IP sent to hospital for further treatment and got stitches. After the treatment he returned back to work site-

Investigation summary: Describe the investigation process, the methodology used and any unique or specific terminology that was used in the report.	Investigation was conducted by fact finding and root cause analysis using WHY tree method. The team collect the fact through site investigation, re-construction of position, document review and interview the personnel.
---	---

Causal Analysis (5 WHY):


- Apply 5 Why to direct and indirect causes identified (Direct: Unsafe Acts or Conditions, In Direct: People and job factors)
- Keep asking what caused or allowed this condition/practice to occur?
- You may get to the root cause before the 5th Why, it may take more than 5 Why's depending on the complexity of the incident.

Why 1:	- IP did not wear proper PPE, Hand Glove with Heavy Duty Resistant. - Un-authorized person to operate the rebar bending equipment.
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Why 2:	- There was lack of supervision to working group activity and manpower management. - There was lack of knowledge about authorization to equipment operation.
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Why 3:	- There was lack of safety sign about Authorization to Operate the Equipment, Hand Injury and marking of pinch point at the equipment. - The specific procedure to operate the equipment was not provided.
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Root Cause Summary: describe the root (or basic) causes related to management and/or programmatic factors	- Lack of Awareness: <ul style="list-style-type: none"> o The workers (both IP and Carpenter Crew) was not aware of safety requirement for authorization for equipment operation. o IP was not aware about the hazard of the equipment, and not prepared the proper PPE. o The Carpenter Crew was not aware to request needs shall through the workshop foreman, and the workshop foreman will assign an authorized and skill person to operate the equipment. o There is no specific procedure to operate the equipment
	- Safety Communication: The fabrication workshop less of safety sign about Authorization to Operate Power Tool/Equipment, Hand Injury Prevention and marking of pinch point at the equipment.
	- Risk Management: Unauthorized person to operate equipment resulting wrong method and improper PPE used.

Involve Company Critical Risk?									
	—	—	—	—	—	—	□	□	□

Evidence (documents reviewed, photographs) referenced in investigation



Rebar Equipment

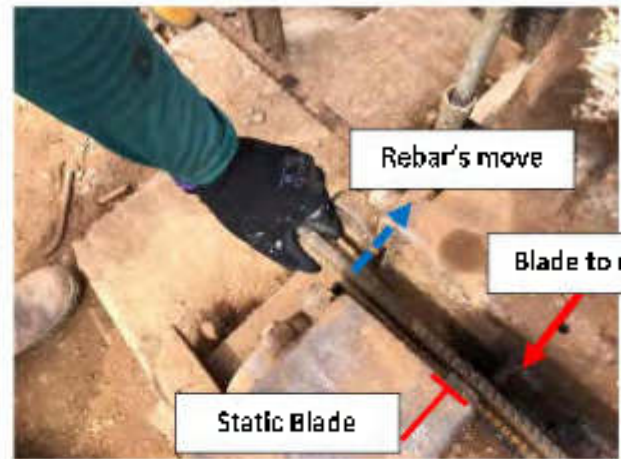


The edge

Rebar Position and Pinch Point



Rebar Position and Pinch Point



Re-construction of position



Treatment

Conclusion & Recommendations




Conclusion: Provide any conclusions or recommendations from the investigation process.



The incident occurred with root cause of Man Power Management regarding operator of rebar bending equipment needs in daily operation. Lack of safety awareness about the authorization to Operate the power tools and equipment resulted an unauthorized worker operate the equipment without proper method and PPE.

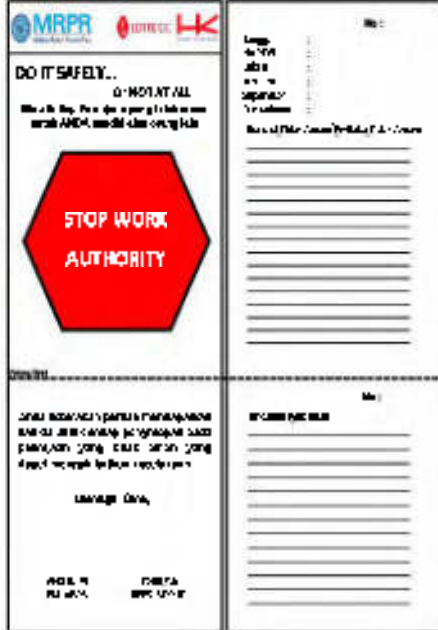
MRPR recommend to contractor to implement the safety improvement and corrective action



	on site.			
Corrective Actions: Include action owner and time frames and action reference (ID) if applicable.	Action Owner:	Action:	Action ID	Due Date:
	EPC Contractor	Socialize the Lesson Learned and emphasize the Authorization of Equipment Operator	01	20 March 2020
	EPC Contractor	Implement the selection of Hand Glove based on job risk. Provide high duty resistant hand gloves	02	20 March 2020
	EPC Contractor	Perform the safety campaign regarding Pinch Point and Hand Injury Prevention through safety talk, safety board and safety banner at site	03	31 March 2020
	EPC Contractor and sub	Prepare the specific procedure to Operate the Power Tools/Equipment	04	30 April 2020
	EPC Contractor	Implement system of Site Equipment Operation Permit Card to personnel.	05	30 April 2020
	EPC Contractor	Identify and marking the pinch point for mechanical equipment	06	31 March 2020
	EPC Contractor and sub	Emphasize authorization Refuse to Work Policy	07	31 March 2020
Lessons Learnt	<ul style="list-style-type: none"> - Only Authorized person is permitted to operate the equipment. - Implement PPE Selection base on Job risk. Heavy Duty Resistant hand glove shall worn for respective pinch point risk. 			

CORRECTIVE ACTION FOR MEDICAL TREATMENT CASE_HAND INJURY 20200306

No	Action	Action by	Due Date	Corrective Action	Status
1	Socialize the Lesson Learned and emphasize the Authorization of Equipment Operator	EPC Contractor	20 March 2020	Socialization was done by general safety talk 12 March 2020 and stand down meeting 08 March 2020. (Attendance list attached)	Closed
2	Implement the selection of Hand Glove based on job risk. Provide high duty resistant hand gloves	EPC Contractor	20 March 2020	 <ul style="list-style-type: none"> Provide hand glove heavy duty to operator cutting bar 	
3	Perform the safety campaign regarding Pinch Point and Hand Injury Prevention trough safety talk, safety board and safety banner at site	EPC Contractor	31 March 2020	 <ul style="list-style-type: none"> Install safety sign for "Hand protection" at site and workshop and socialize it through general safety talk 	Closed
4	Prepare the specific procedure/Work Instruction to Operate the Power Tools/Equipment	EPC Contractor and subbies	30 April 2020	 <p>Working Instruction for equipment operation has been provided</p>	Closed

5	Implement system of Site Equipment Operation Permit Card to personnel	EPC Contractor	30 April 2020	 <p>Authorized person card has been issued only for the authorized personnel to operate equipment.</p>	Closed
6	Identify and marking the pinch point for mechanical equipment	EPC Contractor	31 March 2020	 <ul style="list-style-type: none"> Install marking of pinch point for mechanical equipment 	Closed

7	Emphasize authorization Refuse to Work Policy	EPC Contractor and subbies	31 March 2020	 <ul style="list-style-type: none"> • Resocialization Stop work authority/Self stop work authority to worker during toolbox meeting (Attendance list attached) 	Closed
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Riau GFPP 275MW IPP Project	ACCIDENT INCIDENT & NEARMISS REPORT FORM	Ref Doc. No : RIAUI-LEC-G10-PM-0002	 
		APPENDICES	

INCIDENT INVESTIGATION REPORT

INCIDENT NO : 001-RIPP/NM/V/2020

INCIDENT CLASSIFICATION: Work Related Non-Work Related

TYPE OF INCIDENT	INJURY TYPE :	DAMAGE :	ENVIRONMENTAL :
<input type="checkbox"/> Injury	<input type="checkbox"/> Fatality	<input type="checkbox"/> Equipment	<input type="checkbox"/> Catastrophic
<input type="checkbox"/> Damage	<input type="checkbox"/> L.T.I	<input type="checkbox"/> Property	<input type="checkbox"/> Major
<input type="checkbox"/> Environment	<input type="checkbox"/> MT Restricted		<input type="checkbox"/> Serious
<input checked="" type="checkbox"/> Near Miss	<input type="checkbox"/> MT Non Restricted		<input type="checkbox"/> Minor
	<input type="checkbox"/> First Aid		

SEVERITY POTENTIAL CLASSIFICATION

<input type="checkbox"/> (1) First Aid	<input type="checkbox"/> (1) Slight Risk of materials damage or cost of lost (<\$1,000) <input type="checkbox"/> (1) down time 8 hours	<input type="checkbox"/> (1) Slight Risk of materials damage or cost of lost (<100 litres)	<input type="checkbox"/> (1) Local Exposure
<input type="checkbox"/> (2) Medical Treatment	<input type="checkbox"/> (2) Minor Risk of materials damage or cost of lost (<\$10,000) <input type="checkbox"/> (2) down time <= 1 day	<input type="checkbox"/> (2) Minor Risk or spills to environment (<1000 litres)	<input type="checkbox"/> (2) State Exposure
<input type="checkbox"/> (3) Lost Time/ Rest. Injury	<input type="checkbox"/> (3) Medium Risk of materials damage or cost of lost (<\$100,000) <input type="checkbox"/> (3) > 1 day	<input type="checkbox"/> (3) Medium Risk of materials damage or cost of lost (<5 M ³)	<input type="checkbox"/> (3) National Exposure
<input type="checkbox"/> (4) Single Fatality	<input type="checkbox"/> (4) Major Risk of materials damage or cost of lost (<\$1,000,000) <input type="checkbox"/> (4) down time > 1 week	<input type="checkbox"/> (4) Major Risk of materials damage or cost of lost (<100 M ³)	<input type="checkbox"/> (4) Regional Exposure

PERSONNEL INVOLVED

Name	Involvement	Position/Company
Muller Sitorus	Witness	Operator crane/ITI
Asep	Witness	Material control/LEC
Riskansyah	Witness	Material control/ITI
Alan	Witness	Rigger/ITI
Darmawan	Witness	Rigger/ITI
Yohanes	Witness	Rigger/ITI
Slamet Riyadi	Witness	Rigger/ITI
Haiz Halim	Witness	Rigger/ITI

A. PERSONAL / DETAILS OF THE VICTIM INJURED PERSON

NAME	N/A	EMP. NO / IC NO :	N/A	POSITION	N/A
LOCATION	N/A	AGE	DATE OF BIRTH	DEPT./SECTION	N/A
		N/A	N/A		
SEX	<input type="checkbox"/> Male	SUPERVISOR NAME	Roni	EMPLOYEE CLASSIFICATION	<input type="checkbox"/> Full Time
	<input type="checkbox"/> Female	WORKER EXPERIENCE			<input type="checkbox"/> Part Time
					<input type="checkbox"/> Contract
					<input type="checkbox"/> Trainee

B. BASIC OF EMPLOYMENT


WORKING TIME	SHIFT ARRANGEMENT	NUMBER OF HOURS			
			None		<input type="checkbox"/> 6 hours or less
					<input type="checkbox"/> More than or 8 hours excluding overtime

C. JOB DETAIL

DESCRIPTION OF OCCUPATION OR JOB					
MAIN TASK PERFORM					
TRAINING PROVIDED	<input type="checkbox"/> Induction Training	Remarks :			
	<input type="checkbox"/> Task Specific Training				
	<input type="checkbox"/> Both of the above				
	<input type="checkbox"/> Neither of the above				

D. DETAIL OF INJURY OR DISEASE

NATURE OF INJURY	<input type="checkbox"/> Bruising	<input type="checkbox"/> Dislocation	<input type="checkbox"/> Others/Specify
<input type="checkbox"/> Strain/Sprain	<input type="checkbox"/> Scratch/Abrasion	<input type="checkbox"/> Internal	
<input type="checkbox"/> Fracture	<input type="checkbox"/> Amputation	<input type="checkbox"/> Foreign Body	
<input type="checkbox"/> Laceration/Cut	<input type="checkbox"/> Burn/Scald	<input type="checkbox"/> Chemical Reaction	
Injured Part of Body :			
Remarks :			
Treatment :	<input type="checkbox"/> First Aid	<input type="checkbox"/> Doctor's office	
	<input type="checkbox"/> Emergency Room	<input type="checkbox"/> Hospitalization	

Riau GFPP 275MW IPP Project	ACCIDENT INCIDENT & NEARMISS REPORT FORM	Ref Doc. No :	 
		R/IAU-LEC-G10-PM-0002	
		APPENDICES	

Name and address of treating Physician or Fatality			
--	--	--	--

E. LOST TIME INJURY / DESEASE
 Additional questions to be answered for cases which result in a fatality or permanent disability, or where there was time lost from work of one or more days / shifts. These questions should be completed as soon as possible after the injury or disease is reported.

EMPLOYEES PREFERRED LANGUAGE		TYPE OF EMPLOYEE :	<input type="checkbox"/> Permanent Employee
		<input type="checkbox"/> Wage/Salary Earning	<input type="checkbox"/> Contract Employee
		<input type="checkbox"/> Self employed	<input type="checkbox"/> Trainee
			<input type="checkbox"/> Contractors and Sub-Contractors
WORKER EXPERIENCE IN TASK BEING CARRIED OUT WHEN INJURY OR DISEASE OCCURRED		PROPORTION OF SHIFT WORKED DURING THE INCIDENT OCCURRED	<input type="checkbox"/> 25% or Less
			<input type="checkbox"/> 25% - 50%
			<input type="checkbox"/> 51% - 75%
			<input type="checkbox"/> 76% - 100%
			<input type="checkbox"/> Overtime
DETAILS OF PERSON COMPLETING	Name :	Position :	
	Signature :	Date	

F. DAMAGE PROPERTY

Property, Equipment or Material Damaged :	Object or Substance Inflicting Damage	Describe Damage :
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G. ACCIDENT DESCRIPTION

On Wednesday, May 20th, 2020, approximately 03.30 PM Riggers conducted unloading mechanical material from trailer to laydown area which is packing in wooden box.

The load was lifted using four sling belts with basket method on two boxes at one stacking. When the operator lowering load to laydown area, the operator was lowering on the uneven ground condition and caused material on the top unbalanced. The operator immediately sling up the crane then makes the load hit another material and the loads fell down and resulting wooden box material is broken.

The Fact Findings:

- Material control from LEC and ITI supervise the activity.
- No HSE personnel supervise around on the scene
- Laydown area was muddy and narrow.
- Material weight about 125 kg per box with dimension: 120 cm x 60 cm x 40 cm
- Lifting of material using 4 sling belt which is 2 sling belts are 3 Ton and 2 sling belts are 5 Ton and 2 shackles 8 ton.
- The operator take initiative to lowering load to empty space without following instruction from signman.
- The operator take initiative to lifted up the unbalanced load after landed to uneven surface and contacted to another material.
- Tag line for controlling material was installed

- Toolbox Meeting was conducted prior start to work morning time without operator crane.
- Riggers and operator have valid licenses
- Crane have valid SILO
- Permit To Work for unloading material, Job safety analysis and lifting plan available on site.
- Job safety analysis not capture hazard of uneven ground.
- Job safety analysis already socialized during toolbox meeting

H. ROOT CAUSE ANALYSIS

Event

- | | |
|--|---|
| <input type="checkbox"/> Struck Against (Running or bumping into) | <input type="checkbox"/> Caught on (Snagged, Hung) |
| <input type="checkbox"/> Struck by (Hit by moving object) | <input type="checkbox"/> Caught Between (Crushed or Amputated) |
| <input checked="" type="checkbox"/> Fall to lower level | <input type="checkbox"/> Contact with |
| <input type="checkbox"/> Fall on same level (Slip and fall, tip over) | <input type="checkbox"/> Overstress, Overexertion, Overload |
| <input type="checkbox"/> Caught in (pinch and Nip Points) | <input type="checkbox"/> Others : |

Immediate Cause

Substandard Act

Substandard Condition

- | | |
|--|---|
| <input type="checkbox"/> Operating Equipment Without Authority | <input type="checkbox"/> Inadequate Guards or Barriers |
| <input type="checkbox"/> Failure to Warn | <input type="checkbox"/> Inadequate or Improper Protective Equipment |
| <input checked="" type="checkbox"/> Failure to Secure | <input type="checkbox"/> Defective Tools / Equipment or Materials |
| <input type="checkbox"/> Operating at Improper Speed | <input checked="" type="checkbox"/> Congested or restricted action at Work Area |
| <input type="checkbox"/> Making safety devices inoperable | <input type="checkbox"/> Inadequate warning system |
| <input type="checkbox"/> Removing safety devices | <input type="checkbox"/> Fire and explosion hazards |
| <input type="checkbox"/> Using Defective Equipment | <input type="checkbox"/> Poor Housekeeping, disorder |
| <input type="checkbox"/> Failing to use PPE properly | <input type="checkbox"/> Noise Exposure |
| <input type="checkbox"/> Improper Loading | <input type="checkbox"/> Radiation Exposure |
| <input checked="" type="checkbox"/> Improper Placement | <input type="checkbox"/> Poor Housekeeping |
| <input checked="" type="checkbox"/> Improper Lifting | <input type="checkbox"/> Inadequate or Excess Illumination |
| <input type="checkbox"/> Improper Position for Task | <input type="checkbox"/> Inadequate Ventilation |
| <input type="checkbox"/> Servicing Equipment in operation | <input checked="" type="checkbox"/> Others: Laydown was muddy and narrow |
| <input type="checkbox"/> Horseplay | |
| <input type="checkbox"/> Drug or Alcohol Use | |
| <input type="checkbox"/> Unnecessary Haste | |
| <input type="checkbox"/> Others | |

Basic cause

Personal factor

Job factor

- | | |
|---|--|
| <input type="checkbox"/> Inadequate physical | <input checked="" type="checkbox"/> Inadequate supervision |
| <input type="checkbox"/> Inadequate mental / psychological capability | <input type="checkbox"/> Inadequate purchasing |
| <input type="checkbox"/> Physical or physiological stress | <input type="checkbox"/> Inadequate maintenance |
| <input type="checkbox"/> Mental or psychological Stress | <input type="checkbox"/> Inadequate tools and equipment |
| <input type="checkbox"/> Lack of Knowledge | <input type="checkbox"/> Inadequate Work Standards |
| <input type="checkbox"/> Lack of Skill | <input type="checkbox"/> Wear and Tear |
| <input type="checkbox"/> Improper Motivation | <input type="checkbox"/> Abuse or Misuse |
| <input checked="" type="checkbox"/> Others: Lack of safety awareness | <input type="checkbox"/> Others: |

Failure to maintain compliance with adequate standards for:


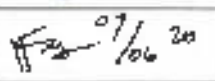
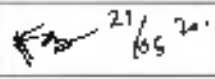


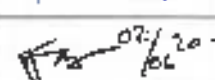
- | | |
|---|--|
| <input type="checkbox"/> Leadership & Administration | <input type="checkbox"/> Personal Protective Equipment |
| <input type="checkbox"/> Leadership Training | <input type="checkbox"/> Health & Hygiene control |
| <input type="checkbox"/> Planned Inspections and maintenance | <input type="checkbox"/> System Evaluation |
| <input type="checkbox"/> Critical Task Analysis (JSA) and Procedures | <input type="checkbox"/> Engineering and change Management |
| <input type="checkbox"/> Accident Investigation | <input type="checkbox"/> Personal Communications |

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<input checked="" type="checkbox"/> Task Observations	<input checked="" type="checkbox"/> Group Communications
<input type="checkbox"/> Emergency preparedness	<input type="checkbox"/> General Promotion
<input type="checkbox"/> Rules and work permits	<input type="checkbox"/> Hiring & Placement
<input type="checkbox"/> Accident / Incident Analysis	<input type="checkbox"/> Materials & Services Management
<input checked="" type="checkbox"/> Knowledge and Skill Training	<input type="checkbox"/> Off – the – job safety
	<input type="checkbox"/> Other

How bad could the accident have been?	Very serious	Serious	Minor
What is the chance of the accident happening again?	Frequent	Occasional	Rare

I. CORRECTIVE & PREVENTIVE ACTION

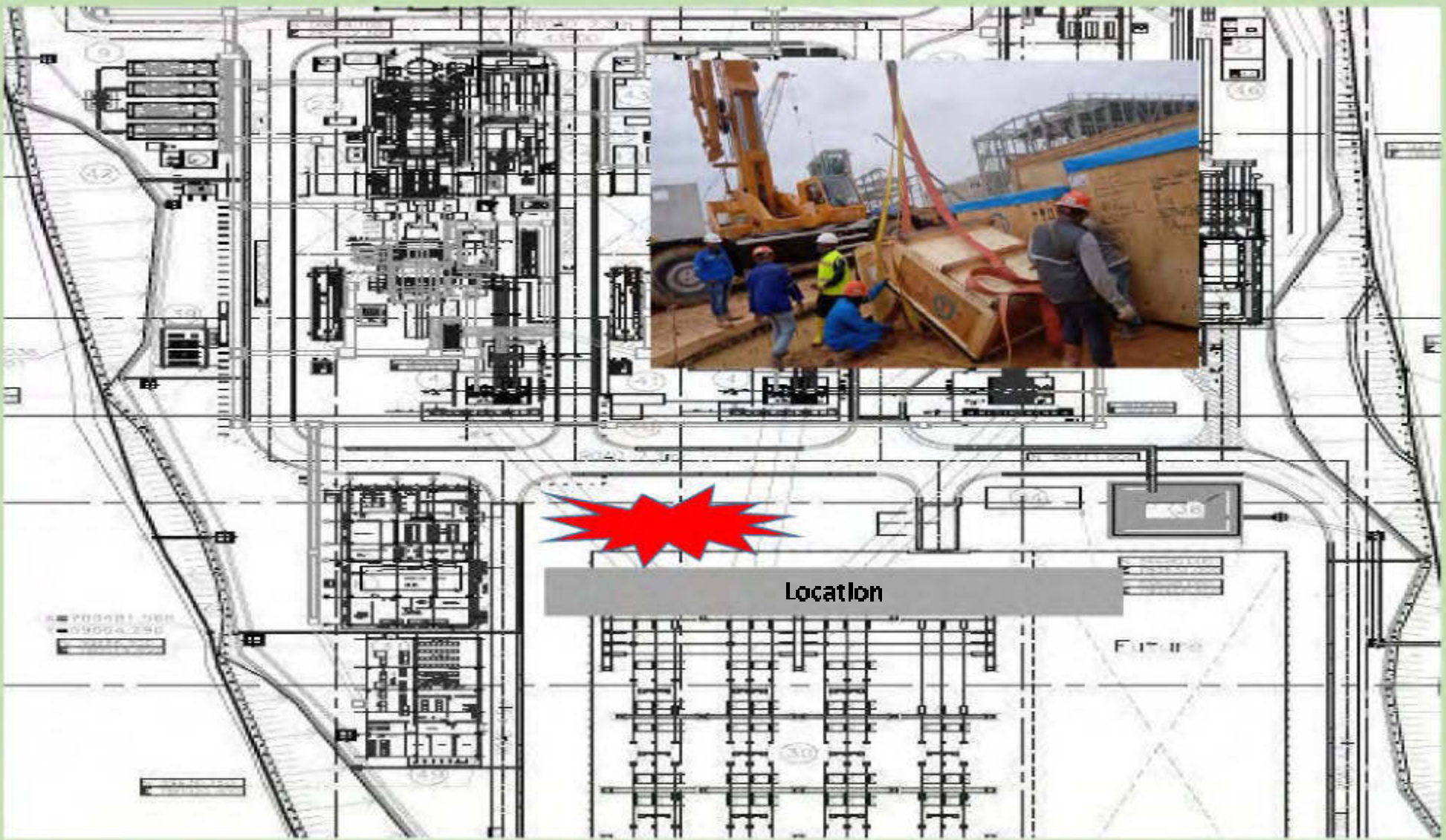
Action to prevent recurrence (long term and short term)	Person in Charge	Due Date	Sign and Date of Completion
Contractor to conducted training refreshment to operator and rigger to reinforce the responsibility	RJO	June 15 th, 2020	
Prepare ground level of laydown prior to material placement	RJO/ITI	June 15 th, 2020	 07/06/20
Rigger to using proper webbing sling/lifting gear according to material weight or specification.	RJO/ITI	June 15 th, 2020	 21/06/20
ITI to increase number of safety personnel to monitor loading unloading material to prevent any lack of monitoring	ITI	June 15 th, 2020	 28/05/20
Contractor to revise or up date the job safety analysis loading unloading material.	RJO/ITI	June 15 th, 2020	 19/05/20
Disciplinary action (first warning letter) to be given to: - Rigger and the operator crane	RJO	June 15 th, 2020	 02/06/20

J. INVESTIGATION TEAM

SIGNATURE	NAME	POSITION
	Leo Kardo N	HSES Manager
	Muhammad Faula A	HSE Supervisor
	Dadan A	HSE Supervisor



INCIDENT SKETCH & CHRONOLOGY

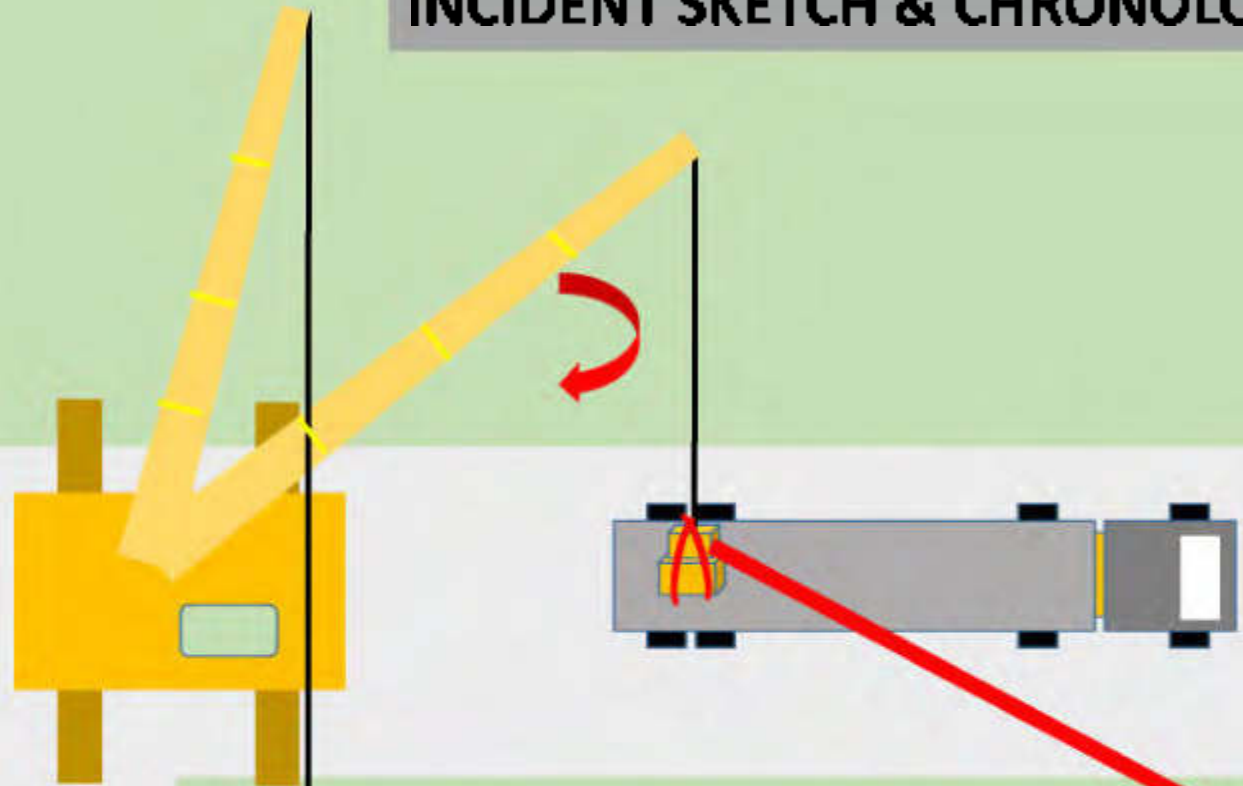


Location

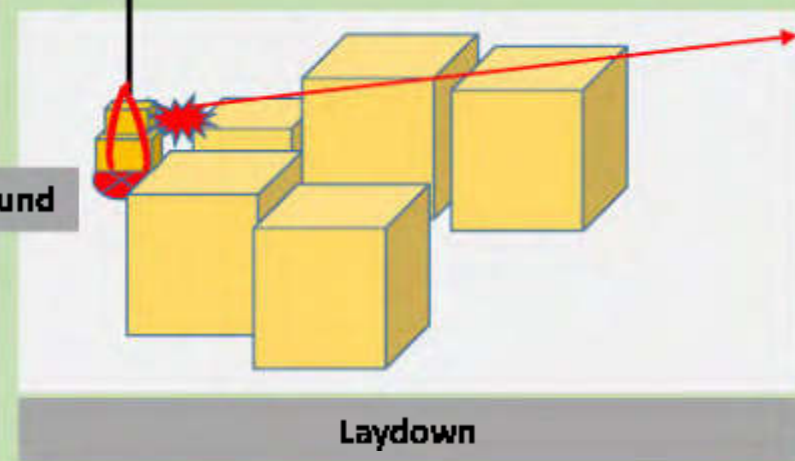
Future



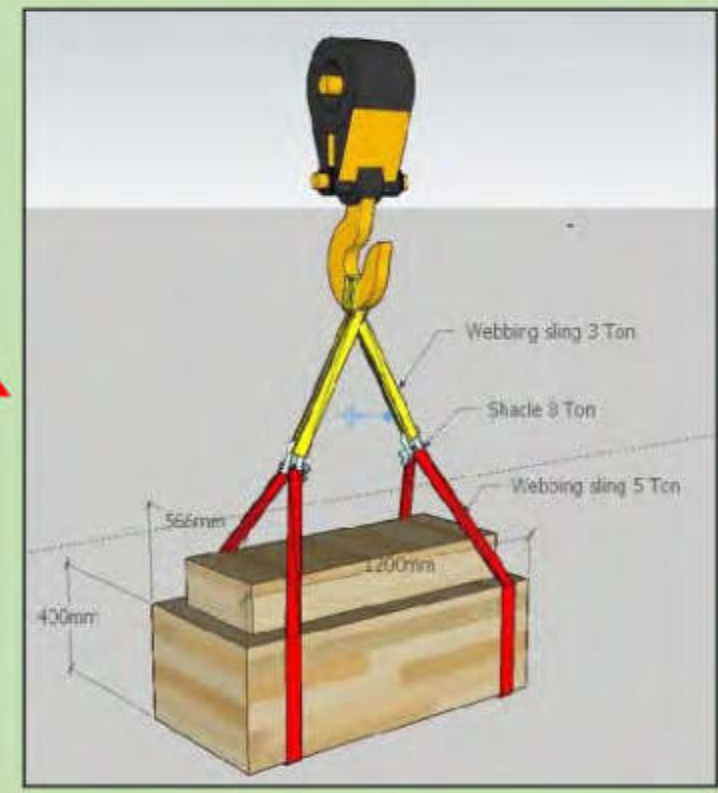
INCIDENT SKETCH & CHRONOLOGY



Uneven ground



Hit point



	KEMENTERIAN KETENAGAKERJAAN RI	OPERATOR
	LISENSI K3	MOBILE CRANE
	PESAWAT ANGKAT & ANGKUT	KLAS : 1(satu)
No: 179432-OEK-J-MC/PNS/111/2020		Gol. Terak. A
Nama	: MULLER PARSADORAN SITORUS	
Tempat/Tgl. Lahir	: Porsea, 24-06-1966	
Perusahaan	: PT. Suraia Baja Perkasa	
Baru/Usia	: 23 Maret 2020	
		

012000032



KEMENTERIAN KETENAGAKERJAAN REPUBLIK INDONESIA
 MINISTRY OF MANPOWER OF THE REPUBLIC OF INDONESIA
 DIREKTORAT JENDERAL PEMBINAAN PENGAWASAN KETENAGAKERJAAN DAN
 KESELAMATAN DAN KESEHATAN KERJA
 DIRECTORATE GENERAL OF LABOUR INSPECTIONS DEVELOPMENT AND OCCUPATIONAL SAFETY AND HEALTH

Sertifikat
Certificate

NOMOR 5/179432/AS.02.00/111/2020

Diberikan Kepada :

Nama : MULLER PARSADORAN SITORUS
 Tempat, tgl. Lahir : Porsea, 24-06-1966
 Perusahaan/Pekerjaan : PT. Suraia Baja Perkasa

TELAH MENGIKUTI

PEMBINAAN TEKNIK KESELAMATAN DAN KESEHATAN KERJA (K3)
 BIDANG PESAWAT ANGKAT DAN ANGKUT

The Development and Training of Technical Training of Lifting & Transporting Equipment

Ditandatangani oleh

PT. KARYA MASTER MANDIRI INDONESIA

Di Jakarta, pada tanggal 17 dan 20 Februari 2020
 In Jakarta on February 17 to 20, 2020

Pemegang sertifikat ini menuntahi persyaratan sebagai

OPERATOR K3 MOBILE CRANE KELAS : 1 (satu)
 ONE MOBILE CRANE OPERATOR 1st GRADE

sesuai Peraturan Menteri Tenaga Kerja dan Transmigrasi RI No. Per.09/Men/VI/2010 dan
 Keputusan Dirjen Binwasaker dan K3 Nomor 04 Tahun 2017
according to the Regulation of the Minister of Manpower Number Per-09/Men/VI/2010 and Keputusan Dirjen Binwasaker dan K3 Nomor 04 Tahun 2017

Jakarta, 23 Maret 2020

A.n. Direktur Jenderal

Pembinaan Pengawasan Ketenagakerjaan dan K3,
The general of the Directorate General of Labour Inspection and Occupational Safety and Health

Dirjen Pengawasan Norma K3,
The general of the Directorate General of Occupational Safety and Health



Gharmahadi, S.T., M.M.
 NIP. 19530831 199703 1 002



	KEMENTERIAN KETENAGAKERJAAN RI	JURU IKAT RIGGER
	LISENSI K3	
PESAWAT ANGKAT & ANGKUT		
Reg. : 1230-CPKS-Rigg/PA/VII/2018	Gol. Darat : -	
Nama : YOHANES		
Tempat / Tanggal Lahir : Kemas, 11 September 1994		
Pekerjaan : Juru kawat Rigger		
Perilaku : 14 Agustus 2018		
Jakarta, 14 Agustus 2018		
Drs. Herman Prakoso Hidayat, MM NIP. 19580412 198603 1 001		

No. Sel. 803 - 0963-Rigg/PA/VII/18

KEMENTERIAN KETENAGAKERJAAN R.I.
Departemen Pembinaan, Pengawasan, Ketenagakerjaan dan Keselamatan dan Kesehatan Kerja

DIREKTORAT JENRAL PEMBINAAN, PENGAWASAN KETENAGAKERJAAN DAN KESELAMATAN DAN KESEHATAN KERJA
Departemen Pembinaan, Pengawasan, Ketenagakerjaan dan Keselamatan dan Kesehatan Kerja

Sertifikat
Pembinaan

OPERATOR PESAWAT ANGKAT & ANGKUT
Lifting Equipment Operator

Kerangka Undang - Undang No. Tahun 1970 dan Permen No. 05/ME/VI/80 dan
Undang - Undang - Undang No. Tahun 1970 dan Peraturan Per 05/ME/VI/80 and
Permen No. Per 08/ME/VI/2019, **MENTER TENAGA KERJA DAN TRANSMIGRASI RI**
Permen Number Per 08/ME/VI/2019, Ministry of Manpower and Transmigration Republic of Indonesia

Membuatkan Sertifikat Kaparter
Hasil ujian certificate is :

Nama : **YOHANES**
Tempat/Tgl Lahir : Kemas, 11 November 1994
Alamat Rumah : Dusun I/Kaman RT 07 / RW 001 Kel. Naman Wan. Pangpandan
Kab. Ogan Komering Ilir - Sumatera Selatan
Pekerjaan : Juru kawat Rigger

Yang telah mengikuti Pembinaan/Pengujian Ujian K3 Operator Pesawat Angkat & Angkut dan
hasilnya telah dinyatakan lulus examination of lifting equipment operator course and/or the
yang bersangkutan dinyatakan lulus Ujian, dengan kualifikasi
hasilnya telah dinyatakan lulus for the examination with qualification

OPERATOR K3 JURU IKAT/RIGGER
DSH JURU IKAT/RIGGER

Pemegang Sertifikat ini, Berwenang mengoperasikan pesawat angkat & angkut sesuai dengan
aturan keselamatan dan kesehatan kerja operator pesawat angkat & angkut K3 Rigger
jika wajib diwajibkan mengamalkan prinsip-prinsip keselamatan dan kesehatan kerja dalam
kegiatan operasional safety and health work in order to prevent occupational accidents and
usaha pencegahan kecelakaan harus dengan peraturan perundang-undangan yang berlaku
The safe operation and protection

Jakarta, 14 Agustus 2018

A.n. Direktur Jenderal
Pembinaan, Pengawasan Ketenagakerjaan dan K3
Direktur Pengawasan Norma
Keselamatan dan Kesehatan Kerja
Drs. Herman Prakoso Hidayat, MM
NIP. 19580412 198603 1 001

No. Reg. 1230 - 0963-Rigg/PA/VII/2018

	KEMENTERIAN KETENAGAKERJAAN RI	JURU IKAT
	LISENSI K3 PESAWAT ANGGKAT & ANGGKUT	RIGGER
Reg : 8566-JIK3TFAA/XU2019	Tgl Dstn :	
Nama : SELAMET RIADI		
Tempat/Tgl. Lahir : Santapan, 15 Agustus 1994		
Pekerjaan : Rigger		
Berkas No : 20 NOVEMBER 2016		

No. Ser : 8566-JIK3TFAA/XU2019



KEMENTERIAN KETENAGAKERJAAN RI
 MINISTRY OF MANPOWER AND OCCUPATIONAL SAFETY AND HEALTH
 DIREKTORAT JENDERAL PEMBINAAN PENGAWASAN KETENAGAKERJAAN DAN
 KESELAMATAN DAN KESEHATAN KERJA
 DIRECTOR GENERAL OF GENERAL EMPLOYMENT, SAFETY AND HEALTH AND OCCUPATIONAL SAFETY AND HEALTH

Sertifikat
Certificate of

Berdasarkan Undang – Undang No. 1 Tahun 1970 Jo. Permen No. 05/MEN/1985 dan
 Undang – Undang – Undang No. 1 Tahun 1970 Jo. Permen No. 05/MEN/1985 dan
 Permen No. Per. 09/MEN/VIII/2010. MENETRI TENAGA KERJA DAN TRANSMIGRASI RI
 /Permen No. Per. 09/MEN/VIII/2010 Ministry of Manpower and Transmigration Indonesia
 Membankan sertifikat kepada

Nama : SELAMET RIADI
 Tempat/Tgl. Lahir : Santapan, 15 Agustus 1994
 Alamat : Dusun II Santapan Barat RT 003 / - Kel/Ds. Santapan Barat
 Kec. Kanis Kra Ogan Ilir Prov. Sum-Sel
 Pekerjaan : juru ikat / RIGGER

Yang telah mengikuti Pembinaan Pengujian Lisensi K3 bidang Pesawat Angkat & Angkut dan
 Menguasai Materi Kejuruan dan Keselamatan dan Kesehatan Kerja yang dilaksanakan pada
 Yang bersangkutan dinyatakan lulus ujian dengan kualifikasi
 (Kategori : 1) dan dinyatakan sebagai tenaga kerja yang memenuhi persyaratan untuk pekerjaan

BIDANG PESAWAT ANGGKAT & ANGGKUT
JURU IKAT / RIGGER

Pemegang Sertifikat ini diwajibkan mengamalkan prinsip – prinsip Keselamatan dan Kesehatan Kerja
 dalam usaha pencapaian kebolehan sesuai dengan peraturan perundang – undangan yang berlaku.
 (The holder is required to apply the principle)

Jakarta, 25 November 2016
 Jakarta, November 25, 2019
 A. H. Direktur Jendral
 dan Pengawasan Ketenagakerjaan dan K3
 (Ministry of Manpower and Occupational Safety and Health)
 Kementerian Ketenagakerjaan dan K3
 (Ministry of Manpower and Occupational Safety and Health)



Henry Sutanto, ST, MIV
 NIP. 19710922 195703 1 007



No. Ser : 8566-JIK3TFAA/XU2019



No. Ser. 13.2004.003/PMA/2013/3013



KEMENTERIAN TENAGA KERJA DAN TRANSMIGRASI RI
Ministry of Manpower and Transmigration of the Republic of Indonesia
DIREKTORAT JENDERAL PEMBINAAN PENGAWASAN KETENAGAKERJAAN
Directorate General of Labor Protection and Supervision

Sertifikat

Certificate

Diberikan kepada :

Name :

Nama : ATAN SAHPUTRA

Name

Tempat, tgl. Lahir : P. Brandan, 8 Oktober 1982

Place and date of birth

Perusahaan/Pekerjaan : PT. Waskuta Karya

Company/Occupation

TELAH MENGIKUTI

the following course

PEMBINAAN TEKNIK KESELAMATAN DAN KESEHATAN KERJA

The Development of Safety and Health Engineering of the Field of Training

BIDANG PESAWAT ANGKAT DAN ANGKUT

The Field of Lifting Equipment

Diselenggarakan oleh

by

PT. ARPINDO PRATAMA

Di Pekanbaru pada tanggal 06 s.d. 08 Desember 2013

in Pekanbaru on December 06 - 08, 2013

Perancang sertifikat ini memenuhi persyaratan sebagai

A holder of the certificate satisfies the requirements as

JURU IKAT / RIGGER

sesuai Peraturan Menteri Tenaga Kerja dan Transmigrasi RI No. PER.05/MEN/VII/2010 Jo

Surat Edaran Dirjen Binwasaker Nomor : SE. No. 01/DJPPK/VI/2009

according to the Decree of the Director General of Manpower and Transmigration of RI No. 05/PER/VI/2010 Jo

The Decree of the Director General of Labor Protection and Supervision Number : SE/01/DJPPK/VI/2009



2/16

Jakarta, 31 Desember 2013

Jakarta, December 31, 2013

A.n. Menteri Tenaga Kerja dan Transmigrasi RI

for the Head of the Ministry of Manpower and Transmigration of the Republic of Indonesia

Direktur Jenderal

Pembinaan Pengawasan Ketenagakerjaan

Director General of Labor Protection and Supervision

Drs. A. Nudji Handaya, M.Si

Name : Asyraf A.P.
Position : SPV
Company : LEC

Saya selaku SPV material LEC, akan melakukan pembongkaran barang yang rencananya ada 6 trailer, menggunakan crane 70 T. Proses pembongkaran pada Lorry 5 4 trailer sudah dibongkar, lanjut trailer yang ke-5 dan 2 box material terakhir. Pada saat diangkat 2 box digantung dengan sling. Sebelum mendapatkan lokasi penurunan dari crane menurunkan box pada tanah yg agak miring / tidak rata, ketika box turun dan box atasnya miring dari crane langsung ke sling, box menbentur pelat material di sampingnya, dan langsung di turunkan lagi, ketika box atas jatuh ke tanah.

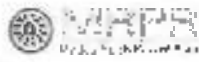
TANDA TANGAN



Name : MULIER. P. SITORUS
POSITION : OPR. CRANE TOWER
Company : SBP

Pada saat aktivitas Loading unloading saya
opr. crane tower. Pada saat material box sudah
step diikat riggar saya mulai up sling, dan
swing ke arah landan, saya turunkan box
taman box nya miring dan saya up sling
box mengenai material di samping, dan saya
area sling pada tanah, box tergelung karena
janda miring.

TANDA TANGAN



WITNESS STATEMENT



Name : Riskansyah
Position : Foreman TML
Company : ITI

Saya bersama crew akan melakukan pembongkaran material di laydown 5 menggunakan crane 70 T. rencana hari ini ada 6 trailer yang akan dibongkar. Bat material yang jatuh merupakan box terakhir pada trailer no. 5. Pada saat akan diangkat Bat ditumpuk 2 dan dilikat sling secara digandeng, lalu diturunkan lalu saat diturunkan rupanya tancin tidak rata dan bat harusnya bergelinding.

TANDA TANGAN 24/04/2017

Name : ATAN SUPRIYA
Position : RIGGER
Company : IPI

1) Loading AND Loading material.


2) Material tergelincir karena tanah tidak rata
AND material yg diatas tergelincir.

3) Kebutuhan sekitar dan 3rd lokasi ditayarkan 5.

4) Box Truk dari Tiesel, ada 2 Box material

~~_____~~

TANDATANGAN 2/5/20


(ATAN SUPRIYA)



WITNESS STATEMENT



Name : DERMAWATI
Positor : RIGGER
Company : ITI

PADA PUKUL 16-30 ada kejadian

posisi saya di bawa.

barang MAULURUN ada gundukan barang jadi MIRUK

OPERATOR. TERKEJAD DI AP jadi jatuh mau jatuh di area sampai Balok
JALU SEMBAR

TANDA TANGAN

Name : YOHANES
Position : RIGGER
Company : ITI

1) Sekitar jam 3 lewat kita angkat barang

posisi saya diatas ketika ~~barang~~ saya turun dari trailer

barang yang udah kami angkat yang penerman barang yang dibawah

ketika barang yang mulai di turunkan barang, barang udah
ada di bawah, ketika mulai area slang barang mulai jatuh abarator

posisi langsung ke slang. ~~barang~~ ~~barang~~ ~~barang~~ ~~barang~~

ketika posisi langsung ke slang ketika area slang barang langsung

masuk, bisa sebelah ketika barang mulai langsung area lagi.

~~barang~~ ~~barang~~ ~~barang~~ ~~barang~~

TANDA TANGAN





WITNESS STATEMENT



Name : Selamat Riassi
 Position : Rigger
 Company : ITI

pada saat jam 18:30 ada penerangan malam material saat itu
 pada saat di atas kita melihat ada 2 fungsi ada box
 yang sama rata sama balok, ke 2 box itu fungsi jendang
 menggunakan welding + bor, pada saat foto menggunakan
 box, juga pastikan box itu sudah sangat aman,
 saat barang selesai di angkat tidak ada penerangan malam,
 pada saat penerangan tidak ada foto, sehingga barang diangkat
 kembali.

TANDA TANGAN
[Signature] 21.11.2020

Name : HAFIE HALIM

Position : Rigger

Company : PT III

Seperangkat Sump pada saat instalasi di area Sump, di tempat Material di letakan, ada gangguan tanah yg membuat ~~Material~~ Material menjadi guncang. ~~Material~~ karena terjadi guncang pada Material, Sertak Operator tidak bisa lep Sump, dan bingung kejatuhan karena Sump tidak bisa Sump yg di alat sangat berbahaya.

1. Loading and loading Material

2. ~~Material~~ Material terguncang saat di letakan di posisi tetapi ada gangguan tanah yg membuat Material tidak level.3. Port terbalik ~~Material~~ Material yg ke 5 dari 6 terbalik.

TANDA TANGAN



HAFIE HALIM.

21/5 - 2020.

Date : 16.05.2020
 Work Location : Unloading material (H) area
 Job Description :
 Duration : 15.05.20 until 16.05.20
 Time : Normal Emergency
 Company : PT. III
 Division : Mechanical Piping

I. Material Condition
 New Second-hand

II. Weight of Material

1. Fixed Load = 6 ton

2. Lifting Accessories = 0.3 ton

2.1 Main Block Hook = -- ton

2.2 Auxiliary Hook = -- ton

2.3 Spreader/Hanger = -- ton

2.4 Lifting Gear

a. Type of Sling

Wire rope 1" x 19 1/2" 400

Webbing sling 200mm x 30m

Chain Block

a. Diameter = 1" inch/mm

c. Length = 60 M

d. Amount = 4 Pc

e. Capacity = 32 ton

f. Total Weight of Sling = 0.14 ton

2.5 Shackles

a. Diameter = 1" inch/mm

b. Capacity = 25 ton

c. Amount = 4 Pc

d. Total Weight of Shackles = 0.02 ton

Total Weight of Material and Accessories = 6.36 ton

IV. Crane Positioning

1. Base Foundation

Soft

Hard

2. Working Area

Electrical line

Pipeline

Free Zone

3. Slope

Slope

Flat

Crane Capacity (Load Chart) & Crane Condition

Safety Factor (SF) = $\frac{\text{Crane Capacity}}{\text{Total Weight of Material} \times \text{Dynamic Factor}}$

Safety Factor (SF) = $\frac{19.3 \times 85\%}{6.36 \times 1.1} = 2.3$

Note: On Shore, DAF = 1.1
 Off Shore, DAF = 1.2
 Crane condition for new equipment = 100%
 second condition = 95%, 90% etc.

III. Crane

1. Type of Crane (Mobile/Crawler, Telescopic lattice boom)

2. Brand/Crane Model = Kato

3. Years of Manufacture =

4. Crane Capacity = 40 ton

5. Lifting Material Radius = 7 M

6. Lowering Material Radius = 7 M

7. Lifting Angle

7.1 Main Boom = 67 degree

7.2 Fly Jib = degree

7.3 Luffing Boom = degree

8. Length of Boom

8.1 Main Boom = 53.8 M

8.2 Fly Jib = M

8.3 Luffing Boom = M

Total Length of Boom = 23.8 M

9. Counter Weight = ton

10. Crane Capacity (Load Chart) = 19.3 ton

11. Total Reeving = Reeving

12. Wire rope diameter = 18 inch/mm

13. Wire rope capacity = ton

V. Pre Checklist for Lifting

1. Crane position safe and level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Full Outrigger and level	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Swing Area have been clear and safe	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Crane/Lifting equipment daily inspection	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Use max counter weight	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Total reeving and lifting gear	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Use verified (operator and rigger)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Use experienced (operator and rigger)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Correct rigger	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Load chart available	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Assign signalman and supervisor	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. Warning sign and barricade	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13. Communication (Hand signal/radio)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14. Lighting system	<input type="checkbox"/>	<input checked="" type="checkbox"/>

VI. Lifting Crew

1. Lifting Supervisor's Name = Kandar

2. Rigger's Name = Adam

3. Number of Working Person = 7 persons

4. Operator's Name / Class / SIO No

a. Yohanon / (operator)

b. _____

c. _____

d. _____

VII. Document Attachments

Crane layout

Rigging hookup arrangement

Crane chart extract

Foundation details/calc

JHA/JSA/ATA

Risk Evaluation

Wind/Weather Forecast

Drawing of load

Load Weight/CG Source Info

Load/Crane Clearances

VIII. Lifting Task Require Meeting for approval! Yes or No

IX. PTW Accepted By Construction

Requested by	Reviewed by		Approved by
Performing Authority	Lifting Engineer	HSE (LOTTE F & C)	Area Authority
(Name/Sign)	(Name/Sign)	(Name/Sign)	(Name/Sign)

No Permit : CW-01541

A APLIKASI PENGAJUAN OLEH PERFORMING AUTHORITY (PA) PLANNED UNPLANNED

Diajukan Oleh Discipline Supervisor	Nama	ID No	Disetujui oleh PA (Discipline Manager / CV)	Nama	ID No	Tanggal Aplikasi (dd/mm/yyyy)	Tanggal Pekerjaan (dd/mm/yyyy)
	Sign			Sign			
	<i>Armed M</i>			<i>DADANG</i>		<i>19/5/2020</i>	<i>19/5/2020</i>
Lokasi / Area Kerja :			<i>AD Area</i>				
Durasi Pekerjaan dan Tanggal			<i>20/5/2020 s/d 26/5/2020</i>				
Nomor tag Perawatan / Deskripsi Pekerjaan : <i>loading & unloading and manual handling permanent water area - cleaning all area crane 70</i>							
Nama Kontraktor : <i>PT ICI</i>				Jumlah Pekerja : <i>4 org</i>			
Nama Pengawas		<i>1. A. MUBAH</i>		<i>2. Abdullah</i>		<i>3. Dadang</i>	

B DAFTAR CEK PENCEGAHAN OLEH AREA AUTHORITY (AA)

1. Cek Alat Pelindung Diri (APD) yang dibutuhkan Berikan tanda [x] pada jenis APD yang dibutuhkan sesuai pekerjaan				2. Cek Peralatan Safety yang dibutuhkan untuk Pekerjaan Spesifik			
<input checked="" type="checkbox"/> Helm, full mata, Sepatu safety	<input checked="" type="checkbox"/> Masker Job	Pakaian tenaga kerja		<input type="checkbox"/> Peralatan APD Pemilik	Lainnya		
<input checked="" type="checkbox"/> Sarung tangan Karet / Kulit	<input checked="" type="checkbox"/> Work Vest / Life Jacket	Lainnya		<input type="checkbox"/> Life Line			
<input type="checkbox"/> Ear Plug	<input checked="" type="checkbox"/> Full Body Harness			<input type="checkbox"/> Lampu Flash Light untuk pekerjaan malam hari			
<input type="checkbox"/> Sarung Kepala PVC	<input type="checkbox"/> Face Shield						
<input type="checkbox"/> PVD Apron	<input type="checkbox"/> Madam Gasa Dengan Filter Sesuai MSDS						
		<input type="checkbox"/> Pemadam Api / Gas					
3. Daftar Cek Pencegahan				4. Work Statement yang dibutuhkan			
1. Apakah JSA/MRAOC sudah disetujui, diimprint dan semua detail sudah sosialisasi				Ya		Tidak	
2. Apakah Pekerja telah melaksanakan training yang sesuai				Ya		Tidak	
3. Semua peralatan Hand tool dan power tools dalam kondisi baik				Ya		Tidak	
4. Beres, di inspeksi				Ya		Tidak	
5. Menggunakan Bahan kimia				Ya		Tidak	
6. Lainnya				Ya		Tidak	
Adapun pekerjaan berhubungan dengan hal-hal berikut:				Ya		Tidak	
1. Unit tenaga listrik Power supply (UPS)				Ya		Tidak	
2. Interlock system				Ya		Tidak	
3. Programmable Logic Control (PLC)				Ya		Tidak	
4. Distribusi DCS Control System (DCS)				Ya		Tidak	
5. Lainnya				Ya		Tidak	

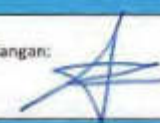
C PERSETUJUAN PERMIT/IJIN KERJA

Persetujuan ini mengizinkan oleh dengan ini saya menyetujui pelaksanaan pekerjaan ini

Tanggal (dd/mm/yyyy) : *19/5/2020*

Waktu : *09:00*

Nama : *S-H. CHAI*

Tanda Tangan : 

D VALIDASI PERMIT/IJIN KERJA

Saya telah memeriksa pekerjaan, lokasi dan kondisi pekerjaan dalam keadaan aman. Jika terjadi perubahan, pelaksana PA akan memberitahu status izin kerja ini.

No	Tanggal Validasi Harian	Performing Authority	Area Authority	No	Tanggal Validasi Over-time	Waktu over-time	Performing Authority	Area Authority
1	<i>20/5/2020</i>	<i>MUBAH</i>	<i>[Signature]</i>	1				
2	<i>21/5/2020</i>	<i>Dadang</i>	<i>[Signature]</i>	2				
3	<i>22/5/2020</i>	<i>Abdullah</i>	<i>[Signature]</i>	3				
4	<i>23/5/2020</i>	<i>Abdullah</i>	<i>[Signature]</i>	4				
5	<i>24/5/2020</i>	<i>Abdullah</i>	<i>[Signature]</i>	5				
6				6				
7				7				

BILA TERJADI KEADAAN DARURAT SECARA OTOMATIS IZIN KERJA DIBATALKAN PERMIT BARI HARUS DIAJUKAN, JIKA PEKERJAAN PERLU DILANJUTKAN KEMBALI

E PENUTUPAN & PEMBATALAN PEKERJAAN

Dengan ini saya menyatakan bahwa status permit dengan nomor tersebut diatas:

	Ya	Tidak	Persetujuan	Performing Authority	Area Authority
Seluruh pekerjaan telah selesai	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Tanggal (dd/mm/yyyy)	<i>26/05/2020</i>	<i>26.05.2020</i>
LOTO & Isolation sudah dikembalikan ke posisi semula	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Waktu	<i>09:30</i>	<i>10:30</i>
Area kerja dan peralatan telah dibersihkan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Tanda Tangan Nama & D No.	<i>Abdullah</i>	<i>[Signature]</i>

1. Lembar permit (MOC) dikembalikan ke area kerja (has permit)
 2. Lembar Isolation dikembalikan ke posisi semula
 3. Saat selesai bekerja, pastikan Isolation permit dan Isolation Area kerja
 4. Kembalikan lembar permit ke PTAC setelah selesai pekerjaan
 5. Permit closed harus didokumentasikan selama project berlangsung



PEMERINTAH PROVINSI RIAU
DINAS TENAGA KERJA DAN TRANSMIGRASI

Jl. Payaya No. 57-59 Telp. (0761) 21733 - 22285 Fax. 26067 Email : danakertrans@riau.go.id
PEKANBARU

LAPORAN PEMERIKSAAN DAN PENGUJIAN
KESELAMATAN DAN KESEHATAN KERJA (K3)
PESAWAT ANGKAT DAN ANGKUT

Jenis : **ROUGH TERRAIN CRANE**
Nomor : **1/Lap-Was.PAA/DTKT/03-20**

Membaca, memperhatikan dan menindak lanjuti surat permohonan Sdr **IRFAN FAJAR HAIRAWAN, RIGGING ENGINEER PT. TRUBA JAYA ENGINEERING**, Alamat : Jl. Swadaya II No 7 Tanjung Barat, Jakarta Selatan, dalam rangka pemeriksaan dan pengujian Pesawat Angkat dan Angkut (**Rough Terrain Crane**) yang dipergunakan untuk mengangkat dan memindahkan material di area kerja PT. Truba Jaya Engineering, dengan alamat : Proyek Riau GFPP 275 MW IPP Tenayan Raya Kota Pekanbaru, Prov. Riau. Setelah dilakukan pemeriksaan dan pengujian Pesawat Angkat dan Angkut pada tanggal 31 Maret 2020 diperoleh keterangan sebagai berikut.

A. DATA TEKNIS:

1. Jenis PAA : **ROUGH TERRAIN CRANE**
2. Merk/Model/Type/No. Seri : **Kato / SR-700L / 6210293**
3. Perusahaan Pembuat : **Kato Works Co., Ltd.**
4. Negara Pembuat : **Tokyo / Jepang**
5. Tahun Pembuatan : **2014**
6. Dipergunakan untuk : **Mengangkut / memindahkan material**
7. Tempat Penggunaan : **Area kerja PT. Truba Jaya Engineering**
8. Alamat Penggunaan : **Proyek Riau GFPP 275 MW IPP, Tenayan Raya, Pekanbaru, Prov. Riau**
9. Kapasitas angkat : **70.000 Kg**
10. Kecepatan Angkat : **10 m/min**
11. Tinggi angkat : **45,5 m**
12. Jenis penggerak : **Motor Diesel**
13. Kekuatan motor penggerak : **257 KW / 2 200 Rpm**
14. Alat Keselamatan : **Outrigger, Klakson, Brake, Hand brake, Lampu-lampu, Safety belt, Rotari, Alarm, APAR, P3K, dll**

B. HASIL PEMERIKSAAN DAN PENGUJIAN :

a. Pemeriksaan :

Pada saat dilakukan pemeriksaan terhadap Pesawat angkat dan angkut jenis **Rough Terrain Crane** tersebut ditemukan hal-hal sebagai berikut.

1. Pesawat angkat dan angkut ini menggunakan sistem penggerak Motor Diesel yang terpasang dan berfungsi dengan baik;
2. Secara visual kondisi konstruksi rangka, cabin/overhead guard, roda-roda/ban, seat, handle controller battery, boom/JIB, hook, hook block, wire rope, pully, cylinder lift boom, mast, system hidrolik, dalam keadaan baik
3. Secara visual kondisi Alat keselamatan (safety device) seperti: Safety belt, Load indicator, Load chart, Limit Switch, Anti two block, counter balance weight, Outrigger, klakson, brake, hand brake, alarm/lampu rotari, lampu-lampu, APAR dan Kotak P3K terpasang dengan baik

b. Pengujian :

Pada saat dilakukan pengujian terhadap Pesawat Angkat dan Angkut jenis **Rough Terrain Crane** tersebut, ditemukan hal-hal sebagai berikut.

t. Pengujian ...

1. Pengujian terhadap Sistem elektro motor beserta perlengkapannya bekerja dan berfungsi dengan baik.
2. Pengujian terhadap fungsi Alat keselamatan (safety device) seperti: Safety belt, Load indicator, Load chart, Limit Switch, Anti two block, Counter balance weight, Quirigger, klakson, brake, park brake alarm/lampu rotari, lampu-lampu, Emergency stop, dan APAR, terpasang dan berfungsi dengan baik.
3. Pengujian fungsi terhadap Pesawat Angkat dan Angkut dengan gerakan hoisting, swing dan travelling peralatan berfungsi dengan baik;
4. Pada saat pengujian beban secara dinamis dengan mengacu load chart dan dilakukan gerakan hoisting dan travelling peralatan berfungsi dengan baik.
5. Pada saat pengujian beban statis dengan beban 100% x SWL dengan mengacu load chart dan ditahan selama \pm 20 menit peralatan berfungsi dengan baik.

C. KESIMPULAN DAN SARAN :

Pesawat Angkat dan Angkut Rough Terrain Crane tersebut dapat dipergunakan dan diterbitkan Pengesahan pamakalannya dengan syarat-syarat sebagai berikut

1. Periksa dan pastikan semua alat kontrol dan alat keselamatan (safety device) terpasang, terpelihara dan berfungsi dengan baik sebelum pesawat angkat dan angkut dipergunakan.
2. Instalasi/ peralatan yang berbahaya terhadap keselamatan dalam bekerja harus diindungi.
3. Rambu-rambu dan petunjuk tentang bahaya harus terpasang dengan baik, jelas dan mudah terlihat / terbaca;
4. Pesawat angkat dan angkut harus dioperasikan oleh Operator dan dibantu oleh Rigger yang masing-masing telah memiliki keterampilan dan lisensi K3 dari Kementerian Ketenagakerjaan Republik Indonesia.
5. Dalam mengoperasikan Pesawat angkat dan angkut, Operator harus memakai alat pelindung diri yang diwajibkan;
6. Dalam mengoperasikan Pesawat angkat dan angkut, wajib berpedoman pada SOP dan tidak melebihi beban maksimum yang diizinkan;
7. Perhatikan dan laksanakan semua tambahan syarat teknis dalam lembar pemeriksaan dan pengujian ini sebelum Pesawat angkat dan angkut ini dipergunakan;
8. Menaat dan melaksanakan Undang-Undang No. 1 Tahun 1970 tentang Keselamatan Kerja, Permenaker No. Per.05/Men/1985 tentang Pesawat Angkat dan Angkut, dan Pemenakertrans No. Per.05/MEN/W/2010 tentang Operator dan Petugas Pesawat Angkat dan Angkut;
9. Pesawat Angkat dan Angkut Rough Terrain Crane tersebut harus dilakukan pemeriksaan dan pengujian ulang [berkala] oleh Pengawas Ketenagakerjaan Keselamatan dan Kesehatan Kerja / Ahli K3 Spesialis Pesawat Angkat dan Angkut yang memiliki Lisensi K3 dari Kementerian Ketenagakerjaan Republik Indonesia paling lambat pada Maret 2021.




Demikian laporan hasil pemeriksaan dan pengujian Keselamatan dan Kesehatan Kerja (K3) Pesawat Angkat dan Angkut jenis Rough Terrain Crane ini, agar dapat dipergunakan sebagaimana mestinya.

Fekanbaru, 31 Maret 2020
 Yang Melakukan Pemeriksaan/Pengujian,
 Pengawas Ketenagakerjaan
 Spesialis K3 Pesawat Angkat dan Angkut
 Disakertrans Prov. Riau


M. ZAMHIR, ST

NIP. 19751123 201001 1 003

CORRECTIVE ACTION FOR _NEARMISS MATERIAL FALL DOWN WHILE LIFTING 20200520

No	Action	Action by	Due Date	Corrective Action	Action Date	Status
1	Contractor to conduct training refreshment to operator and rigger to reinforce the responsibility	RJO	15 June 2020	Training Attached report attached	26 May 2020	Closed
2	Prepare ground level of laydown prior to material placement	RJO/IT	15 June 2020	Contractor Compact laydown prior to use 	07 June 2020	Closed
3	Rigger to using proper webbing sling/lifting gear according to material weight or specification.	RJO/IT	15 June 2020	Lifting using correct lifting gear 	21 May 2020	Closed
4	ITI to increase number of safety personnel to monitor loading/unloading material to prevent any lack of monitoring	ITI	15 June 2020	ITI has been added 3 HSE personnel 	28 May 2020	Closed
5	Contractor to revise or up date the job safety analysis loading/unloading material.	RJO	15 June 2020	File Attached		Closed

6	Disciplinary action: (first warning letter) to be given to: Rigger and the operator crane	RJO	15 June 2020		02 June 2020	Closed
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TRAINING REPORT

Project	: Riau GFPP 275 IPP Project
Company	: ITI
Venue	: L&C Site Office
Day / Date	: Tuesday / May 26, 2020
Number of Attendees	: 8 Person
Training	: Safety Lifting & Rigging Operation
Trained by	: Leo KN

Subject :

- Role and responsibility Operator
- Role and responsibility Rigger
- Safety crane operation
- Safety rigging method
- Safety working load
- Lifting gear inspection
- Emergency case

Photo Documentation :


Prepared by	Acknowledge by
 HSE Supervisor	 Leo KN HSE Manager




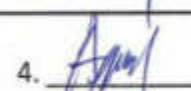




Day/Date : Tuesday / 26. May. 2020.

Project : Riau GFPP 275 MW IPP PROJECT

Time : 09.00 am

Location : LEG SITE OFFICE

Subject : Refreshman Operator & RIGGER

No	Name	Company/Position	Signature
1	Slamet Riab	Rigger	1.  2. 
2	Darmawan	Rigger	3.  4. 
3	Johannes	Rigger	5.  6. 
4	Aban Sahputra	Rigger	7.  8. 
5	Rizkiandhah	Foreman ML	9. _____ 10. _____
6	MULLER D. (TURK)	OP. Crane Foot	11. _____ 12. _____
7	ASEP	SPV / LEG	13. _____ 14. _____
8	HAFIZ WAHM	RIGGER	15. _____ 16. _____
9			17. _____ 18. _____
10			19. _____ 20. _____
11			21. _____ 22. _____
12			23. _____ 24. _____
13			25. _____ 26. _____
14			27. _____ 28. _____
15			29. _____ 30. _____
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TASK : LOADING AND UNLOADING MATERIAL

No.	Sequence of Basic Job Steps/ Urutan Langkah Pekerjaan	Hazard/Bahaya	Hazard Effect/Akibat Bahaya	Initial Risk*			Recommendation Action/Tindakan Rekomendasi	Residual Risk**		
				PR	SV	IR		PR	SV	RR
4	Loading & Unloading						Pastikan pemakaian rigging tools sesuai kapasitasnya			
		Material rusak	Material rusak	3	3	6	Dak posisi pemasangan rigging tools dengan benar dan path line yang tepat	1	2	2
							Hanya rigger berpengalaman yang memasang sling dan shackles			
							Komunikasi 2 arah antara operator boom truck dan rigger baik			
							Pasang tag line pada material			
		boom truck rusak atau tipping	Equipment rusak	3	5	15	Pasang barricade di area bahaya, pastikan tidak ada orang di bawah material lifting	2	2	4
			Fatality	3	3	6	Pastikan posisi boom truck dan material yang diangkat sesuai dengan lifting plan	1	2	2
		Tanen Tilt/Rate	Equipment rusak	3	4	12	Retakan tanah sebelum meletakkan material	1	2	2
							Pastikan komunikasi tetap dilakukan pada saat menurunkan material			
					Hindari pekerjaan lift-lifta dalam menjangkau beban untuk menghindari beban kecil					

TASK : LOADING AND UNLOADING MATERIAL

No.	Sequence of Basic Job Steps / Urutan Langkah Pekerjaan	Hazard/Bahaya	Hazard Effect/Akibat Bahaya	Initial Risk*			Recommendation Action/Tindakan Rekomendasi	Residual Risk *)		
				PR	SV	IR		PR	SV	RR
5	Melepas rigging knots pada material	... rigging tools jatuh dan mengenai orang	Rigging tools rusak	3	3	6	Tidak meletakkan jari di titik erat, dan pastikan anggota badan pada jarak yang aman dengan muatan	1	2	2
		Orang terjatuh, terlempar, atau terlempas oleh rigging tools	Orang cidera	2	3	6	Memposisikan anggota tubuh dengan aman	1	2	2
							Saat melepas wire sling tidak terjadi pemampasan atau hentakan			
							Menggunakan tali pengikat untuk kendali pergerakan			
							Gunakan APD seperti sepatu safety dll. agar anggota tubuh terlindungi			
					Selalu kewaspadaan terhadap pekerjaan					
6	Housekeeping	Pekerja tersandung atau tersuk benda jatuh	Orang cidera	2	2	4	Mengumpulkan sampah pada satu tempat	1	2	2
							Sediakan tempat sampah di area kerja dan lakukan pembuangan secara rutin			

Note :

PR : Probability / Kemungkinan Risiko
 SV : Severity / Tingkat Keparahan Risiko
 IR : Initial Risk / Risiko Yang Melekat (yang sudah menjadi sifat bawaannya)
 RR : Residual Risk / Risiko Sisa / Risiko Ikutan

PRELIMINARY INCIDENT REPORT

Near miss– (Fire On the Cover of HRSG column 12)

1

SUMMARY:

Date & Time of Incident : 02 June 2020 / 03.50 PM
Asset : Riau IPP 275 MW
Location : PLTGU Construction Site, Riau
Incident Classification : Near miss
IP Name/Age/Company : - /-/PT. Indo Teknik Industri
Incident Risk Rank : (2 x 2 = 4) ~~HIGH~~—~~MEDIUM~~—~~LOW~~

DESCRIPTION:

On Tuesday, June 02nd, 2020, approximately 03.50 PM welder conducted welding of column of HRSG 12 at top west side area on coloum G. While welder conducted the welding the spark fell down through the hole between H-beam and fire blanket to the cover of column that consisting from green sheet, plastic transparan, and carton at time the cover immediately get burned.

The fire fighting team immediately extinguished the fire using two fire extinguishers 6 kg. No personnel injury and no property damage.

IMMEDIATE CAUSES :

- No fire extinguisher and fire watcher standby on the scene.
- Improper fire blanket installation.

IMMEDIATE ACTION :

1. Extinguished the fire using fire extinguisher.
2. Rectified Installation of fire blanket
3. Conducted Briefing to Involved person

FURTHER FOLLOW UP ACTIONS :

1. Provide fire extinguisher near to hot work area
2. Assign fire watcher for hot work activity
3. Conduct refresh training of Fire Prevention Procedure for Hot Work Activity to contractor

Attached Pictures:



Riau GPPP 275MW IPP Project	ACCIDENT INCIDENT & NEARMISS REPORT FORM	Ref Doc. No : RIAU-LEC-G10-PM-0002	 
		APPENDICES	

INCIDENT INVESTIGATION REPORT

INCIDENT NO : 003-RIPP/NM/V/2020			
INCIDENT CLASSIFICATION: <input checked="" type="checkbox"/> Work Related <input type="checkbox"/> Non-Work Related			
TYPE OF INCIDENT	INJURY TYPE :	DAMAGE :	ENVIRONMENTAL :
<input type="checkbox"/> Injury	<input type="checkbox"/> Fatality	<input type="checkbox"/> Equipment	<input type="checkbox"/> Catastrophic
<input type="checkbox"/> Damage	<input type="checkbox"/> L T I	<input type="checkbox"/> Property	<input type="checkbox"/> Major
<input type="checkbox"/> Environment	<input type="checkbox"/> MT Restricted		<input type="checkbox"/> Serious
<input checked="" type="checkbox"/> Near Miss	<input type="checkbox"/> MT Non Restricted		<input type="checkbox"/> Minor
	<input type="checkbox"/> First Aid		

SEVERITY POTENTIAL CLASSIFICATION

<input type="checkbox"/> (1) First Aid	<input type="checkbox"/> (1) Slight Risk of materials damage or cost of lost (<\$1,000) <input type="checkbox"/> (1) down time 8 hours	<input type="checkbox"/> (1) Slight Risk of materials damage or cost of lost (<100 litres)	<input type="checkbox"/> (1) Local Exposure
<input type="checkbox"/> (2) Medical Treatment	<input checked="" type="checkbox"/> (2) Minor Risk of materials damage or cost of lost (<\$10,000) <input type="checkbox"/> (2) down time <= 1 day	<input type="checkbox"/> (2) Minor Risk or spills to environment (<1000 litres)	<input type="checkbox"/> (2) State Exposure
<input type="checkbox"/> (3) Lost Time/ Rest Injury	<input type="checkbox"/> (3) Medium Risk of materials damage or cost of lost (<\$100,000) <input type="checkbox"/> (3) > 1 day	<input type="checkbox"/> (3) Medium Risk of materials damage or cost of lost (<5 M ³)	<input type="checkbox"/> (3) National Exposure
<input type="checkbox"/> (4) Single Fatality	<input type="checkbox"/> (4) Major Risk of materials damage or cost of lost (<\$1,000,000) <input type="checkbox"/> (4) down time > 1 week	<input type="checkbox"/> (4) Major Risk of materials damage or cost of lost (<100 M ³)	<input type="checkbox"/> (4) Regional Exposure

PERSONNEL INVOLVED

Name	Involvement	Position/Company
Purwanto	Witness	Welder/ITI
Ucok H Hutabarat	Witness	Supervisor /LEC
Nurman Syahputra	Witness	Foreman Mechanical/ITI
Hamdani	Witness	HSE/ITI

Riau GFPP 275MW IPP Project	ACCIDENT INCIDENT & NEARMISS REPORT FORM	Ref Doc. No : RIAU-LEC-G10-PM-0002	 
		APPENDICES	

A. PERSONAL / DETAILS OF THE VICTIM INJURED PERSON					
NAME	N/A	EMP. NO / C NO :	N/A	POSITION	N/A
LOCATION	N/A	AGE	DATE OF BIRTH	DEPT./SECTION	N/A
		N/A	N/A		
SEX	<input type="checkbox"/> Male	SUPERVISOR NAME	Roni	EMPLOYEE CLASSIFICATION	<input type="checkbox"/> Full Time
	<input type="checkbox"/> Female	WORKER EXPERIENCE			<input type="checkbox"/> Part Time
					<input type="checkbox"/> Contract
					<input type="checkbox"/> Trainee
B. BASIC OF EMPLOYMENT					
WORKING TIME		SHIFT ARRANGEMENT	None	NUMBER OF HOURS	<input type="checkbox"/> 8 hours or less
					<input type="checkbox"/> More than or 8 hours excluding overtime
C. JOB DETAIL					
DESCRIPTION OF OCCUPATION OR JOB					
MAIN TASK PERFORM					
TRAINING PROVIDED	<input type="checkbox"/> Induction Training	Remarks :			
	<input type="checkbox"/> Task Specific Training				
	<input type="checkbox"/> Both of the above				
	<input type="checkbox"/> Neither of the above				
D. DETAIL OF INJURY OR DISEASE					
NATURE OF INJURY	<input type="checkbox"/> Bruising	<input type="checkbox"/> Dislocation	<input type="checkbox"/> Others/Specify		
<input type="checkbox"/> Strain/Sprain	<input type="checkbox"/> Scratch/Abrasion	<input type="checkbox"/> Internal			
<input type="checkbox"/> Fracture	<input type="checkbox"/> Amputation	<input type="checkbox"/> Foreign Body			
<input type="checkbox"/> Laceration/Cut	<input type="checkbox"/> Burn/Scald	<input type="checkbox"/> Chemical Reaction			
Injured Part of Body :					
Remarks :					
Treatment :	<input type="checkbox"/> First Aid	<input type="checkbox"/> Doctor's office			
	<input type="checkbox"/> Emergency Room	<input type="checkbox"/> Hospitalization			

Riau GFPP 275MW IPP Project	ACCIDENT INCIDENT & NEARMISS REPORT FORM	Ref Doc. No : RIA-U-LEC-G10-PM-0002	 
		APPENDICES	

Name and address of treating Physician or Fatality			
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E. LOST TIME INJURY / DISEASE
 Additional questions to be answered for cases which result in a fatality or permanent disability, or where there was time lost from work of one or more days / shifts. These questions should be completed as soon as possible after the injury or disease is reported.

EMPLOYEES PREFERRED LANGUAGE		TYPE OF EMPLOYEE :	<input type="checkbox"/> Permanent Employee
		<input type="checkbox"/> Wage/Salary Earner	<input type="checkbox"/> Contract Employee
		<input type="checkbox"/> Self employed	<input type="checkbox"/> Trainee
			<input type="checkbox"/> Contractors and Sub Contractors
WORKER EXPERIENCE IN TASK BEING CARRIED OUT WHEN INJURY OR DISEASE OCCURRED		PROPORTION OF SHIFT WORKED DURING THE INCIDENT OCCURRED	<input type="checkbox"/> 25% or Less
			<input type="checkbox"/> 25% - 50%
			<input type="checkbox"/> 51% - 75%
			<input type="checkbox"/> 76% - 100%
			<input type="checkbox"/> Overtime
DETAILS OF PERSON COMPLETING	Name :	Position :	
	Signature :	Date :	

F. DAMAGE PROPERTY

Property, Equipment or Material Damaged :	Object or Substance Inflicting Damage	Describe Damage :
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G. ACCIDENT DESCRIPTION

On Tuesday, June 02nd, 2020, approximately 03.50 PM welder conducted welding of column of HRSG 12 at top west side area on column G with elevation approximately 25 meters.

A welder conducted the welding the spark fell down through the hole between H-beam and fire blanket to the cover of column that consisting from green sheet, plastic transparan. and carton on about elevation 23 meters at time the cover immediately get burned.

The fire fighting team immediately extinguished the fire using two fire extinguishers 6 kg. No personnel injury and no property damage.

The Fact Findings:






- No Fire watcher standby on the scene
- Supervision of hot work activity from bottom side.
- Welder is certified person
- No fire extinguisher standby on the scene only on the bottom side
- The Flammable cover of HRSG can not be removed
- Improper fire blanket installation to protect flammable material from the spark
- No specific safety training for welder
- PTW and JSA available on site

H. ROOT CAUSE ANALYSIS	
Event	
<input type="checkbox"/> Struck Against (Running or bumping into)	<input type="checkbox"/> Caught on (Snagged, Hung)
<input type="checkbox"/> Struck by (Hit by moving object)	<input type="checkbox"/> Caught Between (Crushed or Amputated)
<input type="checkbox"/> Fall to lower level	<input type="checkbox"/> Contact with
<input type="checkbox"/> Fall on same level (Slip and fall, tip over)	<input type="checkbox"/> Overstress, Overexertion, Overload
<input type="checkbox"/> Caught in (pinch and Nip Points)	<input checked="" type="checkbox"/> Others : Fire incident
Immediate Cause	
Substandard Act	Substandard Condition
<input type="checkbox"/> Operating Equipment Without Authority	<input type="checkbox"/> Inadequate Guards or barriers
<input type="checkbox"/> Failure to Warn	<input type="checkbox"/> Inadequate or Improper Protective Equipment
<input checked="" type="checkbox"/> Failure to Secure	<input type="checkbox"/> Defective Tools / Equipment or Materials
<input type="checkbox"/> Operating at Improper Speed	<input type="checkbox"/> Congested or restricted action at Work Area
<input type="checkbox"/> Making safety devices Inoperable	<input type="checkbox"/> Inadequate warning system
<input type="checkbox"/> Removing safety devices	<input type="checkbox"/> Fire and explosion hazards
<input type="checkbox"/> Using Defective Equipment	<input type="checkbox"/> Poor Housekeeping, disorder
<input type="checkbox"/> Failing to use PPE properly	<input type="checkbox"/> Noise Exposure
<input type="checkbox"/> Improper Loading	<input type="checkbox"/> Radiation Exposure
<input type="checkbox"/> Improper Placement	<input type="checkbox"/> Poor Housekeeping
<input type="checkbox"/> Improper Lifting	<input type="checkbox"/> Inadequate or Excess Illumination
<input type="checkbox"/> Improper Position for Task	<input type="checkbox"/> Inadequate Ventilation
<input type="checkbox"/> Servicing Equipment in operation	<input checked="" type="checkbox"/> Others: Improper fire blanket installation
<input type="checkbox"/> Horseplay	
<input type="checkbox"/> Drug or Alcohol Use	
<input type="checkbox"/> Unnecessary Haste	
<input type="checkbox"/> Others	
Basic cause	
Personal factor	Job factor
<input type="checkbox"/> inadequate physical	<input checked="" type="checkbox"/> Inadequate supervision
<input type="checkbox"/> Inadequate mental / psychological capability	<input type="checkbox"/> Inadequate purchasing
<input type="checkbox"/> Physical or physiological stress	<input type="checkbox"/> Inadequate maintenance
<input type="checkbox"/> Mental or psychological Stress	<input type="checkbox"/> Inadequate tools and equipment
<input type="checkbox"/> Lack of Knowledge	<input type="checkbox"/> Inadequate Work Standards
<input type="checkbox"/> Lack of Skill	<input type="checkbox"/> Wear and Tear
<input type="checkbox"/> Improper Motivation	<input type="checkbox"/> Abuse or Misuse
<input checked="" type="checkbox"/> Others: Lack of inspection	<input checked="" type="checkbox"/> Others: Lack of preparation
Failure to maintain compliance with adequate standards for:	
<input type="checkbox"/> Leadership & Administration	<input type="checkbox"/> Personal Protective Equipment
<input type="checkbox"/> Leadership Training	<input type="checkbox"/> Health & Hygiene control
<input type="checkbox"/> Planned Inspections and maintenance	<input type="checkbox"/> System Evaluation
<input checked="" type="checkbox"/> Critical Task Analysis (JSA) and Procedures	<input type="checkbox"/> Engineering and change Management
<input type="checkbox"/> Accident Investigation	<input type="checkbox"/> Personal Communications
<input checked="" type="checkbox"/> Task Observations	<input type="checkbox"/> Group Communications
<input type="checkbox"/> Emergency preparedness	<input type="checkbox"/> General Promotion
<input type="checkbox"/> Rules and work permits	<input type="checkbox"/> Hiring & Placement
<input type="checkbox"/> Accident / Incident Analysis	<input type="checkbox"/> Materials & Services Management
<input type="checkbox"/> Knowledge and Skill Training	<input type="checkbox"/> Off – the – job safety
	<input type="checkbox"/> Other


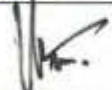

Riau GFPP 275MW IPP Project	ACCIDENT INCIDENT & NEARMISS REPORT FORM	Ref Doc. No : RIAU-LEC-G10-PM-0002	 
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How bad could the accident have been?	Very serious	Serious	Minor
What is the chance of the accident happening again?	Frequent	Occasional	Rare

I. CORRECTIVE & PREVENTIVE ACTION

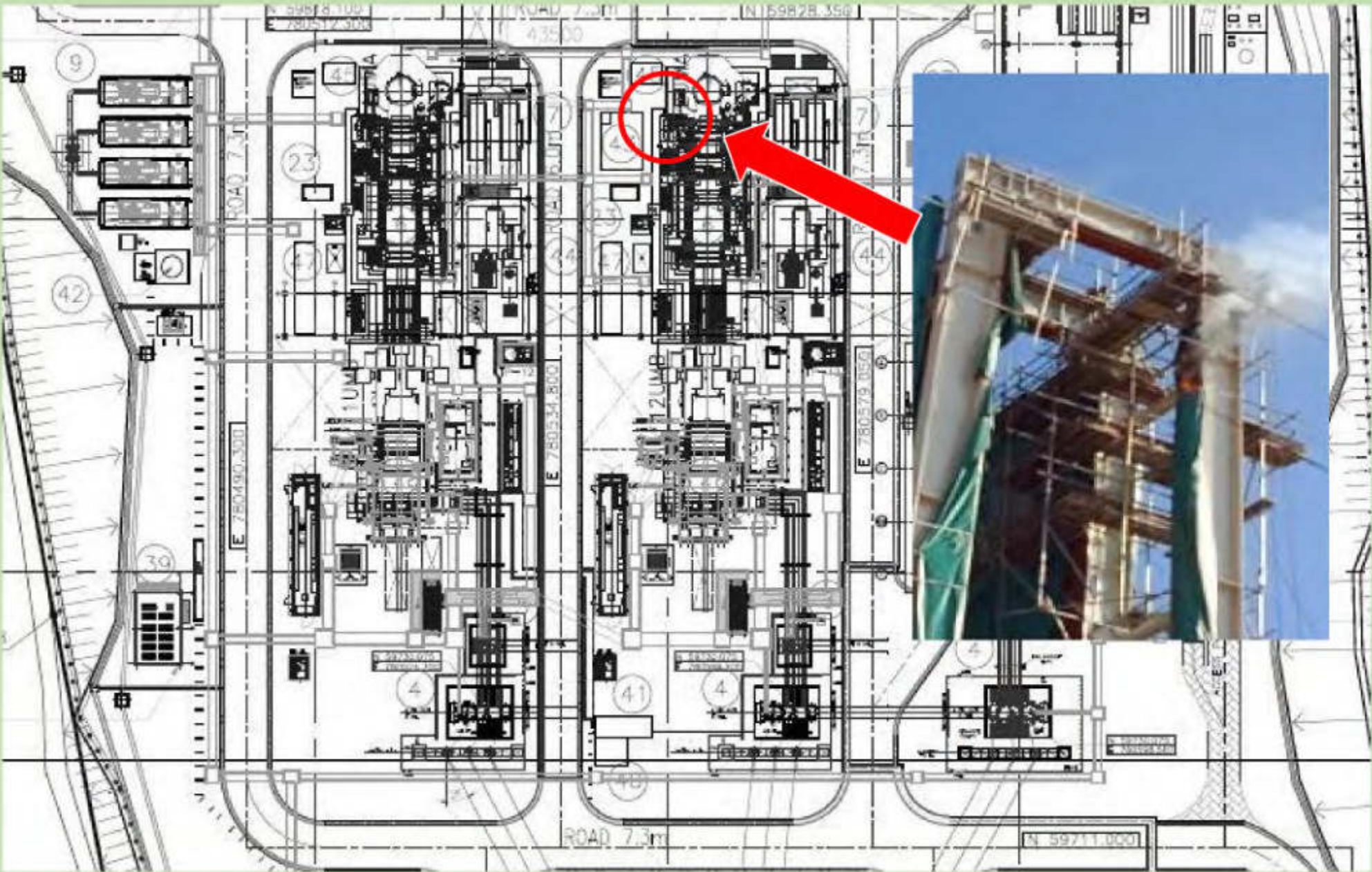
Action to prevent recurrence (long term and short term)	Person in Charge	Due Date	Sign and Date of Completion
Sub contractor to provide sufficient number of fire extinguisher	RJO / ITI	June 20th, 2020	 15/06/20
Sub contractor to assign fire watcher to monitor hot work activity	ITI	June 20th, 2020	 15/06/20
Sub contractor to install proper fire blanket to control spark from hot work activity	RJO / ITI	June 20th, 2020	 15/06/20
Contractor to establish hot work training for welder	ITI	June 20th, 2020	 15/06/20
Disciplinary action (first warning letter) to be given to: - To welder and supervisor	RJO	June 20th, 2020	 15/06/20

J. INVESTIGATION TEAM

SIGNATURE	NAME	POSITION
	Leo Kardo N	HSES Manager
	Muhammad Fauza A	HSE Supervisor
	Setyo W	HSE Supervisor

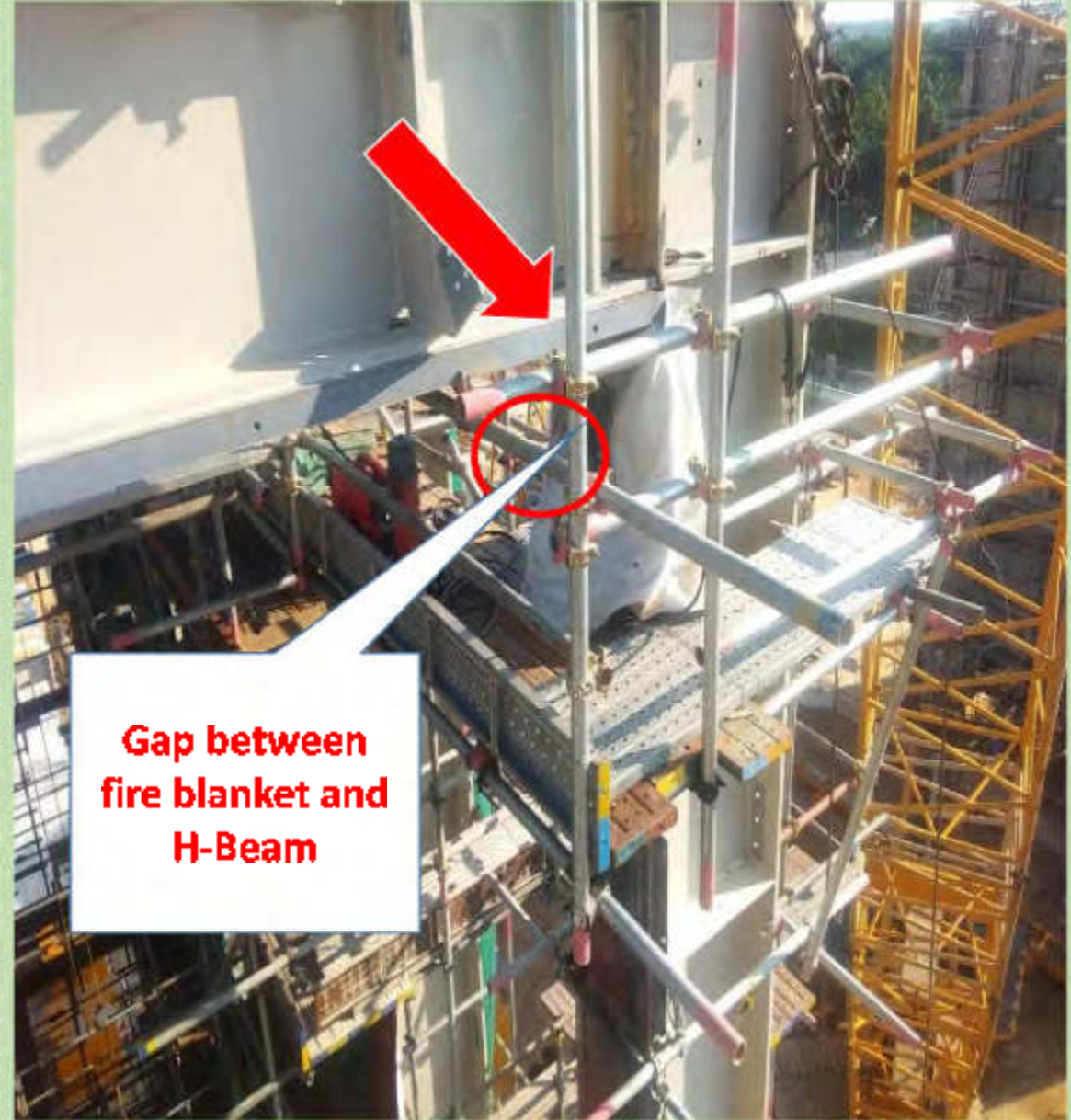


INCIDENT LOCATION





INCIDENT SKETCH & CHRONOLOGY



Name : Muhammad Syahputra
Position : Pekerjaan Inspektur
Company : PT I :

Pada pagi hari sampai siang hari saya berada di HPSG H 12 di atas saya meninjau pekerjaan kondisi di atas ini ada beberapa di bagian, posisi welder di atas saya cek sudah lengkap, perlengkapan di atas lengkap, Safety Harness juga safety above karena ada di atas di atas, ada juga semua di bawah saja.

Ada juga pekerja di atas, semua ini karena ada, karena semua pekerja pada pekerjaan tidak ada yang mengawasi, karena pekerjaan di atas pekerjaan, akan kita pastikan supaya bisa terjamin ini seperti di bawah terjamin.
Wassalam, salam, Terima kasih.

TANDA-TANGAN


Muhammad Syahputra



WITNESS STATEMENT



Name : PURWANTO
 Position : WELDER
 Company : ITI

Pada waktu saya sedang melakukan pemelasan kemarin pada tanggal 02-06-2020. Terjadi kebakaran pada Terpal yang mana posisinya tepat dibawah saya. Sebelum melakukan pemelasan saya sudah memasang fire blanket. Cuma pada waktu saya melakukan pemelasan tidak ada yang memantau / menjaga lokasi di sekitar tempat pemelasan. Kebeperluan appar juga belum ada. Karena seorang welder itu pan dengan nra terbatas.

Atas nya :

- Setiap melakukan pekerjaan harus di siapkan dulu cermatnya.
1. Harus ada satu orang yang menjaga / memantau
 2. Sediakan appar.
 3. Pasang fire blanket.

TANDA TANGAN


Purwanto

Name : UCOK HOTUAN HUTABARAT,
Position : Supr. welder
Company : PT. ITI.

KRENLOBI KEJADIAN PADA TGL 02.05.2020 DI

AREAL FIRE # 12 PLTGU TENAYAN PADA JAM. 14⁰⁰

* PADA SAAT PENGELASAN DI COLOUMN 05 (LEFT SIDE).

TERJADI KEBAKARAN TERPAL WARNA HIJAU DI AKIBATKAN

ADANYA PROSES PENGELASAN PADA COLOUMN TERSEBUT.

* SEBELUM MELAKUKAN PENGELASAN SUDAH DI

PISANG MEDIANE FIRE BRANDED NAMUN TERPAL

TANG ADA DI BAWAH GARA YG KURANG BAIK

POSISINYA MUNGKIN LEPAS DARI IKATANNYA

DAN MENJADI BERGULUNG ADEU DAPAT MENATAPUNE

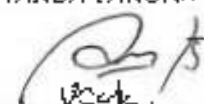
SISA 2 PEMBAKARAN YG TERJADI DI ATASNYA.

* DAN UNTUK ANTISIPASI KEDEPAN KAMI PERUS

LEBIH EXTRA UNTUK MENEHINDORI TERJADINYA

KEBAKARAN

TANDA TANGAN


UCOK

Name : Hanani
Position : HSE
Company : PT. ITI

Kronologi kejadian : -

Saya sedang pengecekan di sektor area HSE, dan saya tegaskan kepada welder dan scaffolding dan juga fitter yang bekerja di atas di lapangan bekerja di bawah (di Clearkan di bawah apa pun itu / material mudah terbakar (orang & H)). Dan saya bericade...
pada saat saya berada di HSE 11 - terdapat terdapat dan rekan HSE 12, ada kebakaran. Saya langsung meminta operator crane 300 T dengan HSE Raka untuk membantu untuk semua tindakan apa pun termasuk bucket (saya dan P. raka APD lengkap dan APAR (MATERIAH APAR Ranja) langsung ke tempat. dan langsung ke TRP langsung ke area padam ke APAR tersebut. dan saya lihat masalah terdapat fire blanket. ya. TKS.

TANDA TANGAN


Hanani
HSE

A. MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST DAN MENYERAHKAN KE PERMITSUBMITTER (PRA)

Dibekukan Oleh Buddy buddy001	Nama (huruf Balok)	Tanda Tangan	Posisi (Jabatan) ID No.	Department / Section	Tanggal Aplikasi (dd/mm/yy)	Tanggal Penerimaan (dd/mm/yy)
	L. PURBA		SUPV - M&E	M&E-11	26/15/2020	26/15/2020

LOKASI: AREA 2
NOVOLTAGE ATAU/RESTRICSI PERALATAN: RUMAH PERKILAH CASSINO LIMA / 140100-01 / HSEB / WELDING ON BRIDGE
NAMA KONTRAKTOR: HK
NAMA PENGAWAS (MANAGER) / PERMITSUBMITTER: L. PURBA
JUMLAH PERALATAN: 1 IRIGASI
: FERRY

<input checked="" type="checkbox"/> Kelas I (Orc / Flame) <input type="checkbox"/> Kelas II (Hot Spark)	<input type="checkbox"/> Ac drng / Gas Cutting Soldering Work <input type="checkbox"/> Welding / Wire Drawing Leadring / Taps <input type="checkbox"/> Lembar	<input type="checkbox"/> Grinding / Wire Drawing Leadring / Taps <input type="checkbox"/> Sandblasting / Water Jet Material Combustible Object <input type="checkbox"/> Open uraian bila berbahaya atau lainnya
--	---	--

SAFETY PRECAUTION CHECKLIST Boleh Performing Authority (Suzuki / Safety Specialist / Engineer)	PILIHAN SAHAJIAH		PILIHAN SAHAJIAH ID No.1	KETERANGAN
	YA	TIDAK		
1. Insulasi dari kabel & connector dalam kondisi baik Tidak ada kabel longgangan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	L. Purba	
2. Semua peralatan listrik di phase harus menggunakan "Tools & Equipment Inspection Protocol" sebelum digunakan	<input type="checkbox"/>	<input type="checkbox"/>		
3. Seluruh supply listrik ke peralatan listrik harus memiliki minimal double insulasi & terhubung dengan ELCB	<input type="checkbox"/>	<input type="checkbox"/>		
4. Hubungan The Return Current (T-1) yang terdapat di lokasi harus diamankan dengan pengaman ke tempat lain	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
5. Seluruh mesin las AC & Stress Relieving (e.g. PHWT) harus di Grounding dengan sempurna	<input type="checkbox"/>	<input type="checkbox"/>		
6. Amankan silinder gas dalam bucket, jauh dari percikan api & tutup bagian regulator gas menggunakan Fire Proof Sheet	<input type="checkbox"/>	<input type="checkbox"/>		
7. Gas Terisi & sedang gas harus dikeluarkan dan Confined Space & regulator dipisahkan dari silinder gas saat istirahat	<input type="checkbox"/>	<input type="checkbox"/>		
8. Exhaust fan harus digunakan jika Hot Work dilakukan didalam Confined Space	<input type="checkbox"/>	<input type="checkbox"/>		
9. Peralatan Non Intrinsically Safe sudah inspeksi & distujui sesuai "Tools & Equipment Inspection Procedure"	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
10. Barikade area kerja, sediakan rambu peringatan & pembatas/penahan sebelum bekerja	<input type="checkbox"/>	<input type="checkbox"/>		
11. Apakah tabung gas berisi Acetylene / LPG / Hydrogen / Oxygen digunakan Pressurized harus dipasang 2 fastback armor pada setiap / head	<input type="checkbox"/>	<input type="checkbox"/>		
12. Fire Watchmen dari PA digunakan untuk memantau kegiatan Hot Work kelas 1 di Hazardous Area (jika ditentukan)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
13. Lainnya:				

Dengan ini saya selaku Site Operation Manager / Site Manager PA menyetujui penganjuran Permit Hot Work ini:
 Nama: FERRY
 ID No. Tanda Tangan & Tgl: 26/15/2020

B. SAFETY PRECAUTION CHECKLIST Boleh Area Authority (PRA)

1. MELAKUKAN PERIKSAAN DAN MENYERAHKAN KE PERMITSUBMITTER <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST	2. MELAKUKAN PERIKSAAN DAN MENYERAHKAN KE PERMITSUBMITTER <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST <input checked="" type="checkbox"/> MELAKUKAN PERIKSAAN & SAFETY PRECAUTION CHECKLIST
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3. SAFETY PRECAUTION CHECKLIST	PILIHAN SAHAJIAH		PILIHAN SAHAJIAH ID No.1	4. WORK CERTIFIKAT YANG DIPERLUKAN*
	YA	TIDAK		
Safety Precaution Checklist Umum Untuk Hot Work Kelas I & II a. Apakah JERAMBA sudah terpasang di lokasi pekerjaan, dan apakah sudah terpasang dengan benar? b. Apakah semua gas telah dikeluarkan secara komprehensif. Jika Ya, Peralatan dilakukan setiap 3 jam. c. Apakah semua gas telah di lampirkan form Gas Test, pemantauan terpasang? d. Initial Gas Test oleh Gas Tester Pelajar: 17/04 e. Memeriksa bahwa Lumbung/ EPOC adalah Safe Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	L. Purba	*LDO (Jelentor) Working at height Working with pressure Lifting Plan Chemical Entry Pass/MSDS Excavation Confined Space
Safety Precaution Checklist Spesifik Untuk Hot Work Kelas I a. Apakah semua kabel dan selang bebas dari kerusakan? b. Mengambil perhatian dengan memasang Fire Proof Sheet, Fire Barrier yang dibatasi "Tanda untuk pengaman yang tidak ada untuk membatasi untuk melindungi diri dari T-1" c. Tidak ada pengaman dalam radius 35 meter dari pekerjaan Hot Work kelas I d. Apakah semua bahan mudah terbakar telah dibersihkan? e. Lainnya:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	L. Purba	None (Tidak ada pekerjaan yang perlu dilakukan)
a. Apakah semua gas telah di lampirkan form Gas Test, pemantauan terpasang? b. Apakah semua gas telah di lampirkan form Gas Test, pemantauan terpasang? c. Apakah semua gas telah di lampirkan form Gas Test, pemantauan terpasang? d. Apakah semua gas telah di lampirkan form Gas Test, pemantauan terpasang? e. Lainnya:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lokan p	Pengukuran Gas Test per cek Hours, and after break LEL

C. PERSETUJUAN (ISSUEING AUTHORITY) DAN MENYERAHKAN KE PERMITSUBMITTER

Dengan ini saya menyetujui Permit ini Tanggal (dd/mm/yy): 26/15/2020 Nama: S-H. CHAZ Tanda Tangan:	
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D. MELAKUKAN PERIKSAAN DAN MENYERAHKAN KE PERMITSUBMITTER

No.	Tanggal Aplikasi (dd/mm/yy)	Tanda Tangan	No.	Tanggal Aplikasi (dd/mm/yy)	Tanda Tangan
1	27/15/2020		1	27/15/2020	
2	28/15/2020		2	28/15/2020	
3	29/15/2020		3	29/15/2020	
4	30/15/2020		4	30/15/2020	
5	31/15/2020		5	31/15/2020	
6	01/16/2020		6	01/16/2020	
7	02/16/2020		7	02/16/2020	

RIU & TERJADI KEADAMAN DILAKUKAN SECARA OTOMATIS IZIN KERJA DIBATALKAN PERMIT BARU HARUS DIARJIKAN, JIKA PERUBAHAN PERLU DIAMUKANSI KIRIBAU

E. MELAKUKAN PERIKSAAN DAN MENYERAHKAN KE PERMITSUBMITTER

1. Seluruh Pekerjaan telah selesai 2. OHS & Working Permitting EPOC dan Safety Precaution Checklist 3. Safety Precaution Checklist 4. Permits 5. Laporan pekerjaan	1. Seluruh Pekerjaan telah selesai 2. OHS & Working Permitting EPOC dan Safety Precaution Checklist 3. Safety Precaution Checklist 4. Permits 5. Laporan pekerjaan
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Job Safety Analysis



PT. INDO TEHNIK INDUSTRI

Activity	ERECTION HRSG UNIT 11 AND 12	Project/Site Location	RIAU GFPP 275 MW IPP PROJECT
Work Description:	INSTALLATION, FABRICATION AND MODIFICATION WORK TO COMPLETE THE HRSG INSTALLATION	Company	PT. INDO TEHNIK INDUSTRI
		Department Involved	MECHANICAL DEPT
Approve Date	13/05/20	Register No	RIPP-JC/JSA/012/ITI

General Safety Condition Requirements:

1. LLC – HSE Plan and Safety procedures are to be followed at all times. / Semua prosedur yang tertuang didalam LSC plan harus di patuhi
2. Minimum PPE to be worn at all times / APD Minimum harus digunakan di seluruh di lokasi kerja
3. Risk Assessment to be available at all points of the work – Workers must be informed of Risk Assessment and understand the risk involved in the works. / Penilaian risiko harus dilakukan untuk setiap pekerjaan dan pekerja harus mengetahui semua risiko pekerjaan dan tahu dampaknya
4. Tool box talk/pre-job briefing to be given at the start of each work shift and before starting a new task or activity. / Melakukan toolbox meeting sebelum memulai pekerjaan baru dan awal shift baru
5. Supervisor, HSE and First Aiders or medical facilities to be available. / Memastikan Supervisor, petugas kesehatan dan keselamatan tersedia dilapangan

Minimum PPE Required.

Hard hat (Helmet), safety glasses, hi-visibility vest, coverd gloves, safety shoes.

Prepared By SPV / Engineer	Checked By Construction Manager/Supintendent	Reviewed By HSE RIPP JO	Approved By RIPP JO (Discipline Manager)	Acknowledged By MRPR
 Iqbal FATONI	 Ferry	 Leo	 R. A. CHAZ 12/05/2020	 M. Nur 13-05-2020

CONTRACTOR : PT.INDO TECH K.INDUSTRI

TASK : HIRSG DIRECT ON

No.	Sequence of Basic Job Steps/ Urutan Langkah Pekerjaan	Hazard/Bahaya	Hazard Effect/Akibat Bahaya	Initial Risk*			Recommendation Action/Tindakan Rekomendasi	Residual Risk *1		
				PR	SV	IR		PR	SV	RR
1	Proses Perijinan (Processing permit)	1.1 Pembuatan Perijinan yang kurang benar dapat menyebabkan miskomunikasi (Miscommunication can make trouble & delaying work progress)	Miskomunikasi bisa menghambat progress pekerjaan (Miscommunication can make trouble & delaying work progress)	3	3	9	Lakukan briefing mengenai prosedur kerja, bahaya yang ada dan pencegahannya serta scope pekerjaan yang akan dilakukan kepada pekerja terlebih dahulu sebelum memulai pekerjaan (Share the rules about working permits to all component of workers to working after permits are completed, and about punishment if they make any offence) Lakukan toolbox meeting sebelum memulai pekerjaan (Toolbox meeting before start working) Sosialisasikan ISA ke semua pekerja (socialization ISA to workers) Berikan arahan bahwa pekerjaan harus dapat dilakukan jika izin kerja telah ditandatangani oleh departemen / pihak terkait (Share with management about permit process and do not start to work before permits complete and signed)	2	2	4
2	Mobilisasi Material (Material mobilization)	2.1 Kecelakaan pada saat mobilisasi material (kecelakaan kendaraan) (Vehicle Crash)	Kecelakaan dapat mengakibatkan kerusakan pada kendaraan dan cedera pada operator (Accident can cause damage on vehicle and injuries to the operator)	6	5	30	Memastikan kendaraan yang digunakan sesuai dengan aturan yang ditentukan oleh pihak Client, dilengkapi dengan flagman. (Make sure the vehicle is properly safe and accordance with Client's vehicle movements/rules, and equipped with flagman.)	2	2	4
		2.2 Material yang dibawa roboh/terjatuh pada saat mobilisasi (Material falling when mobilization process)	Bisa mengakibatkan kerusakan pada material. (Caused material damage) Mencegah / mencegah para pengemudi jalan lainnya.	2	5	10	Membuat perijinan LMK dan SIM Site. (Make vehicle permits and driver permits from Client) Mengikat peralatan kerja / material pada saat mobilisasi. (Tied the material with properly safe) Menjauhi aturan kecepatan dan jalan yang telah ditentukan di site (follow the speed limit rules)	2	2	4
3	Penerimaan material (Unloading material)	3.1 Material terjatuh, kejatuhan/terjepit material pada saat penerimaan (Falling materials, risk for injury)	Bisa mengakibatkan kerusakan pada material. Serta cedera pada personel. (falling material can cause personal injury and material damage)	2	5	10	Membuat tanda peringatan saat unloading dan pasang signage, kod warna yang baik antara signal man dan operator. Signal man selalu mengarahkan operator. (Make sure about lifting safe distance, and do not position personnel below of the work-lifting top line, good cooperation from the signal man and operator signal man always sign the operator)	2	4	8

- Position loading-unloading sesuai dengan lifting plan.

TASK 1. RISK EVALUATION

No.	Sequence of Basic Job Steps/ Urutan Langkah Pekerjaan	Hazard/Bahaya	Hazard Effect/Akibat Bahaya	Initial Risk*			Recommendation Action/Tindakan Rekomendasi	Residual Risk *)		
				PR	SV	IR		PR	SV	RR
							Pastikan posisi pekerja tidak berada di bawah material/equipment yang diangkat (Make sure to all manpower do not stay below of material/equipment when lifting)			
		3.2 Kesalahan penempatan material dan mengganggu akses jalan	Akses tertutup (closed access)	3	2	6	Tidak melakukan penempatan material di lokasi akses jalan dan pasang barikade di sekitar area kerja yang sedang bekerja. (Do not put the materials on the access way and should place the barricade around heavy equipment)	2	2	4
4	Chipping	4.1 Berdebu (Dusty)	Berakutasi (snpuan pernafasan) (Cough or respiratory disorder)	4	2	8	Dijwajibkan memakai sarung tangan dan masker (Required to wear gloves and mask)	3	2	6
		4.2 Tangan terlepas dari pegangan mesin chipping (hand wrenched or scratched)	Memar, terkilir & tangan terluka (sprained, bruised and injured)	3	3	9	Gunakan APD (sarung tangan) yang sesuai dengan jenis pekerjaan, katun, kulit atau leather (use the right hand gloves, exam cotton or leather)	2	2	4
		4.3 Mata tertusuk serbuk/serpihan concrete (askipun) (eye contaminated with dust or grain material)	Mata iritasi, sampai kerusakan permanen pada mata (eye irritation, until permanent damage to the eye)	3	3	9	Gunakan APD (kacamata safety) (use safety goggles)	2	2	4
5	Padding	5.1 Berdebu (Dusty)	Berakutasi (gangguan pernafasan) (Cough or respiratory disorder)	4	2	8	Dijwajibkan memakai sarung tangan dan masker (Required to wear gloves and mask)	3	2	6
		5.2 Mata tertusuk serbuk/serpihan concrete (askipun) (eye contaminated with dust or grain material)	Mata iritasi, sampai kerusakan permanen pada mata (Eye irritation, until permanent damage to the eye)	3	3	9	Gunakan APD (kacamata safety) (use safety goggles)	2	2	4
6	Instalasi Scaffolding (Scaffolding Installation)	6.1 Tangan terjepit/tergigit/tertusuk benda tajam (hand wrenched or scratched)	Ledera pada jari dan tangan (injury to fingers and hands)	3	3	9	Gunakan APD (sarung tangan) yang sesuai dengan jenis pekerjaan, katun, kulit atau leather (use the right hand gloves, exam cotton/leather)	2	2	4
		6.2 Mata tertusuk serbuk/serpihan concrete (askipun) (eye contaminated with dust or grain material)	Mata iritasi, sampai kerusakan permanen pada mata (Eye irritation, until permanent damage to the eye)	3	3	9	Gunakan APD (kacamata safety) (use safety goggles)	2	2	4
		6.3 Kejatuhan material	Ledera pada kepala keretakan	2	5	10	Pastikan tidak ada pekerja yang melintas pada saat	2	3	6

TASK 1 HSE/ERUCTION

No.	Sequence of Basic Job Steps/ Urutan Langkah Pekerjaan	Hazard/Bahaya	Hazard Effect/Akibat Bahaya	Initial Risk*			Recommendation Action/Tindakan Rekomendasi	Residual Risk *)		
				PR	SV	IR		PR	SV	RR
		(falling materials)	(Major injuries and/or fatality)				Pasang barikade di area pekerjaan (place the barricade in working area)			
		6.4. Scaffolding pemasangan scaffolding tidak benar (unproper scaffolding installation)	Scaffolding roboh (Unproper scaffolding installation can make scaffolding collapse)	2	5	10	Pastikan dalam pemasangan scaffolding telah benar Pastikan bahwa scaffolding telah memiliki izin/sertifikat dan ahli di bidangnya (make sure the scaffolding have license or certificate and accomplished in scaffolding) Pastikan scaffolding dilengkapi dengan bracing, ladder, toe board dan base plate (make sure the scaffolding completed by bracing, ladder, toe board and base plate) Sebelum digunakan perancah scaffolding, harus dilakukan pengorek dan cord tagging dengan	2	3	6
		6.5. Terjatuh dari ketinggian (Fall from heights)	Cidera parah hingga kematian (Major injuries and/or fatality)	2	5	10	Gunakan full body harness dengan double lanyard dan kalung kedua hooknya. (Use full body harness with double lanyard and 100 persen tie off)	2	3	6
7	Erection & Fit Up Heat Recovery Steam Generator	7.1. Personal teruka karena terjatuh (Injury because falling from heights)	Cidera parah hingga kematian (Major injuries and/or fatality)	2	5	10	Pastikan pekerja pada saat ketinggian lebih dari 1,8 m harus menggunakan Full Body Harness dan Mengikuti Perancah sesuai dengan Arusnya (Make sure to using Full Body harness for working more than 1.8 m heights)	2	3	6
		7.2. Terjempas Material	Luka berat serta kerusakan pada material (Major injuries and material damage)	2	5	10	Pastikan Posisi Pekerja tidak berada di bawah material pada saat pemasangan (Make sure to not positioned manpower/any person below of materials)	2	3	6
		7.3. Tangan Terjepit	Cidera pada jari dan tangan (Injuries on the hand and finger)	2	3	6	Pastikan Pekerja sudah siap instruksi pekerjaan pada saat Toolbox meeting dan Mengetahui cara kerja yang aman. (Share for the procedure and safety work steps on the toolbox meeting before start working)	2	2	4
8	Pemotongan (Cutting)	8.1. Memotong dengan cutting torch (cutting using a torch)	Luka bakar / ledakan (Burns / fire explosion)	2	3	6	Memastikan tidak ada kebocoran gas yang bocor sebelum memulai pekerjaan (Make sure no gas bottle leaking) Memasang flash back arrester (Install flashback arrester) Memastikan pemadam kebakaran ringan (Carry fire extinguisher)	2	2	4

2.41 Crane rail

Fatality

2

5

10

- pastikan pengangkatan sudah ada permit / lifting plan dan crane list out

2

2

4

TASK : HASIL KERJA

No.	Sequence of Basic Job Stages/ Urutan Langkah Pekerjaan	Hazard/Bahaya		Hazard Effect/Akibat Bahaya	Initial Risk*			Recommendation Action/Tindakan Rekomendasi	Residual Risk *†		
					PR	SV	IR		PR	SV	RR
		8.2	Percikan api saat pemotongan (Sparks during cutting process)	Luka bakar dan kerusakan material (Burns and material damage)	3	3	9	Menggunakan APD (Face Shield, apron dll) (Use PPE - face shield, apron, etc)	2	2	4
								Cover area dengan fire blanket (Cover the area using fire blanket)			
9	Pengerjaan dasar (Grinding)	9.1	Sumber panas pada peralatan (Heat source from the tools)	Ledakan/kebakaran (Explosion/fire)	2	3	6	Gunakan fire blanket Tersedia alat pemadam kebakaran ringan (Standby fire extinguisher) Jauhkan bahan yang mudah terbakar/me tidak min. 8 meter dari sumber titik api (Minimum distance from explosive area must be 8 meters)	2	2	4
		9.2	terputang	Luka luka (Minor injury)	2	3	6	Gunakan APD (sarung tangan) (Use safety gloves)	2	2	4
		9.3	Disk pecah	Deadly melukai operator atau personel di sekitar (Can harm the operator or personel around working area)	3	3	9	Pastikan gerinda telah diinspeksi dan dinyatakan aman untuk digunakan (Make sure grinding machine has been inspected and is safe to use) Gunakan disk gerinda sesuai dengan fungsinya (Use grinding disc suitable for its function) Grinding wheel harus terpasang sempurna (Make sure grinding disc is properly installed) RPM gerinda harus lebih kecil dari RPM disk (Grinding machine RPM should less than RPM grinding disc)	2	2	4
		9.4	Sumber listrik (Power source)	Tersetrum (Electric shock)	3	3	9	Matikan sumber listrik saat mengganti grinding wheel Pasang ELCB pada panel listrik (Install ELCB at electric panel) Pastikan kabel pemada dalam keadaan baik (Make sure grinding cable in good condition) Pakai sarung tangan (Use hand glove before operate the tools)	2	3	6
		9.5	Partikel berterbangan (Spark)	Mata terpapar dengan serbuk besi (eye contaminated with dust or granular material)	3	3	9	Gunakan APD (sarung tangan) (Use safety goggles) Gunakan face shield pada saat pengerjaan (Use face shield)	2	2	4
10	Pemeriksaan (Welding)	10.1	Sumber panas (Heat Source)	Luka bakar / kebakaran/ledakan (Burns / fire / explosion)	2	3	6	Gunakan fire blanket Tersedia alat pemadam kebakaran ringan (Standby fire extinguisher) Jauhkan bahan yang mudah terbakar/me tidak min. 8 meter dari sumber titik api (Minimum distance from explosive area must be 8 meters)	2	2	4

TASK : HSC DIRECTION

No.	Sequence of Basic Job Steps/ Urutan Langkah Pekerjaan	Hazard/Bahaya		Hazard Effect/Akibat Bahaya	Initial Risk*			Recommendation Action/Tindakan Rekomendasi	Residual Risk **)		
					PR	SV	IR		PR	SV	RR
		10.2	Asap (Fume)	Gangguan pernafasan (Respiratory disorders)	3	2	6	Pastikan bahwa welder telah memiliki Usahakan saat melakukan pengelasan posisi welder searah dengan arah angin (While do welding activity, direction of welder position in the direction of the wind)	2	2	4
		10.3	Sumber listrik (Power source)	Ternstrum (electric shock)	3	3	9	Pastikan kabel las dalam keadaan baik Gunakan APD (sarung, tangan las) (Use safety welding gloves)	2	3	6
								Pastikan konektor listrik menggunakan tipe tahan ledakan dan tahan air (make sure electric connector using proof explosion and water proof)			
								Pastikan area kerja kering (Make sure working area is dry)			
						Tempatkan peralatan las pada tempat yang aman dan dikar (labung gas) (Place the welding equipment in a safe place and fastened (Gas bottle))					
11	Clean up Area	10.1	Material tidak tertata	Dapat mengganggu akses, dan material hilang (Material that may interfere with the access, and causing missing materials)	2	2	4	Pastikan penempatan material tidak mengganggu akses lain (Make sure the material does not interfere with the placement of other access)	2	1	2
				Tersandung/Terpeleset (Trip or Slip)	2	2	4	Pastikan segala peralatan dan material sebelum dan setelah selesai bekerja (Tidy up all the equipment & material before and after work)	2	1	2
		10.2	Alat yang tidak dikembalikan pada tempatnya	Alat yang hilang (Tools are missing)	3	1	3	Setelah bekerja kembalikan alat alat ke tempat penyimpanan yang telah disediakan (After work, return the tools to the storage area provided.)	2	1	2
		10.3	Material limbah (Waste material)	Sampah tercampur (Mixed garbage)	3	3	9	Pilah-pilah sampah sesuai jenisnya B3/Non B3 (Sorting waste according to its type - B3/Non B3)	2	3	6
Sampah tidak dibersihkan dapat menyebabkan kebakaran dan kecelakaan pada pekerja	3			3	9	Meny buang sampah pada tempat yang telah ditentukan (Dispose waste to a designated place)	2	3	6		

TASK : HIRSI ERECTION

No.	Sequence of Basic Job Steps/ Urutan Langkah Pekerjaan	Hazard/Bahaya	Hazard Effect/Akibat Bahaya	Initial Risk*			Recommendation Action/Tindakan Rekomendasi	Residual Risk **)		
				PR	SV	IR		PR	SV	RR
			berikutnya (Waste is not cleaned can lead to fires and accidents at next work)				Membersihkan lokasi pekerjaan sebelum selesai pekerjaan (Clean area after work done) House keeping sebelum bekerja, saat bekerja dan sesudah kerja (House keeping before work, during work and after work)			

Nota :



PR : Probability / Kemungkinan Risiko

SV : Severity / Tingkat Kep parah an Risiko

IR : Initial Risk / Risiko Awal (sebelum menjadi silet/bawaannya)

RR : Residual Risk / Risiko Sisa / resiko lanjutan

CORRECTIVE ACTION FOR _Fire on Top Side HRSG 12 20200602

No	Action	Action by	Due Date	Corrective Action	Action Date	Status
1	Sub contractor to provide sufficient number of fire extinguisher	RJO	20 June 2020	Fire Extinguisher register Attached	15 June 2020	Closed
2	Sub contractor to assign fire watcher to monitor hot work activity	ITI	20 June 2020	Fire Watcher List Attached	15 June 2020	Closed
3	Sub contractor to install proper fire blanket to control spark from hot work activity	RJO	20 June 2020		03 June 2020	Closed
4	Contractor to establish hot work training for welder	ITI	20 June 2020	Training has been conducted File Attached	20 June 2020	Closed
5	Disciplinary action (first warning letter) to be given to: To welder and supervisor	RJO	20 June 2020		15 June 2020	Closed



TRAINING REPORT

Project	: Riau GFPP 275 IPP Project
Company	: ITI, JK, HK
Venue	: LEC Site Office
Day / Date	: Saturday / June 20, 2020
Number of Attendees	: 8 Person
Training	: Hot work safety
Trained by	: M. Fauzi Azmie

Subject :

- Safe work preparation
- Inspection tools
- Combustible material
- Hazard mitigation
- Role and responsibility fire watcher
- Fire triangle
- Fire extinguisher techniques

Photo Documentation :


Prepared by	Acknowledge by
 M. Fauzi Azmie HSE Supervisor	 Leo Kim HSE Manager









Day/Date : Saturday / 20. June. 2020

 Project : Riau GPPP 275 MW

 Time : 0.30 am

 Location : CCL Site Office

 Subject : Hot work Safety

No	Name	Company/Position	Signature	
1	Ucik	ITI / SPV	1. 	2. 
2	Purwanto	ITI / Welder		
3	ANDRIAN	ITI - Fitter	3. 	4. 
4	Iren Burhan	ITI - Welder		
5	Ruslan Syah	ITI - Fitter	5. 	6. 
6	Maulur	Jk Skill 1		
7	Fiki Gatris	Jk Skill	7. 	8. 
8	Indra Suro	Jk - T.Las		
9				
10			9. _____	10. _____
11				
12			11. _____	12. _____
13				
14			13. _____	14. _____
15				
16			15. _____	16. _____
17				
18			17. _____	18. _____
19				
20			19. _____	20. _____
21				
22			21. _____	22. _____
23				
24			23. _____	24. _____
25				
26			25. _____	26. _____
27				
28			27. _____	28. _____
29				
30			29. _____	30. _____

FIRE WATCHER

No	Team	Name
1	Staff	Febri Nuansa
		M. Rizky Faiza
		Ilafi Ramadhan
2	Indirect	Rudi Hartono
		Indra
		Riadi
3	Mechanical 1	Jundri Hadi
		Iga Wihantara
4	Mechanical 2	Raymond Marbun LG
		Bryan Sabra S
		Bismil Ramadhana
5	Mechanical 3	Rinto Jenls P
		Avin Ramadhani
		Royken Darlis m
		Andryan
6	Mechanical 4	Pebrladi
		Rahmat Doni
		Marwawi
7	Mechanical 5	M. Hariadi
		Septawan
8	Mechanical 6	Erbin
		Bezaleel Ido Elzedek
		Robinhud Sihombing
		Herbert Sitompul
9	Mechanical 7	Lijon Manalu
		Reza Putra Muslim
10	Material Control	Rizal Franzoni
		Vandi Vadi
11	Welder	Arpen Rudianto Harahap
		Ridwan Andrika
		Brinanda Alfredo S
		Frwin Saleh
		Rio Naldi Ambarita
12	Piping Team	Jekson Lubis
		Jhontahari M. S
13	Tank	Arif Munandar
		Kurniawan
		Sarlam
14	Painting	Wanda
		Andi H Tampubolon
		Ahmad Habibi

Fire Extinguisher

NO	NAME EQUIPMENT / TOOLS	BRAND	CAPACITY	CONTENT	QTY / PCS	USER	LOCATION
1	Fire Extingulsher	Viking	6 Kg	Powder	3	HSE LÖTTE	
2	Fire Extingulsher	Viking	6 Kg	Powder	21	HSE ITI	Cooling Tower, Workshop ITI, CWP, HRSG
3	Fire Extingulsher	Viking	9 Kg	Powder	7	HSE ITI	Cooling Tower, Workshop ITI, CWP
4	Fire Extingulsher	Viking	3 Kg	Powder	1	HSE ITI	Mobile Crane
5	Fire Extingulsher	Viking	20 Kg	Powder	1	HSE ITI	Laydown ITI
6	Fire Extingulsher	Viking	25 Kg	Powder	2	HSE ITI	Laydown ITI
7	Apar	Ganesha	6 Kg	Powder	4	Tank	Tank Area
8	Fire Extingulsher		6 kg	Powder	6	HSE ITI	Kantor Truba, Workshop Truba, GTG, STG, HRSG
9	Fire Extingulsher		9 kg	Powder	6	HSE ITI	Kantor Truba, Workshop Truba, GTG, STG, HRSG
10	Fire Extingulsher (New)	Viking	6 kg	Powder	30	HSE ITI	

DOKUMENTASI TRAINING FIRE WATCHER



DOKUMENTASI TRAINING FIRE WATCHER



DOKUMENTASI TRAINING FIRE WATCHER



FIRE BLANKET



PRELIMINARY INCIDENT REPORT

Near miss – Fire occurred in Temporary Security Post

SUMMARY:

Date & Time of Incident : 09 June 2020 / 03.40 PM
Asset : Riau IPP 275 MW
Location : PLTGU Construction Site, Riau
Incident Classification : Near miss – Fire on Temporary facility of Security Post
IP Name/Age/Company : XX /XX/PT. Jaya Kencana (Sub Contractor of LEC)
Incident Risk Rank : (1 x 4 = 4) HIGH – ~~MEDIUM~~ - LOW

DESCRIPTION:

On Tuesday, June 9th, 2020, approximately 03.30 PM security guard left the temporary security post of Jaya Kencana for monitoring the JK's laydown area.

Approximately 03:40 the security guard saw smoke was coming out from security post. Immediately security back to the post and then security guard and fire team extinguished fire using fire extinguishers provided in place . The ceiling of security office got burnt and No Injury person and no impact to the project activity

IMMEDIATE CAUSES :

- Electrical Installation short circuit
- Circuit Breaker was failed

IMMEDIATE ACTION :

1. Extinguished the fire using fire extinguishers provided in place.
2. Disconnect the electrical cable distribution to temporary security post.




FURTHER FOLLOW UP ACTIONS :


1. EPC to inspect all electrical installation to all temporary facilities regularly and record in the log book.
2. EPC have to ensure all facility of contractor and sub-contractor provided with sufficient number of fire extinguishers
3. Conduct incident investigation to find Root Causes and corrective action plan.

Attached Pictures:



CORRECTIVE ACTION FOR FIRE INCIDENT IN JK'S TEMPORARY SECURITY POST 20200609

No	Action	Action by	Due Date	Corrective Action	Action Date	Status
1	Sub contractor to conduct periodic inspection of electrical installation for temporary facility	JK	30 June 2020	<ul style="list-style-type: none"> Electrical panel inspection has been done 	30 June 2020	Closed
2	Sub Contractor to use cable that complete with grounding for temporary facility	JK	30 June 2020	<ul style="list-style-type: none"> Cable completed with grounding has been installed 	30 June 2020	Closed
3	Sub contractor to hire Expert of electrician (Ahli K3 Listrik)	JK	30 June 2020	<ul style="list-style-type: none"> Certified Electrical Technician has been hired Instead off Expert of electrician (Ahli K3 Listrik) 	30 June 2020	Closed

4	Contractor to provide suitable circuit breaker for power socket extension	JK	30 June 2020	Proper circuit breaker has been Installed 	30 June 2020	Closed
5	Establish Safety electrical training for electrician	RJO	30 July 2020	Training Report Attached	30 June 2020	Closed

TRAINING REPORT

Project	: Riau GFPP 275 IPP Project
Company	: JK
Venue	: LEC Site Office
Day / Date	: Tuesday / June 30, 2020
Number of Attendees	: 9 Person
Training	: Electrical Safety
Trained by	: M. Fauza Azmie

Subject :







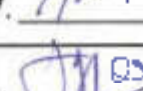
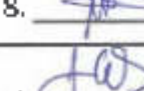
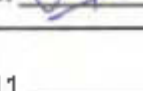

- Definition of shocked
- Hazard identification
- Electrical injuries
- Type of circuit breaker
- Grounding/earthing system
- Electrical safety installation
- Emergency case

Photo Documentation :


Prepared by	Acknowledge by
 M. Fauza Azmie, HSE Supervisor	 Saiful Azmi HSE Manager

Day/Date : Tuesday / 30. June. 2020
 Time : 10.00 am
 Subject : Electrical safety.

Project : Riau GFPP 275 MW
 Location : CEC Site d'Ac.

No	Name	Company/Position	Signature
1	YOGI EFRANTO	PT. JAYA KENCANA/SKIL	1.  2. 
2	KELLIA DISMAWATI	PT. JAYA KENCANA - SKILL	
3	RUDI ENDREO	PT. JAYA KENCANA - SKILL	3.  4. 
4	RIKI DANDORO	PT. JAYA KENCANA SKILL	
5	MUSLIMAN	PT. JAYA KENCANA	5.  6. 
6	ARI RINTO	PT. LOTTE	
7	SUSANTO	PT. JAYA KENCANA	7.  8. 
8	SAIFUL	PT. JAYA KENCANA	
9	SAIFUL	PT. JAYA KENCANA	9.  10. 
10			
11			11. _____ 12. _____
12			
13			13. _____ 14. _____
14			
15			15. _____ 16. _____
16			
17			17. _____ 18. _____
18			
19			19. _____ 20. _____
20			
21			21. _____ 22. _____
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23			23. _____ 24. _____
24			
25			25. _____ 26. _____
26			
27			27. _____ 28. _____
28			
29			29. _____ 30. _____
30			

APPENDIX J

SEP Log

CSR Log

MRPR STAKEHOLDER ENGAGEMENT DATABASE/LOG BOOK

No	Date	Stakeholder Type	Time/Once	Personal (Name, Dept, & Position)	Venue	Name	Phone / Mobile Number	Initials (Last, First, Middle Initial)	Position/ Function	Address	Category (Government, Private, Academic, etc.)	Level of Stakeholder (1-5)	Subject/ Agenda	Priority/ Issue	Issue Category (1-5)	Required Follow-up	Responsible Party (Stakeholder or MRPR)	Update/ Status (1-5)	Stakeholder Contact Person	Comment	Document
1	02-Jan-20	S	14.00	L. Heron Dewa (Social Specialist) S. Harsa Anu (Social Specialist)	Labour Department, City of Pekanbaru	Abdul Kadir	08176549100	Labu	Department Head	Sub-District Pekanbaru	Government	3	On the Employee Issue	Discussion about the employee department	13	Yes	1	2	Closed	02-Jan-20	Communication Report
2	07-Jan-20	S	08.00	L. Fulu K Perdy (Social Specialist) S. Harsa Anu (Social Specialist)	Labour Department, City of Pekanbaru	Alimul	08532255250	PL	PLU/ TU	Sub-District Pekanbaru	Government	3	Access	Coordination about railway material order	3	No	1	2	Closed	07-Jan-20	Communication Report
3	07-Jan-20	S	10.00 AM	L. Fulu K Perdy (Social Specialist) S. Harsa Anu (Social Specialist)	Labour Department, City of Pekanbaru	Rizki Rizki	08127092200	Labu	Department Head	Sub-District Pekanbaru	Government	3	On the Employee Issue	Discussion about on the employee department	13	Yes	1	2	Closed	22-Jan-20	Communication Report
4	08-Jan-20	S	10.00 AM	Wanda W (Social Specialist)	Labour Department, City of Pekanbaru	Suwardo, Dharma, Rudi, Agus, Agus	08174549500	PTM	HR	Sub-District Pekanbaru	Government	4	MRFLTP Implementation Proposal	Discussion about the issue on equal and MRCA	11	Yes	1	1	Closed	09-Jan-20	Revised LSP Proposal
5	22-Jan-20	S	2.30 PM	L. Fulu K Perdy (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist)	Labour Department, City of Pekanbaru	Rizki Rizki	08176549500	Labu	Department Head	Sub-District Pekanbaru	Government	4	On the Employee Issue	Discussion about on the employee department	13	No	1	2	Closed	22-Jan-20	Communication Report
6	27-Jan-20	S	2.00 PM	L. Fulu K Perdy (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist)	Labour Department, City of Pekanbaru	Abdul Kadir	08176549100	Labu	Department Head	Sub-District Pekanbaru	Government	3	Monthly Employee Issue	Discussion about monthly employee issue	13	No	1	3	Closed	27-Jan-20	Communication Report
7	30-Jan-20	S	3.00 PM	Wanda W (Social Specialist)	Labour Department, City of Pekanbaru	Suwardo, Dharma, Rudi, Agus, Agus	08127452200	PTM	HR	Sub-District Pekanbaru	Government	4	MRFLTP Implementation Proposal	Discussion about the method of the 2nd part	11	Yes	1	1	Closed	31-Jan-20	Revised LSP Proposal
8	04-Feb-20	S	3.00 PM	Wanda W (Social Specialist)	Labour Department, City of Pekanbaru	Rudiman	NA	Labu	Department Head	Sub-District Pekanbaru	Government	3	MRFLTP Implementation Proposal	Discussion about the needs of data of the company	11	Yes	1	1	Open	04-Feb-20	Open
9	05-Feb-20	S	10.00 AM	Wanda W (Social Specialist)	Labour Department, City of Pekanbaru	Suwardo, Dharma, Rudi, Agus, Agus	08127452200	PTM	HR	Sub-District Pekanbaru	Government	4	MRFLTP Implementation Proposal	Discussion about the needs of data of the company	11	Yes	1	1	Closed	07-Feb-20	Revised LSP Proposal
10	12-Feb-20	S	2.00 PM	L. Fulu K Perdy (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist)	Labour Department, City of Pekanbaru	Indah	08534525158	Tamparaya	Head	Pekanbaru	Government	2	Coordination	Coordination about the needs of data of the company	10	No	2	1	Closed	12-Feb-20	Communication Report
11	14-Feb-20	S	10.00 AM	Wanda W (Social Specialist)	Labour Department, City of Pekanbaru	Eng Yulita	08176549100	Pasaman	Head	Pekanbaru	Government	2	Community Health Program	Discussion about the program	10	Yes	1	1	Closed	14-Feb-20	Proposal
12	14-Feb-20	S	3.00 PM	Wanda W (Social Specialist) Wanda W (Social Specialist)	Labour Department, City of Pekanbaru	Eng Yulita	08534525158	Land	Head	Pekanbaru	Government	4	Land Use Data	Land Use Data	13	No	1	1	Closed	14-Feb-20	Communication Report
13	14-Feb-20	S	2.00 PM	L. Fulu K Perdy (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist)	Labour Department, City of Pekanbaru	Elpendi	08127092200	Mega Naga	Head	Pekanbaru	Government	4	On the Employee Issue	Discussion about the employee department	2	No	2	2	Closed	14-Feb-20	Communication Report
14	14-Feb-20	S	10.00 AM	L. Fulu K Perdy (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist)	Labour Department, City of Pekanbaru	Wanda W	08537758800	Kawon	Head	Pekanbaru	Government	4	Scorecard Proposal: MTQ	Discussion about the scorecard	10	No	2	2	Closed	14-Feb-20	Letter of Acceptance
15	14-Feb-20	S	2.00 PM	L. Fulu K Perdy (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist) S. Harsa Anu (Social Specialist)	Labour Department, City of Pekanbaru	Adi	08176549100	Labu	Head	Pekanbaru	Government	4	Scorecard Proposal: MTQ	Discussion about the scorecard	10	No	2	2	Closed	14-Feb-20	Letter of Acceptance

MRPR STAKEHOLDER ENGAGEMENT DATABASE/LOG BOOK

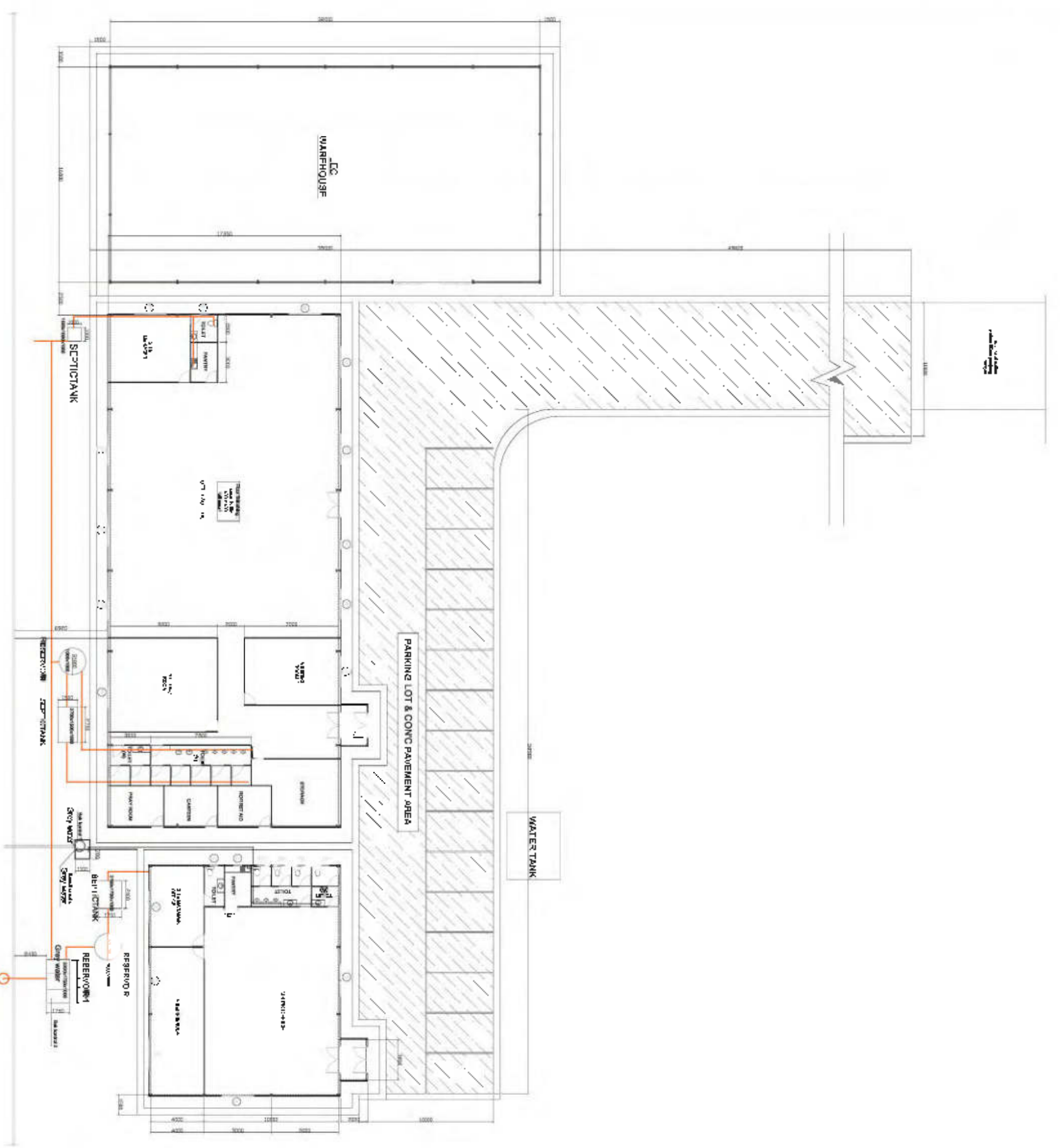
No	Date	Stakeholder Type	Time/Once	Personal (Name, Dept. & Position)	Venue	Stakeholder						Subject/Agenda	Description	Issue Category	Required Follow up	Regulation by stakeholder	Urgency level	Status	Closeout	Document		
						Name	Phone / Mobile Number	Address (Postal, Sub-District, District)	Position/ Position	Address	Category (Government, Private, NGO, Academic, etc.)										Level of Stakeholder (Local, Regional, National, International)	
16	16-Feb-20	5	10:00 AM	D. Fulu K Perdy (Social Spesialist) S. Haras Dewa (Alumni House Staff) S. Umpi Kusri (Social Spesialist) K. Muli (Alumni House Staff) S. Arga Purat	Trianggung Sub-District Office	Yes	811367100	Trianggung Sub-District	Head	Pekalongan	4	1	Stakeholder Program: MTO	To be discussed on the MTO 2020 agenda regarding the need for a social special event in the area	10	No	2	2	Closed	16-Feb-20	Journal of Assessment	
17	16-Feb-20	5	7:00 PM	D. Fulu K Perdy (Social Spesialist) S. Haras Dewa (Alumni House Staff) S. Umpi Kusri (Social Spesialist) K. Muli (Alumni House Staff) S. Arga Purat	Darmasasmita Sub-District Office	Yes	8533345220	Darmasasmita Sub-District	Head	Pekalongan	4	1	Stakeholder Program: MTO	To be discussed on the MTO 2020 agenda regarding the need for a social special event in the area	10	No	2	2	Closed	16-Feb-20	Journal of Assessment	
18	13-Feb-20	5	10:00 AM	MPPR Site Team	MPPR Site Office	Yes	8177651937	Puskasmas Regional	Head	Pekalongan	1	2	Project Energy	Site visit to the location of the MPPR	10	No	1	1	Closed	13-Feb-20	Project Site Report	
19	21-Feb-20	5	10:00 AM	Wanda W. Satrio (Social Spesialist)	Wangsan Sub-District Office	Yes	8133812287	Mega Muli Sarjana	Head	Pekalongan	4	5	CSR Program (Stakeholder Program)	To be discussed on the MTO 2020 agenda regarding the need for a social special event in the area	2	No	2	2	Closed	14-Feb-20	Communication Record	
20	24-Feb-20	5	9:00 AM	D. Fulu K Perdy (Social Spesialist) S. Haras Dewa (Alumni House Staff)	Local Government City of Pekalongan	Yes		Local Government City of Pekalongan	Staff Division	Pekalongan	1	3	Supporting report	Stakeholder supporting report	13	No	1	3	Closed	24-Feb-20	Communication Record	
21	14-Feb-20	5	10:00 AM	Wanda W. Satrio (Social Spesialist)	BWS Sarasin Sub-District Office	Yes	8177651937	BWS Sarasin Sub-District	Head	Pekalongan	1	3	Hydroelectric	Consultation regarding the need for a social special event in the area	10	No	1	3	Closed	14-Feb-20	Communication Record	
22	24-Feb-20	5	10:00 AM	Wanda W. Satrio (Social Spesialist)	DKK Karesidenan Pekalongan	Yes	8133812287	DKK Karesidenan Pekalongan	Head	Pekalongan	1	3	Waste disposal	1. Consultation regarding the need for a social special event in the area 2. Consultation regarding the need for a social special event in the area	10	No	1	3	Closed	24-Feb-20	Communication Record	
23	27-Feb-20	5	10:00 AM	Pada K. Satrio (Social Spesialist)	HR Office	Yes		Environmental Department	Staff	Pekalongan	1	3	Environmental	Environmental Department consultation about the need for a social special event in the area	10	No	1	3	Closed	27-Feb-20	Communication Record	
24	13-Mar-20	5	10:00 AM	D. Fulu K Perdy (Social Spesialist) S. Haras Dewa (Alumni House Staff) S. Umpi Kusri (Social Spesialist)	Industry Town Sub-District Office	Yes	8150338206	Industry Town Sub-District	Head of Industry Town Sub-District	Pekalongan	1	1	CSR Policy	CSR Policy regarding the need for a social special event in the area	10	No	2	3	Closed	13-Mar-20	Communication Record	
25	18-Mar-20	5	10:00 AM	D. Fulu K Perdy (Social Spesialist) S. Haras Dewa (Alumni House Staff) S. Umpi Kusri (Social Spesialist)	Industry Town Sub-District Office	Yes	8150338206	Industry Town Sub-District	Head of Industry Town Sub-District	Pekalongan	1	1	Land ownership status	plan to be carried out land measurement	1	Yes	6	3	Closed	18-Mar-20	Communication Record	
26	13-Mar-20	5	10:00 AM	D. Fulu K Perdy (Social Spesialist) S. Haras Dewa (Alumni House Staff) S. Umpi Kusri (Social Spesialist)	Industry Town Sub-District Office	Yes	8150338206	Industry Town Sub-District	Head of Industry Town Sub-District	Pekalongan	1	3	Land ownership status	Ownership status of land	1	No	2	3	Closed	18-Mar-20	Communication Record	
27	04-Mar-20	5	9:00 AM	Anggi P. Jari	DEWPTSP Pekalongan City	Yes	817248258-3028	DEWPTSP Pekalongan City	Member	Pekalongan	1	3	MR Permit	Submission of new application form for MR Permit	10/13	Yes	2	2	1	Open	04-Mar-20	Communication Record
28	08-Mar-20	5	9:00 AM	Anggi P. Jari	Syntex and P. A. Satrio Office	Yes	0212-8280-902	Syntex and P. A. Satrio Office	Member	Pekalongan	1	3	Temporary July beam	Syntex issued notification letter regarding Temporary July Additional Work	10/13	No	2	3	2	Open	08-Mar-20	Communication Record
29	04-Mar-20	5	9:00 AM	Anggi P. Jari	Working Center Department	Yes	NA	Working Center Department	Member	Pekalongan	1	3	Permit	Main Working Center Department to check the status of the permit	10/13	Yes	2	2	1	Open	04-Mar-20	Communication Record
30	19-Apr-20	5	2:00 PM	Anggi P. Jari	Syntex and P. A. Satrio Office	Yes	0212-8280-902	Syntex and P. A. Satrio Office	Member	Pekalongan	1	3	Temporary July beam	Meeting regarding technical operation July	10/13	No	2	3	2	Open	19-Apr-20	Communication Record
31	17-Mar-20	5	3:00 PM	Anggi P. Jari	DEWPTSP Pekalongan City	Yes	817248258-3028	DEWPTSP Pekalongan City	Member	Pekalongan	1	3	MR Permit	Following up on the MR Permit with legal	10/13	Yes	2	2	1	Open	17-Mar-20	Communication Record
32	24-Mar-20	5	3:00 PM	Anggi P. Jari	DEWPTSP Pekalongan City	Yes	817248258-3028	DEWPTSP Pekalongan City	Member	Pekalongan	1	3	MR Permit	Following up on the MR Permit with legal	10/13	No	2	2	2	Open	24-Mar-20	Communication Record
33	05-Apr-20	5	10:00 AM	Wanda W. Satrio (Social Spesialist)	Mega Muli Sarjana	Yes	8133812287	Mega Muli Sarjana	Head of MTSB	Pekalongan	1	3	CSR	Consultation regarding the need for a social special event in the area	10	No	CSR	1	2	Closed	05-Apr-20	CSR Report
34	02-Apr-20	5	10:00 AM	Wanda W. Satrio (Social Spesialist)	Pekalongan	Yes	8133812287	Mega Muli Sarjana	Director	Pekalongan	4	3	CSR	Finalizing CSR Sarasin Mega Muli Sarjana	10	No	CSR	2	2	Closed	02-Apr-20	BAST
35	04-Apr-20	5	10:00 AM	Wanda W. Satrio (Social Spesialist)	Puskasmas Regional	Yes	8177651937	Puskasmas Regional	Head	Pekalongan	1	2	CSR	Finalizing CSR Sarasin Mega Muli Sarjana	10	No	CSR	1	2	Closed	04-Apr-20	CSR Report

MRPR STAKEHOLDER ENGAGEMENT DATABASE/LOG BOOK

No	Date	Stakeholder Type	Time/Once	Personal (Name, Dept. & Position)	Venue	Stakeholder Name	Phone / Mobile Number	Address	Position/Job Title	Organization	Number of Stakeholders	Subject/Agenda	Priority/Topic	Issue Category	Required Follow-up	Responsible Party	Update/Status	Stakeholder Contact Info	Document		
36	13-Jun-20	S	10.00 AM	W. Sukri W. Indrianto	Terapan Reg District	Indah Yulia	01275321036	Terapan Reg District	Head	Pekalongan	1	CSR	Food for the Future	CSR	No	CSR	1	2	Closed	CSR Report	
37	13-Jun-20	S	10.00 AM	W. Sukri W. Indrianto	FFPM UHTI	Suwondo	01275321000	FFPM UHTI	Head of UHTI	Pekalongan	1	LRP	Coordination Meeting	LRP	No	1	1	2	Closed	Communication Record	
38	21-Jun-20	S	10.00 AM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	DFPAD (Bank Mandiri)	Zikra	0832-7540-254	DFPAD (Bank Mandiri)	Staff	Pekalongan	1	CSR	CSR	CSR	No	1	2	2		Communication Record	
39	23-Jun-20	S	2.00 PM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Indrayanti Terasan Sub-District Office	M.S. Chandia	01232780026	Indrayanti Terasan Sub-District	Head of Indrayanti Terasan Sub-District	Pekalongan	1	CSR	Food donation related to pandemic COVID-19	CSR	Yes	CSR	3	1			Communication Record
40	23-Jun-20	S	11.00 AM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Perintis Office	Staff Perintis		Perintis Office	Staff	Pekalongan	1	CSR	CSR	CSR	Yes	CSR	3	2			Communication Record
41	07-Jul-20	S	2.00 PM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Pekalongan	Rezi		SD Marginal	Officer	Pekalongan	3	CSR	CSR	CSR	No	4	2		Closed	Communication Record	
42	08-Jul-20	S	10.00 AM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Pekalongan	Rezi		SD Marginal	Officer	Pekalongan	3	CSR	CSR	CSR	No	4	2		Closed	CSR Report	
43	11-Jul-20	S	9.00 AM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Labor Department of HRD	L. M. and P. M. Hand		Labor Department of HRD	Head of Labor Department of HRD	Pekalongan	1	CSR	CSR	CSR	Yes	2	2	2		Communication Record	
44	13-Jul-20	S	10.00 AM	W. Sukri W. Indrianto	FFPM UHTI	Suwondo	01275321000	FFPM UHTI	Head of UHTI	Pekalongan	1	LRP	Coordination Meeting	LRP	No	1	1	2	Closed	Communication Record	
45	13-Jul-20	S	2.00 PM	Social Team PLTCU	WFP	WFP		WFP	Head of WFP	Pekalongan	1	CSR	CSR	CSR	No	3	2			CSR Report	
46	14-Jul-20	S	10.00 AM	Social Team PLTCU	Terapan Reg District	Mrs. Indah Yulia	01275321036	Terapan Reg District	Head	Pekalongan	1	CSR	CSR	CSR	No	3	2			CSR Report	
47	14-Jul-20	S	8.00 PM	W. Sukri W. Indrianto	BQ Café	M.S. Chandia	0832-7540-254	BQ Café	Head of BQ Café	Pekalongan	4	Media Program	CSR	CSR	No	2	2	2	Closed	Communication Record	
48	13-Jul-20	S	8.00 AM	Social Team PLTCU	Terapan Reg District	Mrs. Indah Yulia	01275321036	Terapan Reg District	Head	Pekalongan	1	CSR	CSR	CSR	No	3	2			CSR Report	
49	13-Jul-20	S	1.00 PM	Wanda W	Pekalongan	Dian	0815-595-1977	Pekalongan	Head of Wanda W	Pekalongan	4	Media Program	CSR	CSR	No	6	2	2	Closed	Communication Record	
50	14-Jul-20	S	8.00 AM	Wanda W	Pekalongan	M.S. Chandia	012-2327-8454	Pekalongan	Head of Wanda W	Pekalongan	4	Media Program	CSR	CSR	No	6	2	2	Closed	Communication Record	
51	14-Jul-20	S	8.00 AM	Social Team PLTCU	Mandara	Sumart, R. N. N.		Mandara	Head of Mandara	Mandara	3	CSR	CSR	CSR	No	6	2	2	Closed	CSR Report	
52	14-Jul-20	S	1.00 PM	Social Team PLTCU	Tanjung Tera	Dita Johari		Tanjung Tera	Head of Tanjung Tera	Tanjung Tera	3	CSR	CSR	CSR	No	6	2	2	Closed	CSR Report	
53	14-Jul-20	S	8.00 AM	Social Team PLTCU	Priang Sub-District	Muchtar		Priang Sub-District	Head of Priang Sub-District	Priang Sub-District	3	CSR	CSR	CSR	No	6	2	2	Closed	CSR Report	
54	23-Jul-20	S	1.00 PM	Social Team PLTCU	Suka Gading	P. S. S.		Suka Gading	Head of Suka Gading	Suka Gading	3	CSR	CSR	CSR	No	6	2	2	Closed	CSR Report	
55	27-Jul-20	S	10.00 AM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	FFPM UHTI	Suwondo	01275321000	FFPM UHTI	Head of UHTI	Pekalongan	1	LRP	Coordination Meeting	LRP	No	1	1	2	Closed	Communication Record	
56	01-Aug-20	S	09.00	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Labor Department of HRD	Mrs. Auli Septina		Labor Department of HRD	Staff	Pekalongan	1	CSR	CSR	CSR	No	3	2			Communication Record	
57	01-Aug-20	S	14.00	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Environmental Office	Mrs. Eva	0815-595-1977	Environmental Office	Head of Environmental Office	Pekalongan	1	CSR	CSR	CSR	Yes	1	2	1		Communication Record	
58	04-Aug-20	S	9.00 AM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Terapan Reg District	Mrs. Indah Yulia		Terapan Reg District	Head of Terapan Reg District	Pekalongan	1	CSR	CSR	CSR	No	3	2			Communication Record	
59	04-Aug-20	S	8.00 AM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Pekalongan - Soc	Rebi		Pekalongan - Soc	Head of Pekalongan - Soc	Pekalongan	5	LRP	LRP	LRP	No	2	2	2		Communication Record	
60	08-Aug-20	S	2.00 PM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Terapan Reg District	M. S.		Terapan Reg District	Head of Terapan Reg District	Pekalongan	1	CSR	CSR	CSR	No	1	2	2		Minutes of Meeting	
61	15-Aug-20	S	2.00 PM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Indrayanti Terasan Sub-District Office	M. S. Chandia		Indrayanti Terasan Sub-District	Head of Indrayanti Terasan Sub-District	Pekalongan	1	CSR	CSR	CSR	Yes	1	2	2		Minutes of Meeting	
62	24-Aug-20	S	14.00	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Terapan Reg District	Mrs. Indah Yulia	01275321036	Terapan Reg District	Head of Terapan Reg District	Pekalongan	2	CSR	CSR	CSR	Yes	1	2	1		Communication Record	
63	25-Aug-20	S	8.00 PM	Pubuk Tanah Sosial (Social), Dept. (Social) (Social)	Sawasirah	Ade		Sawasirah	Head of Sawasirah	Pekalongan	4	CSR	CSR	CSR	No	1	2	2		Communication Record	

APPENDIX K

Temporary Wastewater Route during Power Plant Construction



LEGEND

- Clay molar
- DNCS water
- Power <math>110V</math> AC

Detail Reservoir 1