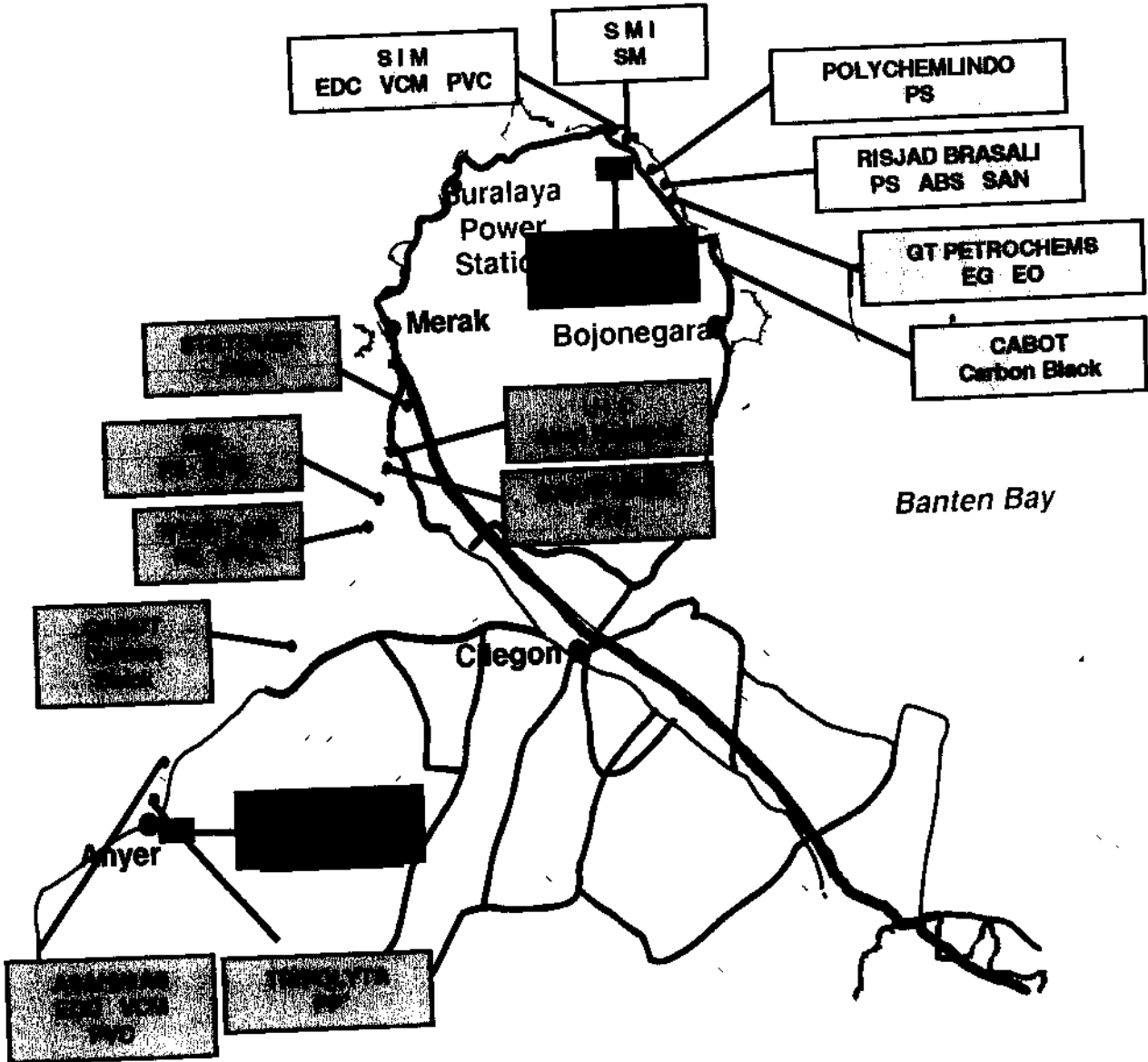


Indonesia Idel Site  
Merak Assets

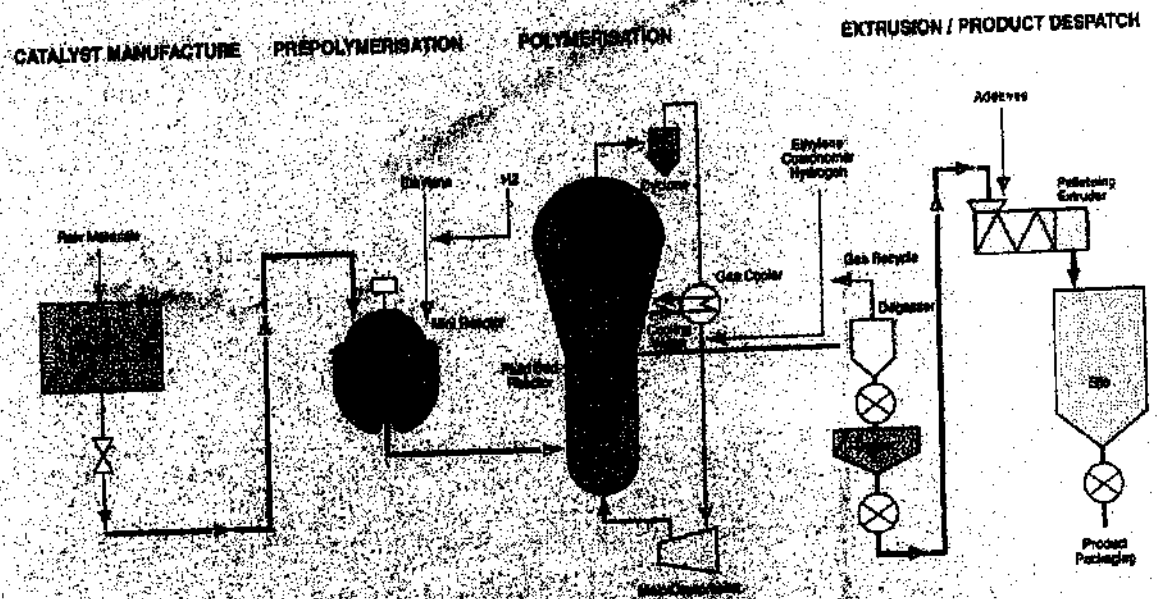
Lampiran 1: Peta PT. TITAN Petrokimia Nusantara



Lampiran 2: Foto Udara PT. TITAN Petrokimia Nusantara



Lampiran 3 : Process Flow Diagram



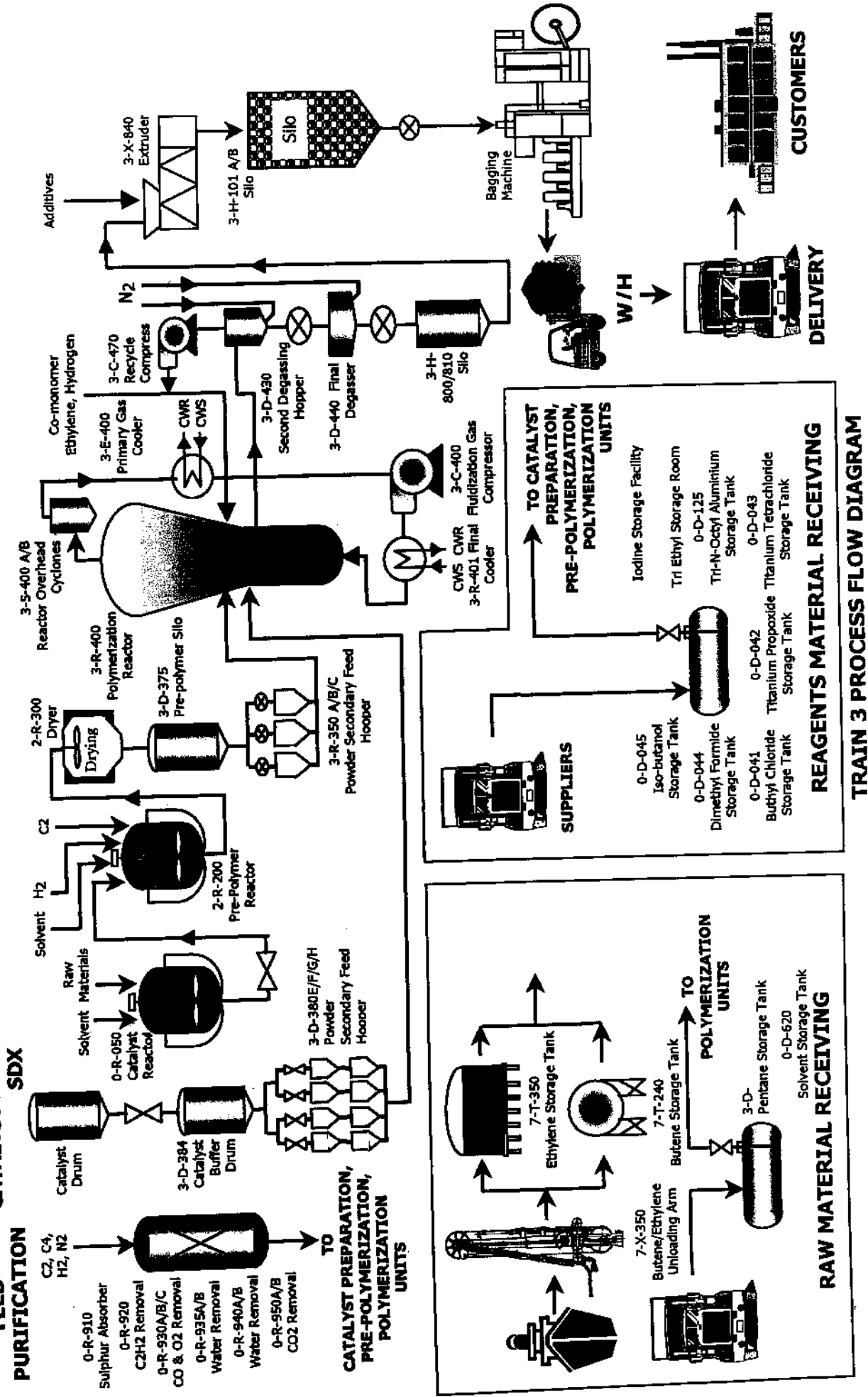
# PELLETIZING & BAGGING

# POLYMERISATION

# PRE-POLYMERISATION

# CATALYST PREPARATION & PRE-POLYMERISATION

# FEED PURIFICATION



TRAIN 3 PROCESS FLOW DIAGRAM



**Summary of  
HIPO Near-miss  
Investigation Report**

Procedure	
Form	PTENI-HISEQ-4-FRM-F-0XX
Date Issued	November 25 <sup>th</sup> 2005
Revision	0
Page	1 of 1

**Accident:** Electrical shock when welding activity

**Business Unit:** Polyethylene

**Location of Incident:** APU 3 - 2<sup>nd</sup> floor

**Date of Incident:** November 25<sup>th</sup>, 2005

**Type of Incident:** HIPO Near miss

**Brief Account of Incident:**

On November 25, 2005, 17:00, Welding activity is carried out to support Compounding project at TR3 APU building - 2<sup>nd</sup> floor. Welder will work overtime at that afternoon. Welder start working by connected the Electrical socket of Welding machine to the permanent electrical outlet socket at H-beam in APU 3-2<sup>nd</sup> floor. Ampere regulator is set at 75 Amp but no arc welding came out, then Welder try to increased the ampere by turned of ampere regulator to 100 Amp but the arc welding is still the same with 75 Amp. He suspects that the electrical connection system in the welding machine is abnormal then He check the welding machine body by his right hand without using anything and he got electrical shock, fortunately he can withdrawn his hand directly and push the OFF switch of the welding machine to disconnect the electrical system by his leg and call electrical technician for repair. Electrical Technician came on location at 18:25 after take rest and pray, He start measure the Voltage of every phase of the permanent electrical socket outlet (between phase and phase and between phase and ground cable) Found that one of the Phase cable is interchange with Ground cable, it lead to electrical phase is flowing into ground cable and welding machine body. The wrong connection is directly repair and the welding activity continued

**Investigation Findings: (Summary)**

**Critical factors:**

1. Phase cable is interchange with ground cables.
2. Main breaker is not trip when electrical circuit contact to machine body.

**Root Causes Analysis:**

**Phase cable is interchange with ground cables.**

1. **Immediate cause:**
  - Improperly prepared equipment. The socket outlet cable system is not inspected when punch list was carried out during hand over from TR3 project (contractor) to PT PENI.
2. **Root cause:**
  - Inadequate development of Procedure. (PSP) Electrical Punch list system is available and carried out when handed over is carry out but no Cable socket outlet system list include in the punch list sheet.
  - Inadequate correction of worksite/job hazard. (Leadership)

This incident has experienced in other area (SWI-3 On about 2002) but not reported and no comprehensive corrective action.

**Inadequate standard/specification and design criteria. (Engineering/Design)**

Existing socket out let has 5 cables (Red /yellow/Blue for phase cable, Black for Neutral and Yellow with green strip for Ground) but TR3 socket has 4 cables (Red/Yellow/Blue for Phase and Black for Neutral, no Grounding cable).

**Main breaker is not trip when electrical circuit contact to machine body.**

1. **Immediate cause:**
  - Inadequate guard or protective devices. (Protective system)  
No grounding cable that have to be install to the main ground system is available in the welding machine.
2. **Root cause:**
  - Inadequate assessment of potential failure. (Eng/Design)  
Possibility electrical connection failure is not recognized well in welding machine electrical system.
  - Inadequate development of Procedure. (PSP)  
Purchased, receiving or rental equipment procedure in place but electrical hazards/risk assessment to potential failure is not address in the procedure.

**Corrective actions - Messages:**

No	Recommendation	Action	Target
1.	Install additional Grounding cable at welding machine that is connected to Grounding system in plant.	BSA	Done
2.	Re inspect all socket outlet cable connection at TR3, with the priority at APU3-4.	BSA	30 Dec 2005 (APU3 done)
3.	Review electrical project hand over procedure inspection checklist.	BSA	15 Jan 2006
4.	Reinforce the HSE Reporting system to all employees when involved in Incident, Sub standard or Near miss.	HF	15 Dec 2005
5.	Coach all engineering person especially welder to not to touch the machine when welding machine has	IZ	Done

	<b>Summary of ACCIDENT Investigation Report</b>	Procedure	Site Emergency Procedure
		Form	PENI-HSEQ-4-FRM-E-0XX
		Date Issued	31 July 2006
		Revision	0
		No Of Page	2

**Accident:** Fatality  
**Business Unit:** Polyethylene  
**Location of Incident:** Polymerization Unit 2  
**Structure**  
**Date of Incident:** 12 July 2006  
**Type of Incident:** Fatal Injury

**Brief Account of Incident:**

On July 12<sup>th</sup> 2006, circa 13:50, a serious incident occurred at the Polymerization Unit-2 (PU-2) Structure resulting a fatal injury. Five workers, 1 (One) person (PT.TITAN employee) and 4 (Four) Persons (Sankyu/Contractors) were doing a scaffolding removal at the 7<sup>th</sup> floor of PU-2 Structure. As part of the job, reinstallation three pieces of grating at that floor was needed. Each grating was tied-up to rope to prevent accidental falling during re-installation.

They had difficult fitting during the re-installation of Grating #3 and finally they decided, based on their inexperienced judgment, the job was finish. They assumed PT. TITAN's crew should do the finishing. By the time they were about to leave the area pursuing for handrail removal, the incident happened. It is strongly believed that the victim (Sankyu/Contractors) was trying to go across the gratings to join his team in the opposing side. He paced onto the infirmly fitted Grating #3 and fell down onto the 6<sup>th</sup> floor hitting permanent handrail. It was a sudden event that none of his team realized that the victim had fallen down.

The victim was evacuated from the scene for initial observation at the plant's clinic. He then was transferred to the Hospital (RS. Krakatau Medika). At circa 15:00 hrs, The Victim was pronounced dead. According to the Death Certificate from the hospital, the cause of death was *hemato-thorax*.

**Critical factors:**

1. Both *Civil and Service Supervisor (CSS)* and *Workshop and Inspection Superintendent (WIS)* had an unequal perception of the job scope when the permit request was issued."
2. "*Rigging and Scaffolding Leader (RSL)* assigned inexperienced technician to lead the Job".

3. "The workers decided that the job was complete and left the area although Grating #3 was not completely fitted yet."

**Root Causes Analysis:**

**Immédiate cause:**

- 4.8 Routine activity without thought: The Superintendent assumed that the Supervisor understood about the scope of the job because he thought it is a routine job of the Supervisor.
- 4.2 Distracted by other concerns: Though RSL considered the job was an easy one, he would do the job himself with his own team (PT. TITAN) where he could supervise comprehensively. As a result of the demand of that time, two jobs at the adjacent time, he decided to delegate the supervision to his inexperienced subordinate. He chose to lead other job, which he thought to be more difficult.
- 3.1 Lack of knowledge of hazard present: The workers do not know that the unfit grating is un safe.
- 4.1 Improper decision-making: The job is not completely fitted yet but has been decided to finish without putting the warning system.
- 4.2 Distracted by other concern: The worker was concentrated to remove the scaffolding.

**System/Root cause :**

- 15.2 Inadequate vertical communication between supervisor and person: There was inadequate communication between the Superintendent and the Supervisor regarding the job scope.
- 11.1 Inadequate work planning: The work being done was not adequately planned in terms of people, equipment, materials, procedures or permits.
- 6.1 Inadequate assessment of required skill: Those workers are very skillful for scaffolding. None of them ever worked for grating installation. (RAM)



# Summary of ACCIDENT Investigation Report

Procedure	Site Emergency Procedure
Form	PENI-HSEQ-4-FRM-E-OXX
Date Issued	31 July 2006
Revision	0
No Of Page	2

- 7.4 No training provided: The workers have never received any training or coaching (*Tool Box Session*) about hazard of grating installation.
- 14.1 Lack of Procedure for the task: There was no written Procedure covering the work being performed at the time of the incident.

<i>procedure, Do we understand procedure, Do we follow procedure<sup>s</sup> for all activity (CF-3)</i>		
--	--	--

**Investigation Team :**

1. Helmy Fuadi
2. Asep AH
3. Catur PBW
4. Faralian P
5. Muhartanto

**Recommendation for Corrective actions :**

No	Recommendation	Actionee	Target
1.	Reinforce <i>Check &amp; Re-Check Behavior</i> among Leaders & Subordinates (CF-1).	Amin H	Aug. 2006
2.	Ensure the <i>HSE Standards</i> (e.g. RA, Procedure, PTW, etc.) are consistently implemented for every job being performed by the Head Department (CF-2)	Amin H	Aug. 2006
3	Develop & implement the <i>Recognition &amp; Punishment System</i> that related to Safety concern (CF-2, CF-3)	Dade S	Sept 2006
4	Develop the <i>Tool Box Session</i> that performed prior to any <i>non routine-critical job</i> (CF-3)	Helmy F	Aug. 2006
5	Specific trainings shall be provided for those who relatively new assigned worker in any job (CF-3)	Dade S	Sem ester 2, 2006
6	Reinforce the 3D Principle: " <i>Do we have</i>	Helmy F	Aug. 2006

**Acknowledged By:**

Aimn Hidayat  
Technical and Operation Director.



LAMPIRAN 5: EMERGENCY RESPONSE TEAM PROCEDURE

**PT. PETROKIMIA NUSANTARA INTERINDO**

**PROCEDURE**

DOKUMENT NO.: P ENI - H S E - 2 - P R S - E - 0 0 7

**EMERGENCY RESPONSE TEAM**

Revision Control Sheet					
Revision	Date	Description of Amendment	Prepared by	Reviewed by	Approved by
0	18-07-2005		Asep A Hoer	Helmy Fuadi	Amin Hidayat

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PENI-HSE-2-PRS-E-007

Authority: HSEQ Dept head	Prepared by: HSE Superintendent	Custodian: Central Document Controller
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EMERGENCY RESPONSE  
TEAM

AUTHORITY:  
HSEQ MANAGER

PAGE 2 OF 11

TABLE of CONTENT

1. PURPOSES.....	3
2. SCOPE.....	3
3. AMENDMENT DETAIL.....	3
4. REFERENCES.....	3
5. DEFINITIONS & ABBREVIATION.....	3
5.1. Definition.....	3
5.2. Abbreviation.....	3
6. ACCOUNTABILITY.....	3
6.1. HSEQ Department Head.....	3
6.2. Fire Protection Superintendent.....	4
6.3. Fireman Coordinator.....	4
6.4. Shift Superintendent/Emergency controller.....	4
7. ERT (EMERGENCY RESPONSE TEAM).....	4
7.1. Purpose.....	4
7.2. ERT Member, Assignment and Competence.....	4
7.3. ERT Training.....	7
7.4. ERT Skill.....	7
7.5. Change or Replacement.....	8
8. ATTACHMENT.....	9
8.1. Attachment-1: Emergency Response Organization.....	9
8.2. Attachment-2: List of Emergency Response Team.....	10
8.3. Attachment-3: List of Building Warden.....	11

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Reference No:	PENI-HSE-2-PRS-E-007		Next Revision	18 July 2007



# EMERGENCY RESPONSE TEAM

AUTHORITY:  
HSEQ MANAGER

PAGE 3 OF 11

## EMERGENCY RESPONSE TEAM

### 1. PURPOSES

The purpose of this procedure is to guide the relevant persons regarding the present of ERT (Emergency Response Team), ERT role and responsibility, assignment and competency.

### 2. SCOPE

This procedure will cover the function of the ERT, the number of ERT and assignment, training and qualification, exercising or drill.

### 3. AMENDMENT DETAIL

New Procedure

### 4. REFERENCES

- PENI-HSE-2-PRS- E- 001: Site emergency Procedure,
- Fire Team manual,

### 5. DEFINITIONS & ABBREVIATION

#### 5.1. Definition

**Emergency Response Team** is the team that will handle the emergency condition in field of PENI Plant site

**Auxiliary Firemen** is the support team that assist the Firemen in case of emergency, this team are coming from shift Production, Technical Development and Security team.

#### 5.2. Abbreviation

ERT : Emergency Response Team

### 6. ACCOUNTABILITY

#### 6.1. HSEQ Department Head:

HSEQ Department Head is accountable to ensure the ERT is established such as the team members, their competency and the guideline of their role and responsibility..

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Reference No:	PENI-HSE-2-PRS-E-007		Next Revision	18 July 2007



## EMERGENCY RESPONSE TEAM

AUTHORITY:  
HSEQ MANAGER

PAGE 4 OF 11

### 6.2. Fire Protection Superintendent.

Fire Protection Superintendent is responsible to provide the program, training and emergency preparedness plan.

### 6.3. Fireman Coordinator

Fireman Coordinator is responsible to maintain the capability and qualification of the ERT.

### 6.4. Shift Superintendent/Emergency controller

He/She is responsible to maintain the availability of the ERT on His/Her group shift and also to make sure that the ERT are doing safely when handling the emergency situation.

## 7. ERT (EMERGENCY RESPONSE TEAM)

### 7.1. Purpose

The purpose of setting up ERT is to provide a dedicated team to overcome and manage the plant in emergency situation such as fire, explosion, hazardous material spillage or other incident that possible to cause people injury, property damage, pollution or damage the environment, and it will impact to Company business and/or reputation.

### 7.2. ERT Member, Assignment and Competence

ERT is valid per shift, means each shift has each ERT.

The ERT is consist of:

- Emergency Controller
  - Emergency Controller is leader of ERT
  - Shift Superintendent is assigned as Emergency Controller on emergency situation and acts as ERT Leader.
  - Emergency Controller shall:
    - Competent to manage the team in emergency situation.
    - Has a good view about the plant and process.
    - Able to make decision.
- Emergency Communicator
  - Utility/IBL DCS Operator is assigned as Emergency Communicator
  - Emergency Communicator is assigned to act as communicator whether

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Reference No:	PENI-HSE-2-PRS-E-007		Next Revision	18 July 2007



# EMERGENCY RESPONSE TEAM

AUTHORITY:  
HSEQ MANAGER

PAGE 5 OF 11

internal or external during emergency situation. See PENI-HSE-2-PRS-E-001: Site Emergency Response Procedure for detail.

- Emergency Communicator shall:
  - o Has good knowledge about emergency response system such fire alarm system
  - o Able to communicate to external, especially in the beginning of emergency situation
- Firemen
  - Firemen are the Firemen shift from HSEQ Department.
  - One of the firemen acts as Fire Truck driver when emergency happen and the other one acts as Fire leader of Fire Team who overcome directly to handling fire, explosion, spillage and/or evacuate injury people.
  - Firemen shift in his normal duty and emergency situation shall competent in handling fire, explosion, spillage and evacuate injury person.
  - Firemen shift also shall has good knowledge about emergency preparedness on Plant site.
- Auxiliary Firemen
  - Auxiliary Firemen are as a member of Fire Team who overcome directly to handling fire, explosion, spillage and/or evacuate injury people.
  - Auxiliary Firemen are consist of:
    - o 2 persons from Shift Production Area-1 (IBL/Utility)
    - o 5 persons from Shift Production Area-2 (Tr-1 and Tr-2)
    - o 1 person from Shift Laboratory
  - During emergency, the personnel who are assigned as Auxiliary Firemen shall out of his normal duty.
  - Production Manager selects, assigns, also update the personnel who assigned as auxiliary fireman from Production Department.
  - Technical Development Manager selects, assigns, also update the personnel who assigned as auxiliary fireman from Technical Development Department.
  - Auxiliary Firemen shall:
    - o Competent in handling fire, explosion, spillage and evacuate injury

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Reference No:	PENI-HSE-2-PRS-E-007		Next Revision	18 July 2007



# EMERGENCY RESPONSE TEAM

AUTHORITY:  
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PAGE 6 OF 11

person.

- o Has good physics.
- o Has good knowledge about emergency preparedness on all area of plant site.
- Paramedic
  - Paramedic shift is act as paramedic on emergency situation.
  - Paramedic duty in emergency situation is to handling injury person in the safe area after evacuated by Fire Team, first aid action and provide decision/recommendation to Emergency Controller and On Scene team for further treatment o injury person.
  - Paramedic shall:
    - o Has good knowledge and skill to do first aid action.
    - o Able to provide action or recommendation of further treatment to the injury person.
- Ambulance Driver
  - Shift driver is assigned as ambulance driver during emergency situation.
- Security
  - 2 Security shift personnel are assigned as ERT member to support ERT around the emergency/incident location.
- Building Warden
  - One or two or more (depend on size of the Building and number of personnel in the Building) personnel in each Building shall be assigned as Building Warden of the Building.
  - Each Building Warden is assigned to responsible dedicated HAP (Head Account Point).
  - The Duty of Building Warden can be seen in PENI-HSE-2-PRS-E-001: Site Emergency Response Procedure.
  - Building Warden shall have good knowledge about emergency response system, good view about the plant area and road to Assembly Point.
- Production Shift Supervisor
  - Production Shift Supervisor is not directly as a member of ERT.
  - In emergency situation:

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Reference No:	PENI-HSE-2-PRS-E-007		Next Revision	18 July 2007



# EMERGENCY RESPONSE TEAM

AUTHORITY:  
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PAGE 7 OF 11

- o Shift Supervisor area where the incident is happen in his area, he responsible to support Emergency Controller to manage and control the area whether from control room or directly to field to ensure the plant is safe, while other shift Supervisor monitor and control his are in a safe manner.

### 7.3.ERT Training

The ERT shall have good response in handling emergency situation/condition based on his/her role in ERT.

Appropriate training shall be provided for them to have appropriate competence on his/her role.

Some training shall be provided are:

- Site Emergency Response Procedure.
  - o Overall
  - o His/her responsibility/role.
- Chemistry of fire, properties of flammable and combustible liquids.
- Fire apparatus and equipment operation.
- Water application technique.
- Foam equipment use and application.
- Tank Fire Fighting.
- Handling LPG emergencies, vapors release, toxic gas release.
- Respiratory protection when fighting Fire.
- Process unit fire.
- Interior structural fire fighting.
- Simulation in Units and process area.
- Hand On fire fighting.
- Hose lay out and handling.

The training can be given in classroom or field practice.

### 7.4.ERT Skill

- To improve ERT skill to handling emergency situation/condition, the team shall have experience to do in simulation or called Fire Drill.
- Each ERT shall have drill experience.

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Reference No:	PENI-HSE-2-PRS-E-007		Next Revision	18 July 2007



**EMERGENCY RESPONSE  
TEAM**

**AUTHORITY:  
HSEQ MANAGER**

**PAGE 8 OF 11**

- Fire Protection Superintendent is responsible to provide scenario and plan the drill.

**7.5. Change or Replacement**

- If the shift group of the member is changed, he shall inform to Shift Superintendent and Fire Protection Superintendent to update the group member of ERT.
- Any change the personnel due to rotation program or other purpose, his superior shall inform to Shift Superintendent or/and Fire Protection Superintendent to upade the group member of ERT.
- Any new personnel as a member of ERT, Fire Protection shall provide Emergency response training for him.

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Reference No:	PENI-HSE-2-PRS-E-007		Next Revision	18 July 2007



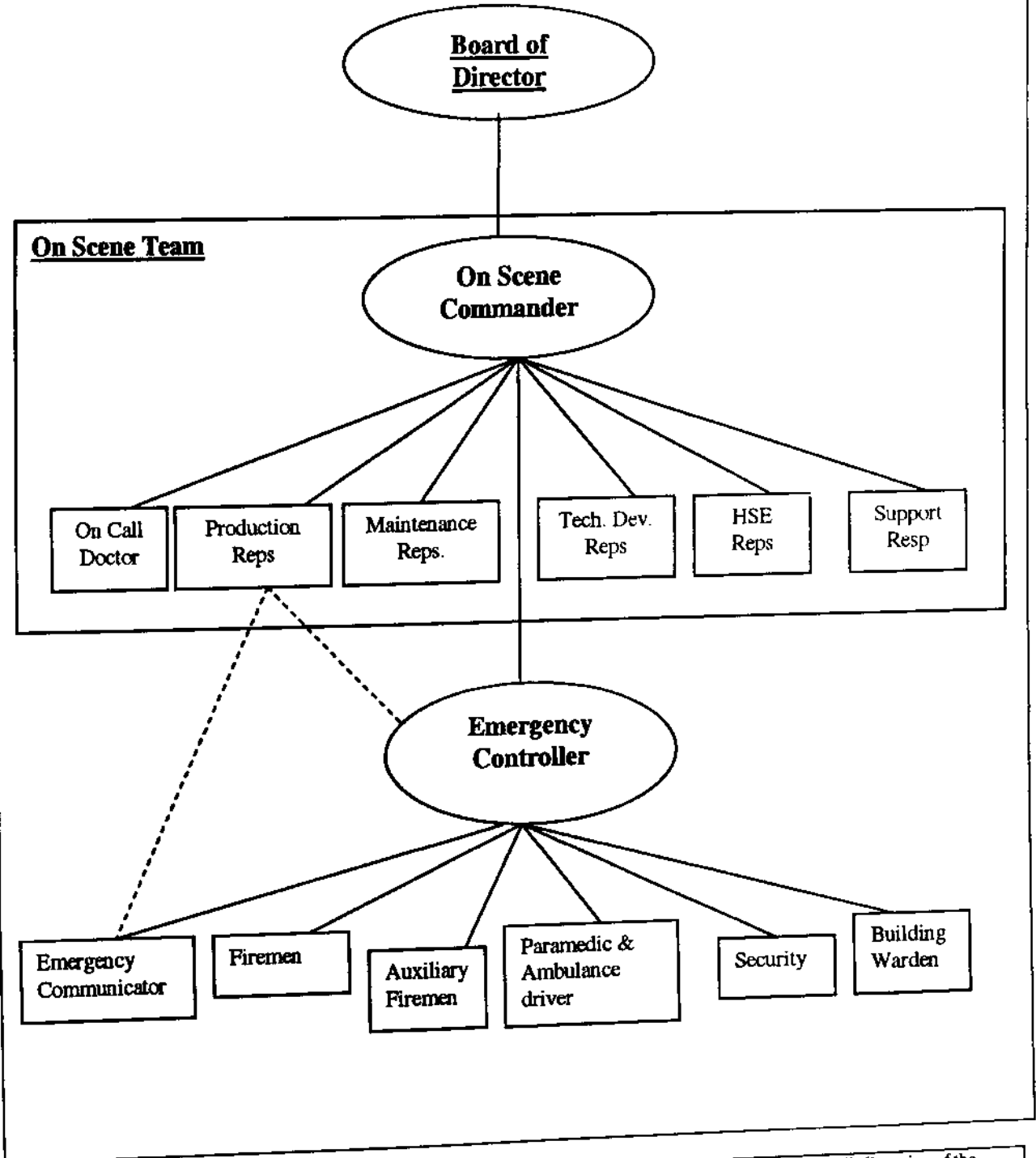
# EMERGENCY RESPONSE TEAM

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PAGE 6 OF 11

## 8. ATTACHMENT

### 8.1. Attachment-1: Emergency Response Organization.



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Reference No:	PENI-HSE-2-PRS-E-007		Next Revision	18 July 2007





**EMERGENCY RESPONSE  
TEAM**

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PAGE 10 OF 11

**8.2. Attachment-2: List of Emergency Response Team**

ERT Post	Structural Post	Group A	Group B	Group C	Group D
Emergency Controller	Shift Superintendent	Rachmad Drajad	Nurhadi	Supriyanto	Agus Sulistiyono
Emergency Communicator	DCS Operator	Achmad Ahyadi	Haryono	Rufus	Ari Gunawan
Firemen	Fireman	Didi Sartono	Hanafi Harahap	Abdul Latif	Dadang hermal
	Fireman	Alrifansyah	Sony Hermawan	Suwandi	Slamet Riyadi
Auxiliary Firemen	Field Operator	Achmad Syauqi	Swardi Hutasoit	M.Ridwan	M. Amin
	Field Operator	Efriyadi	Abdul fatah	Hujaeni	Agus Prayitno
	Field Operator	Hermanto	Benni Sandra	D. Setiawan	Rony
	Field Operator	Hairul Saleh	Zakaria	Agus Iwan I.	Antok Siswanto
	Field Operator	Amoar Piterson	Oyo Sunaryo	Dedi Rachmat	Abdurrahman
	Field Operator	Teresna Dew.	Subroto	Johannes Malingkay	Achmad Muslih
	Field Operator	Cecep Alamsyah	Ifran Harris	Dodi Hendrawan	Constantinus R.K
	QC Lab	M. Arif	Yudi Wahyudi	Hajin S	Budi S
Paramedic	Paramedic	Rustiana	Adjat Sudrajat	Babay Suhaemi	Irvan H
Ambulance Driver	Driver Shift	Not specified			
Security	Security Shift	Not specified			
Building Warden		See list on Attachment-3.			

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Reference No:	PENI-HSE-2-PRS-E-007		Next Revision	18 July 2007



## EMERGENCY RESPONSE TEAM

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PAGE 11 OF 11

### 8.3. Attachment-3: List of Building Warden

No	Name	Building Warden	Building & Person	Remark
1	Luki Lukman	BW - Admin Building	Admin ( 1 HAP ) GPA, ISO, HRD	
2	Aida Baso	BW - Back up		
3	Ruislan			
4	Mawardi	BW - Admin Building	Admin ( 1 HAP ) Procurement,Accounting, Clinic, Service	
5	Furqoni			
6	Cornellius H Parera	BW - Back up		
7	Erna Febriana	BW - TC Building	Training Center ( 1 HAP ) TC & Training attendance	
8	Edi Wantoro	BW - Back up		
9	Herry Riyadi	BW - W/S Building	Work Shop ( 1 HAP ) Maintenance	
10	Ferry Kasidi	BW - Back up		
11	Sapendi	BW - W/S Building	Engineering ( 1 HAP )	
12	Humsedi	BW - Back Up		
13	Kusnadi	BW - Lab Building	QC&Lab ( 1 HAP ) Day & Shift	Shift
14	Pamungkas			
15	Rudiyanta	BW - Back up		
16	Jaya Komarudin			
17	Wriyo Yunedhi			
18	Mustohar	BW - TSC Building	TSC (1 HAP ) TSC & Contract	
19	Aris Syaefudin	BW - Back up		
20	Arif Wawan	BW - CR Building	Control Room ( 1 HAP ) Day, shift & Helper production	
21	Muardi	BW - Back up		
22	Building Warden	BW - Ops Meeting Room	Ops Meet Room ( 1 HAP )	Building Owner
23	Juansyah	BW - EVS Building	EVS ( 1 HAP ) HSE	
24	Sumarsono	BW - Back up		
25	Hilal Dasuki	BW - W/H ½	Warehouse 1/2 (1 HAP) TNT, P&L, Truck PE crew	
26	Maulana Hajmi			
27	Yusron H			
28	Shift Forman TNT Truck Loading	BW - Back up		
29	Eko Prasetyo, TNT	BW - W/H ¾	Warehouse 3/4 ( 1 HAP ) TNT, Truck PE crew	
30	Ariyatna, TNT			
31	Maulani Syam	BW - Back up		
32	Shift Forman TNT Truck Loading			
33	Shift Forman, TNT Production & Wakil (8 Orang)	BW - Bagging Machine	Bagging 1/2 & 3/4 ( 2 HAP ) TNT Production	

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Reference No:	PENI-HSE-2-PRS-E-007		Next Revision	18 July 2007



**PRIMARY TASK RISK ASSESSMENT**  
**HSE-4-FRM-S-031**

Lampiran 6: Pemasangan Gas Burner pada Boiler-B  
 Description of Task : Pemasangan Gas Burner pada Boiler-B  
 Site/Installation & Location : Utility  
 Assessment Team Member Names : HTN, AK, CPBW, HS, SMN  
 Sheet no : 1 of 3  
 Number involved in task : -  
 Review Date : 08/06/07

No	Task	Hazard Identified	Hazard Effect	Risk Evaluation			Control Measure	Action		Residual Risk				
				Refer to evaluation forms (Appendix-2)	HE	P		R	Person Responsible	Date Completed	HE	P	R	
1	Persiapan													
1.1	Melepas kabel elektrik motor (FD fan, burner motor, etc)	Use Check List as a guide be specific (Appendix-1&3)	Type of Injury/Damage or environmental impact (Appendix-2)	H	L		Lakukan isolasi sumber listrik, Lindungi kabel yg terlepas dan tempatkan pada posisi yg aman.	Sonjaya			L	L		
			Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten, perhatikan postur tubuh saat bekerja	Fery			L	L		
1.2	Melepas kabel instrumentasi disekitar burner & tubing	Ergonomi	Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten, perhatikan postur tubuh saat bekerja	Fery			L	L		
			Meninggal dunia	H	L		Lakukan isolasi sumber listrik, Lindungi kabel yg terlepas dan tempatkan pada posisi yg aman.	Sonjaya			L	L		
			Perawatan Rumah sakit	M	L	4	Lakukan LOTO	Catur			L	L		
1.3	Memasang tenda terpaulin diatas burner (di pipe rack)	Tersesembur gas/ cairan bertekanan Jatuh pada ketinggian	Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten. Gunakan body harness	Herry R			L	L		
			Perawatan Rumah sakit	M	L	4	Yakinkan lantai tidak basah, lcin. Hentikan pekerjaan bila hujan.	Herry R			L	L		
			First aid	L	L		Gunakan lengan panjang, sarung tangan.	Herry R			L	L		
1.4	Memasang plat besi digravit disebelah utara boiler untuk akses forklift 2ton	Terjatimpa material plat	Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten. Gunakan body harness	Herry R			L	L		
			Kerusakan peralatan	H	L		Dilakukan oleh orang yg kompeten, Pemasangan plat bertahap, hentikan pekerjaan bila hujan	Herry R			L	L		
2	Melepas Bumer Lama													
2.1	Melepas FD fan motor dengan bantuan chain block	Ergonomi	Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten, perhatikan postur tubuh saat bekerja	Ometraco/ Agus K.			L	L		
			Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.			L	L		
			Kerusakan peralatan	H	L		Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.			L	L		

No	Task	Hazard Identified	Hazard Effect	Riesk Evaluation			Control Measure	Action		Residual Risk																																																																										
				Type of Injury/Damage or environmental impact (Appendix-2)	Refer to evaluation forms (Appendix-2)	HE		P	R	Person Responsible	Date Completed	HE	P	R																																																																						
2.2	Melepas burner assy	Use Check List as a guide be specific (Appendix- 1&3)	Type of Injury/Damage or environmental impact (Appendix-2)	M	L	4	Dilakukan oleh orang yang kompeten, perhatikan postur tubuh saat bekerja	Ometraco/ Agus K.		L	L	2																																																																								
													M	L	4	Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.		L	L	2																																																															
																						H	L	2	Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.		L	L	2																																																						
																															L	L	2	Dilakukan oleh orang yang kompeten, gunakan sarung tangan	Ometraco/ Agus K.		L	L	2																																													
																																								H	L	2	Inspect chain block sebelum digunakan, dilakukan oleh kompeten person, digantung ditempat yg kuat. Gunakan chain block sesuai kapasitas	Ometraco/ Agus K.		L	L	2																																				
																																																	M	L	4	Batasi jumlah orang yg dekat chain block	Ometraco/ Agus K.		L	L	2																											
																																																										L	L	2	Gunakan helm, batasi jumlah orang	Ometraco/ Agus K.		L	L	2																		
																																																																			M	L	4	Lakukan LOTO	Catur		L	L	2									
																																																																												M	L	4	Dilakukan oleh orang yang kompeten, perhatikan postur tubuh saat bekerja	Ometraco/ Agus K.		L	L	2
H	L	2	Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.		L	L	2																																																																												
									L	L	2	Dilakukan oleh orang yang kompeten, gunakan sarung tangan	Ometraco/ Agus K.		L	L	2																																																																			
																		H	L	2	Inspect chain block sebelum digunakan, dilakukan oleh kompeten person, digantung ditempat yg kuat. Gunakan chain block sesuai kapasitas	Ometraco/ Agus K.		L	L	2																																																										
																											M	L	4	Batasi jumlah orang yg dekat chain block	Ometraco/ Agus K.		L	L	2																																																	
																																				L	L	2	Gunakan helm, batasi jumlah orang	Ometraco/ Agus K.		L	L	2																																								
																																													M	L	4	Gunakan hot work permit, lakukan gas test sebelum & setiap 15menit selama pengelasan, LEL=0 hingga radius 25 meter, bersihkan cairan / material yang mudah terbakar, fireman stand by, alat pemadam kebakaran dan hose fire hydrant siap, lindungi area pengelasan dgn tarpaulin untuk menghindari percikan api las.	Ometraco / Fireman		L	L	2																															
																																																						L	L	2	Gunakan PPE pengelasan	Ometraco/ Agus K.		L	L	2																						
																																																															L	L	2	Gunakan Masker	Ometraco/ Agus K.		L	L	2													
																																																																								L	L	2	Gunakan PPE pengelasan	Ometraco/ Agus K.		L	L	2				

No	Task	Hazard Identified	Hazard Effect	Risk Evaluation			Control Measure	Action		Residual Risk		
				HE	P	R		Person Responsible	Date Completed	HE	P	R
	Step of Work	Use Check List as a guide be specific (Appendix-1&3)	Type of Injury/Damage or environmental impact (Appendix-2)	Refer to evaluation forms (Appendix-2)			Required (include existing and proposed)					
			Meninggal dunia	H	L		Seluruh alat listrik dicek ulang sistem isolasinya ; dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.		L	L	2
			Cacat permanen	H	L		Gunakan batu gerinda yg sesuai, inspect gerinda, gunakan PPE penggerindaan	Ometraco/ Agus K.		L	L	2
			Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten, perhatikan postur tubuh saat bekerja	Ometraco/ Agus K.		L	L	2
3.2	Memasang flange burner		Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.		L	L	2
			Kerusakan peralatan	H	L		Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.		L	L	2
			First aid	L	L		Dilakukan oleh orang yang kompeten, gunakan sarung tangan	Ometraco/ Agus K.		L	L	2
			Kerusakan peralatan	H	L		Inspect chain block sebelum digunakan, dilakukan oleh kompeten person, digantung ditempat yg kuat.	Ometraco/ Agus K.		L	L	2
			Perawatan Rumah sakit	M	L	4	Gunakan chain block sesuai kapasitas	Ometraco/ Agus K.		L	L	2
			First aid	L	L		Batasi jumlah orang yg dekat chain block	Ometraco/ Agus K.		L	L	2
			First aid	L	L		Gunakan helm, batasi jumlah orang	Ometraco/ Agus K.		L	L	2
			Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten, perhatikan postur tubuh saat bekerja	Ometraco/ Agus K.		L	L	2
3.3	Memasang gas burner Assy		Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.		L	L	2
			Kerusakan peralatan	H	L		Dilakukan oleh orang yang kompeten, gunakan sarung tangan	Ometraco/ Agus K.		L	L	2
			First aid	L	L		Dilakukan oleh orang yang kompeten, gunakan sarung tangan	Ometraco/ Agus K.		L	L	2
			Kerusakan peralatan	H	L		Inspect chain block sebelum digunakan, dilakukan oleh kompeten person, digantung ditempat yg kuat.	Ometraco/ Agus K.		L	L	2
			Perawatan Rumah sakit	M	L	4	Gunakan chain block sesuai kapasitas	Ometraco/ Agus K.		L	L	2
			First aid	L	L		Batasi jumlah orang yg dekat chain block	Ometraco/ Agus K.		L	L	2
			First aid	L	L		Gunakan helm, batasi jumlah orang	Ometraco/ Agus K.		L	L	2
4	Memasang Gas Train		Meninggal dunia, kerugian / kerusakan alat	VH	L		Gunakan hot work permit, lakukan gas test sebelum & setiap 15menit selama pengelasan, LEL=0 hingga radius 25 meter, bersihkan cairan / material yang mudah terbakar, fireman stand by, alat pemadam kebakaran dan hose fire hydrant siap, lindungi area pengelasan dgn tarpaulin untuk menghindari percikan api las. Tidak melakukan pekerjaan ini dengan proses LOTO	Ometraco / Fireman		L	L	2
4.1	Fabrikasi pipa spool untuk gas train di field (jika diperlukan)		First aid	L	L		Gunakan PPE pengelasan	Ometraco/ Agus K.		L	L	2

No	Task	Hazard Identified	Hazard Effect	Risk Evaluation			Control Measure	Action		Residual Risk		
				Type of Injury/Damage or environmental impact (Appendix-2)	Refer to evaluation forms (Appendix-2)	HE		P	R	Person Responsible	Date Completed	HE
	Step of Work	Use Check List as a guide be specific (Appendix-1&3)					Required (Include existing and proposed)					
		Iritasi pernafasan	First aid	L	L		Gunakan Masker	Ometraco/ Agus K.			L	L
		Terpercik api las/ grinding	First aid	L	L		Gunakan PPE pengelasan	Ometraco/ Agus K.			L	L
		Tersengat listrik las/ gerinda	Meninggal dunia	H	L		Seluruh alat listrik dicek ulang sistem isolasinya ; dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.			L	L
		Terkena pecahan batu gerinda	Cacat permanen	H	L		Gunakan batu gerinda yg sesuai, inspect gerinda, gunakan PPE penggerindaan	Ometraco/ Agus K.			L	L
		Material terjatuh	Kerusakan peralatan	H	L		Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.			L	L
4.2	Memasang gas train assy (spool, valve, regulator, flowmeter, dll)	Material terjatuh	Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.			L	L
		Tertimpa material	Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten, gunakan sarung tangan	Ometraco/ Agus K.			L	L
		Tangan terjepit	First aid	L	L		Dilakukan oleh orang yang kompeten, perhatikan postur tubuh saat bekerja	Ometraco/ Agus K.			L	L
		Ergonomi	Perawatan Rumah sakit	M	L	4	Dilakukan oleh orang yang kompeten, perhatikan postur tubuh saat bekerja	Ometraco/ Agus K.			L	L
5	Memasang Control Panel Burner	Kebakaran pada saat welding / drilling	Meninggal dunia, kerugian / kerusakan alat	VH	L		Gunakan hot work permit, lakukan gas test sebelum & setiap 15menit selama pengelasan, LEL=0 hingga radius 25 meter, bersihkan cairan / material yang mudah terbakar, fireman stand by, alat pemadam kebakaran dan hose fire hydrant siap, lindungi area pengelasan dgn terpaulin untuk menghindari percikan api las. Tidak melakukan pekerjaan ini dengan proses LOTO	Ometraco/ Fireman			L	L
		Iritasi mata	First aid	L	L		Gunakan PPE pengelasan	Ometraco/ Agus K.			L	L
		Iritasi pernafasan	First aid	L	L		Gunakan Masker	Ometraco/ Agus K.			L	L
		Terpercik api las/ grinding/ gram dari mesin bor	First aid	L	L		Gunakan PPE pengelasan/ grinding / drilling	Ometraco/ Agus K.			L	L
		Tersengat listrik las/ gerinda/ mesin bor	Meninggal dunia	H	L		Seluruh alat listrik dicek ulang sistem isolasinya ; dilakukan oleh orang yang kompeten. Hentikan pekerjaan bila hujan.	Ometraco/ Agus K.			L	L
		Terkena pecahan batu gerinda	Cacat permanen	H	L		Gunakan batu gerinda yg sesuai, inspect gerinda, gunakan PPE penggerindaan	Ometraco/ Agus K.			L	L
		Material terjatuh	Kerusakan peralatan	H	L		Dilakukan oleh orang yang kompeten.	Ometraco/ Agus K.			L	L
		Tangan terjepit	First aid	L	L		Dilakukan oleh orang yang kompeten, gunakan sarung tangan	Ometraco/ Agus K.			L	L

Catatan :  
 Semua pekerja diharuskan menggunakan ear plug.  
 Perhatikan kebocoran steam disekitar tempat kerja.

Name of Team Leader: HARTONO

Lampiran 7: STRA



**SIMPLIFIED TASK RISK ASSESSMENT**

**PENI-HSE-4-FRM-S-033-.....**

**: Rework Pellet Dengan Fasilitas Double Blower di BM-2 Area**

**Description of Task**

**Review Date**

**: 6-10-2005**

**Originator**

**Review By (Line Supervisor) :**

**Supriyanto**

**Sumarsono, M. Sapendi, Samin, Budi Nugroho**

No	Task	Hazard Identified	Hazard Effect	Control Measure	Action By
	Step of Work	Use Check List as a guide be specific (Appendix-1&3)	Type of Injury/Damage or environmental impact (Appendix-2)	Required (Include existing and proposed)	
	Pemasangan scaffolding	Tangan terkilir. Kejatuhan material scaffolding.	Perawatan rumah sakit Perawatan rumah sakit	Dilakukan oleh orang yang kompeten. Memakai PPE yang standard (glove, safety spectacle, safety helmet). Sertifikasi scaffolding	Arzis Hilal/ WH Assistant
1	Pengangkutan pellet dari lack area ke double blower facility	Tabrakan Forklift Salah pengambilan	Perawatan rumah sakit	Dilakukan oleh Fork Lift Driver yang sertifikasi	Hilal/ WH Assistant
2	Menaikkan pellet ke atas dak papan double blower facility	Kejatuhan bag berisi pellet Jatuh dari ketinggian Ergonomi Tergores pisau	Kontaminasi pellet/ down grade Perawatan rumah sakit Perawatan rumah sakit Perawatan rumah sakit	Dilengkapi dengan list barang yang akan didouble blower Dilakukan oleh Fork Lift Driver yang sertifikasi. Pasang pita kuning agar lalulintas orang bisa dibatasi Pasang penghalang/ pagar	Supriyanto/ WH Asistant Hilal/ WH Assistant Arzis
3	Mengangkat PE dan memasukkan ke corong		Perawatan rumah sakit	Dilakukan oleh orang yang kompeten. Pisau yang bergagang (memakai pisau dapur)	Supriyanto/ WH Asistant Supriyanto/ WH Asistant
4			Perawatan medis/ klinik		

Aprove by Area Authority :

( Supriyanto )

Aprove by Head Department :

( Japri Irianto )

Lampiran 8: Schedule PM June 2007

PM Schedule June 2007

No	WO No	TAG No	Work Type	Description	Resp	Priority	Equipment	Requirement		Schedule Date					Labor Name
								Permit 1	Permit 2	Scaffolding	Preparation	25	26	27	
0	2606816	0-D-070	PREV	ESD INTERLOCK TEST OF DISCHARGE OF REAGENT NO.21 SYSTEM	INSTO	2						4			
1	2700018	0-ROV-086	PREV	ESD INTERLOCK TEST OF NM INLET TO 0-R-080 SYSTEM	INSTO	2						4			
2	2700027	0-ROV-981	PREV	ESD INTERLOCK TEST OF FEED PURIFICATION UNIT SYSTEM	INSTO	2	DOWN						4		
3	2703687	8-S-510A	PREV	3 MONTHLY CLEAN CONDENSATE STRAINER,PLUG,AREANE(C)	MECHO	2						0.5			
4	2608533-22	7-X-350	MODS	MOC-550: INSTALL 6" FLEXIBLE HOSE FOR C2/C4 UNLOADING	CIVIL	2							16	16	
5	2608533-27	7-X-350	MODS	MOC-550: INSTALL 6" FLEXIBLE HOSE FOR C2/C4 UNLOADING	WSHOPE	2	DOWN					13	13		
6	2704398	0-M-081	PREV	2-YEARLY PM ON AGITATOR BY MECH & ELEC	MECHO	2	DOWN							8	
7	2704344	0-AT-920	PREV	MONTHLY CALIBRATE GAS CHROM. ANALYSER AT ACETIL HYDROGENATOR	INSTO	2	DOWN					1			
8	2704346	0-AT-930	PREV	MONTHLY CALIBRATION OF O2 ANALYSER	INSTO	2	DOWN					1			
9	2704352	0-AT-201	PREV	MONTHLY CALIBRATION OF PH METER ANALYSER AT NEUT PIT	INSTO	2	UP								1
10	2608164-8	8-K-401B	MODS	MONTHLY ROUTINE CALIBRATION OF BOILER (NATURAL GAS PIPELINE INSTALLATION)	WSHOPE	2						8	8	8	8
11	2704750	8-ROV-102A	CORR	PLEASE CHECK AND REPAIR IF NECESSARY 8-ROV-102A, IT WAS LEAK ON I/A	INSTO	2	UP							8	8
12	2704842	8-GS-100	PREV	WEEKLY RUNNING TEST ON PLANT GENERATOR SET	ELEC1	2	UP						1		
13	2704867	GEN1440	INSPC	ANODE INSTALLATION AT JETTY	LIFT	2						8	8	8	8
14	2704961	3-D-701	MSUP	ERECT SCAFFOLDING FOR PAINTING PYROGRATE AT 3-D-701	LIFT	1						8	8	8	8
15	2704988	7-X-350	CORR	PEMBUATAN RAK PVC COVER UNTUK C2 LOADING	WSHOPE	2						12	12		
16	2704986	8-B-411	PREV	MONTHLY CHECK DAMPER, ATOMIZER,CLEAN FUEL (EIO)	MECHO	2									4
17	2704982	8-GS-100	PREV	WEEKLY RUNNING TEST ON PLANT GENERATOR SET	ELEC1	2	UP								1
18	2704984	0-AT-080	PREV	2-MONTHLY CALIBRATION OF O2 ANALYSER	INSTO	2	UP								1
19	2705025	UTL1000	INSPC	PLANT INSPECTION AT UTILITY AREA	MECHO	2						8			
20	2704770-1	GEN1310	OPSUP	TO CONNECTED CABLE FOR LAMP WACHT TOWER AT BUTINE AND MAIN ROAD	CIVIL	1						8	8	8	8
21	2705345	GEN1300	BREAK	REPAIR WACHT TOWER SECURITY AT FLARE	CIVIL	1						4	4	4	4
22	2705408	8-S-101A	OPSUP	REPAIR BLOWDOWN LINE DUE TO LEAKING	WSHOPE	2									4
23	2704750-1	8-ROV-102A	CORR	PLEASE CHECK AND REPAIR IF NECESSARY 8-ROV-102A, IT WAS LEAK ON I/A	MECHO	2									4
24	2705688	COO1550	SAFE	PENGGANTIAN LAMPU DI CAU BUILDING	ELEC1	2						8	8	8	8
25	2705688-1	COO1550	SAFE	ERECT SCAFFOLDING , PENGGANTIAN LIGHTING DI CAU BUILDING	LIFT	2						8	8	8	8
26	2705689	UTL1300	SAFE	PENGGANTIAN LAMPU DIKERTAR FIRE WATER SYSTEM	LIFT	2						8	8	8	8
27	2705689-1	UTL1300	SAFE	ERECT SCAFFOLDING: PENGGANTIAN LAMPU DIKERTAR FIRE WATER SYSTEM	ELEC1	2						5	5		
28	2704338-1	0-M-081	PREV	2-YEARLY PM ON AGITATOR BY MECH & ELEC	LIFT	2	DOWN								8
29	2704826-1	7-Z-350	INSPC	3 MONTHLY PM, MAINTENANCE & INSPECTION FOR HOIST	ELEC1	2						1.5			
30	2705609	7-X-350	OPSUP	PLEASE CONNECT AND DISCONNECT HOSE TO GASCHEM MOSEL FOR UNLOADING C2	LIFT	2						8			
31	2705609-1	7-X-350	OPSUP	PLEASE CONNECT AND DISCONNECT HOSE TO GASCHEM MOSEL FOR UNLOADING C2	LIFT	2						8			
32	2705621	8-P-102B	SAFE	ERECT SCAFFOLDING AT FIRE WATER PUMP	LIFT	2								4	
33	2705629	WIS1000	CORR	REPAIR AND INVENTORY ALL TOOLS CIVIL MAINTENANCE	CIVIL	1						8	8	8	8
34	2705662	0-D-082F	OPSUP	CONNECT DISCONNECT TOTE BIN 0-D-082F	MECHO	2						4			
35	2705663	0-D-082G	OPSUP	CONNECT DISCONNECT TOTE BIN 0-D-082G	MECHO	2						4			
36	2705664	0-D-082H	OPSUP	CONNECT DISCONNECT TOTE BIN 0-D-082H	MECHO	2								4	



## Lampiran 9: CLC Analysis

### CLC Analysis and Recommendation

<b>Possible Immediate Causes (Action)</b>	
<b>Follow Procedure Description</b>	<b>Recommendation</b>
<b>Follow Procedure ( 1 )</b>	
1_1 Violation by individual	Sosialisasi prosedur, breafing, coaching
1_2 Violation by group	Sosialisasi prosedur, breafing, coaching
1_3 Violation by Supervisor	Sosialisasi prosedur, breafing, coaching
1_4 Operation of equipment without authority	Training
1_5 Improper position or posture for the task	Training
1_6 Overexertion of physical capability	Training
1_7 Work or motion at improper speed	Sosialisasi prosedur, breafing, coaching
1_8 Improper lifting	Training
1_9 Improper loading	Training
1_10 Shortcuts	Training
1_11 Other	
<b>Use of Tools or Equipment Description</b>	<b>Recommendation</b>
<b>Use of Tools or Equipment ( 2 )</b>	
2_1 Improper use of equipment	Training
2_2 Improper use of tools	Training
2_3 Use of devecive equipment (aware)	Training
2_4 Use of devecive tools (aware)	Training, mengajukan pembelian barang lewat procurement
2_5 Improper placement of tools, equipment or materials	Safety training
2_6 Operation of equipment at improper speed	Safety training mengenai bahaya rotating equipment
2_7 Servicing of equipment in operation	Safety training mengenai bahaya rotating equipment
2_8 Other	
<b>Use of Protective Method Description</b>	<b>Recommendation</b>
<b>Use of Tools or Equipment ( 3 )</b>	
3_1 Lack of knowledge of hazard present	Training mengenai risk assessment
3_2 PPE not used	Training safety
3_3 Improper use of proper PPE	Training mengenai hazardous material/chemical
3_4 Servicing of energized equipment	Training mengenai hazard electric, mechanic, LOTO
3_5 Equipment or materials not secured	Training scaffolding
3_6 Disable guard, warning system or safety devices	Pasang sign, sediakan safety equipment
3_7 Removal of guard, warning system or safety devices	Safety sign, safety equipment selalu tersedia pada tempat dimana ada hazard
3_8 PPE not available	PPE selalu tersedia /stock
3_9 Other	
<b>Inattention/Lack of Awareness Description</b>	<b>Recommendation</b>
<b>Inattention/Lack of Awareness ( 4 )</b>	
4_1 Improper decision making of lack of judgment	Training mengenai manajemen pengambilan keputusan
4_2 Distracted by other concerns	Training motivasi, safety talk
4_3 Inattention to footing and surroundings	Training motivasi, safety talk
4_4 Horseplay	Toolbox, coaching
4_5 Acts of violence	Achievment and motivation training, coaching
4_6 Failure to warn	Inspector should be put tagging
4_7 Use of drugs or alcohol	Medical check up periodically
4_8 Routine activity without thought	Hazard identification training
4_9 Other	

**CLC Analysis and Recommendation**

**Possible Immediate Causes (Condition)**

<b>Protective System Description</b>		<b>Recommendation</b>
<b>Protective System ( 5 )</b>		
5_1	Inadequate guard or protective devices	Selalu tersedia alat-alat safety, PPE
5_2	Defective guards or protective devices	Alat-alat safety selalu dilakukan inspeksi, PM
5_3	Inadequate PPE	Selalu tersedia alat-alat safety, PPE yang siap pakai
5_4	Defective PPE	Selalu check sebelum pakai PPE
5_5	Inadequate warning system	Alarm, sign harus selalu dievaluasi
5_6	Defective warning system	Sistem alarm harus selalu dilakukan PM
5_7	Inadequate isolation of process or equipment	Konsep LOTO dan EIRC harus diterapkan
5_8	Inadequate safety devices	Sertifikasi alat-alat safety secara rutin harus diterapkan
5_9	Defective safety devices	Sertifikasi dan PM alat-alat safety secara rutin harus diterapkan
5_10	Other	
<b>Tools, Equipment &amp; Vehicle Description</b>		<b>Recommendation</b>
<b>Protective System ( 6 )</b>		
6_1	Defective equipment	PM rutin, sediakan spare part
6_2	Inadequate equipment	Harus selalu tersedia equipment yang sesuai dengan jenis jobnya
6_3	Improperly prepared equipment	Persiapan harus selalu dilakukan sebelum job dimulai
6_4	Defective tools	Harus mempunyai spare untuk tools sebagai redundansi
6_5	Inadequate tools	Harus segera mengajukan pembelian tools bila tidak punya
6_6	Improperly prepared tool	Tools dan benda kerja harus disiapkkan sebelum job dimulai
6_7	Defective vehicle	Alat angkat dan angkut harus selalu diPM rutin dan sertifikasi
6_8	Inadequate vehicle for the purpose	Sediakan alat angkat dan angkut
6_9	Improperly prepared vehicle	Sediakan alat angkat dan angkut
6_10	Other	
<b>Work Exposure to Description</b>		<b>Recommendation</b>
<b>Protective System ( 7 )</b>		
7_1	Fire or Explosion	Inspect safety equipment seperti sprinckle, hose dll secara rutin, hitung FEI
7_2	Noise	Ukur noise rutin, pasang sign, pakai ear plug
7_3	Energized electrical system	Isolate electric EIRC pasang LOTO
7_4	Energized system, other than electrical	Positive isolation
7_5	Radiation	Pasang sign
7_6	Temperature extremes	Pasang sign
7_7	Hazardous Chemical	Pasang sign
7_8	Mechanical Hazards	Pasang sign
7_9	Clutter or Debris	Pasang sign
7_10	Storms or acts of nature	Install grounding, arder, bounding
7_11	Slippery floors or walkways	Pasang sign
7_12	Other	
<b>Work Place Environment / Layout Description</b>		<b>Recommendation</b>
<b>Protective System ( 8 )</b>		
8_1	Congestion or restricted motion	Dibebaskannya jalan masuk dan keluar
8_2	Inadequate or excessive illumination	Install penerangan tambahan
8_3	Inadequate ventilation	Instal baru sistim ventilasi
8_4	Unprotected height	Pakai full body harness
8_5	Inadequate work place layout	Tata ulang tempat kerja
	Control less than adequate	Develop control system program
	displays less than adequate	Develop display system, lighting etc
	labels less than adequate	Install label clearly
	location out of reach or sight	Install alat bantu kerja
	conflicting information is presented	Clear communication
8_6	Other	

**CLC Analysis and Recommendation**

<b>Possible System Causes (Personal Factor)</b>	
<b>Physical Capability Description</b>	<b>Recommendation</b>
<b>Physical Capability ( 1 )</b>	
1_1 Vision deficiency	Medical check up
1_2 Hearing deficiency	Medical check up
1_3 Other sensory	Medical check up
1_4 Reduced respiratory	Medical check up
1_5 Other permanent	Medical check up
1_6 Temporary disability	Medical check up
1_7 Inability to sustain body position	Perlu alat bantu
1_8 Restricted range of body movement	Perlu alat bantu
1_9 Substance sensitivities or allergies	Medical check up
1_10 Inadequate size or strength	Recruitment procedure
1_11 Diminished capacity	Recruitment procedure
1_12 Other	
<b>Physical Condition Description</b>	<b>Recommendation</b>
<b>Physical Condition ( 2 )</b>	
2_1 Previous or illness	Medical check up
2_2 Fatigue	Rest
*due to work load	Rest
*due to lack of rest	Rest
*due to sensory overload	Medical check up
2_3 Diminished performance	Medical check up
*due to temperature extremes	Install AC, exhaust fan etc
*due to Oxygen deficiency	Use O2 monitoring, install air remover
*due to atmospheric pressure variation	Stabilise guide vane/damper
2_4 Blood sugar insufficiency	Medical check up
2_5 Impairment due to drug or alcohol use	Medical check up
2_6 Other	
<b>Mental State Description</b>	<b>Recommendation</b>
<b>Mental State (3)</b>	
3_1 Poor judgment	Breafing
3_2 Memory failure	Medical check up
3_3 Poor coordination or reaction time	Breafing, team building
3_4 Emotional disturbance	Breafing, rest
3_5 Fears or phobias	Breafing
3_6 Low mechanical aptitude	Breafing
3_7 Low learning aptitude	Breafing
3_8 Influenced by medication	Breafing
3_9 Other	
<b>Mental Stress Description</b>	<b>Recommendation</b>
<b>Mental Stress ( 4 )</b>	
4_1 Preoccupation with problems	Breafing
4_2 Frustration	Breafing
4_3 Confusing direction/demands	Breafing
4_4 Conflicting directions/demands	Breafing
4_5 Meaningless or degrading activities	Breafing
4_6 Emotional overload	Breafing
4_7 Extreme judgment/decisions demands	Breafing
4_8 Extreme concentration/perception demands	Breafing
4_9 Extreme boredom	Breafing
4_10 Other	Breafing

### CLC Analysis and Recommendation

Possible System Causes (Personal Factor)	
Behavior Description	Recommendation
<b>Behavior ( 5 )</b>	
5_1 Improper performing is rewarded	Training, breafing
*saves time or effort	Training, breafing
*avoids discomfort	Training, breafing
*gains attention	Training, breafing
5_2 Improper supervisory	Training, breafing
5_3 Inadequate identification of critical safe behaviors	Training, breafing
5_4 Inadequate inforcement of critical safe behaviors	Training, breafing
*proper performance is criticized	Training, breafing
*inappropriate peer pressure	Training, breafing
*inadequate performance feedback	Training, breafing
*inadequate disciplinary process	Training, breafing
5_5 Inappropriate aggression	Training, breafing
5_6 Improper use of production incentives	Training, breafing
5_7 Supervisor implied haste	Training, breafing
5_8 Employee perceived haste	Training, breafing
5_9 Other	
Skill Level Description	Recommendation
<b>Skill Level ( 6 )</b>	
6_1 Inadequate assessment of required skills	Audit tentang keselamatan kerja
6_2 Inadequate practice of skills	Training skills, knowledge
6_3 Infrequent performance of skills	Training periodically
6_4 Lack of coaching on skills	Training periodically
6_5 Insufficient review of instruction to establish skill	Audit tentang keselamatan kerja dan keahtian lainnya
6_6 Other	

## CLC Analysis and Recommendation

Possible System/Basic Causes (Personal Factor)		
<b>Training / Knowledge Transfer ( 7 )</b>		<b>Recommendation</b>
7_1	Inadequate knowledge transfer	Develop training need
	* inability to comprehend	Develop training need
	* inability instructor qualifications	Training of trainer
	* inadequate training equipment	Prepare training facilities
	* misunderstood instruction	Clear communication
7_2	Inadequate recall of training material	Develop training materials
	* training not reinforced on the job	Specific training
	* inadequate refresher training frequency	Refreshing training
7_3	Inadequate training effort	Establish training budgeting and other facilities
	* inadequate training program design	Develop training program
	* inadequate training goals/objectives	Develop training goals/objectives
	* inadequate new employee orientation	Basic training for employee
	* inadequate initial training	Basic training for employee
	* inadequate means to determine if qualified for job	Specific training
7_4	No training provided	Develop training program
	* need for training not identified	Specific training
	* training record incorrect or out of date	Training documentation
	* new work methods introduced without training	Specific training
	* decision made not to train	Develop training program
7_5	Other	
<b>Management/Supervisor/Employee Leadership Description</b>		
<b>Management/Supervisor/Employee Leadership ( 8 )</b>		<b>Recommendation</b>
8_1	Conflicting roles/responsibilities	Develop management conflict
	* unclear reporting relationship	Develop reporting system clearly, detail
	* conflicting reporting relationship	Reporting coordination plan, better hand over
	* unclear assignment of responsibility	Job description and responsibility clearly
	* conflicting assignment of responsibility	Job coordination clearly, no over lapping
	* improper or insufficient delegation of authority	Jabatan dan job des yang jelas
8_2	Inadequate leadership	Leadership training
	* standard of performance missing or not enforced	Ada prosedur atau guide line yang jelas
	* inadequate accountability	Key performance Indicator yang jelas
	* inadequate or incorrect performance feedback	Hubungan kerja yang harmonis
	* inadequate work site walk-through	Ada program inspeksi lapangan yang rutin
	* inadequate safety promotion	Ada program promosi yang berkala
8_3	Inadequate correction of prior hazard/incident	Koreksi langsung bila ada hazard atau insiden
8_4	Inadequate identification of work site/job hazard	Identifikasi hazard di setiap unit
8_5	Inadequate management of change system	Develop/plan MoC if needed
8_6	Inadequate incident reporting/investigation system	Develop investigation team, meeting, reporting
8_7	Inadequate or lack of safety meeting	Safety talk, tool box, HSE committee periodically
8_8	Inadequate performance measurement & assessment	Develop PTR, STRA, JSA
8_9	Other	
<b>Contractor Selection &amp; Oversight Description</b>		
<b>Contractor Selection &amp; Oversight ( 9 )</b>		<b>Recommendation</b>
9_1	Lack of contractor pre-qualification	Ada prosedur pemilihan kriteria contractor
9_2	Inadequate contractor prequalification	Ada prosedur pemilihan kriteria contractor
9_3	Inadequate contractor selection	Ada prosedur pemilihan kriteria contractor
9_4	Use of non-approved contractor	Ada prosedur pemilihan kriteria contractor
9_5	Lack of job oversight	Ada prosedur pemilihan kriteria contractor
9_6	Inadequate oversight	Ada prosedur pemilihan kriteria contractor
9_7	Other	

**CLC Analysis and Recommendation**  
Possible System/Basic Causes (Personal Factor)

<b>Engineering Design ( 10 )</b>		<b>Recommendation</b>
10_1	Inadequate technical design	Engineering design base on technical data
	* design input obsolete	Reengineering
	* design input not correct	Reengineering
	* design input not available	Reengineering
	* design output inadequate	Reengineering
	* design input infeasible	Reengineering
	* design output unclear	Reengineering
	* design output not correct	Reengineering
	* design output inconsistent	Reengineering
	* no independent design review	Reengineering and punchlist
10_2	Inadequate standard, specification, and or design criteria	Develop procedure, standard, guideline, best design
10_3	Inadequate assessment of potential failure	Use tools as assessment, FMEA, Fish bone diagram
10_4	Inadequate ergonomic design	Modification
10_5	Inadequate monitoring of construction	Reengineering
10_6	Inadequate assessment of operational readiness	Precommissioning
10_7	Inadequate monitoring of initial operation	Commissioning
10_8	Inadequate evaluation and or documentation of change	Management of change
10_9	Other	
<b>Work Planning Description</b>		
<b>Work Planning ( 11 )</b>		<b>Recommendation</b>
11_1	Inadequate work planning	Perencanaan yang bagus dan koordinasi dengan devisi lain
11_2	Inadequate preventive maintenance	PM routine
	* assesment of needs	Vibration monitoring
	* lubrication/servicing	Vibration monitoring
	* adjustment / assembly	Calibration
	* cleaning / resurfacing	House keeping program
11_3	Inadequate repair	PM routine
	* communication of needed repair	PM routine
	* scheduling of work	Weekly planning
	* examination of part	Vibration monitoring
	* part substitution	Dikaji ulang
11_4	Excessive wear and tear	Procedural
	* inadequate planning for use	Pemakaian normal
	* extention of service life	Perencanaan sesuai jadwal
	* improper loading	Normally loading
	* use by untrained people	Training Need Analysis
	* use for wrong perpose	Personal competence
11_5	Inadequate reference materials or publications	Material Safety Data Sheets and Socialization
11_6	Inadequate audit/inspection/monitoring	Training Auditor, inspector dan jadwal audi/inspeksi
	* no documentation	Dokumen standard ISO 9000/14000
	* no correction responsibility assigned	Penempatan responsibility personel yang tepat
	* no accountability for corrective action	Penanggung jawab tindakan koreksi yang jelas
11_7	Inadequate job placement	Personal competence harus tersedia
	* appropriate personnel not identified	Personal competence memakai atribut khusus
	* appropriate personnel not available	Personal competence harus dipilih sesuai bidangnya
	* appropriate personnel not provided	Personal competence harus siap menjalankan tugas
11_8	Other	

## CLC Analysis and Recommendation

### Possible System Causes (Personal Factor)

Purchasing, Material Handling & Material Control ( 12 )		Recommendation
12_1	Incorrect item received	Purchasing procedure termasuk pemilihan contractor atau vendor
	* inadequate specification to vendor	Spec material yang dikirim ke vendor sesuai catalog
	* inadequate specification on requisition	Request form ditulis dengan jelas
	* inadequate control on changes to orders	PO (Purchasing Order) harus jelas
	* unauthorized substitution	Tulis request baru bila ganti material
	* inadequate product acceptance requirement	Pemintaan sesuai kebutuhan
	* no acceptance verification performed	Ada verifikasi bila salah order
12_2	Inadequate research on material/equipment	Establish research and development program
12_3	Inadequate mode or route of shipment	Pilih Rute pengiriman yang terdekat
12_4	Improper handling of materials	Training chemical/material handling
12_5	Improper storage of materials or spare parts	Provided store and good inventory
12_6	Inadequate material packaging	Training tentang chemical/material handling
12_7	Materials shelf life exceeded	Purchasing procedure
12_8	Improper identification of hazardous materials	Training hazard identification
12_9	Improper salvage and or waste disposal	Training environment
12_10	Inadequate use of safety and health data	Training and provide MSDS
12_11	Other	
Tools and Equipment Description		
Tools and Equipment ( -13 )		Recommendation
13_1	Inadequate assessment of needs and risks	Develop PTR, STRA, JSA team
13_2	Inadequate human factor/ergonomics considerations	Develop risk assessment
13_3	Inadequate standards of specification	Prosedur kerja harus tersedia
13_4	Inadequate availability	Prosedur kerja harus tersedia dan mudah diimplementasikan
13_5	Inadequate adjustment/repair/maintenance	Program/planning maintenance yang bagus
13_6	Inadequate salvage and reclamation	Asuransi untuk material yang dipesan
13_7	Inadequate removal/replacement of unsuitable items	Tersedia jalan masuk keluar yang lapang
13_8	No equipment record history	Ada system inventory yang bagus (MAXIMO)
13_9	Inadequate equipment record history	Ada system inventory yang bagus (MAXIMO)
13_10	Other	

### CLC Analysis and Recommendation

Possible System /Basic Causes (Personal Factor)		
Work Rules/Policies/Standards/ Procedures (PSP) Description ( 14 )	Recommendation	
14_1	Lack of PSP for the task	Develop procedure and socialisation program
	* lack of defined responsibility for PSP	Develop procedure, instruction clearly
	* lack of job safety analysis	Develop JSA, STRA, PTR
	* inadequate job safety analysis	Develop JSA, STRA, PTR
14_2	Inadequate development of PSP	Develop procedure dan revisi setiap 6 bulan
	* inadequate coordination with process/equipment design	Koordinasi dengan departemen terkait
	* inadequate employee involvement in the development	Pilih orang yang berkompetensi
	* inadequate definition of corrective actions	Tindakan koreksi ditentukan oleh team departemen yang terkait
	* inadequate format for easy use	Dari prosedur dibuat instruksi yang praktis
14_3	Inadequate implementation of PSP, due to deficiencies	Penggunaan prosedur di lapangan harus ada audit
	* contradictory requirements	Revisi prosedur/instruksi bila perlu
	* confusing format	Prosedur singkat dan praktis
	* more than one action per step	Prosedur singkat dan praktis
	* no check-off spaces provided	Revisi prosedur/ instruksi bila perlu
	* inaccurate sequence of steps	Revisi prosedur/ instruksi bila perlu
	* confusing instructions	Instruksi dalam bahasa Indonesia
	* technical error/missing steps	Revisi prosedur/ instruksi sesuai kondisi lapangan
	* excessive references	Revisi prosedur/ instruksi bila perlu
	* potential situations not covered	Revisi prosedur/ instruksi sesuai kondisi lapangan
14_4	Inadequate enforcement of PSP	Management support
	* inadequate monitoring of work	Supervise and develop job description clearly
	* inadequate supervisory knowledge	Training
	* inadequate reinforcement	Management support
	* non-compliance not corrected	Briefing, reward and punishment implementation
14_5	Inadequate communication of PSP	PSP baru harus disosialisasikan ke karyawan
	* incomplete distribution to work group	Ada perwakilan dari setiap departemen
	* inadequate translation to appropriate languages	PSP selalu dalam 2 bahasa (Inggris dan Indonesia)
	* incomplete integration with training	PSP dijadikan agenda training
	* out of date revisions still in use	Selalu terupdate setiap 6 bulan sekali
14_6	Other	
Communication Description		
Communication ( 15 )		
15_1	Inadequate horizontal communication between peers	Jalin hubungan komunikasi yang harmonis antar karyawan
15_2	Inadequate vertical communication between supervisor and person	Jalin hubungan komunikasi yang harmonis antara atasan dan bawahan
15_3	Inadequate communication between different organizations	Jalin hubungan komunikasi yang harmonis antar departemen
15_4	Inadequate communication between work groups	Jalin hubungan komunikasi yang harmonis antar shift/work group
15_5	Inadequate communication between shifts	Jalin hubungan komunikasi yang harmonis antar shift/work group
15_6	Inadequate communication method	Develop metode hand over, sistem laporan dll
15_7	No communication method available	Sediakan sarana komunikasi, radio, telepon, email, intranet dll
15_8	Incorrect instructions	Training communication skills
15_9	Inadequate communication due to job turnover	Develop metode hand over, sistem laporan dll
15_10	Inadequate communication of safety and health data, regulations or guidelines	HSE departemen selalu update tentang regulasi dan informasi keselamatan kerja
15_11	Standard terminology not used	Briefing, reward and punishment implementation
15_12	Verification/repeat back techniques not used	Peduli terhadap kondisi plant yang kurang aman dan menulis laporan di tracking system
15_13	Messages too long	Instruksi dalam bahasa Indonesia, jelas, ringkas
15_14	Speech interference	
15_15	Other	



Lampiran 10: Incident Report December 2006

INCIDENT REPORT December 2006

No	Nomor	Date	Location	Description	Corrective Action	Action By	Dept Act	Originator	Dept	Action	Condition	Status	Type of Loss	
1	2006-IR-1804	08/12/2006	WAREHOUSE TRAIN 1-2	Calent/makan untuk tim TNT telat, padahal Tim TNT bekerja dengan tenaga yang amat sangat keras (loading) dan memerlukan banyak supply makanan/tenaga.	Disampaikan di safety talk ke manajemen TNT untuk mengingatkan kepada Pihak Catering agar tidak telat mengirim Stop pekerjaan segera	Hilal Asari Dasuki	Logistic Distribution	Maulana Hazmi	Logistic Distribution	4-8 Routine activity without thought		Completed	Loss time/production	
2	2006-IR-1810	22/12/2006	APU 1 - 2	Sekitar jam 08:00, karyawan TNT sedang melakukan re-work pellet HD5220GM ke 25947, tiba-tiba kaki kirinya terpeleok/jatuh dari pijakan scaffolding. Mengakibatkan badannya terbelut dengan scaffolding tersebut dan mengalami memar di dada.	Kirim pekerja tersebut ke clinic PT Titan Petrokimia Nusantara Perbaiki scaffolding dan pasang tagging	Nyack Razak	Production	Nyack Razak	Production	13-1 Inadequate assessment of needs and risks 6-3 Improperly prepared equipment	Completed Completed Inprogress	Completed	Injury	
3	2006-IR-1812	28/12/2006	PPU/PU 1	1-C400 trip pada jam 21.07 disebabkan oleh 1-PDAL-414-A/B/C, 415/416 aktif karena 1-P400-A trip. Hal ini disebabkan oleh Transformator SWB-2021-A (Transformator supply electric power ke equipment TR41 dan Catalyst) trip.	Me-reset kembali TRF-2021-A Mencari penyebab trip-nya TRF-2021-A Check performance 1-P-400-B karena tidak mampu back up	Sonjaya	Maintenance	Edi Widodo	Production	4-8 Routine activity without thought	6-4 Defective tools	Completed Inprogress Inprogress	Completed Inprogress Inprogress	Loss production Property damage
4	2007-IR-1813	29/12/2006	UTILITIES 1	Pada Jumat siang 29 Desember 2006, dilaporkan adanya kerusakan tubing dari loading arm 7X350 mengakibatkan oli terbuang dan loading arm tidak dapat ditungskan. Immediate action telah dilakukan dengan mengganti hydraulic hose yang patah tersebut dan men-top up oli. Penyebab kerusakan tubing diduga adalah: 1. Umur 2. Mechanical impact	Ganti tubing yang rusak Top up oil Sediakan spare hose Investigasi apa penyebab utama kerusakan tubing	Feri Kasidi Pejman Tampubolon Herry Riadi R Bq Catur Putranto	Maintenance Maintenance Maintenance Production	Feri Kasidi Feri Kasidi Feri Kasidi Feri Kasidi	Maintenance Maintenance Maintenance Maintenance	4-8 Routine activity without thought	6-5 Insufficient review of instruction to establish skill 10-5 Inadequate monitoring of construction 7-8 Mechanical hazards	Completed Completed Inprogress Inprogress	Completed Completed Inprogress Inprogress	Property damage

Lampiran 11: Nearmiss Report Desember 2006

NEARMISS Report December 2006

No	Nomor	Date	Location	Description	Corrective Action	Action By	Dept Act	Originator	Dept Orig	Action	Condition	Status	Potencial Loss	Type of contact
1	2006-NM-1725	13/12/2006	PPU/PU 1	Pekerjaan pemasangan MOC-551 untuk N2 di 1-V-485 ada lubang di sekitarnya yang di tutup dengan terpaulin sehingga pada saat akan melubangi spool tapal tersebut terinjak dan tererosok	briefing ke team hati-hati dalam melakukan pekerjaan dan kenali lokasi kerja pasang papan di lantai yang di tutup dengan terpaulin untuk pijakan	Bahrudin Bahrudin	Engineering Engineering	Bahrudin Bahrudin	Engineering Engineering	4-3. Inattention for footing and surroundings  4-3. Inattention for footing and surroundings	 Completed Completed	Completed Completed	Injury  Injury	Fall to lower level  Fall on the same level
2	2006-NM-1726	15/12/2006	APU 3 - 4	Pada saat pemasangan pipa CWS+CWR di Horizontal mixer, filter dari workshop berjalan tanpa melihat ke arah bawah dan kaki tersandung dengan pipa 3/4" yang akan di pasang hampir terjatuh	Penempatan pipa yang rapih dan aman untuk orang lewat, yakinkan tempat kerja yang rapih Briefing * Perhatikan pada saat jalan atau melintas di daerah kerja, jangan terburu-buru Yakinkan pada saat akan bekerja mengetahui lingkungan kerja dan aman untuk bekerja	Bahrudin Bahrudin Bahrudin	Engineering Engineering Engineering	Bahrudin Bahrudin Bahrudin	Engineering Engineering Engineering	4-3. Inattention for footing and surroundings  4-3. Inattention for footing and surroundings	 Completed Completed Completed	Completed Completed Completed	Injury  Injury	Fall on the same level
3	2006-NM-1727	17/12/2006	APU 1 - 2 ( Electric Panel extruder room di APU 2nd floor )	Pada saat memonitor filling master batch, saya pergi ke area substation, mengecek apakah ACnya dingin. Saya menemukan adanya genangan air dari rembesan AC, yang hampir memenuhi 2/3 bagian dari ruangan tersebut. Yang mana ini sangat berpotensi bisa terjadinya electric failure ( kebakar ), kerugian produksi bahkan akibat yang lebih fatal lagi.	Agar selalu diperhatikan performance AC tersebut. Karena keadaan AC ditempat ini sangat diperlukan sebab sering terjadi trip extruder karena ACnya tidak dingin	Sonjaya	Maintenance	Ifran Hais	Production	6-1 Defective equipment	11-2 Inadequate preventive maintenance 12-2 Inadequate research on materials/equipment	Inprogress	Property Damage	Other
4	2006-NM-1731	20/12/2006	APU 1 - 2	17.30 terjadi kenaikan pressure conveying pellet dari 1H850 ke Homosilo, suction filter online dua-duanya, discharge filter di onlinekan juga dua-duanya namun pressure conveying masih tinggi, extruder diturunkan ratenya dari 14.5 ke 12T/hr, blower 6C101-1B flip flop popping paralel dumping pellet via sample connection, switch over ke 6C101-1A kontinyu popping.	Break off line conveying untuk mengeluarkan pellet yg terjebak Membersihkan discharge filter	Faustinus Bagus Hartono Cecep Alamsyah	Production Production	Faustinus Bagus Hartono Faustinus Bagus Hartono	Production Production	5-2 Defective guards or protective devices 5-2 Defective guards or protective devices	11-2 Inadequate preventive maintenance 11-2 Inadequate preventive maintenance	Completed Completed	Production loss	Over load

NEARMISS Report December 2006

No	Nomor	Date	Location	Description	Corrective Action	Action By	Dept Act	Originator	Dept Orig	Action	Condition	Status	Potencial Loss	Type of contact
5	2006-NM-1729	21/12/2006	Laydown PEWH 1/2	Beberapa pipa 4" berjatuhan dari truk. Pipa 4" berjatuhan saat forklift akan menurunkan pipa tersebut, pipa jatuh dari sisi lain truk dikarenakan stopper kayu di aial tersebut patah. Pipa jatuh ke open ditch, tidak ada kerugian	Inform di safety talk	Yuliadi	Engineering	Yuliadi	Engineering	5-2 Defective guards or protective devices	10-3 Inadequate assessment of Potential failure	Inprogress	Injury	Struck by
6	2006-NM-1723	02/12/2006	PE WAREHOUSE TRAIN 1-2	BROKEN LOADING HD6070 UA 0681282 =1 BAG TIDAK ADA TAMBAHANNYA YANG 1 BAG DI BAG TERTULIS DG SPEDOL HD5301AA 06B1262 DI CEK BM OF BARANG TERSEBUT CAMPUR JADI SAYA CURIGA LANGSUNG ANWAR LAB LUNTUK MEYAKINKAN, TERNYATA BETUL CAMPUR HD6070UA DENGAN HD5301AA, KEJADIAN INI MUNGKIN WAKTU DI LOADING PECAH BERDEKATAN ATARA 2 GRADE TERSEBUT LALU MAIN MASUKIN SAJA.	SAYA HARAP KEJADIAN TERSEBUT TIDAK TERULANG LAGI INI MASIH LUNTUNG HANYA 1 BAG KALAU BAG TERSEBUT SUDAH GABUNG DENGAN STOK PASTI BARANG TERSEBUT AKAN MENJADI OFGRADE SEMUA	Heru Setyadi	Logistic and Distribution	Muhtadi Asfar	Logistic and Distribution	4-1 Improper decision making or lack of judgment	8-4 Inadequate identification of worksite/job hazards	Completed	Loss production	Other
7	2006-NM-1730	21/12/2006	RSU 3	When opening 3LT455 (low point) remain TEA down to the floor and cause small fire and extinguished directly. But due to the smoke was big enough and touch the infrared detector cause fire alarm active. Before that level transmitter at high point already removed successfully.	Defeat infrared detector	Sonjaya	Maintenance	Janner Pasaribu	Production	2-1 Improper use of equipment (infrared detector not defeated before done the job)	2-7 Servicing of equipment in operation	Completed	Fire	Other

NEARMISS Report December 2006

No	Nomor	Date	Location	Description	Corrective Action	Action By	Dept Act	Originator	Dept Orig	Action	Condition	Status	Potencial Loss	Type of contact
8	2006-NM-1732	26/12/2006	TSC BUILDING	There are two vital errors on the current IMS for LL0209AA & LL0220AA issue date 1 August 2006. The density & black-spec parameters written on the August's version are not the same as approved of that in the February's version. Yet the only approved for August is regarding the change of product name, not for the spec.	Improve the way we work, instill check & re-check to subordinate  Perform disciplinary action	Faralian Poerdjono  Faralian Poerdjono	Technical  Technical	Faralian Poerdjono  Faralian Poerdjono	Technical  Technical	4-8 Routine activity without thought. Technically the IMS template used for current IMS does not refer to the approved IMS per February 2006. It seems there was mistake of "Copy & Paste" mode. 4-8 Failure to warn Since the approve IMS change for August was covering the Product Name Change, supervision was not 100% given and overlooked the mistypes.	5-2 Improper supervisory example The originator need more supervision to ensure his work is well-scrutinize by his superior 5- 5 Inappropriate aggression The IMS prepared in haste, lack of overview of the consequences.	Inprogress  Inprogress	Production loss	Other
					Perform disciplinary action	Faralian Poerdjono	Technical	Faralian Poerdjono	Technical			Inprogress		

Lampiran 12: Sub standard Report Desember 2006

Sub Standard Report December 2006

No	Nomer	Date	Location	Description	Cooperative/Action	Action By	Dept Act	Originator	Dept Orig	Action	Condition	Status
1	2006-SS-2650	06/12/2006	Tempat Istirahat tnt produksi	Di temukan dispenser kondisi ON yang di produksi b/m-2 galornya ada tetapi airnya kosong	Kondisi tersebut langung saya cabut kabelnya untuk melega agar tidak terjadi kebakar dispenser jengon terulang kejadian ini	Muhammad Astan	Logistic and Distribution	Muhammad Astan	Logistic and Distribution	1-2 Violation (by group)		Inprogress
2	2006-SS-2649	05/12/2006	BOILER STEAM GENERATION	Pekerja PT. MPK membuat/membangun scaffolding di Boiler B dengan cara memasukkan 2 batang pipa yang lebih kecil ke Fire tube dan dipasang papan di atasnya, papan dilikat ke pipa tersebut tanpa ada pipa support lainnya. Namun setelah diinjak 2 orang sambil membawamengangkat plat untuk dipasang di dinding area superheater, scaffolding tersebut kurang aman atau kurang kuat.	Stop pekerjaan, scaffolding dibuat lebih kokoh dan aman	Bahrudin	Engineering	Sumarsono	HSEQ	1-2 Violation (by group) 2-5 Improper placement of tools, equipment or materials 3-5 Equipment or materials not		Inprogress
3	2006-SS-2651	06/12/2006	PPU/PU 1	Banyak sampah yang menumpuk bekas leging di PU lantai 5, ini sangat mengganggu karena bila tertumpu angin sisa leging tersebut akan berbangkai dan terhisap orang yang lewat. Selain sisa leging ada juga tangkai dan seling yang besar	Harap segera diturunkan sisa - sisa leging tersebut Diturunkan juga seling yang tidak terpakai karena bila terna di atas akan menjadi berkarat	M Sapendi	Engineering	Rudi yan yan	Maintenance	1-3 Violation (by supervisor)		Inprogress
4	2006-SS-2653	09/12/2006	Control Room	Nomer telepon Duty Parson (M.Hanun S) masih tertulis nomer yang lama, kejadian ini sudah beberapa kali seperti ini	Selalu up date nomer telepon duty parson	Dieta Sukenti	Maintenance	Rudi Repeleta	Production	1-3 Violation (by supervisor)		Inprogress
5	2006-SS-2654	09/12/2006	LABORATORY BUILDING	Team laboratory mencoba memasang chiller secara paralel untuk cooling baby plant machine sehujung dengan coil coolernya rusak tanpa adanya risk assessment terlebih dahulu, sehingga ketika dicoba di running air yang ada di chamber cooling cepat diebelah selatan 8-T-202 A patah. Valve yang patah mengakibatkan PW bocor karena valve tidak bisa digunakan	Langsung di stop new chiller membatalkan pemasangan new chiller	Kuanadi	QC & Assurance	Saeftu Mahdi	QC & Assurance	1-3 Violation (by supervisor)		Completed
6	2006-SS-2660	13/12/2006	8-T-202A DW storage tank	Handile valve dari PW Pipe yang menuju eyewash yang berada disebelah selatan 8-T-202 A patah. Valve yang patah mengakibatkan PW bocor karena valve tidak bisa digunakan	Ganti valve yang patah dengan yang baru	Bahrudin	Engineering	Ischaq Sumarionohadi	Engineering		6-1 Defective equipment	Inprogress
7	2006-SS-2661	13/12/2006	Pipe Rack APU Train 1	Pipa 3" (3 length) sisa project PW water masih ada yang belum diturunkan dari pipenck	Turunkan pipa 3" (3 length) dan atas piperack APU-1	M Sapendi	Engineering	Ischaq Sumarionohadi	Engineering	4-2. Distracted by other concern		Inprogress
8	2006-SS-2662	11/12/2006	Lantai 5 PU Train 1	Terdapat sampah bekas shutdown Train 1 berupa : Pipa, Laging, Wool (insulation)	Turunkan sampah bekas shutdown Train 1 tersebut (pipa, lagging, wool, etc)	Bahrudin	Engineering	Ischaq Sumarionohadi	Engineering	4-2. Distracted by other concern		Inprogress
9	2006-SS-2669	14/12/2006	PPU/PU 1	Pembuangan steam di J-300 Kurang baik dan minta dibuatkan saluran pembuangan air	Buatkan saluran air yang terbuat dari pipa besi	Iskandar	Engineering	Supriyadi	Production		8-6. Other	Inprogress
10	2006-SS-2664	13/12/2006	PPU/PU 1	Push button 1-S-440 tidak bisa lock (mangunci)	Perbaiki	Sonjaya	Maintenance	Royani	Production		6-1 Defective equipment	Inprogress
11	2006-SS-2655	11/12/2006	General Lab	Handle untuk pintu oven T-038 mengalami cacat (defect), meskipun masih dapat dipergunakan namun tidak pantas. Perlu diperbaiki agar isolasi proses di dalam oven benar-benar efektif dari lingkungan luar.	Perbaiki handle dengan unit yang baru	Abu Sumarna	Technical Services	Farihan Poerdjono	Technical Services		6-1 Defective equipment	Inprogress
12	2006-SS-2665	14/12/2006	TEA Bunker	Ada pemasangan 3-psv-454 tidak terpasang sempurna hanya ada tiga baud yang terpasang sehingga posisi psv tersebut miring	Pastikan kepada semua Teknisi agar tidak mengoperasikan alat diatas temperatur standar agar tidak terpapar pada uap panas & potensi bahaya lainnya	Bahrudin	Engineering	Adhya Saputro	Maintenance	1-2. Violation (by group)		Inprogress
13	2006-SS-2656	12/12/2006	PU 3	Grating di antara 3-D-250 dan 3-C-400 mengalami deformasi. Kemungkinan terkena beban yang berlebihan	Ganti / perbaiki grating	Fadjar Luthfi	Engineering	Faisal Fahd	Engineering		6-1 Defective equipment	Inprogress

Sub Standard Report December 2006

No	Nomor	Date	Location	Description	Corrective Action	Action By	Dept Act	Originator	Dept Orig	Action	Condition	Status
14	2006-SS-2668	12/12/2006	APU1/2	Pada saat saya sedang mengisi master batch di Lantai-4, mata saya terkena debu additive karena keripat yang mengalir dari kepala. Pada saat aban menggunakan Eye wash untuk membasuh mata, ternyata air yang keluar berwarna coklat / keruh dan berbau besi.	Agar diadakan pengecekan / inspektasi secara reguler semua eye wash untuk menjamin bahwa eye wash siap digunakan	Asep Abu Hoer	HSEQ	Fahrur Rizal	Production		6-10 Other	Inprogress
15	2006-SS-2666	15/12/2006	FRU - FEED PURIFICATION UNIT 0	1. OTC921 indikatornya pasing, OP 0% tapi PV nya naik terus (harus mengatur manual valve untuk mendapatkan PV yang di inginkan)	cek & perbaiki	Feri Kasidi	Maintenance	akhmad syauqi	Production		6-1 Defective equipment	Inprogress
16	2006-SS-2667	16/12/2006	ANALYSER HOUSE 1	Cerobong/venting line ke ATM dari AH-1 sudah rusak/korosi	Perbaiki	M Sapendi	Engineering	Faustinus Bagus Harbano	Production		6-1 Defective equipment	Inprogress
17	2006-SS-2668	18/12/2006	OTHERS(LAIN LAIN)	Seorang Technisi AC mengendarai sepeda sambil membawa tangga di depan Training center	Menghentikan pengendara dan mengingatkan bahayanya dan diminta rtk tidak mengemudi. Meninggikan kembali di safety talk atau secara langsung ke semua jajaran bahwa sepeda bukan untuk membawa barang	Helmy Fuadi	HSEQ	Helmy Fuadi	HSEQ	1-10 Shortcuts 2-2 Improper use of tools		Completed
18	2006-SS-2677	18/12/2006	SWI - 3	Pada saat akan mengambil lampu hogen di SWI 3, ditemukan plug lampu tersebut penuh dengan air yang bisa mengakibatkan Ground fault/ atau bisa mengakibatkan bahaya pada orang yang akan menggunakannya	Plug harus di bersihkan terlebih dahulu di air sebelum digunakan Penggunaan triling socket dan plug di lapangan harus di bungkus dengan plastik agar tidak kemasukan air yang dapat mengakibatkan ground fault	Luki Lukman Hakim	I.T and Services	Helmy Fuadi	HSEQ	1-10 Shortcuts 2-2 Improper use of tools		Inprogress
19	2006-SS-2678	19/12/2006	Jetty Head	Safety sign, win sock (tanda arah angin) di jetty head sudah rusak/hokok tinggal kerangkanya saja. Agar di ganti dengan standar yang ada.	Seperaga ganti dengan yang baru	Alek Mizaron	Maintenance	Sotjaya	Maintenance		5-1 Inadequate guards or protective	Inprogress
20	2006-SS-2679	19/12/2006	Area 1 SWI Out Fall	Pagar BRC di sekitar area Sea Water Out fall sudah banyak yang rusak/putus karena korosi. Untuk mencegah kejahatan/kriminal atau seseorang yang tidak bertanggung jawab, agar segera di adakan perbaikkan	Security yang memantau/bertugas di area tersebut harus extra hati-hati karena mudah sekali orang masuk melalui pagar BRC yang rusak/terpos	Alek Mizaron	Maintenance	Sotjaya	Maintenance		5-1 Inadequate guards or protective devices	Inprogress
21	2006-SS-2680	19/12/2006	PU 3	Lubang grating dibawah 3-R-400 2nd Floor hanya ditutup dengan papan dan hanya diikat dengan kawat	Tutup grating dengan plat/grating yang sesuai dan permanent	Asep Abu Hoer	HSEQ	M Sapendi	Engineering		6-1 Defective equipment	Inprogress
22	2006-SS-2681	20/12/2006	MAINT ENG BUILDING	AC Split yang ada di ruangan Engineering Meeting Room alirnya bocor ke dalam ruangan dan membahayakan peralatan listrik	Seperaga di lakukan penggantian pagar BRC yang baik dan standard Tutup grating dengan plat/grating yang sesuai dan permanent Planning kan untuk segera diperbaiki	Trikawi Hartono	I.T and Services	M Sapendi	Engineering		6-1 Defective equipment	Completed
23	2006-SS-2682	20/12/2006	PU 3	Ditemukan eye wash shower dilantai dasar PU 3-D-466, fiternya tidak terpasang	Seperaga diperbaiki/ganti dengan yang baru Diberi sign atau penghalang pada lantai yang licin atau cucuran air	M Sapendi	HSEQ	M Sapendi	Engineering		6-1 Defective equipment	Inprogress
24	2006-SS-2682	20/12/2006	PU 3	Ditemukan eye wash shower dilantai dasar PU 3-D-466, fiternya tidak terpasang	Seperaga diperbaiki/ganti dengan yang baru Diberi sign atau penghalang pada lantai yang licin atau cucuran air	Fadjar Luthile	Engineering	Agus Kuswartaman	Engineering		5-1 Inadequate guards or protective devices	Inprogress
25	2006-SS-2682	20/12/2006	PU 3	Ditemukan eye wash shower dilantai dasar PU 3-D-466, fiternya tidak terpasang	Seperaga diperbaiki/ganti dengan yang baru Diberi sign atau penghalang pada lantai yang licin atau cucuran air	Anbia	Engineering	Agus Kuswartaman	Engineering		5-1 Inadequate guards or protective devices	Inprogress
26	2006-SS-2682	20/12/2006	PU 3	Ditemukan eye wash shower dilantai dasar PU 3-D-466, fiternya tidak terpasang	Seperaga diperbaiki/ganti dengan yang baru Diberi sign atau penghalang pada lantai yang licin atau cucuran air	Asrori	I.T and Services	Humedri	Engineering		7-11 Slippery floors or walkways	Completed
27	2006-SS-2682	20/12/2006	PU 3	Ditemukan eye wash shower dilantai dasar PU 3-D-466, fiternya tidak terpasang	Seperaga diperbaiki dan masukan dalam engineering work planning	Dista Sukenti	Maintenance	Humedri	Engineering		7-11 Slippery floors or walkways	Completed
28	2006-SS-2682	20/12/2006	PU 3	Ditemukan eye wash shower dilantai dasar PU 3-D-466, fiternya tidak terpasang	Seperaga diperbaiki dan masukan dalam engineering work planning	Anbia	Engineering	Arzia Mardy	Maintenance		5-1 Inadequate guards or protective devices	Inprogress

Sub Standard Report December 2006

No.	Nomor	Date	Location	Description	Coorrective>Action	Action By	Dept Act	Originator	Dept Orig	Action	Condition	Status
24	2006-SS-2683	20/12/2006	PPU/PU 1	Ada hand rili yang sengaja ditepas di sekitar 2-D-420 C, bekas pelepasan 2-O-420 C belum terpasang kembali, ini akan membahayakan jika ada orang yang bekerja di daerah tersebut.	Hand dipasang kembali bila ada pelepasan hand rili atau pelepasan yang lainnya sehingga keadaan daerah tersebut normal seperti semula	Djamiludin	Maintenance	Rudi Yan Yan	Maintenance	3-8 Disabled guards, warning systems or safety devices 3-8 Disabled guards, warning systems or safety devices		Inprogress
25	2006-SS-2684	20/12/2006	APU 1 - 2	Sewaktu ada pekerjaan pemotongan lumpur di extruder 2 dengan menggunakan chain saw bermesin bensin, pekerja menggunakan mesian debu sehingga pelindung.	Mesin untuk pelindungan dan gas buang harus disediakan	Asep Abu Hoer	HSEQ	Muhammad Hanun Sohar	Maintenance		5-3 Inadequate Personal Protective Equipment	Completed
26	2006-SS-2685	20/12/2006	BOILER STEAM GENERATION	Ditemukan socket 415V Antara Arangum dan Boiler pada stater unit temporary tidak memiliki tutup, sehingga apabila turun hujan air masuk ke dalam socket akan menyebabkan kerusakan pada alas listrik	Pasang kembali penutup socket yang hilang atau ganti dengan yang baru	Sonjaya	Maintenance	Sonjaya	Maintenance		5-1 inadequate guards or protective devices	Inprogress
27	2006-SS-2686	20/12/2006	SEA WATER INTAKE - AND CHLORINATI ON TRAIN 3	Socket 240 Volt tidak standard lagi posel antara ground dan line sehingga susah dipalcat (tidak bisa dipalcat)	Harat diganti dengan yang baru	Sonjaya	Maintenance	Sonjaya	Maintenance		6-1 Defective equipment	Inprogress
28	2006-SS-2688	21/12/2006	BOG	Line 7-P-205A/B to 7-PI-208 A/B pipa dia 3/4" Had broken so possible pump and PI's could not Operated	Replaced the old pipe with new one then wrapped it would be long life	M Sapardi	Engineering	M Sapardi	Engineering		6-1 Defective equipment	Inprogress
29	2006-SS-2669	18/12/2006	BOILER STEAM GENERATION	Kontraktor tidak menggunakan safety glass, walaupun safety glass ada dan terganggu di lehernya.	Meminta yang bertanggung untuk memakai safety glass Meminta leadernya untuk masalah menggunakan crewnya mengenai peraturan safety yang berkaitan dengan PPE	Helmy Fuadi Helmy Fuadi	HSEQ HSEQ	Helmy Fuadi Helmy Fuadi	HSEQ HSEQ	3-2 Personal Protective Equipment not used 3-2 Personal Protective Equipment not used		Completed Completed
30	2006-SS-2673	19/12/2006	CONTROL ROOM	Alat pemadam kebakaran di control building seharusnya di periksa tanggal 12 December 2006, tetapi sampai saat ini belum dilakukan pemeriksaan lagi.	Agar diadwalkan lagi dengan baik pemeriksaan alat pemadam kebakaran	Asep Abu Hoer	HSEQ	Faisal Fahd	Engineering	4-2 Distracted by other concerns		Inprogress
31	2006-SS-2674	20/12/2006	BOILER STEAM GENERATION	Ditemukan saturasi steam/SM yang ke Deaerator 8 D 403 tidak di online, sehingga temperatur Deaerator >80. Hal ini dapat mempengaruhi/mengurangi efisiensi kerja Deaerator yang pada akhirnya mempengaruhi kualitas air umpan (BFW) dan jumlah penggunaan chemical	Commissioning line SM ke Deaerator 8 D 403 Kontrol Temperatur Deaerator manual setiap shift (2/3x) karena 8-PV-426 rusak. Perbaiki 8-PV-426	Akhmad Syaqui R Bg Catur Putranto	Production Production	Akhmad Syaqui Akhmad Syaqui	Production Production	4-8 Routine activity without thought 4-8 Routine activity without thought		Completed Completed
32	2006-SS-2676	20/12/2006	PPU/PU 1	Ditemukan Nm untuk back flush 1-F-436 bocor	Di perbaiki dan dinormalkan kembali	Krisnan Sitorus	Maintenance	Royari	process		7-7 Hazardous chemicals	Inprogress
33	2006-SS-2670	18/12/2006	APU 1 - 2	Tangga (step ladder) yang terpasang di Extruder 2 sudah terikat dengan baik dan mungkin sudah digunakan, tapi tidak ada certificate bahwa tangga tersebut sudah valid untuk digunakan.	Menginformasikan ke team scaffolding untuk meng inspek dan menententikasi tangga tersebut.	Bahudin	Engineering	Helmy Fuadi	HSEQ	2-8 Other		Inprogress
34	2006-SS-2671	18/12/2006	TSC MACHINE HALL	Pada saat perbaikan panel di Mesin Hot Press terlihat adanya beberapa kabel yang terkelupas pada bagian dalam panel, dimana dapat mengakibatkan terjadinya hubungan arus singkat / kebakaran	Penggantian kabel yang terkelupas dengan kabel yang baru Membersihkan / merapikan bagian dalam dan luar mesin Provided and Review untuk cooling system Total pada seluruh equipment yang ada	Sonjaya Abu Sumarna Faralio Poerdjono	Maintenance Technical Technical	Abu Sumarna Abu Sumarna Abu Sumarna	Technical Technical Technical		6-1 Defective equipment 6-1 Defective equipment 6-1 Defective equipment	Inprogress Inprogress Inprogress

Sub Standard Report December 2006

No	Nomor	Date	Location	Description	Corrective Action	Action By	Dept Act	Originator	Dept Orig	Action	Condition	Status
35	2006-SS-2672	18/12/2006	LPG STORAGE	Fire Ext. di dekat 9-P-321 (08-DP-50 & 15-DP-9) tidak mempunyai catatan yang jelas mengenai pengisian. Satu Ext. sudah lewat masa inspeksi sedangkan ext. yang kedua catatannya kosong/tidak ada.	Agar di perhatikan inspeksi alat-alat pemadam kebakaran di area pabrik	Asep Abu Hoer	HSEQ	Faisal Fahd	Engineering		6-6 Improperly prepared tools	Completed
36	2006-SS-2689	21/12/2006	CONTROL BUILDING	2 buah Radio Communicator yang berada di OCS area 1 tidak berfungsi dengan baik, yang satu untuk transmisi jelek dan satu lagi penerimaan/receivernya jelek, hal ini sangat mengganggu pekerjaan terutama pada saat emergency.	cek & perbaiki	Fuqoni	I.T and Services	Ahmad Syaqi	production		6-1 Defective equipment	Completed
37	2006-SS-2690	21/12/2006	PU-3	Seorang teknisi kontraktor (PBE) menggunakan tool tidak dengan semestinya. Pahat digunakan sebagai obeng untuk mencorengkan clamp hose (during cleaning 3E471 A/B)	Pekerjaan dihentikan sementara dan pahat diganti dengan obeng minus selalu menggunakan tools yang benar	Hidayat	Engineering	Hidayat	Engineering	2-2 Improper use of tools		Completed
38	2006-SS-2691	21/12/2006	8-T-202 A/B	Plates form yang di depan 8-T-202 A/B handlingnya sudah lepas baik sebelah kiri maupun kanan	Mohon di pasang kembali dan diganti dengan yang baru dengan cara di las/welding	Bahrudin	Engineering	M Sapendi	Engineering		6-2 Defective guards or protective devices	Inprogress
39	2006-SS-2692	25/12/2006	Scrap Shelter	Lampu penerangan (jenis Neon TL ), ada yang lepas dari dubukannya, sehingga posisinya menggantung pada tabel power aisle.	Segera di perbaiki	Sonjaya	Maintenance	Yoyok Wardaya	Logistic and Distribution		6-1 Defective equipment	Inprogress
40	2006-SS-2699	28/12/2006	APU 1 - 2	Talang atau gutter di atas Additive room/APU 1/2 sudah korosi dan bocor, air hujan mengalir lewat drinding dan membasahi pintu, sehingga pintu lama karaman juga akan korosi. Akibatnya juga ada yang bocor dan bisa	Talang diganti dengan yang baru	M Sapendi	Engineering	Sumarsono	HSEQ		6-1 Defective equipment	Inprogress
41	2006-SS-2694	26/12/2006	LIFT APU TR-3	Warning light, lift APU TR-3 Lantai dasar tidak menyala saat lift depressurisasi. Dan untuk lantai 4 lift APU TR-3 warning light tidak terpasang di dubukannya	Atap yang bocor ditambah	M Sapendi	Engineering	Sumarsono	HSEQ		6-1 Defective equipment	Inprogress
42	2006-SS-2695	26/12/2006	Lantai Dasar TR2	Ditemukan 6" gate valve yang terpasang pada pipa header steam yang terdapat di lantai dasar TR-2 tepatnya sebelah ujung barat - Utara Train 2 bocor pada bagian stemnya	Lantai dasar perbaiki sambungan label warning light	Sonjaya	Maintenance	Arzis Mardy	Maintenance		6-1 Defective equipment	Inprogress
43	2006-SS-2696	28/12/2006	STORE	Rak Pipa di STORE sudah semakin keratan.	Permasalahan warning light di lantai 4 lift	Sonjaya	Maintenance	Arzis Mardy	Maintenance		6-1 Defective equipment	Inprogress
44	2006-SS-2697	28/12/2006	STORE OFFICE	Cover AC split rusak / hampir jatuh	Gaslet pada stem valve tersebut diganti jika TR-1 atau boiler shutdown	Bahrudin	Engineering	Ichaq Sumartono/hadij	Engineering		6-1 Defective equipment	Inprogress
45	2006-SS-2698	28/12/2006	APU 1 - 2	Truck pengangkut lumpur/aglom dengan muatan ~ 7 ton dari lump shelter melindas fire hose yang digelar (dalam kondisi kosong) di antara instrument air dan APU area	Memasang barikade kuning untuk menghalangi orang mendekati ke valve tersebut	Daliyo	HSEQ	Ichaq Sumartono/hadij	Engineering		6-1 Defective equipment	Inprogress
					Penggantian besi yang berkarat + painting	M Sapendi	Engineering	Tri Djoko Winarno	Logistic and Distribution		6-1 Defective equipment	Inprogress
					Perbaikan temporary cover AC Split (di laban)	Astori	I.T and Services	Tri Djoko Winarno	Logistic and Distribution		6-1 Defective equipment	Completed
					Perbaikan permanent (pasang plat penguat)	Astori	I.T and Services	Tri Djoko Winarno	Logistic and Distribution			Inprogress
					Memperhatikan kembali kepada sopir truck agar jalan memutar supaya tidak melindas hose	Maulana Hazmi	Logistic and Distribution	Sumarsono	HSEQ			Inprogress
					Pasang safety cone di jalan tempat welding berada	Sumarsono	HSEQ	Sumarsono	HSEQ	1-1 Violation (by individual)		Completed
					Mempertanyakan kepada semua safety cone pada area di mana fire hose melintas/menyeberang jalan	Sumarsono	HSEQ	Sumarsono	HSEQ	4-1 Improper decision making or lack of judgment		Completed



Sub Standard Report December 2006

No	Nomor	Date	Location	Description	Corrective Action	Action By	Dept Act	Originator	Dept Orig	Action	Condition	Status
46	2006-SS-2700	27/12/2006	BOG (7-C-352)	Perbaikan checker plate di BOG area (7-C-351 + 7-C-352) pada saat team workshop mengelas stopper di dekat 7-C-352. Keluar api dari flange sebelah barat 7-C-352 dan bisa di padamkan kemudian dilakukan gas test ulang setelah tidak ada indikasi kebocoran pekerjaan di mulai lagi dengan syarat body 7-C-352 di siram dengan air dan di tutup terpalulin	Yakin kan setelah berhenti/istirahat sebelum pengelasan di gas test Alat pemadam api harus sedekat mungkin dengan las Informasikan saat safety talk mendatang	Bahrudin	Engineering	Bahrudin	Engineering	1-1 Violation (by individual) 4-1 Improper decision making or lack of judgment		Inprogress
47	2006-SS-2708	29/12/2006	APU 1 - 2	Air menggenangi di lantai 4 APU building (deritikan pias di lantai 2 dan 3) dikarenakan banyak atap yang sudah bocor, sealing/cover body allo dan backdruah serta atap concrete di lantai lima juga terjadi rembesan yang cukup besar sehingga menyebabkan genang	Memperbaiki lantai concrete (disemen kembali tempat-2 yang bocor) Memperbaiki/mengganti talang air yang rusak, menambal atap Menutup semua jendela yang ada di gedung APU	M Sapendi	Engineering	Didik Rohasanto	Production	4-9 Other		Inprogress
48	2006-SS-2709	29/12/2006	APU 1 - 2	Checked plate di lantai 5 1/2 dan lima gedung APU1/2 sudah banyak yang keropos/bed corroded	Mengganti checked plate	Bahrudin	Engineering	Didik Rohasanto	Production	4-9 Other	Kurang perawatan (pencegatan)	Inprogress
49	2006-SS-2702	28/12/2006	Tool Room Workshop	Ditemukan kunci pas di tool room workshop tidak sesuai dengan design ukuran awal. Akibat perubahan piasita material karena umur pemakaian. - Kunci pas 36 --> ujung 39mm, tengah 37mm - kunci pas 36 --> ujung 40mm, tengah 30mm - Kunci pas 32 --> ujung 35	Melakukan pembersihan korosi dan pengecatan ulang Ganti kunci pas yang rusak	Arzis Mardy	Maintenance	Arzis Mardy	Maintenance	6-1 Defective equipment		Inprogress
50	2006-SS-2710	29/12/2006	APU 1 - 2	Emergency exit doors were not closed properly (opened by tying it to the outside railing), therefore during rainy season, rain water splashed on the flooring of the additive building (2nd & 4th floor) making it wet and slippery. There is one place where the water puddle is exactly in front of the exit door to the staircase, which if walk thru making employee boots wet and slippery to decent the stairs.	Repair the emergency door accordingly	M Sapendi	Engineering	Kamarudin bin Kasim	Finance		6-1 Defective equipment 8-6 Other	Inprogress
51	2006-SS-2701	28/12/2006	Lantai Dasar TR-1	Ditemukan pipa drain dari 1-P-406 A disambung memalal hose warna hitam dan panjang hose tidak mencapai sebaran sehingga air drain membasahi lantai. Lantai basah dapat cepat menimbulkan jamur sehingga menjadi licin	Ganti hose dengan yang lebih panjang dan berwarna kuning agar buangan drain tersebut bisa langsung ke selokan jika untuk permainan disarankan hose diganti dengan pipa	Krisman Siturus	Maintenance	Ichaq Sumartonoheadji	Engineering	1-1. Violation (by group)		Inprogress
						Krisman Siturus	Maintenance	Ichaq Sumartonoheadji	Engineering			Inprogress



**Hasil Analisis CLC (Comprehensive List of Causes)  
Immediate Cause 2006**

		January			February			March			April			May			June			July		
<b>Tools, Equipment &amp; Vehicle Description</b>		SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN
6_1	Defective equipment	19	1	1	46	6	1	28	1	1	19	1	7	6	1	1	7	1		11	1	1
6_2	Inadequate equipment				1						1											
6_3	Improperly prepared equipment	9	3		13	1		4	2	1	2									1		
6_4	Defective tools										3	1	3	1						1		
6_5	Inadequate tools										1	1										
6_6	Improperly prepared tool																					
6_7	Defective vehicle																					
6_8	Inadequate vehicle for the purpose																					
6_9	Improperly prepared vehicle							1														
6_10	Other						1						1			1			1			1
<b>Work Exposure to Description</b>																						
7_1	Fire or Explosion																					1
7_2	Noise																					1
7_3	Energized electrical system																					
7_4	Energized system, other than electrical																					
7_5	Radiation																					
7_6	Temperature extremes						1															
7_7	Hazardous Chemical			2																		1
7_8	Mechanical Hazard																					
7_9	Clutter or Debris																					
7_10	Storms or acts of nature																					
7_11	Slippery floors or walkways						5		2													
7_12	Other																					
<b>Work Place Environment / Layout Description</b>																						
8_1	Congestion or restricted motion												3			1						1
8_2	Inadequate or excessive illumination																					
8_3	Inadequate ventilation																					
8_4	Unprotected height																					
8_5	Inadequate work place layout												1			9						2
	Control less than adequate																					
	displays less than adequate																					
	labels less than adequate																					
	location out of reach or sight																					
	conflicting information is presented																					
8_6	Other												1									
		42	6	3	118	18	6	72	4	8	52	6	12	66	10	12						

**Hasil Analisis CLC (Comprehensive List of Causes)  
Immediate Cause 2006**

Follow Procedure Description	August			September			October			November			December			SS	NM	IN	TOT
	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN				
<b>Follow Procedure ( 1 )</b>																			
1_1 Violation by Individual	8	1		1			1			10			2			62	7	4	73
1_2 Violation by group	3						3				1		4			15	3	1	19
1_3 Violation by Supervisor	5			1			2						4			23	0	1	24
1_4 Operation of equipment without authority																2	1	0	3
1_5 Improper position or posture for the task																1	0	0	1
1_6 Overexertion of physical capability																0	0	0	0
1_7 Work or motion at improper speed																0	0	0	0
1_8 Improper lifting																0	0	0	0
1_9 Improper loading													2			0	0	0	0
1_10 Shortcuts	2			2						3						6	0	0	6
1_11 Other																3	0	3	6
<b>Use of Tools or Equipment ( 2 )</b>																			
2_1 Improper use of equipment					1		2						1			3	2	0	5
2_2 Improper use of tools									2			3				6	0	1	7
2_3 Use of defective equipment (aware)	1									1						4	0	1	5
2_4 Use of defective tools (aware)																0	0	0	0
2_5 Improper placement of tools, equipment or materials				1					2							7	1	0	8
2_6 Operation of equipment at improper speed													1			0	1	0	1
2_7 Servicing of equipment in operation													1			1	0	1	2
2_8 Other																0	0	0	0
<b>Use of Tools or Equipment ( 3 )</b>																			
3_1 Lack of knowledge of hazard present	1			2			1			1						49	11	6	66
3_2 PPE not used	3						8		4		2					22	0	0	22
3_3 Improper use of proper PPE	1						1									2	0	0	2
3_4 Servicing of energized equipment								1								0	0	0	0
3_5 Equipment or materials not secured																4	0	0	4
3_6 Disable guard, warning system or safety devices													2			2	0	0	2
3_7 Removal of guard, warning system or safety devices																0	0	0	0
3_8 PPE not available																1	0	0	1
3_9 Other																0	0	1	1
<b>Inattention/Lack of Awareness ( 4 )</b>																			
4_1 Improper decision making or lack of judgment	5	2	2	5	1		3	1	4	4	1	2	1			42	21	6	69
4_2 Distracted by other concerns	1			2	2				3			3				29	5	9	43
4_3 Inattention to footing and surroundings			1										1			1	1	1	3
4_4 Horseplay																0	0	0	0
4_5 Acts of violence														1		1	0	1	1
4_6 Failure to warn													1			0	0	0	0
4_7 Use of drugs or alcohol									3		3	1	2			7	2	2	11
4_8 Routine activity without thought		1		1					1		3					8	1	1	10
4_9 Other	3			1	1											0	0	0	0
<b>Protective System ( 5 )</b>																			
5_1 Inadequate guard or protective devices				1			4		1		6					29	3	3	35
5_2 Defective guards or protective devices	1			1					2		1	1				5	1	0	6
5_3 Inadequate PPE										2						1	2	0	3
5_4 Defective PPE																0	0	0	0
5_5 Inadequate warning system																0	2	0	2
5_6 Defective warning system																0	0	0	0
5_7 Inadequate isolation of process or equipment																0	0	2	2
5_8 Inadequate safety devices																0	0	0	0
5_9 Defective safety devices																0	0	0	0
5_10 Other																0	0	0	0

**Hasil Analisis CLC (Comprehensive List of Causes)  
Immediate Cause 2006**

		August			September			October			November			December						
<b>Tools, Equipment &amp; Vehicle Description</b>		SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	Tot
6_1	Defective equipment	15	1	1	3	1	1			1	4		3	25	1	1	176	21	20	217
6_2	Inadequate equipment										1						3	0	0	3
6_3	Improperly prepared equipment	1		1												1	28	8	3	39
6_4	Defective tools		1									3				1	3	4	7	14
6_5	Inadequate tools					1										1	1	2	1	4
6_6	Improperly prepared tool					1				1				1			2	1	0	3
6_7	Defective vehicle																0	0	0	0
6_8	Inadequate vehicle for the purpose	1															1	0	0	1
6_9	Improperly prepared vehicle																0	0	1	1
6_10	Other													1			1	0	5	6
																	0	0	0	0
<b>Work Exposure to Description</b>																				
7_1	Fire or Explosion			1													0	1	1	2
7_2	Noise																0	0	0	0
7_3	Energized electrical system																0	1	0	1
7_4	Energized system, other than electrical										2						0	2	0	2
7_5	Radiation																0	0	0	0
7_6	Temperature extremes																1	0	0	1
7_7	Hazardous Chemical													1			3	0	0	3
7_8	Mechanical Hazard	2												1	1		3	1	1	5
7_9	Clutter or Debris																0	0	0	0
7_10	Storms or acts of nature													2			8	2	0	10
7_11	Slippery floors or walkways	1															0	0	0	0
7_12	Other																0	0	0	0
																	0	0	0	0
<b>Work Place Environment / Layout Description</b>																				
8_1	Congestion or restricted motion	3									1						4	1	0	5
8_2	Inadequate or excessive illumination	2															6	0	0	6
8_3	Inadequate ventilation				3		2			3							6	3	0	9
8_4	Unprotected height									2				1			0	3	0	3
8_5	Inadequate work place layout				1												13	0	1	14
	Control less than adequate																0	0	0	0
	displays less than adequate																0	0	0	0
	labels less than adequate																0	0	0	0
	location out of reach or sight																0	0	0	0
	conflicting information is presented													2			5	0	1	6
8_6	Other	2				1											0	0	0	404
																	350	44	41	435



SS, NM and Incident Data Based on Location 2008

LOCATION	Jul			Aug			Sept			Oct			Nov			Dec			Total			
	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	T
ANALYSER HOUSE 0																			0	0	0	0
B3 SHELTER																			1	0	0	1
BOG RECOVERY				3			1												14	0	1	15
BOILER STEAM GENERATION				1									3	2					13	3	0	16
BUTENE STORAGE																			0	0	0	0
CHANDRA ASRI (CAPC) C2 SKID																			1	0	0	1
DESALINATION UNIT				1															9	1	0	10
ETHYLENE TANK				1															1	0	0	1
ETU EFFLUENT TREATMENT UNIT	1		1	1						1									8	1	2	11
FBCS FACILITY ROOM																			1	0	0	1
FIREWATER SYSTEMS								1											2	0	0	2
FLARE								1											3	0	0	3
FUEL OIL TANK				1															8	0	0	8
INCENERATOR				1															2	0	0	2
INSTRUMENT AIR COMPRESSOR								1											1	0	2	3
JETTY															2				18	1	6	25
LPG STORAGE			2	1			1												6	5	1	12
POTABLE WATER SYSTEMS				2															25	1	0	26
SEAWATER INTAKE AND CHLORINATION AREA 1	1																		11	2	1	14
TREATED COOLING WATER SYSTEM																			4	0	0	4
UTILITIES 1	1			3	1														13	1	2	16
Demin Water				1															2	1	3	6
CHROMIUM ACTIVATION UNIT				1						1									4	0	1	5
CFU - STRUCTURE				2															3	0	0	3
CFU - FEED PURIFICATION UNIT 0				1															8	0	0	8
RSU 0				3															4	2	1	7
SRU - SOLVENT RECOVERY UNIT										1									0	0	0	0
																			0	0	0	0
																			0	0	0	0
ANALYSER HOUSE 1																			59	8	6	73
ANALYSER HOUSE 2																			28	4	0	32
APU 1-2	4			4		1	2	1	1			0							20	16	4	42
PBU 1-2	1			1															28	10	1	39
PE WAREHOUSE TRAIN 1-2	2	2	1	4	2	1	5	1							2	1			77	11	5	93
PPUPU 1	2			3	1		2	1							1				37	2	9	48
PPUPU 2	1		1	8			7	1											0	0	0	0
																			1	0	0	1
RSU 3																			1	0	0	1
SEA WATER INTAKE AND CHLORINATION TRAIN 3																			0	0	0	0
UTILITIES 3																			0	0	0	0
																			1	0	0	1
																			0	0	0	0
ANALYSER HOUSE 3																			9	2	0	11
ANALYSER HOUSE 4																			4	0	0	4
APU 3-4	1			1															3	1	1	5
PBU 3-4								1			1								1	0	1	2
PE WAREHOUSE TRAIN-3																			0	0	0	0
PU 3																			6	1	1	8
																			2	0	0	2
LABORATORY BUILDING																			0	1	0	1
TC BUILDING								1											1	1	2	4
TSC BUILDING																			0	0	0	0
TSC MACHINE HALL																			9	3	1	13
																			8	0	1	9
CONTROL BUILDING	1			1	1														8	0	0	8
M E WORKSHOP	1			1															6	1	0	7
MAIN PLANT SUBSTATION								2											2	1	0	3
MAINT ENG BUILDING	1								1										0	0	0	0
OFFLOADING SUBSTATION																			1	0	0	1
OPERATION MEETING ROOM																			1	0	0	1
OUT STATION AND RACK ROOM AT TRAIN-3																			1	0	0	1
PRIMARY SUBSTATION																			1	0	0	1





SS, NM and Incident Data Based on Location 2006

LOCATION		Jul			Aug			Sept			Oct			Nov			Dec			SS	NM	IN	TOT
		SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN	SS	NM	IN				
Store	CHEMICAL SHELTER																		1	0	0	1	
	CHEMICAL WAREHOUSE																		3	0	1	4	
	SPARE PART STORE							1							1				5	0	0	5	
Office/ Building	ADMINISTRATION BUILDING				4		1												0	0	0	0	
	AMENITIES				1														6	0	3	9	
	JAKARTA OFFICE																		7	0	0	7	
	KOPERASI BUILDING																		0	0	0	0	
	MOSQUE (MASJID) BUILDING																		0	0	0	0	
	P. L AND TNT BUILDING																		0	0	0	0	
	SECURITY GATE				1														3	1	0	4	
	Training Center																		1	0	0	1	
	Alindo Skid																		0	1	0	1	
	EVS - FIRE STATION																		0	0	1	1	
	FPU-FEED PREPARATION UNIT 3																		0	0	0	0	
	LAY DOWN AREA TR3																		3	0	0	3	
	OTHERS(LAIN LAIN)				1														6	1	2	9	
	PARKING AREA	1			1														2	0	0	2	
	PLN FENCE																		0	0	0	0	
	ROADS GATE A - C																		1	0	0	1	
	UPS AND BATTERIES ROOM																		0	0	0	0	
	WEIGHBRIDGE (TIMBANGAN)								1			1							2	2	0	4	
KENDARAAN								1										1	0	1	2		
Complex	BCI							1										0	0	1	1		
	Jalan Toll				1													1	0	0	1		