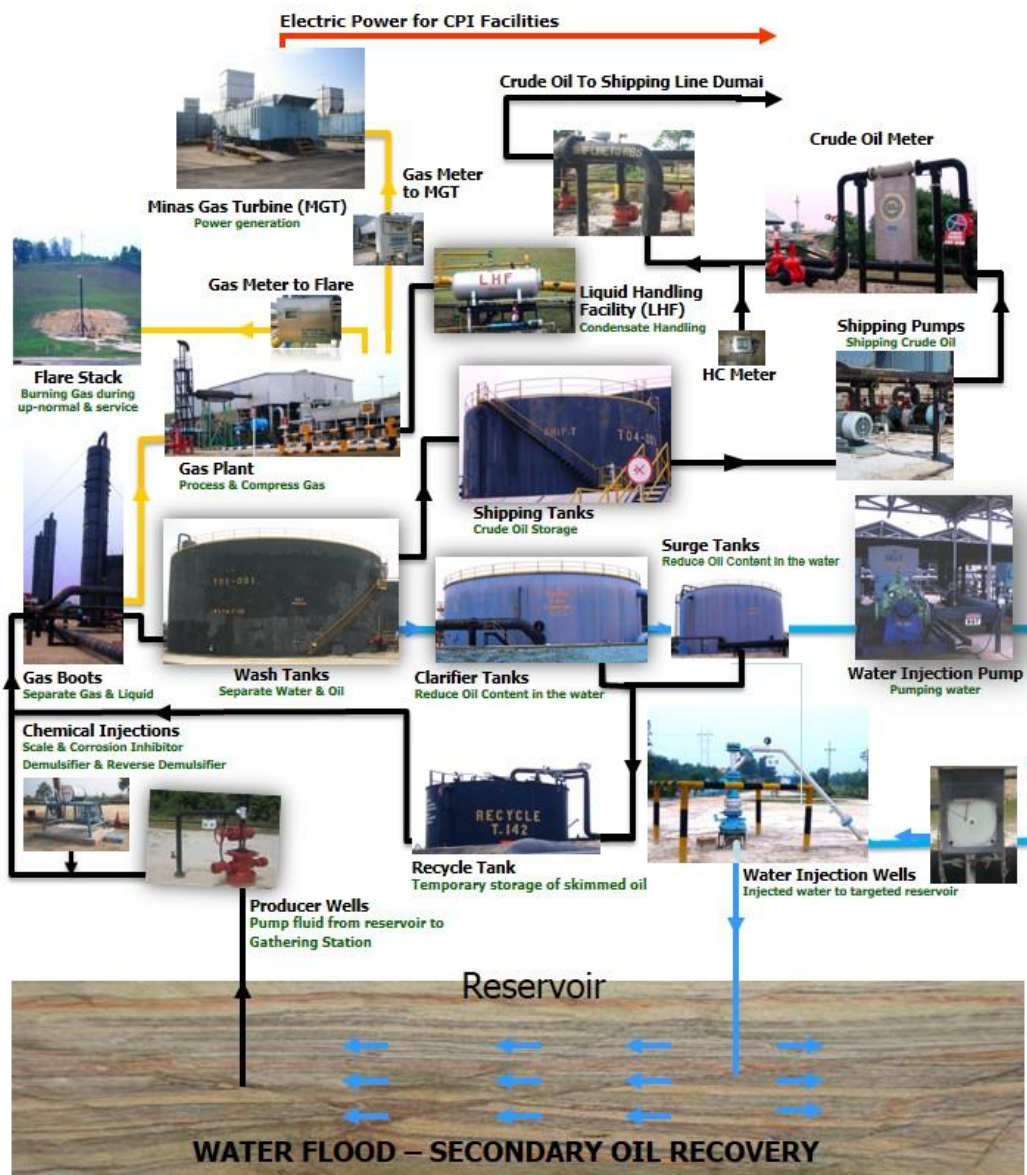


# FLUID PROCESS *MINAS TYPICAL*





## DURI CRUDE OIL & SUMATRAN LIGHT CRUDE OIL

From Dumai Tank Farm

Refer to samples received at TS Lab Duri in Jul 2007 – Jun 2008

Material Safety Data Sheet, Valid Jul 2008 – Jun 2009

Technology Support Laboratory

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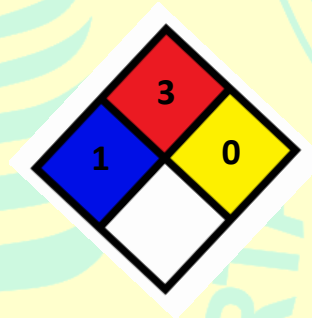
Phone 62-21-3512151 (Hunting)

Fax No. 62-21-3512064/3512065

### General Information

Synonyms: Crude Petroleum

Composition: A mixture of hydrocarbons.



	<u>DURI CRUDE OIL</u>	<u>SUMATRAN LIGHT CRUDE OIL</u>
Density, at 60 °F :	0.92 – 0.94 gr/cc	0.85 – 0.87 gr/cc
Solid Point, °F :	45-55	85-95
Flash Point, °F :	145-165	5-70
Pour Point, °F :	50-60	90-100

### Hazard Analysis

Fire Hazard: Moderate, when exposed to heat or flame.

Disaster Hazard: Moderately dangerous; when heated to decomposition, it emits toxic fumes; it can react with oxidizing materials.

### Countermeasures

SECTION 1. ----- CHEMICAL IDENTIFICATION -----

CATALOG # : **16075 DCO**

NAME : **DURI CRUDE OIL**

CATALOG #: **16076 SLCO**

NAME: **SUMATRAN LIGHT CRUDE OIL**

SECTION 2. ----- COMPOSITION/INFORMATION ON  
INGREDIENTS ----- SYNONYMS: CRUDE PETROLEUM

SECTION 3. ----- HAZARDS IDENTIFICATION --  
----- LABEL PRECAUTIONARY STATEMENTS  
IRRITANT

RISK OF SERIOUS DAMAGE TO EYES.

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY  
OF WATER AND SEEK MEDICAL ADVICE.  
WEAR SUITABLE PROTECTIVE CLOTHING.



SECTION 4. ----- FIRST-AID MEASURES-----

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.  
IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER. IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.  
IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED. PERSON IS CONSCIOUS, CALL A PHYSICIAN.  
WASH CONTAMINATED CLOTHING BEFORE REUSE.

SECTION 5. ----- FIRE FIGHTING MEASURES -----

EXTINGUISHING MEDIA, WATER SPRAY, CARBON DIOXIDE, DRY CHEMICAL POWDER OR APPROPRIATE FOAM. SPECIAL FIREFIGHTING PROCEDURES, WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

----- CHEMICAL SAFETY GOGGLES, RUBBER BOOTS AND HEAVY RUBBER GLOVES.  
ABSORB ON SAND OR VERMICULITE AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL. WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. ----- HANDLING AND STORAGE-----

----- REFER TO SECTION 8.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL

PROTECTION----- CHEMICAL SAFETY GOGGLES, RUBBER GLOVES, SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED, AVOID CONTACT AND INHALATION. DO NOT GET IN EYES, ON SKIN, ON CLOTHING. SEVERE EYE IRRITANT.  
WASH THOROUGHLY AFTER HANDLING, KEEP TIGHTLY CLOSED, STORE IN A COOL DRY PLACE.

SECTION 9. ----- PHYSICAL AND CHEMICAL

PROPERTIES ----- APPEARANCE AND ODOR LIQUID.

SECTION 10. -----STABILITY AND REACTIVITY -----

INCOMPATIBILITIES, STRONG OXIDIZING AGENTS, HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS  
TOXIC FUMES OF: CARBON MONOXIDE, CARBON DIOXIDE

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

ACUTE EFFECTS MAY BE HARMFUL BY INGESTION OR SKIN ABSORPTION.  
CAUSES EYE IRRITATION.  
MAY CAUSE SKIN IRRITATION, CHRONIC EFFECTS DERMATITIS,  
LUNG IRRITATION CHEMICAL PNEUMONITIS.  
TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL,  
AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY  
INVESTIGATED.  
ONLY SELECTED REGISTRY OF TOXIC EFFECTS OF CHEMICAL  
SUBSTANCES (RTECS) DATA IS PRESENTED HERE. SEE ACTUAL ENTRY IN  
RTECS FOR COMPLETE INFORMATION.

SECTION 12. ----- ECOLOGICAL INFORMATION --  
----- DATA NOT YET AVAILABLE.



SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN AFTERBURNER AND SCRUBBER.  
OBSERVE LOCAL ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION -----

PROPER SHIPPING NAME : PETROLEUM CRUDE OIL  
HAZARD CLASS / PACKING GROUP: 3; DETERMINE FLASH POINT TO ACCURATELY CLASSIFY PACKING GROUP  
DOT IDENTIFICATION NUMBER : UN 1267  
DOT SHIPPING LABEL : FLAMMABLE LIQUID

SECTION 15. ----- REGULATORY INFORMATION -----

----- CUSTOM INFORMATION

IRRITANT

R 41

RISK OF SERIOUS DAMAGE TO EYES. S 26

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.

S 36

WEAR SUITABLE PROTECTIVE CLOTHING. REVIEWS, STANDARDS, AND REGULATIONS OEL=MAK IARC CANCER REVIEW:ANIMAL INADEQUATE EVIDENCE IMEMDT 33,87,84

IARC CANCER REVIEW:GROUP 3 IMSUDL 7,252,87

NOES 1983: HZD X5299; NIS 200; TNF 29566; NOS 139; TNE 633350; TFE 249735

NOES 1983: HZD Y1079; NIS 36; TNF 3132; NOS 59; TNE 92890;

TFE 61238 EPA TSCA SECTION 8(B) CHEMICAL INVENTORY

EPA TSCA TEST SUBMISSION (TSCATS) DATA BASE, JULY 1996

SECTION 16. ----- OTHER INFORMATION-----

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE.

TECHNOLOGY SUPPORT LABORATORY

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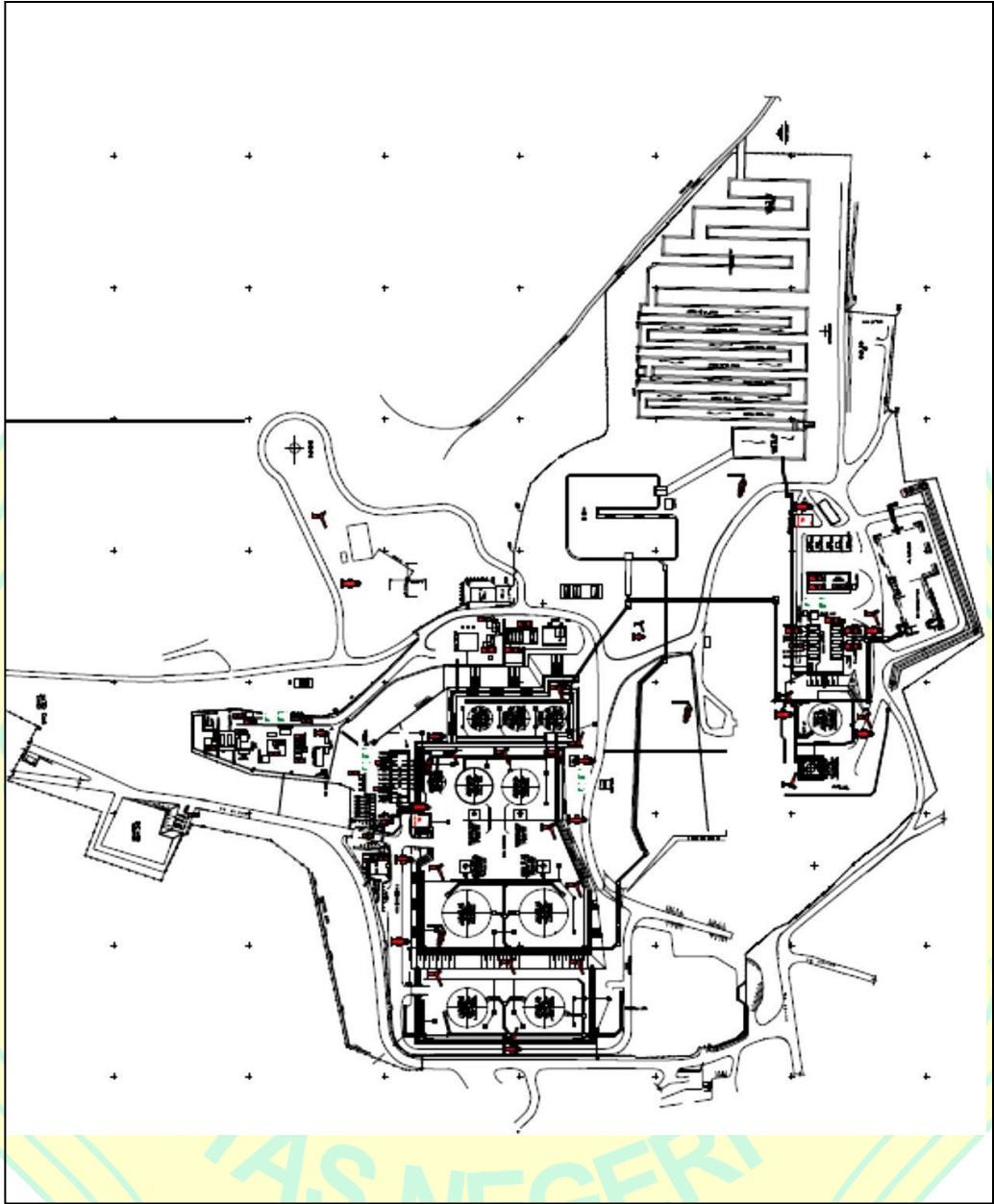
Document No.	Issue No.	Issue Date
TPS.MIN.011	1	21 May 2018



### Taktik Prioritas Minas GS V

<b>Fasilitas:</b> Minas GS V			
<b>Struktur Dalam:</b> Kantor, Tangki, Gas Turbin Shelter, Pompa			
<b>Detail Panggilan Darurat:</b> Hendra Husni 31440 (Day) 0811-7655-38(Night), Operator (31441 - 24 hours)			
<b>Jalan Masuk Fasilitas:</b> Main gate disisi timur, pintu darurat disisi selatan (x2), sisi utara barat (x1), dan sisi utara (x1)		<b>Jalan Access Struktur:</b> Kantor – pintu utama disisi A, Pintu ke MCC disisi D	
<b>Sumber Air:</b> Fire water pit dan 3 x fire water pump utara timur dari main gate. Ada manifold untuk connect ke system dilokasi fire pump. Water pit punya refill line. Fire water ring main punya 15 x dry barrel hydrants			
<b>Sistem Alat Pemadam:</b> 20 x Fire Water Monitors. Tangki didalam dike.		<b>Alat Pemadam Api Ringan:</b> 18 x DCP racun api dan 7 x CO2 Racun api portable. 5 x DCP beroda dan 1 x CO2 beroda.	
<b>Penghuni Siang:</b> 50 Senin ke Jumat, 18 Sabtu/ minggu		<b>Penghuni Malam:</b> 9	
<b>Pertimbangan Penyelamat:</b> Muster area di main gate. Harus Pakai Halligan untuk membuka pintu MCC dari luar			
<b>Bahan Bahaya:</b> Hydrogen Gas (UN 1965) Hydrogen Liquid  Hydrogen Sulfide (UN 1053) Silicon Inhibitor (UN 1859) Toluene (UN 1294)	<b>Jenis/ Berapa Banyak:</b> Dalam Pipa Gas  Dalam tangki (Shipping tank penuh, tangki lain antara 0.2” s/d 3’) Potensi di proses  < 1000 liters  < 1000 liters	<b>Lokasi:</b> Seluruh proses tangki dan workshop Daerah Tangki  Seluruh proses Chemical Shelter  Chemical Shelter	<b>NAERG Guide:</b> NAERG2008 - 115  NAERG2008 - 128  NAERG2008 - 117 NAERG2008 - 125 NAERG2008 - 130
<b>Pertimbangan Keselamatan Fire Fighter:</b> Ada resiko untuk H <sub>2</sub> S, bahaya tenaga listrik di MCC, dan switch building, bahaya kebisingan didaerah generator			
<b>Dimensi Struktur:</b> Kantor – 15,580 ft <sup>3</sup>  Switch building – 30,000 ft <sup>3</sup>  Shipping Tank – D = 45 ft  Wash Tank – D = 120 ft  Clarifier Tank – D = 100 ft  Surge Tank – D = 80 ft	<b>Agent Pemadam Memerlukan:</b> Air (Class A foam), CO <sub>2</sub> / DCP di MCC  Air (Class A Foam) untuk elemen struktur, CO <sub>2</sub> / DCP didaerah alat listrik  744 Gal Class B Foam concentrate + 24,043 Gal Air = 24,787 Gal Solusi  509 Gal Class B Foam Concentrate + 16,440 Gal Air = 16,948 Gal solusi  353 Gal Class B Foam Concentrate + 11,416 Gal Air = 11,769 Gal Solusi  227 Gal Class B Foam Concentrate + 7,307 Gal Air = 7533 Gal Solusi	<b>Flow Memerlukan:</b> 156 gpm  300 gpm  381 gpm untuk 65 menit  1,130 gpm untuk 15 menit  785 gpm untuk 15 menit  502 gpm untuk 15 menit	
<b>Pertimbangan Perlindungan Struktur:</b> Pastikan sluice gate di dike tangki tertutup, melindungi exposures dengan fixed monitor dan portable monitor			

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TPS.MIN.011	1	21 May 2018



AS NEGERI



## RIWAYAT HIDUP



Robiatul Adawiyah, lahir di Bekasi pada tanggal 26 Maret 1997. Anak ke-1 dari 2 bersaudara, pasangan Bapak Odris Saputra (Alm.) dan Ibu Rinah. Beralamat di Kampung Asem RT 10 RW 06 Desa Babelan Kecamatan Babelan Kabupaten Bekasi.

Lulus Sekolah Dasar SDN Babelan Kota 07 pada tahun 2009, kemudian melanjutkan Sekolah Menengah Pertama di SMPN 1 Babelan dan lulus pada tahun 2012. Selanjutnya masuk Sekolah Menengah Atas di SMAN 1 Babelan dan lulus pada tahun 2015. Kemudian melanjutkan ke Program Studi Strata Satu (S1) Universitas Negeri Jakarta pada Fakultas Teknik dengan Program Studi Pendidikan Teknik Mesin, Konsentrasi Teknik Keselamatan dan Proteksi Kebakaran.

Selama perkuliahan penulis mengikuti berbagai macam organisasi, yaitu sebagai Staff PSDM BEMP Teknik Mesin pada tahun 2016-2017 dan Sektetaris BEMP Teknik Mesin pada tahun 2017-2018, Staff Perdagangan BEM Fakultas Teknik pada tahun 2018-2019, Staff Resimen Mahasiswa pada tahun 2016-2018 dan Anggota Racana UNJ pada tahun 2015 hingga sekarang.