

# IGL SERVICES SDN. BHD. (1090632-P)

# CORPORATE PROFILE

B-9-8<mark>, Megan</mark> Avenue II 12 Jalan Yap Kwan Seng 50450 Kuala Lumpur

**\*\*:** +603-2161 0884

+603-8062 4671

**墨:** +603-2161 1489

enquiries@igl.com.my

igl.com.my

#### **About IGL**

IGL Services Sdn Bhd was incorporated in 2014, following the establishment of IGL Process Solutions in 2008. IGL is a local entity owned and managed by Bumiputras. IGL is an engineering consultant, providing specialist services to the oil & gas and chemical industries.

IGL offers services in Technical Safety, Asset Integrity, Measurement and Allocation, Operations Support, Process Optimization as well as process engineering. In addition, our stable of associates and partners expand and enhance our capabilities to provide services in adjacent areas. IGL prioritizes technical competence and delivering services within schedule.

IGL provides training as a HRDF registered company.

#### **Company Address**

- IGL Services' registered business address is: B-9-8, Megan Avenue II 12 Jalan Yap Kwan Seng 50450 Kuala Lumpur.
- IGL Services' working offices are located in Puchong Prima, Selangor, next to the LRT station.

# Company Information

Company Status: Bumiputra – 100%

Paid Up Capital - RM100, 000

### Vision Statement

To be a trusted engineering asset, establishing long term relationships with our clients and partners, while maintaining value to our shareholders and employees.

## **Quality Policy**

IGL is committed to deliver our services to fully satisfy the requirements of our clients. We shall endeavor to:

- strictly adhere to the requirements of our quality management system to meet corporate and project objectives;
- maintain the quality of our work by monitoring and controlling our performance; and
- gauge the effectiveness of our quality management system to provide guidance for continuous improvement

IGL's management and staff are committed and responsible for execution of this policy.

#### **HSE Policy**

We at IGL Services Sdn Bhd recognize the importance of Health, Safety and Environmental responsibility in the successful execution of all our activities. We will strive for a "no accident – no harm to people or the environment" policy. We believe that all actions taken by our management, or any individual employee, must consciously promote the health and safety of our personnel, all who attend our places of work and all who will work on, or are affected by plant or facilities designed by us. We will endeavor to take a pro-active role in the integration of our Safety and Environmental Management System within the Safety and Environmental Management Systems of our Clients to meet the expected target levels of safety and environmental care. Achievement of this policy involves all staff and our subcontractors, who are individually responsible for maintaining high standards of safety and environmental care in their day to day activities, resulting in a continually improving safety culture within IGL.

# In order to meet this goal, we must:

- Clearly define these requirements as the responsibility of every Manager, Supervisor and Employee;
- Take reasonable care for our own safety and for the safety of any others who may be affected by our acts or omissions;
- Operate our business and facilities in a manner that is economical in the use of energy and raw materials and which promotes sound conservation practice and good stewardship of our environment;
- Co-operate with our Clients by complying with safety and environmental instructions and relevant site safety and environment procedures;
- Maintain safe and healthy working conditions, equipment and systems of work;
- Develop and maintain a positive culture with respect to safety and the environment;
- Have, and maintain a complete understanding of our Client's safety policy and clearly focus our efforts on meeting or exceeding those requirements;
- Ensure that every facility designed by us is rigorously assessed so as to comply with our Health, Safety and Environmental Policy as well as all relevant local authority, national and international laws and regulations and industry standards with regards to safety;

- Provide appropriate information, equipment, training and supervision to our employees;
- Ensure that proper procedures and guidelines are available and are used in executing our work;
- Provide means to voice safety and environmental concerns and redress them;
- Systematically identify hazards, assess risks to personnel and the environment and take
  necessary action to eliminate hazards as far as practicable by the choice of design
  measures which provide adequate means for prevention, control and mitigation to meet
  our Client's safety and environmental goals;
- Consider these requirements as part of our subcontractor selection process and ensure conformance during execution.

# **Company Information**

Company Status: Bumiputra - 100%

Paid Up Capital - RM100, 000

#### **Directors**



# Ir. Razmahwata bin Mohamad Razalli (Wata)

- Position: Director / Principal Engineer
- BEM Professional Engineer with Practising Certificate in Chemical Engineering discipline
- MEng Chemical Engineering (Cambridge)
- MA (Cantab)
- Fellow, Institution of Engineers Malaysia
- Chartered Engineer
- Corporate Member, IChemE
- Certified Functional Safety Engineer, TUV
- 25 years' experience in oil and gas.



#### Ir. Razak Yakob

- Position: Director
- Over 20 years experience in the oil and gas industry
- BEM Professional Engineer with Practising Certificate in Petroleum Engineering discipline
- IEM Fellow
- Part Time Lecturer at the UCSI University

#### Services (Technical Safety)

Our HSE services include the following:

- RISK MANAGEMENT Process Safety Management (PSM), HSE Management Systems (HSEMS), Bow-Tie, Hazard Identification, (HAZID, HIREC)/ Hazard and Operability Study (HAZOP), Safety Integrated Level (SIL), Instrumentation Protection Function (IPF), Hazard and Effect Management Process (HEMP)
- RISK ASSESSMENT Fire and Explosion Study, Escape and Evacuation Risk Assessment (EERA), Temporary Refuge Risk Assessment (TRIA), Quantitative Risk Assessment, Dropped Object Study
- LOSS PREVENTION Philosophy, Active Fire Protection, Passive Fire Protection, Safety and Escape Routes Layout
- REGULATORY COMPLIANCE Onshore and Offshore Safety Cases/CIMAH, OSHA compliance Requirements, Drilling Ship Safety Case Based on IADC Guideline.
- TECHNICAL TRAINING Training for participants / facilitators / leaders for the above topics.

Our consultants have extensive experience in the HSE engineering, HSE Management System and HSE regulatory compliance locally and internationally. In addition, we have established a partnership agreement with HSE practitioners who are working on contract and project basis.

#### Services (Measurement and Allocation)

Our Metering services include the following:

- RISK MANAGEMENT Calculate exposure to measurement uncertainties via Uncertainty
  Budget Tables (UBT) methodology. Applicable to transport systems, FSO/FPSO offloading
  facilities, dynamic meters (liquid and gas)
- ASSET INTEGRITY Conduct measurement audits, either based on regulatory requirements, or company specific procedures. Troubleshoot onsite measurement systems.
- REGULATORY COMPLIANCE Prepare metering philosophies, validation/ calibration manuals, operating Manuals, specification for purchase of custody transfer metering systems.
- TECHNICAL TRAINING Training for participants / facilitators / leaders for the above topics.

Our consultants have extensive experience in the measurement system engineering, Management Systems and regulatory compliance locally and internationally. In addition, we have established a partnership agreement with practitioners who are working on contract and project basis.

#### **Services (Asset Integrity)**

Our HSE services include the following:

- RISK MANAGEMENT Preparation of Asset Integrity Management Systems (AIMS), and Technical Integrity Management Systems (TIPS)
- RISK ASSESSMENT Asset Integrity Audits, at management, design, construction and operational levels
- ASSET INTEGRITY Reliability, Availability and Maintainability (RAM), Safety Critical Element (SCE), Performance Standards, Failure Mode Effect Analysis (FMEA)
- TECHNICAL TRAINING Training for participants / facilitators / leaders for the above topics.

Our consultants have extensive experience in AIMS and brownfield works, where assessment of the existing facility is important to ensure effectiveness and reliability of new projects. IGL has access to a multi-disciplinary team to address onshore, offshore, upstream downstream and related industries.

#### **Services (Technical Training)**

We provide scheduled and ad hoc training for our clients. Training is provided in either public settings or arranged sessions at the client's location. Courses are published on our website. Examples of courses available

- Process Safety Management
- General Hazard Effects Management Process (HEMP)
- HAZOP as facilitator/ team member
- HAZID/ HIRARC as facilitator/ team member
- Operationalization of HSE Cases / PSM

#### SSM Form 9









BORANG 9 AKTA SYARIKAT 1965

[Seksyen 16(4)]

No. Syarikat - MyCoID

1090632 P

#### PERAKUAN PEMERBADANAN SYARIKAT SENDIRIAN

Dengan ini diperakui bahawa

#### IGL SERVICES SDN. BHD.

telah diperbadankan di bawah Akta Syarikat 1965, pada dan mulai dari 24 haribulan April 2014, dan bahawa syarikat ini adalah sebuah syarikat berhad menurut syer dan bahawa syarikat ini adalah sebuah syarikat sendirian.

Dibuat di bawah tandatangan dan meterai saya di Kuala Lumpur pada Certified True Copy:

24 haribulan April 2014.

MOHD FAIZAL BIN MOHD KHASIM Company Secretary (MIA 17555) Date: 2 9 APR 2014

DATO' MOHD NAIM DARUWISH

PENDAFTAR SYARIKAT MALAYSIA





# **Engineering Consultancy Practice Certificate**

(Borang F)

#### **AKTA PENDAFTARAN JURUTERA 1967** PERATURAN-PERATURAN PENDAFTARAN JURUTERA 1990 (PERATURAN 35)



No. Perakuan: 2016-7900-00000-BC-1470

#### LEMBAGA JURUTERA MALAYSIA

#### PERAKUAN PENDAFTARAN SEBAGAI AMALAN JURUTERA PERUNDING

INI ADALAH UNTUK MEMPERAKUI BAHAWA

Nama

Perbadanan Korporat

IGL SERVICES SDN. BHD.

Alamat:

**B-9-8 MEGAN AVENUE II** 

NO 12 JALAN YAP KWAN SENG 50450 KUALA LUMPUR W. PERSEKUTUAN (K.L)

MALAYSIA

Cawangan Kejuruteraan:

\*\* CHEMICAL, PETROLEUM \*\*

yang telah mematuhi kehendak-kehendak Akta Pendaftaran Jurutera 1967 dan telah membayar fee pendaftaran didaftarkan sebagai suatu AMALAN JURUTERA PERUNDING dalam cawangan kejuruteraan yang dinyatakan di atas tertakluk kepada syarat-syarat yang dinyatakan di bawah.

Syarat-syarat:

Perakuan pendaftaran ini akan habis tempoh pada 31 Disember 2020

Tarikh Dikeluarkan : 31 Januari 2020

(Ir. KAMALUDDIN BIN HAJI ABDUL RASHID) Yang Dipertua

(Ir. HIZAMUL-DIN BIN AB. RAHMAN) Pendaftar

## **HRDF Training Provider Registration Certificate**

No Siri: 1090632P



# SIJIL PENDAFTARAN PENYEDIA LATIHAN

AKTA PEMBANGUNAN SUMBER MANUSIA BERHAD, 2001

#### **IGL SERVICES SDN BHD**

adalah dengan ini didaftarkan sebagai penyedia latihan di bawah Kumpulan Wang Pembangunan Sumber Manusia

| Tarikh Diluluskan | Tarikh Tamat |
|-------------------|--------------|
| 23/02/2020        | 22/02/2023   |

26/02/2020 Tarikh Dikeluarkan

#### **PETRONAS License**



# LICENSE TO SUPPLY PRODUCT/SERVICE TO EXPLORATION AND OIL/GAS COMPANIES IN MALAYSIA

In exercising the powers conferred by Section 7, Petroleum Development Act 1974 and in accordance to Regulation 5 of the Petroleum Regulation 1974, delegated to me by the Prime Minister of Malaysia, I hereby issue the license under Regulation 3 of the Petroleum Regulation for the purpose of the above to:

Printed Date: 13.07.2018

IGL SERVICES SDN. BHD (1090632-P) B-9-8 MEGAN AVENUE II 12 JALAN YAP KWAN SENG 50450, KUALA LUMPUR

Details of License are as follows:-

Company's No : 1090632-P

Type of Company : LICENSE

Duration of License : 30.09.2018 - 29.09.2021

License Fee : RM 750

Categories of Product/Service : As attached in 'CATEGORIES OF LICENSE / REGISTRATION'.

Special Conditions impose onto this license:-

Subject to the special conditions as attached.

General requirements of this License are as stated in the next page.

Reminder. License Must Apply For Renewal 3 Months Before The Expiry Date.

This is a computer generated printout and no signature from PETRONAS is required.



COMPANY'S NAME : IGL SERVICES SDN. BHD (1090632-P)

LICENSE NO : 1090632-P

LICENSE PERIOD : 30.09.2018 - 29.09.2021

| CATEGORIES OF LICENSE REGISTRATION APPROVED LICENSE CATEGORIES |   |                   |                                   |                         |             |  |
|--|---|-------------------|-----------------------------------|-------------------------|-------------|--|
| L/R/PROVISIONAL  | Service / Supplier Code   | Mode of Operation | Principal Name<br>(If Applicable) | Approval Date /<br>Time | Expiry Date |  |
| LICENSE  | SC3021100<br>CONSULTANCY SERV-ENG. CONSULTANCY SERV (OPERATION&MAINT.<br>STUDIES)-MEASUREMENT-METERING OF HYDROCARBON<br>CONSULTANCY (SC3060200 RECLASS TO SC3021100) | SELF-OPERATED     | NOT APPLICABLE                    | 11.07.2018<br>19:12:28  | 29.09.2021  |  |
| LICENSE  | SC3030100<br>CONSULTANCY SERV-SAFETY CONSULTANCY  | SELF-OPERATED     | NOT APPLICABLE                    | 20.06.2018<br>11:31:55  | 29.09.2021  |  |

\*\*\* END \*\*\*

#### MINISTRY OF FINANCE



#### KEMENTERIAN KEWANGAN MALAYSIA

#### SUIL AKUAN PENDAFTARAN FIRMA PERUNDING

NO. SUIL : J10962688862001284

NO. RUJUKAN PENDAFTARAN : 465-0002045306

TEMPOH SAH LAKU : 13/08/2018 - 12/08/2021

Bahawa dengan ini diperakui syarikat :

IGL SERVICES SDN BHD (1090632-P)

B-9-8 MEGAN AVENUE II

JALAN YAP KWAN SENG

W.P. KUALA LUMPUR

50450 KUALA LUMPUR

WILAYAH PERSEKUTUAN KUALA LUMPUR, MALAYSIA

Telah berdaftar dengan Kementerian Kewangan Malaysia dalam bidang bekalan/perkhidmatan di bawah sektor, bidang dan sub-bidang seperti di Lampiran A. Kelulusan ini adalah tertakluk kepada syarat-syarat seperti yang dinyatakan di Lampiran B. Individu yang diberi kuasa oleh syarikat bagi urusan perolehan Kerajaan adalah seperti berikut :

RAZMAHWATA BIN MOHAMAD RAZALLI 720705055091 DIRECTOR.

Lt

DATO: OTHMAN BIN SEMAIL

Bahagian Perolehan Kerajaan b.p. Ketua Setiausaha Perbendaharaan Kementerian Kewangan Malaysia

Rememental remailigan malaysia

Tarikh Berdaftar Dengan Kementerian Kewangan Malaysia: 13/08/2018

(Sijil ini adalah cetakan komputer dan tidak memerlukan tandatangan)

LAMPIRAN A

NO SIJIL : J10962688862001284 NO RUJUKAN PENDAFTARAN : 465-0002045306

TEMPOH SAH LAKU : 13/08/2018 - 12/08/2021

| BIL | TARIKH<br>DAFTAR<br>BIDANG | KOD<br>BIDANG | KETERANGAN  | STATUS |
|-----|----------------------------|---------------|---|--------|
| 1   | 12/08/2018                 | 330106        | PERKHIDMATAN PERUNDING FIZIKAL/ KEJURUTERAAN/<br>KEJURUTERAAN KIMIA | Aktif  |

Tarikh Berdaftar Dengan Kementerian Kewangan Malaysia: 13/08/2018



# **IGL SERVICES SDN BHD-Past Projects**

| Chrono | Timing           | Duration         | Title   | Category             | End Client           | Value |
|--------|------------------|------------------|---|----------------------|----------------------|-------|
| 1      | 4Q2014           | 1 month          | HAZOP - Flowlines   | Safety               | Petrofac             | Conf  |
| 2      | 4Q2014           | 1 month          | SIL - Flowlines   | Safety               | Petrofac             | Conf  |
| 3      | 4Q2014           | 1 month          | HAZOP - FPSO  | Safety               | JXNippon             | Conf  |
| 4      | 4Q2014           | 1 month          | HAZID - FPSO  | Safety               | JXNippon             | Conf  |
|        | 4Q2014           | 1 month          | HAZID - NMB   | Safety               | Hess                 | Conf  |
|        | 4Q2014           | 1 month          | ENVID - NMB   | Safety               | Hess                 | Conf  |
|        | 1Q2015           | 1 month          | SIL Classification - WHP  | Safety               | Vietsov Petro        | Conf  |
|        | 1Q2015           | 1 month          | SIL Verification - WHP  | Safety               | Vietsov Petro        | Conf  |
|        | 1Q2015           | 1 month          | HAZID - Pipeline PL77   | Safety               | PCSB                 | Conf  |
|        | 4Q2015           | 1 month          | HAZOP - TCOT brownfield   | Safety               | PCSB                 | Conf  |
|        | 1Q2015           | 1 month          | Uncertainty Calculation - FSO   | Measurement          | Ophir                | Conf  |
|        | 4Q2014           | 1 month          | Prelim RA - Development   | Safety               | Petrofac             | Conf  |
|        | 1Q2015           | 1 month          | •   | Safety               | Wilmar Nabati        | Conf  |
|        |                  | _                | HAZOP - Biodiesel plant   | -                    |                      |       |
|        | 1Q2015           | 1 month          | HAZOP - Pipeline PL30 31 32   | Safety               | PCSB                 | Conf  |
|        | 1Q2015           | 1 month          | SIL Verification - WHP  | Safety               | HLJOC                | Conf  |
|        | 1Q2015           | 1 month          | HAZOP - Vendor Packages   | Safety               | PC(T)SB              | Conf  |
|        | 1Q2015           | 1 month          | HAZID - Pipeline CL9 CL11 PL341   | Safety               | PCSB                 | Conf  |
|        | 1Q2015           | 2 months         | Due Diligence - Sumatera  | Safety               | Aecom                | Conf  |
|        | 1Q2015           | 3 months         | Safety Case - CPP   | Safety               | Vestigo              | Conf  |
|        | 1Q2015           | 1 month          | HAZID - Helideck  | Safety               | PCSB                 | Conf  |
| 21     | 1Q2015           | 1 month          | HAZOP - Pipeline PL14 17 323  | Safety               | PCSB                 | Conf  |
| 22     | 2Q2015           | 2 months         | Generic Design Performance Standards (GDPS) review, Tech Safety               | Safety               | UHSE, PETRONAS       | Conf  |
| 23     | 2Q2015           | 3 months         | CPP Tembikai HSE Case   | Safety               | EPOMS                | Conf  |
|        | 2Q2015<br>2Q2015 | 1 month          | SIL Classification - FSO  | Safety               | HESS                 | Conf  |
|        | 2Q2015<br>2Q2015 | 1 month          | HAZOP - Betty FG Mods   | Safety               | PCSB                 | Conf  |
|        | 2Q2015<br>2Q2015 | _                |   | •                    |                      | Conf  |
|        |                  | 3 months         | HAZOP - Cogen Plant, Jurong   | Safety               | Sembcorp             |       |
|        | 2Q2015           | 1 month          | HAZOP - Biogas  | Safety               | Sime Darby           | Conf  |
|        | 2Q2015           | 1 month          | HAZID - Su Tu Trang Ph 1  | Safety               | Cuulong, Vietnam     | Conf  |
|        | 3Q2015           | 1 month          | HAZID HAZOP - Lengo   | Safety               | Kris Energy          | Conf  |
|        | 3Q2015           | 1 month          | HAZOP SIL - PWT, FZ-A   | Safety               | 100C                 | Conf  |
| 31     | 3Q2015           | 1 month          | Vent and Flare Study - Tg Baram   | Safety               | Enquest              | Conf  |
| 32     | 3Q2015           | 3 months         | Safety Studies HAZOP, SIL, IPF, Carbon<br>Footprint, AIV, Noise, FIV- D18 WIF | Safety               | Uzma                 | Conf  |
| 33     | 3Q2015           | 3 months         | Process Safety Review - F6, North Sabah                                       | Safety               | Shell                | Conf  |
| 34     | 3Q2015           | 1 month          | HAZOP - SKE EBA Infill  | Safety               | SKE                  | Conf  |
|        | 3Q2015           | 1 month          | HAZOP - TKDP-B K2 replacement   | Safety               | PCSB                 | Conf  |
|        | 4Q2015           | 3 months         | Safety Studies - Solid Product Jetty,   | Safety               | PETRONAS / Arsea     | Conf  |
| 27     | 402015           | 1 month          | Pengerang   | Safoty               | DCCD                 |       |
|        | 4Q2015<br>1Q2016 | 1 month 6 months | HAZID PL 364 366 SIL Classification and Verification, WD                      | Safety<br>Instrument | PCSB<br>PML          | Conf  |
|        |                  |                  | MOPU WSS and Berantai WHP   |                      |                      |       |
| 39     | 1Q2016           | 1 month          | HAZOP and Constructability BCOT GEG   | Safety               | PCSB                 | Conf  |
| 40     | 1Q2016           | 1 month          | HAZOP Emulsion Treatment Facility, BCOT                                       | Safety               | PCSB                 | Conf  |
| 41     | 1Q2016           | 1 month          | Constructability Review, Fume Hood Package BNG-B and KAKG-B                   | Safety               | PCSB                 | Conf  |
| 42     | 1Q2016           | 1 month          | HAZID HAZOP - Bukit Tua ORF Tie In<br>(Indonesia)                             | Safety               | PC Ketapang II       | Conf  |
| 43     | 2Q2016           | 3 months         | Process Safety Review - E11   | Safety               | Shell                | Conf  |
|        | 2Q2016           | 1 month          | HAZOP - Pemantang Biogas, Indonesia   | Safety               | Minamas / Sime Darby | Conf  |
|        | 2Q2016<br>2Q2016 | 6 months         | Update and Revalidate FSA Cakerawala  | Safety               | CHOC                 | Conf  |
|        | 202046           | 4                | Autor - Karl Dulle HATIR - 1999   | Cafat                | Maskins              | C- 1  |
|        | 2Q2016           | 1 month          | Anjung Kecil Drilling HAZID MOPO  | Safety               | Vestigo              | Conf  |
| 47     | 2Q2016           | 1 month          | SIL Classification NMB FSO packages   | Safety               | Hess                 | Conf  |
| 48     | 2Q 2016          | 1 month          | HAZOP - Hydrogen Generator (Indonesia)  | Safety               | Wilmar Nabati        | Conf  |

| Chrono | Timing  | Duration | Title   | Category    | End Client                 | Value |
|--------|---------|----------|---|-------------|----------------------------|-------|
|        | 2Q 2016 | 1 month  | HAZOP SIL - SKE ISS B15                             | Safety      | SK Energy                  | Conf  |
|        | -       |          | Measurement and Allocation - Call Off               | ·           |                            |       |
| 50     | 2Q2016  | 2 year   | Contract  | Measurement | EnQuest                    | Conf  |
| 51     | 2Q2016  | 1 month  | HAZOP - Rantau Biogas, Indonesia                    | Safety      | Minamas / Sime Darby       | Conf  |
|        |         |          | 5 ,   |             |                            |       |
| 52     | 2Q2016  | 3 months | Process Safety Review - E11, North Sabah            | Safety      | Shell                      | Conf  |
|        | 3Q2016  | 3 months | Process Safety Review - F23, North Sabah            | Safety      | Shell                      | Conf  |
|        | 3Q2016  | 1 month  | HAZOP - Biogas, Sandakan                            | Safety      | Sime Darby                 | Conf  |
|        | 3Q2016  | 1 month  | HAZOP - KPO Distillation Unit                       | Safety      | Wilmar Nabati              | Conf  |
|        | 4Q2016  | 1 month  | HAZOP- AMDP22                                       | Safety      | BSP, shell                 | Conf  |
|        | 4Q2016  | 1 month  | HAZID - Betty Bokor Rejuve                          | Safety      | PCSB                       | Conf  |
|        | 4Q2016  | 3 months | SRS - D18 WI  | Safety      | Uzma                       | Conf  |
|        | 1Q2017  | 1 month  | HAZOP HAZID ENVID - P4D Algeria                     | Safety      | Pertamina                  | Conf  |
|        | 3Q2017  | 2 months | HAZOP Cakerawala                                    | Safety      | Carigali Hess              | Conf  |
| 61     | 2Q2017  | 3 months | HAZOP K2  | Safety      | Arkema                     | Conf  |
| 62     | 2Q 2017 | 1 month  | Constructability Review, D35 HVAC Upgrade           | Safety      | PCSB                       | Conf  |
| 63     | 4Q2017  | 1 month  | HAZOP, Pelintung 1500 TPD Refinery Plant            | Safety      | Wilmar Nabati              | Conf  |
| 64     | 4Q2017  | 2 months | Process Engineering FEED, KBC BASB<br>Bitumen Plant | Process     | Borneo Asphalt Sdn Bhd     | Conf  |
| 65     | 4Q2017  | 1 month  | HAZID Sum Pump Tg Baram                             | Safety      | Petronas/SKO               | Conf  |
| 66     | 4Q2017  | 1 month  | HAZOP Potable Water Tg Baram                        | Safety      | Petronas/SKO               | Conf  |
| 67     | 4Q2017  | 1 month  | HAZOP Fixed Water Bunkering Tg Baram                | Safety      | Petronas/SKO               | Conf  |
| 68     | 4Q2017  | 1 month  | HAZID Fire Prevention Lightning Tg Baram            | Safety      | Petronas/SKO               | Conf  |
| 69     | 4Q2017  | 1 month  | HAZID MCOT Perimeter Lightning Installation         | Safety      | Petronas/SKO               | Conf  |
| 70     | 4Q2017  | 1 month  | HAZID Tie-in for Pimps Implementation               | Safety      | Petronas/SKO               | Conf  |
| 71     | 1Q2018  | 1 month  | Rapid Envid   | Safety      | Petronas                   | Conf  |
| 72     | 1Q2018  | 1 month  | HAZOP Serang Package                                | Safety      | Wilmar Nabati              | Conf  |
| 75     | 2Q2018  | 3 months | Hess Woodgroup Measurement                          | Process     | Woodgroup                  | Conf  |
| 76     | 2Q2018  | 3 months | FPSO V MaMPU1 Uncertainty                           | Proess      | FPSO Ventures Sdn Bhd      | Conf  |
| 77     | 2Q2018  | 1 month  | Pan-century Oleochemicals Cogen HAZOP & HAC         | Safety      | Sime Darby                 | Conf  |
| 78     | 2Q2018  | 1 month  | Sime Darby BioGas HAZOP                             | Safety      | Sime Darby                 | Conf  |
| 79     | 3Q2018  | 1 month  | ENPS FGRU Sweetener HAZOP                           | Safety      | Malaysian Refining Sdn Bhd | Conf  |
|        | 3Q2018  | 1 month  | RNZ BeA BeB BeC HAZOP                               | Safety      | Petronas                   | Conf  |
|        | 4Q2018  | 3 months | Vestigo Tembikai SCE PS Update                      | Safety      | Vestigo                    | Conf  |
| 82     | 4Q2018  | 1 month  | HAZOP Fatty Acid Pelintung                          | Safety      | Wilmar Nabati              | Conf  |
| 83     | 4Q2018  | 3 months | Tg Baram Validation Manual Update                   | Process     | Petronas                   | Conf  |
| 84     | 4Q2018  | 1 month  | IntecSea Murphy PFLNG2 Measurement Allocation       | Process     | Murphy Oil Sarawak         | Conf  |
| 85     | 4Q2018  | 1 month  | SMDS HAZOP Bintulu                                  | Safety      |                            | Conf  |
| 86     | 4Q2018  | 3 months | Vestigo Synergy Tembikai Bowtie                     | Safety      | Vestigo                    | Conf  |
|        | 4Q2018  | 3 months | Enquest Metering Manual                             | Process     | Enquest                    | Conf  |
|        | 4Q2018  | 1 month  | DeMEG HAZID   | Safety      | Murphy Oil Sarawak         | Conf  |
|        | 4Q2018  | 1 month  | H2 HAZOP  | Safety      | Wilmar Nabati              | Conf  |
|        | 2Q2019  | 1 month  | Sampling Procedures                                 | Process     | Enquest                    | Conf  |
| 91     | 1Q2019  | 1 month  | SW Lift Pump RCA                                    | Safety      | Repsol                     | Conf  |
| 92     | 1Q2019  | 1 month  | FIP Risk Assessments                                | Safety      | Repsol                     | Conf  |
| 93     | 2Q2019  | 1 month  | MEWAH Oil Cogenearation HAZOP and HAC               | Safety      | Sime Darby                 | Conf  |
| 94     | 2Q2019  | 1 month  | KDNW-D HAZOP  | Safety      | Repsol                     | Conf  |
| 95     | 2Q2019  | 1 month  | KDNW-D HAZID  | Safety      | Repsol                     | Conf  |
|        | 1Q2019  | 1 month  | MOPO Alarp  | Safety      | MMHE                       | Conf  |
|        | 2Q2019  | 1 month  | KNDW-D LQ Constructability                          | Safety      | Repsol                     | Conf  |
| ٥,     |         |          |   |             |                            |       |

| Chrono | Timing | Duration | Title   | Category | End Client                          | Value |
|--------|--------|----------|---|----------|-------------------------------------|-------|
| 99     | 2Q2019 | 1 month  | Equipment Process List for Disposal of FPSO Materials                       | Process  | THHE                                | Conf  |
| 100    | 2Q2019 | 3 months | Measurement Support   | Process  | HESS                                | Conf  |
| 101    | 2Q2019 | 1 month  | Merakes 1A SIMOPS HAZID   | Safety   | eni                                 | Conf  |
| 102    | 2Q2019 | 1 month  | Bleaching Earth HAZOP   | Safety   | Wilmar Nabati                       | Conf  |
| 103    | 4Q2019 | 1 month  | TNAG OWF Post SIPROD HAZID  | Safety   | Vestigo                             | Conf  |
| 104    | 4Q2019 | On Going | Measurement – Reservoir Measurement<br>New Metering Points                  | Process  | ExxonMobil                          | Conf  |
| 105    | 3Q2019 | 1 month  | CDDP-A New Wellstream Desander UnAit HAZID                                  | Safety   | PETRONAS CARIGALI<br>(TURKMENISTAN) | Conf  |
| 106    | 4Q2019 | 1 month  | HAZOP Installation of Waste Water Degasser System                           | Safety   | PETRONAS GAS BERHAD                 | Conf  |
| 107    | 4Q2019 | 1 month  | HAZID FSU Muar  | Safety   | Vestigo                             | Conf  |
| 108    | 4Q2019 | 1 month  | HAZOP K3  | Safety   | Arkema                              | Conf  |
| 109    | 4Q2019 | 1 month  | CPO Washing HAZOP   | Safety   | Bunge Loders Croklaan               | Conf  |
| 110    | 4Q2019 | 1 month  | Biodiesel HAZOP   | Safety   | Wilmar Nabati                       | Conf  |
| 111    | 4Q2019 | 1 month  | HAZOP Cogeneration  | Safety   | KLK Oleochemicals                   | Conf  |
| 112    | 4Q2019 | 1 month  | 3000TPD Plant HAZOP   | Safety   | Wilmar Nabati                       | Conf  |
| 113    | 4Q2019 | 2 months | HAZOP, HAZID & SIL  | Safety   | PCSB                                | Conf  |
| 114    | 1Q2020 | 1 month  | HAZOP   | Safety   | Brunei Shell Petroleum              | Conf  |
| 115    | 1Q2020 | 1 month  | D35DP-A HAZOP HAZID   | Safety   | ROC                                 | Conf  |
| 116    | 1Q2020 | 1 month  | PVG EV HAZOP HAZID SIL  | Safety   | ECVN                                | Conf  |
| 117    | 1Q2020 | 1 month  | B11 RAM Study   | Safety   | PCSB                                | Conf  |
| 119    | 2Q2020 | 1 month  | Technical Engineering Support and provide<br>Measurement and Other Services | Safety   | ExxonMobil                          | Conf  |
| 120    | 2Q2020 | 1 month  | HAZOP HIP Condensate  | Safety   | JXNippon                            | Conf  |
| 121    | 2Q2020 | 1 month  | MIE HAZOP GPK Instrument Air Upgrading                                      | Safety   | Gas PETRONAS Kerteh                 | Conf  |
| 122    | 2Q2020 | 1 month  | Uprgrading Biodiesel B30 HAZOP  | Safety   | PETRONAS Dagagan Berhad             | Conf  |
| 123    | 2Q2020 | 1 month  | KVDT VRU HAZOP  | Safety   | KVDT                                | Conf  |
| 124    | 2Q2020 | 1 month  | HAZOP Study For SMART8  | Safety   | SMART                               | Conf  |