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ENVIRONMENTAL COMPLIANCE AUDIT REPORT

FOR

PROPOSED REPLANTING AND PLANTING OF 25,000 HA
OF ACACIA MANGIUM AT BENGKOKA PENINSULA,
DISTRICT OF PITAS, SABAH BY ACACIA FOREST
INDUSTRIES SDN BHD.

2ND REPORT OF YEAR 2019

FEBRUARY	JUNE	OCTOBER
	✓	


AEC Ref. No. : JPAS/PP/15/600-1/01/3/29
Report Reference : CK/MO411/1187-2/19
Date of Report : 26th June 2019




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Appendix D:	<ul style="list-style-type: none">• Noise Level Quality Test Report• Standard Guidelines for Environmental Limits and Control

ACACIA FOREST INDUSTRIES SDN BHD

ENVIRONMENTAL MONITORING AND COMPLIANCE AUDIT REPORT

1.0 Introduction

1.1 Monitoring Information

Project Title : Proposed Replanting and Planting of 25,000 Ha of Acacia Mangium at Bengkoka Peninsula, District of Pitas, Sabah by Acacia Forest Industries Sdn Bhd

Monitoring Period : March - June 2019

Date of Monitoring : Compliance Audit : 27th May 2019
Water Sampling : 27th May 2019

EIA Consultant : Kiiwheng Environmental Consultants Sdn. Bhd.

1.2 Project Proponent Information

Project Proponent : Acacia Forest Industries Sdn. Bhd.

Contact Person : Mr. Junextopher J. Maing

Tel. No. : 088 – 438 021

Fax No. : 088 – 424 077

Environmental Officer : Mr. Maxzhelson B. Thomas

Contact No. : 010 – 584 7847 (Mobile)

E-mail : –

1.3 Post-EIA Consultant Information

Post-EIA Consultant : Chemsain Konsultant Sdn. Bhd.

Tel. No. : Office : 088 – 381 277 / 278
Mobile : 019 – 812 0808

Fax No. : 088 – 381 280

Email : edgar.nichols@chemsain.com

1.4 Project Status

Percentage Completion :

Activities	Percentage (%)
Replanting	On-going
Planting	On-going

Chronology of Events :

Table 1.0: Chronology of Events

No.	Event	Date
1.0	Signing of AEC Ref.: JPAS/PP/15/600-1/01/3/29	19 nd Mei 2010

2.0 OBJECTIVE

The Environmental Monitoring and Compliance Audit (EMCA) is a requirement by the Environmental Protection Department (EPD) and to be carried out on quarterly basis, and reported in accordance to the Approval Conditions as specified in the **Syarat-Syarat Alam Sekitar [Seksyen 12(1) dan 20, Enakmen Perlindungan Alam Sekitar 2002]** of the EPD ref: JPAS/PP/15/600-1/01/3/29 dated 19 Mei 2010

3.0 MONITORING LOCATIONS

Designated monitoring and sampling location are shown in **Figure 1.0** with details tabulated in **Table 2.0**.

Table 2.0: Environmental Monitoring Locations

Monitoring Component	Key	GPS Coordinates (Datum: WGS 84)	Location Description
Water Quality	W1	N 05° 51' 18.56" E 117° 06' 41.09"	Sg. Gumpa
	W2	N 05° 54' 12.40" E 117° 06' 36.87"	Tributary of Sg. Malubang
	W3	N 06° 50' 02.73" E 117° 09' 31.55"	Sg. Bongkol
	W4	N 06° 51' 22.08" E 117° 12' 06.83"	Sg. Kakarangan

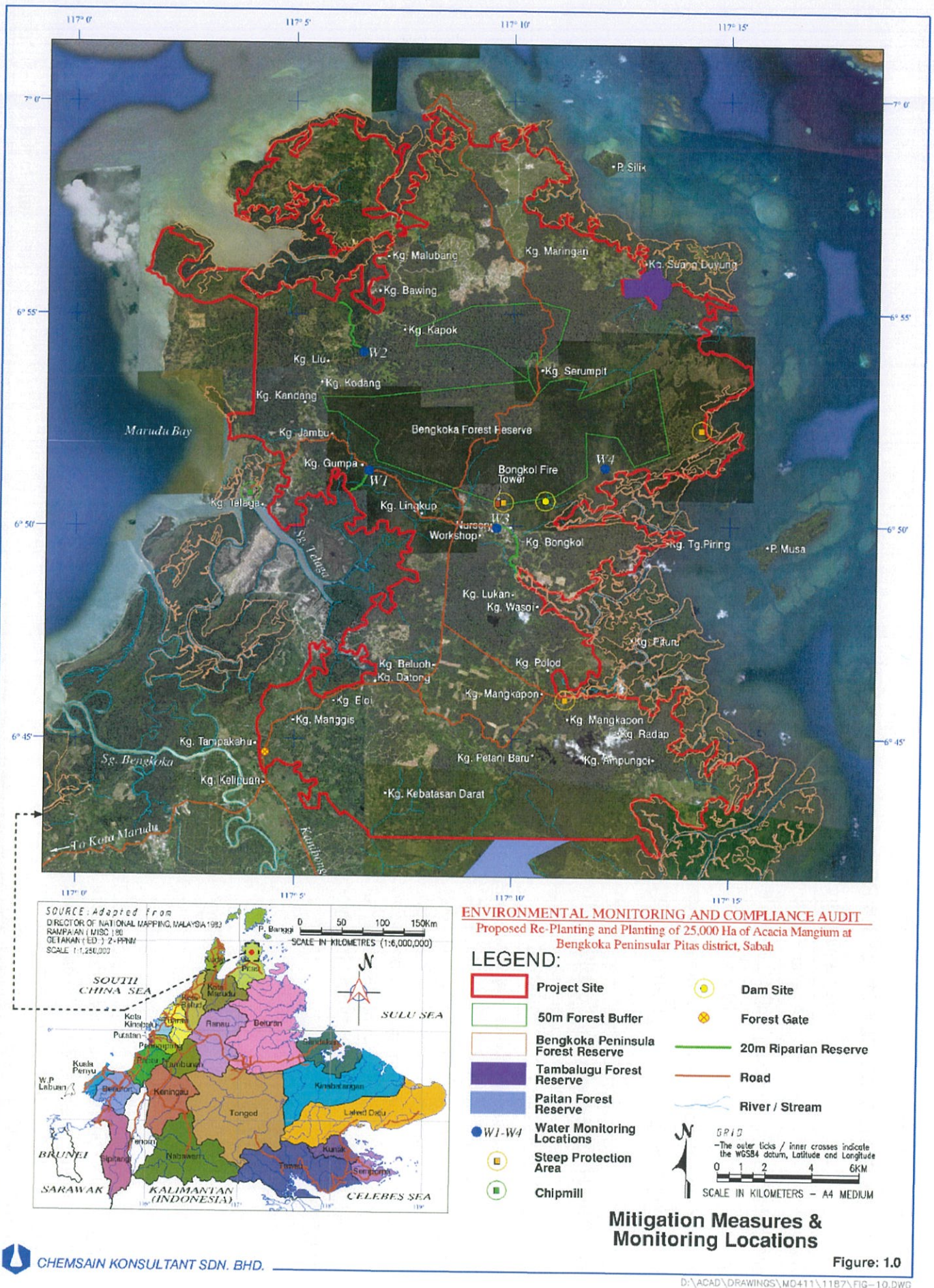


Figure 1.0: Monitoring Locations Map.

4.0 COMPLIANCE STATUS, COMMENTS & RECOMMENDATIONS

Nama Projek : Replanting and Planting of 25,000 Ha Acacia Mangium at Bengkoka Peninsula, District of Pitas, Sabah

Nama Pemaju : Acacia Forest Industries Sdn Bhd

Rujukan fail jabatan ini : JPAS/PP/15/600-1/01/3/29

Tarikh Akujanji : 19 Mei 2010

Penyedia laporan pematuhan ini : Chemsain Konsultant Sdn. Bhd.

Tempoh diliputi oleh laporan ini : March - June 2019

AEC No.	Approved Environmental Conditions	Status	Observations / Comments	Photo No.	Recommendations
5.1	<u>Kawasan Kawasan Pembangunan</u>				
i	Sempadan kawasan projek seperti yang ditunjukkan di "Figure 3.2 – Locality Map" dalam laporan EIA hendaklah disukat sebelum aktiviti projek dimulakan. Penyukatan berkenaan hendaklah disahkan oleh juruukur yang berdaftar di bawah Ordinan Juruukur 1960 (Surveyor Ordinance 1960).	Non Compliance	<ul style="list-style-type: none"> According to the Project Proponent, the boundary survey that was presented in the previous EIA was the gazetted localities that was owned by SAFODA and was not the actual boundary of the Project site for Acacia Forest Industries Sdn. Bhd. The boundary survey was previously attempted to be conducted by SAFODA. However, the attempt was objected by the local community. 	-	<ul style="list-style-type: none"> The Project Proponent is advised to ensure that boundary survey to be conducted once the issue with the local community had been rectified.
ii	Pelan Penyukatan sempadan projek berkenaan hendaklah dikemukakan kepada JPAS bersama-sama dengan bacaan koordinat latitud dan longitud	Non Compliance	<ul style="list-style-type: none"> Refer to the comment in AEC 5.1 (i). 	-	<ul style="list-style-type: none"> The Project Proponent is advised to ensure that the boundary survey plan will be submitted to the EPD once it is

	sebelum aktiviti projek dimulakan.	Comply	<ul style="list-style-type: none"> According to the Project Proponent, the demarcation of the Project boundary on-site will be erected in tandem with the Project operation and progress. 	-	prepared.
5.2	<u>Kualiti Sumber Air</u>				
<i>i</i>	Kaedah pemajuan ladang Acacia mangium yang terkawal dan mesra alam serta dengan menyediakan alternatif sumber air kepada penduduk yang terjejas hendaklah diamalkan.	Comply	<ul style="list-style-type: none"> The Project Proponent practices eco-friendly approach towards the planting and replanting activities on-site. Rainwater were utilized as alternative source of water supply. The Project Proponent ensure that water supply will be provided to the affected villagers (if any). 	-	
<i>ii</i>	Penggunaan baja dan racun perosak (pesticide) secara terkawal hendaklah diamalkan. Pelupusan atau pembuangan bahan baja dan racun perosak adalah tidak dibenarkan di dalam sungai atau alur air.	Comply	<ul style="list-style-type: none"> There were no signs of any fertilizers or pesticides being disposed into any nearest natural waterways as observed during the site visit. The Project Proponent assured that pesticides and fertilizers were only utilized when necessary. The agrochemical storage area were situated near the nursery on-site. 	-	

5.2.1.2	<p>Laporan pemantauan kualiti air juga hendaklah dikemukakan kepada JPAS bersama dengan laporan pematuhan tersebut.</p> <p>Lokasi dan parameter yang perlu dianalisa adalah seperti berikut:</p>	Comply	<ul style="list-style-type: none"> Water sampling exercises were only conducted at monitoring locations, W1 and W4, as per Figure 1.0. Water sampling were unable to be conducted at monitoring locations, W2 and W3, due to stagnant condition. 	Plates 2 to 4	<ul style="list-style-type: none"> Refer to Appendix B. 				
5.3	<p>Perindungan Sungai</p> <p>Simpanan sungai seperti berikut hendaklah dilindungi, disukat dan ditanda di lapangan:</p> <table border="1" data-bbox="327 1456 478 2016"> <thead> <tr> <th>Lokasi</th> <th>Unit / Parameter</th> </tr> </thead> <tbody> <tr> <td>Sebagaimana yang ditanda sebagai "Water Sampling Point" di "Figure 6.1" dalam laporan EIA tersebut.</td> <td>Turbidity, pH, Total Suspended Solids, Oil & Grease, Biochemical Oxygen Demand, Chemical Oxygen Demand, Ammoniacal Nitrogen</td> </tr> </tbody> </table>	Lokasi	Unit / Parameter	Sebagaimana yang ditanda sebagai "Water Sampling Point" di "Figure 6.1" dalam laporan EIA tersebut.	Turbidity, pH, Total Suspended Solids, Oil & Grease, Biochemical Oxygen Demand, Chemical Oxygen Demand, Ammoniacal Nitrogen	Non Compliance	<ul style="list-style-type: none"> Blue signboards were erected on some part of the Riparian Reserves on-site as observed during the site visit. However, some of the Riparian Reserves on-site were not demarcated as observed during the site visit. According to the Project Proponent, the Riparian 	Plate 5	<ul style="list-style-type: none"> The Project Proponent, were advised to demarcate the Riparian Reserves using alternative method (i.e. paint the tree trunks located along the Riparian Reserves belt).
Lokasi	Unit / Parameter								
Sebagaimana yang ditanda sebagai "Water Sampling Point" di "Figure 6.1" dalam laporan EIA tersebut.	Turbidity, pH, Total Suspended Solids, Oil & Grease, Biochemical Oxygen Demand, Chemical Oxygen Demand, Ammoniacal Nitrogen								

<p>semua sungai lain yang mempunyai kelebaran 3 meter atau lebih</p> <p>Semua sungai yang mempunyai kelebaran kurang daripada 3 meter</p>	<p>dari tebing sungai.</p> <p>Sekurang-kurangnya selebar 5 meter pada jarak dari tebing sungai.</p>		<p>Reserves were previously demarcated but the pegs and signboard erected were taken out by the locals.</p> <ul style="list-style-type: none"> Some of the Riparian Reserves area were not demarcated as site preparation and replanting activities was not commenced yet. Some part of the Riparian Reserves were burned due to excessive heat exposure during the dry season. The previous old water pump house located within the Riparian Reserves of Sungai Bongkol had been dismantled by the Project Proponent. 	
<p>ii</p> <p>Sempadan simpanan sungai hendaklah disukat sebelum aktiviti pemajuan ladang Acacia mangium dimulakan di kawasan projek berkenaan dan hendaklah mencapai ketepatan pengukuran standard kelas ketiga.</p>	<p>Comply</p>		<ul style="list-style-type: none"> According to the Project Proponent, the Riparian Reserves survey work had been previously carried out. 	<p>-</p>
<p>iii</p> <p>Pelan penyukat simpanan sungai dengan skala minima 1:25,000 hendaklah dikemukakan kepada JPAS bersama-sama dengan bacaan koordinat latitud dan longitud sebelum sebarang aktiviti pemajuan ladang Acacia mangium dimulakan di kawasan projek berkenaan.</p>	<p>Comply</p>		<ul style="list-style-type: none"> According to the Project Proponent, the Riparian Reserves survey plan had been previously submitted to the EPD. 	<p>-</p>

	Non Compliance	Refer to the comments in AEC 5.3 (i).	Plate 5	The Project Proponent, were advised to demarcate the Riparian Reserves using alternative method (i.e. paint the tree trunks located along the Riparian Reserves belt).
iv	Sempadan simpanan sungai yang telah disukat, hendaklah ditanda di lapangan dengan cat merah serta dipasang dengan papan tanda di lokasi-lokasi yang mudah dilihat sebelum aktiviti pemajuan ladang Acacia mangium dimulakan di kawasan projek berkenaan.	Comply	-	
v	Sebarang aktiviti pemajuan ladang Acacia mangium dan penumbangan kayu tidak dibenarkan di simpanan sungai ini.	Comply	-	
vi	Sebarang pembinaan rumah pekerja, kem pekerja, bengkel, tandas atau struktur bangunan lain tidak dibenarkan di simpanan sungai ini.	Comply	-	
vii	Sebarang penyimpanan bahan minyak atau bahan toksik tidak dibenarkan di simpanan sungai ini.	Comply	Plates 12 & 14	<ul style="list-style-type: none"> There were no signs of any oily / toxic material being stored within the Riparian Reserves area as observed during the site visit. The oily / toxic material storage area were situated near the workshop area and located at more than 50 m away from any nearest natural waterways.

viii	Sebarang bahan tanah lebihan, sisa tumbuhan, sisa pepejal, kumbahan, bahan minyak, kimia atau bahan-bahan toksik tidak dibenarkan dilupuskan di simpanan sungai, di dalam sungai atau alur air.		<ul style="list-style-type: none"> There is no disposal of any overburden or any types of wastes (i.e. biomass, solid material, etc.) into the Riparian Reserves area or any nearest natural waterways as observed during the site visit. 	-	
5.4 Hakisan Tanah dan Pemendapan Kelodak					
5.4.1 Larangan Aktiviti Pemajuan Ladang Acacia Mangium atau Pembersihan Kawasan					
i	Sebarang aktiviti pemajuan ladang Acacia mangium atau aktiviti pembersihan kawasan tidak dibenarkan di kawasan berkecerunan 25 darjah atau lebih dengan keluasan 49 hektar dan kawasan perkampungan, sebagaimana ditunjukkan di "Figure 6.1" dalam laporan EIA tersebut.	Comply	<ul style="list-style-type: none"> There is no activities conducted within the high risk area ($\geq 25^\circ$ slope area) as observed during the site visit. 	-	
ii	Sempadan kawasan yang berkecerunan 25 darjah atau lebih dan kawasan berisiko tinggi serta kawasan perkampungan ini hendaklah ditanda di lapangan dengan cat merah serta dipasang dengan papan tanda sebelum aktiviti pembersihan kawasan dimulakan di kawasan projek berkenaan dan hendaklah mencapai ketepatan pengukuran standard kelas ketiga.	Comply	<ul style="list-style-type: none"> According to the Project Proponent, demarcation of the high risk area (25° slope area) will be carried 6 month priors to operation start at the area (if any). 	-	
iii	Pelan penyukatan kawasan yang berkecerunan 25 darjah atau lebih dan kawasan berisiko tinggi serta kawasan perkampungan berkenaan hendaklah dikemukakan kepada JPAS bersama-sama	Comply	<ul style="list-style-type: none"> Refer to the comment in AEC 5.4.1 (ii). 	-	

	dengan bacaan koordinat latitud dan longitud sebelum aktiviti pemaian ladang Acacia mangium atau aktiviti pembersihan kawasan dimulakan di kawasan projek berkenaan.			
5.4.2 Pembinaan Jalan				
i	Sistem perparitan hendaklah disediakan bagi mengalirkan air keluar dari struktur jalan dan dilencongkan ke kawasan yang mempunyai tumbuhan.	Comply	<ul style="list-style-type: none"> Roadside drainage were provided along the access road on-site. The roadside drainage were diverted towards the vegetated areas. 	-
ii	Aktiviti pelupusan atau pembuangan bahan tanah lebihan (overburden) ke dalam sungai atau alur air <u>tidak dibenarkan</u> .	Comply	<ul style="list-style-type: none"> There is no disposal of overburden into the nearest natural waterways as observed during the site visit. 	-
5.4.3 Pembinaan Rumah Pekerja, Kem Pekerja, Bengkel atau Tapak Semaian				
i	Rumah pekerja, kem pekerja, bengkel atau tapak semaian hendaklah dibina dengan meminimalkan kerja-kerja tanah dan pembersihan kawasan.	Comply	<ul style="list-style-type: none"> The workers' quarters, contractor base camp, workshop and nursery were fully utilised on-site. The Project Proponent utilized the existing workshop of the previous related company, Hijauan Bengkoka Sdn Bhd. 	Plates 6, 8 & 10
ii	Sistem perparitan yang berkesan hendaklah disediakan bagi mengawal larian air permukaan dan air buangan dari kawasan rumah pekerja, kem pekerja, bengkel atau tapak semaian dan	Comply	<ul style="list-style-type: none"> Drainages provided at the workers quarters' area were diverted towards the vegetated area. The drainages provided at the 	Plates 7 & 9

	hendaklah dilencongkan ke kawasan yang mempunyai tumbuhan dan tidak dibenarkan dialir terus ke dalam sungai atau alur air.		nursery area were diverted towards the sedimentation pond.		
iii	Kedudukan rumah pekerja atau kem pekerja hendaklah terletak pada jarak mendatar tidak kurang 30 meter dari tebing sungai atau alur air.	Comply	<ul style="list-style-type: none"> The workers' quarters on-site were located at more than 30 meter away from any nearest natural waterways as observed during the site visit. 	-	
iv	Kedudukan bengkel atau tapak semeaian hendaklah terletak pada jarak mendatar tidak kurang 50 meter dari tebing sungai atau alur air.	Comply	<ul style="list-style-type: none"> The nursery and workshop on-site were located at more than 50 m away from any nearest natural waterways as observed during the site visit. 	Plates 8 & 10	
v	Semua rumah pekerja, kem pekerja, bengkel atau tapak semeaian sedia ada yang tidak mematuhi peraturan-peraturan yang dinyatakan dalam syarat-syarat alam sekitar ini, hendaklah dipindah dan dikawal sebagaimana yang ditetapkan.	Comply	<ul style="list-style-type: none"> The location for the facilities were in compliance with the AEC requirement. 	-	
5.4.4	<u>Kawalan Larian Air Permukaan</u>				
i	Sistem perparitan dan kolam perangkap mendap (sedimentation pond) hendaklah disediakan di lokasi yang strategik dalam kawasan tapak projek.	Comply	<ul style="list-style-type: none"> Drainage were provided to facilitate the surface runoff on-site. The drainage at the nursery were diverted towards the nearby sedimentation pond. 	Plates 7 & 9	
ii	Kolam perangkap mendap tersebut hendaklah diselenggarakan dengan mengeluarkan bahan sedimen sekurang-kurangnya satu (1) kali dalam sebulan.	Comply	<ul style="list-style-type: none"> According to the Project Proponent, they will assure to adhere to this condition. 	-	


iii	Sebarang penyimpanan atau pelupusan bahan sedimen tidak dibenarkan di kawasan sungai atau simpanan sungai.	Comply	<ul style="list-style-type: none"> There is no disposal of any sediments into any of the nearest natural waterways or the Riparian Reserves area as observed during the site visit. 	-	
iv	Sistem perparitan yang berkesan hendaklah dibina bagi mengawal larian air permukaan dari kawasan projek, terutamanya di sekitar kawasan rumah pekerja, kem pekerja, bengkel atau tapak semaian.	Comply	<ul style="list-style-type: none"> Refer to the comments in AEC 5.4.3 (ii). 	Plates 7 & 9	
v	Aliran parit tersebut hendaklah dilencongkan ke kolam perangkap mendap dan tidak dibenarkan dialir terus ke dalam sungai alur air.	Comply	<ul style="list-style-type: none"> Refer to the comments in AEC 5.4.3 (ii). 	-	
vi	Sebarang pembinaan sistem perparitan dan kolam perangkap mendap tidak dibenarkan di dalam alur air semulajadi, kawasan simpanan sungai atau di dalam sungai.	Comply	<ul style="list-style-type: none"> Generally, there were no on-site surface runoff mitigation measures constructed within any of the existing natural waterways and the Riparian Reserves on-site. 	-	
vii	Semua kawasan yang terdedah hendaklah dilingungi dan ditanam dengan tumbuhan tutup bumi untuk mengurangkan hakisan tanah.	Comply	<ul style="list-style-type: none"> The exposed area on-site were planted with cover crops to reduce the risk of soil erosion on-site. 	-	
5.5	<u>Pemajuan Ladang Acacia mangium Secara Berfasa</u>				
i	Operasi pemajuan ladang Acacia mangium hendaklah dilaksanakan secara berperingkat/berfasa dan terancang.	Comply	<ul style="list-style-type: none"> The development for the Acacia mangium plantation were carried out in phases. The logging activities were 	-	

ii	Pelan pengurusan operasi pemajuan ladang Acacia mangium hendaklah disediakan dan dilaksanakan serta satu salinan pelan tersebut hendaklah dikemukakan kepada JPAS.	Comply	<p>conducted within Kapok 2 as observed during the site visit.</p> <ul style="list-style-type: none"> The Operation Management Plan was presented in the EIA report. 	
<p>5.6 <u>Perlindungan Kawasan Sensitif</u></p>				
i	Zon penanaman sekurang-kurangnya selebar 50 meter hendaklah disediakan di sepanjang sempadan projek dengan Hutan Simpan Bengkoka dan Tambalugu (Kelas I), Hutan Simpan Semenanjung Bengkoka (Hutan Simpan Bakau Kelas V) dan Hutan Simpan Paitan (Kelas II). Sebarang aktiviti pemajuan ladang Acacia mangium atau aktiviti pembersihan kawasan tidak dibenarkan di dalam kawasan zon penanaman ini sebagaimana yang dinyatakan di bawah perkara "2 (ii)" serta ditunjukkan di "Figure 6.1" dalam maklumat tambahan laporan EIA tersebut.	Comply	<ul style="list-style-type: none"> The 50 m wide buffer zone were retained as observed during the site visit. According to the Project Proponent, the 50 m wide buffer zone of Hutan Simpan Semenanjung Bengkoka were no longer applicable since the forest reserve had now been developed by others. 	
ii	Sempadan kawasan zon penanaman ini hendaklah dilindungi dan disukat sebelum aktiviti pemajuan ladang Acacia mangium atau aktiviti pembersihan kawasan dimulakan di kawasan projek berkenaan dan hendaklah mencapai ketepatan pengukuran standar kelas ketiga.	Comply	<ul style="list-style-type: none"> The survey work for the buffer zone had been previously carried out by the Project Proponent. 	

iii	<p>Pelan penyukatan kawasan-kawasan zon penampungan berkenaan hendaklah dikemukakan kepada JPAS bersama-sama dengan bacaan koordinat latitud dan longitud sebelum aktiviti pemajuan ladang Acacia mangium atau aktiviti pembersihan kawasan dimulakan di kawasan projek berkenaan.</p>	Comply	<ul style="list-style-type: none"> The survey map was attached together with the EIA report. 	-	
iv	<p>Sempadan kawasan zon penampungan yang telah disukat, hendaklah ditanda di lapangan dengan cat merah serta dipasang dengan papan tanda di lokasi-loasi yang mudah dilihat sebelum aktiviti pemajuan ladang Acacia mangium atau aktiviti pembersihan kawasan dimulakan di kawasan projek berkenaan.</p>	Comply	<ul style="list-style-type: none"> According to the Project Proponent, the demarcation process will be carried out as the Project progress into the area. 	-	
<p>5.7 <u>Bahan Minyak dan Sisa Toksik</u></p>					
i	<p>Bahan minyak dan sisa toksik yang digunakan dalam aktiviti pemajuan ladang Acacia mangium ini adalah tidak dibenarkan dilupuskan atau dibiarkan mengalir ke dalam parit, sungai atau alur air.</p>	Comply	<ul style="list-style-type: none"> There is no disposal of any oily and toxic materials into the nearest natural waterways as observed during the site visit. 	-	
ii	<p>Bahan minyak dan sisa toksik hendaklah dikumpul dan disimpan dalam bekas yang kukuh dan tidak mudah bocor. Bekas-bekas penyimpanan tersebut hendaklah dilabel.</p>	Comply	<ul style="list-style-type: none"> Oily materials and spent oils were stored inside durable HDPE and metal drum containers, and labelled accordingly. The oil and scheduled wastes on-site were stored at the storage facility located near the existing workshop. 	Plates 12 to 14	

iii	<p>Kawasan penyimpanan bahan minyak dan sisa toksik tersebut hendaklah terlindung dari hujan dan hendaklah terletak pada jarak mendatar tidak kurang 50 meter dari tebing sungai atau alur air.</p>	Comply	<ul style="list-style-type: none"> According to the Project Proponent, the disposal of scheduled wastes were handled by Petrojadi Sdn. Bhd. The oil and scheduled wastes storage facility located near the existing workshop, were located at more than 50 m away from any nearest natural waterways. The diesel skid tank on-site were located at more than 50 m away from any nearest natural waterways. 	Plates 12 & 14	
iv	<p>Kawasan penyimpanan bahan minyak dan sisa toksik hendaklah disediakan dengan sistem saliran perangkap minyak.</p>	Comply	<ul style="list-style-type: none"> The oil and scheduled wastes storage facility located near the existing workshop, were equipped with perimeter concrete containment bund filled with sand to prevent any leakage from seeping directly into the ground. The diesel skid tank on-site were equipped with perimeter concrete containment bund filled with saw dust to prevent any leakage from seeping directly into the ground. Drip tray were provided at the workshop area, to contain any oil generated from vehicle maintenance. 	Plates 11, 12 & 14	

V	Bahan minyak dan sisa toksik tersebut hendaklah dilupuskan mengikut garis panduan, peraturan atau undang-undang kerajaan yang sedang berkuatkuasa.	Comply	<ul style="list-style-type: none"> According to the Project Proponent, the disposal of scheduled wastes were handled by Petrojadi Sdn. Bhd. 	-
5.8	Bahan Sisa Pepejal dan Sisa Biomass			
i	Sebarang aktiviti pelupusan bahan sisa pepejal dan sisa biomass <u>tidak dibenarkan</u> ke dalam parit, alur air, di dalam sungai atau simpanan sungai.	Comply	<ul style="list-style-type: none"> There is no disposal of any solid wastes and biomass within the Riparian Reserves area or any nearest natural waterways as observed during the site visit. The biomass generated on-site were stacked properly on the exposed area of the Project site and left in-situ for natural decomposition. 	-
ii	Kemudahan mengumpul dan mengutip bahan sisa pepejal dan sisa biomass hendaklah disediakan. Lokasi kawasan pengumpulan bahan sisa pepejal dan sisa biomass hendaklah dikaji agar tidak mendatangkan kesan negatif kepada penduduk sekitar.	Comply	<ul style="list-style-type: none"> Old oil drum were recycled and utilised as garbage bins at the workshop area. Garbage bins were provided at the workers' quarters. Recycle bins were provided near the nursery and site office. 	Plates 15 & 16
iii	Semua kawasan pengumpulan bahan sisa pepejal dan sisa biomass hendaklah terletak pada jarak mendatar tidak kurang 30 meter dari alur air atau tebing sungai.	Comply	<ul style="list-style-type: none"> The waste collection facility were located at more than 30 m away from any nearest natural waterway as observed during the site visit. 	Plates 15 & 16

iv	Semua bahan sisa pepejal seperti botol, tin, plastik, dan besi hendaklah dikumpul secara berasingan dan dikitar semula.	 <p>Comply</p>	<ul style="list-style-type: none"> Scrap metals from old machineries were temporarily stockpiled at the Project site and will be properly disposed at the later stage or recycled if applicable. Recycle bins were provided near the nursery and site office to facilitate solid waste segregation on-site. 	Plate 16	
v	Sekiranya tiada kawasan pelupusan yang sesuai dalam kawasan projek, bahan sisa pepejal dan sisa biomas tersebut hendaklah dilupuskan di kawasan yang disediakan oleh pihak berkuasa tempatan	Comply	<ul style="list-style-type: none"> Refer to the comments in AEC 5.8 (ii). 	-	
5.9					
i	Pembakaran terbuka adalah <u>tidak dibenarkan</u> .	Comply	<ul style="list-style-type: none"> According to the Project Proponent, the traces of open burning on-site were caused by the high heat exposure during the dry season. The Project Proponent assured that no open burning will be conducted during the Project development activities. 	-	

ii	Pelan pengurusan dan pencegahan kebakaran kawasan pemajuan ladang Acacia mangium hendaklah disediakan dan satu salinan pelan tersebut hendaklah dikemukakan kepada JPAS.	Comply	<ul style="list-style-type: none"> The Fire Prevention and Management Plan had been previously submitted to the EPD via the November 2010 ECR – February 2011 ECR (YI/2011). 	-
5.10	<u>Penghentian Projek</u>			
i	Semua struktur binaan yang tidak digunakan hendaklah dibuka secara teratur apabila berlaku penghentian projek tersebut	Not Applicable	<ul style="list-style-type: none"> Not applicable at the current stage of the Project development as it is still in progress. 	-
ii	Semua struktur binaan yang didapati tidak selamat atau yang tidak dapat dipastikan selamat, hendaklah dibuka.	Not Applicable	<ul style="list-style-type: none"> Refer to the comments in AEC 5.10 (i). 	-
iii	Semua tanah yang tercemar dengan bahan minyak dan bahan berbahaya hendaklah dikeluarkan dan dibersihkan.	Not Applicable	<ul style="list-style-type: none"> Refer to the comments in AEC 5.10 (i). 	-

PERAKUAN PAS

Dengan ini saya mengaku telah turut serta dalam odit yang dijalankan oleh perunding alam sekitar dan telah meneliti dan bersetuju dengan isi kandungan Laporan Pematuhan Alam Sekitar bagi projek ini.

Tandatangan : 
 Nama : JUNEXTOPHER J. MAING
 Jawatan : Protection Manager
 Tarikh : 9.7.2019
 Cop Rasmi syarikat :



PERAKUAN PERUNDING ALAM SEKITAR

Dengan ini saya mengaku dan mengesahkan semua kenyataan dan butir-butir dalam Laporan Pematuhan Alam Sekitar yang dikemukakan adalah benar.

Tandatangan : 
 Nama : EDGAR NICHOLS COSMAS
 Tarikh : 8/7/19
 Cop Rasmi syarikat :



APPENDIX A

Plates



Kawalan Kawasan Pembangunan



GPS coordinates of the picture taken: N 06° 55' 49.9 E 117° 07' 23.9"

Plate 1

View towards the latest logging activities on-site located within Kapok 2.

The Project development were confined within the Project site.

Biomass generated were left in-situ for natural decomposition.

Kualiti Sumber Air



GPS coordinates of the picture taken: N 06° 54' 12.9 E 117° 06' 37.8"

Plate 2

Water sampling exercises were unable to be conducted at monitoring station, **W2**, due to stagnant condition.

Plate 3

Water sampling exercises were conducted at monitoring station **W4**.



GPS coordinates of the picture taken: N 06° 51' 21.7" E 117° 12' 06.5"

Plate 4

Water sampling exercises were conducted at monitoring station **W1**.



GPS coordinates of the picture taken: N 06° 51' 18.9" E 117° 06' 41.2"

Perlindungan Sungai

GPS coordinates of the picture taken: N 06° 54' 12.9" E 117° 06' 37.8"

Plate 5

Signboard were erected to demarcate the Riparian Reserves on-site.

Tree trunks along the Riparian Reserves belt were painted with blue colour for demarcation purposes.

The burned sign within the Riparian Reserves area were caused by the high heat exposure during the dry season.

Pembinaan Rumah Pekerja, Kem Pekerja, Bengkel atau Tapak Semaian

GPS coordinates of the picture taken: N 06° 49' 57.3" E 117° 09' 16.7"

Plate 6

View towards the workers' quarters on-site.

The facility was located at more than 30 m away from any nearest natural waterways.

Plate 7

Drainages were provided at the workers' quarter area to facilitate surface runoff towards the vegetation area.



GPS coordinates of the picture taken: N 06° 49' 57.3" E 117° 09' 16.7"

Plate 8

View towards the nursery located within the Project site.

The facility were located at 50 m away from any nearest natural waterways.



GPS coordinates of the picture taken: N 06° 49' 55.0" E 117° 09' 31.2"



Plate 9

The nursery were equipped with concrete drainage that were diverted towards the nearby sedimentation pond.

GPS coordinates of the picture taken: N 06° 49' 55.0" E 117° 09' 31.2"



Plate 10

The workshop were located at more than 50 m away from any nearest natural waterways.

However, the workshop were not provided with proper drainage as observed during the site visit.

GPS coordinates of the picture taken: N 06° 49' 46.1" E 117° 09' 11.8"

Plate 11

Provision of drip trays at the workshop to contain any oil spill generated from vehicle maintenance on-site.



GPS coordinates of the picture taken: N 06° 49' 46.1" E 117° 09' 11.8"

Bahan Minyak dan Sisa Toksik

Plate 12

View towards the scheduled wastes storage area, situated at the workshop nearby the site office.

The facility were equipped with concretized floor & banded.



GPS coordinates of the picture taken: N 06° 49' 46.1" E 117° 09' 11.8"



Plate 13

The schedule wastes on-site were labelled accordingly.

GPS coordinates of the picture taken: N 06° 49' 46.1" E 117° 09' 11.8"

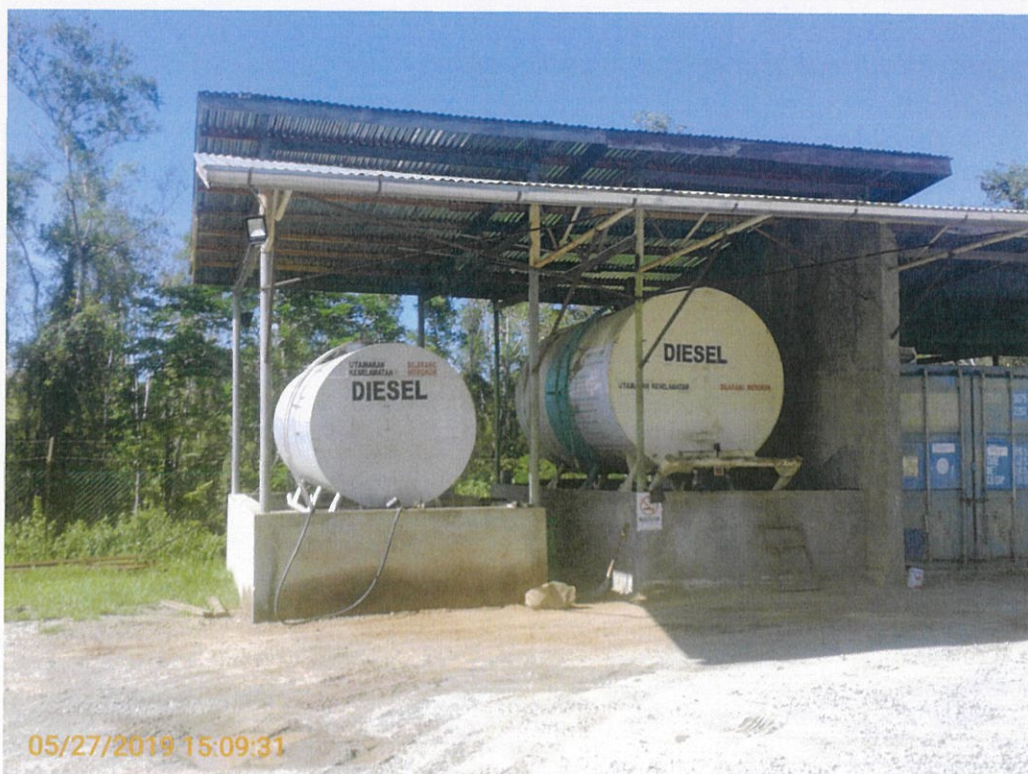


Plate 14

View towards one of the diesel skid tank situated near the workshop.

The diesel skid tank were equipped with concretized floor, bunded and sheltered from weather exposure.

The facility were located at 50 m away from any nearest natural waterways.

Saw dust were provided at the diesel skid tank area as spillage kit.

GPS coordinates of the picture taken: N 06° 49' 46.1" E 117° 09' 11.8"

Sisa Pepejal dan Sisa Biomass



Plate 15

Garbage bins were provided at the workers' quarter area to facilitate solid waste disposal on-site.

GPS coordinates of the picture taken: N 06° 49' 57.3" E 117° 09' 16.7"



Plate 16

Recycle bins were provided at the site office and nursery area to facilitate solid waste segregation on-site.

GPS coordinates of the picture taken: N 06° 49' 55.0" E 117° 09' 31.2"

APPENDIX A

Plates





1.0 WATER QUALITY

1.1 MONITORING LOCATIONS

Water sampling was carried out on the 27th May 2019 at four (4) monitoring locations, **W1**, **W2**, **W3** and **W4** as shown in **Figure 1.0**. However, water sampling exercises were unable to be carried out at monitoring locations, **W2** and **W3**, due to stagnant condition. The weather were fine and sunny throughout the sampling exercises.

1.2 PARAMETERS AND STANDARD LIMIT

Parameters of Interest

pH, Turbidity, Total Suspended Solids (TSS), Oil & Grease, Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Ammoniacal-Nitrogen (NH₃-N).

Standard Limit

All parameters for surface water quality analysis are subjected to **Class IIB** of **National Water Quality Standard of Malaysia (NWQSM)**.

1.3 ANALYTICAL RESULTS

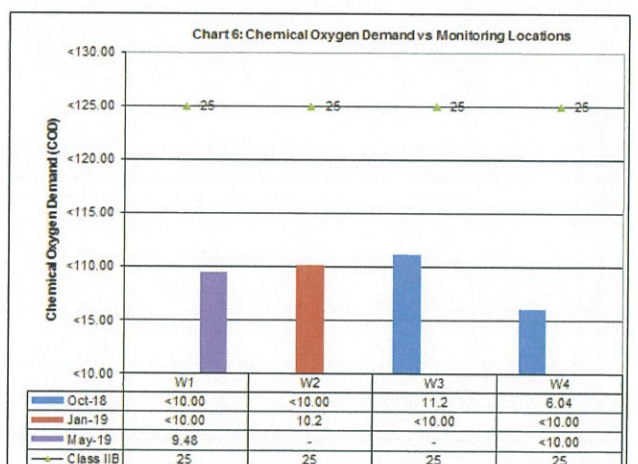
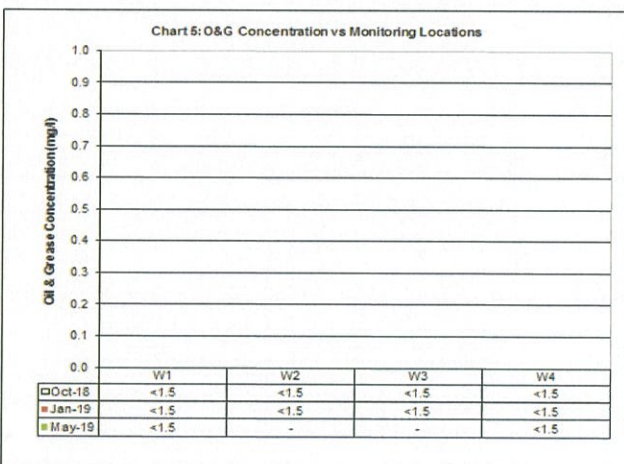
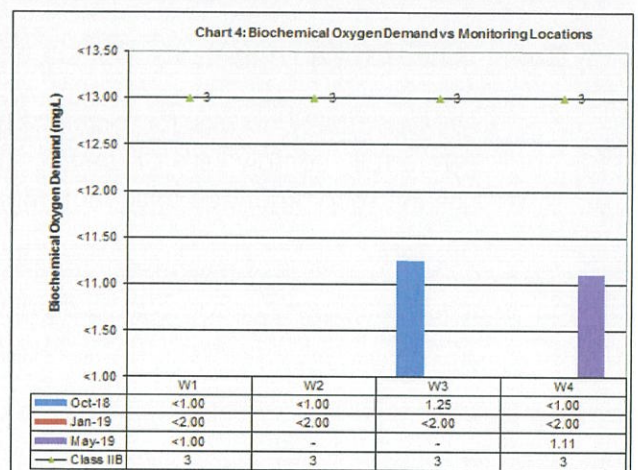
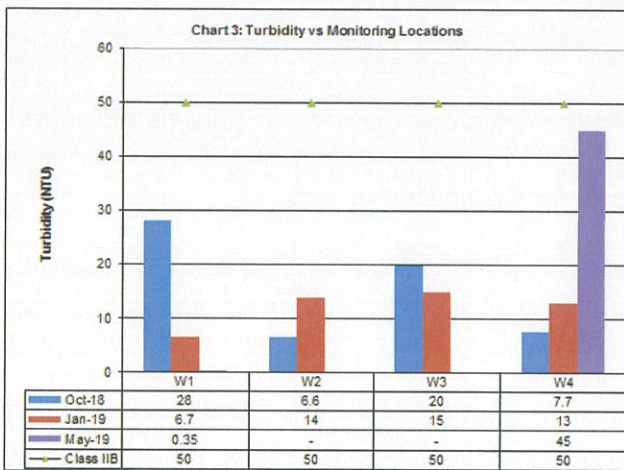
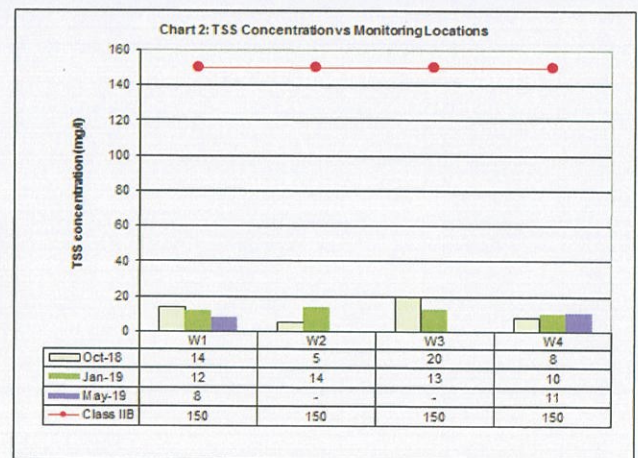
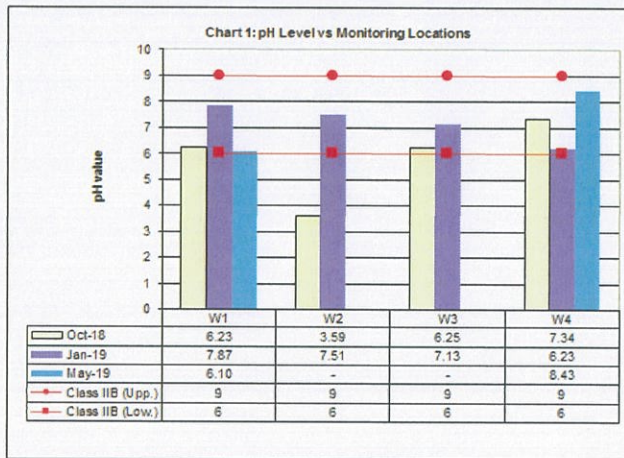
Water quality test results are tabulated on **Table 3.0** and compared against **Class IIB** of **NWQSM**. **Chart 1 – 7** present the historical water quality results for **W1 – W4**. The test reports are presented in **Appendix C**.

Table 3.0: Water quality results

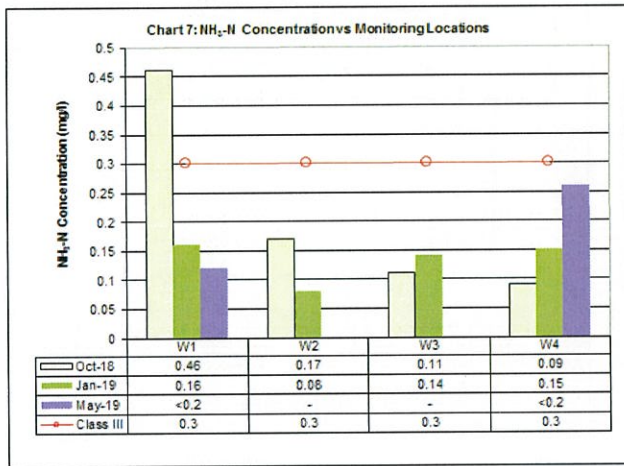
Monitoring Location	Unit	W1	W2	W3	W4	Limit*
		27/5/19 2:53 pm	-	-	27/5/19 3:40 pm	
<u>Physical / Chemical Analysis</u>						
pH Value (in-situ)	mg/L	6.1	-	-	8.43	6 – 9
Total Suspended Solid, TSS	mg/L	8.0	-	-	11.0	50
Turbidity, NTU	NTU	0.35	-	-	45	50
Biochemical Oxygen Demand (BOD)	NTU	<1.00	-	-	1.11	3
Oil & Grease	mg/L	<1.50	-	-	<1.50	40;N, 7 000;N
Chemical Oxygen Demand (COD)	mg/L	9.48	-	-	<10.0	25
Ammoniacal- Nitrogen (as NH ₃ -N)	mg/L	0.12	-	-	0.26	0.3

Notes: * Class IIB of National Water Quality Standard Malaysia (NWQSM); < > Below / above detection limit; N/A – Not applicable

HISTORICAL WATER QUALITY RESULTS (W1 – W4)



HISTORICAL WATER QUALITY RESULTS (W1 – W5)



1.4 OBSERVATION

Water quality results for locations **W1** and **W4** show that overall parameters tested were fully comply with **Class IIB**. The Project Proponent were advised to ensure that all the recommended mitigation measure were practiced on-site.

APPENDIX C

Test Reports for Water Quality
National Water Quality Standards for Malaysia (NWQSM)





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MS ISO/IEC 17025
TESTING
SAMM NO. 238

TEST REPORT

NOT FOR ADVERTISEMENT PURPOSES

Customer : Acacia Forest Industries Sdn Bhd
1st Floor, Wisma Perkasa, Jalan Gaya,
88100 Kota Kinabalu, Sabah.

Lab No. : CK/CL405/2197/19
Type (No.) of Sample : River Water (2)
Date Received : 29th May 2019
Date of Report : 19th June 2019
Project Code : CK/MO411/1187/19

Lab No.:	2197-1	2197-2	<i>Test Method</i>	<i>* Standard Limit</i>
<i>Parameter(s)</i>	W1 Date: 27/05/19 Time: 2.53 pm	W4 Date: 27/05/19 Time: 3.40 pm		
pH Value (in-situ / 27.05.19)	6.10	8.43	APHA 4500-H B, 2017	6-9
Total Suspended Solids, mg/L	8.00	11.0	APHA 2540 D, 2017	50
Turbidity, NTU	0.35	45	APHA 2130 B, 2017	50
Biochemical Oxygen Demand in 5 days @ 20°C, mg/L	<1.00	1.11	APHA 5210 B & 4500-O G, 2017	3
Oil & Grease, mg/L	<1.50	<1.50	APHA 5520 B, 2017	40:N, 7000:N
Chemical Oxygen Demand, mg/L	-	<10.0	APHA 5220 C, 2017	25
Chemical Oxygen Demand, mg/L	9.48	-	In House Method 0560 based on APHA 5220 C, 2017 & USGS	25
Ammoniacal-Nitrogen (as NH ₃ -N), mg/L	0.12	0.26	APHA 4500-NH ₃ F, 2017	0.3

Date of commencement of BOD₅ analysis: 29th May 2019

* Class IIB of National Water Quality Standards Malaysia.

SHIERLY BINTI SULAIMAN
B. Sc. (Hons)
MMIC (4697/6031/11/17)
SENIOR CHEMIST



NOTE: 1) This Test Report shall not be reproduced, except in full, without the written approval of the laboratory.
2) The above result(s) are based on sample(s) as received.
3) The result(s) relates to the sample(s) tested.

NATIONAL WATER QUALITY STANDARDS FOR MALAYSIA

Parameters	Classes						
	Unit	I	IIA	IIB	III	IV	V
Ammoniacal-N.	mg/l	0.1	0.3	0.3	0.9	2.7	>2.7
BOD	mg/l	1	3	3	6	12	>12
COD	mg/l	10	25	25	50	100	>100
DO	mg/l	7	5 - 7	5 - 7	3 - 5	<3	<1
pH		6.5 - 8.5	6 - 9	6 - 9	5 - 9	5 - 9	-
Colour	TCU	15	150	150	-	-	-
Elec. Cond*	uS/cm	1000	1000	-	-	6000	-
Floatables		N	N	N	-	-	-
Odour		N	N	N	-	-	-
Salinity*	%	0.5	1	-	-	2	-
Taste		N	N	N	-	-	-
Tot. Diss. Sol.*	mg/l	500	1000	-	-	4000	-
Tot. Susp. Sol.	mg/l	25	50	50	150	300	>300
Temperature	°C	-	Normal+2	-	Normal+2	-	-
Turbidity	NTU	5	50	50	-	-	-
F. Coliform**	counts/100ml	10	100	400	5000 (20000) ^a	5000 (20000) ^a	-
Total Coliform	counts/100ml	100	5000	5000	50000	50000	>50000

N = No visible floatable material / debris; or No objectionable odour; or No objectionable taste

* = Related parameters, only one recommended for use

** = Geometric mean

a = Maximum not to be exceeded

CLASS USES

- I** represent water body of excellent quality. Standards are set for the conservation of natural environment in its undisturbed state. Water bodies such as those in the national park areas, fountainheads, and in high land and undisturbed areas come under this category where strictly no discharge of any kind is permitted. Water bodies in this category meet the most stringent requirements for human health and aquatic life protection.
- IIA / IIB** represents water bodies of good quality. Most existing raw water supply sources come under this category. In practice, no body contact activity is allowed in this water for prevention of probable human pathogens. There is a need to introduce another class for water bodies not used for water supply but of similar quality which may be referred to as **Class IIB**. The determination of **Class IIB** standard is based on criteria for recreational use and protection of sensitive aquatic species.
- III** is defined with the primary objective of protecting common and moderately tolerant aquatic species of economic value. Water under this classification may be used for water supply with extensive / advance treatment. This class of water is also defined to suit livestock drinking needs.
- IV** defines water quality required for major agricultural irrigation activities which may not cover minor applications to sensitive crops.
- V** represents other waters which do not meet any of the above uses.