



EXECUTIVE SUMMARY

Infographic

First Schedule EIA
AMR.2025.MSWM.EIA

Project Title

PROPOSED DEVELOPMENT OF AN OFF-SITE WASTE OIL RECOVERY FACILITY LOCATED AT LOT 6169, NILAI INDUSTRIAL PARK, MUKIM SETUL, DISTRICT OF SEREMBAN, NEGERI SEMBILAN FOR MS WASTE MANAGEMENT SDN. BHD. (MSWM)

PROJECT PROPONENT



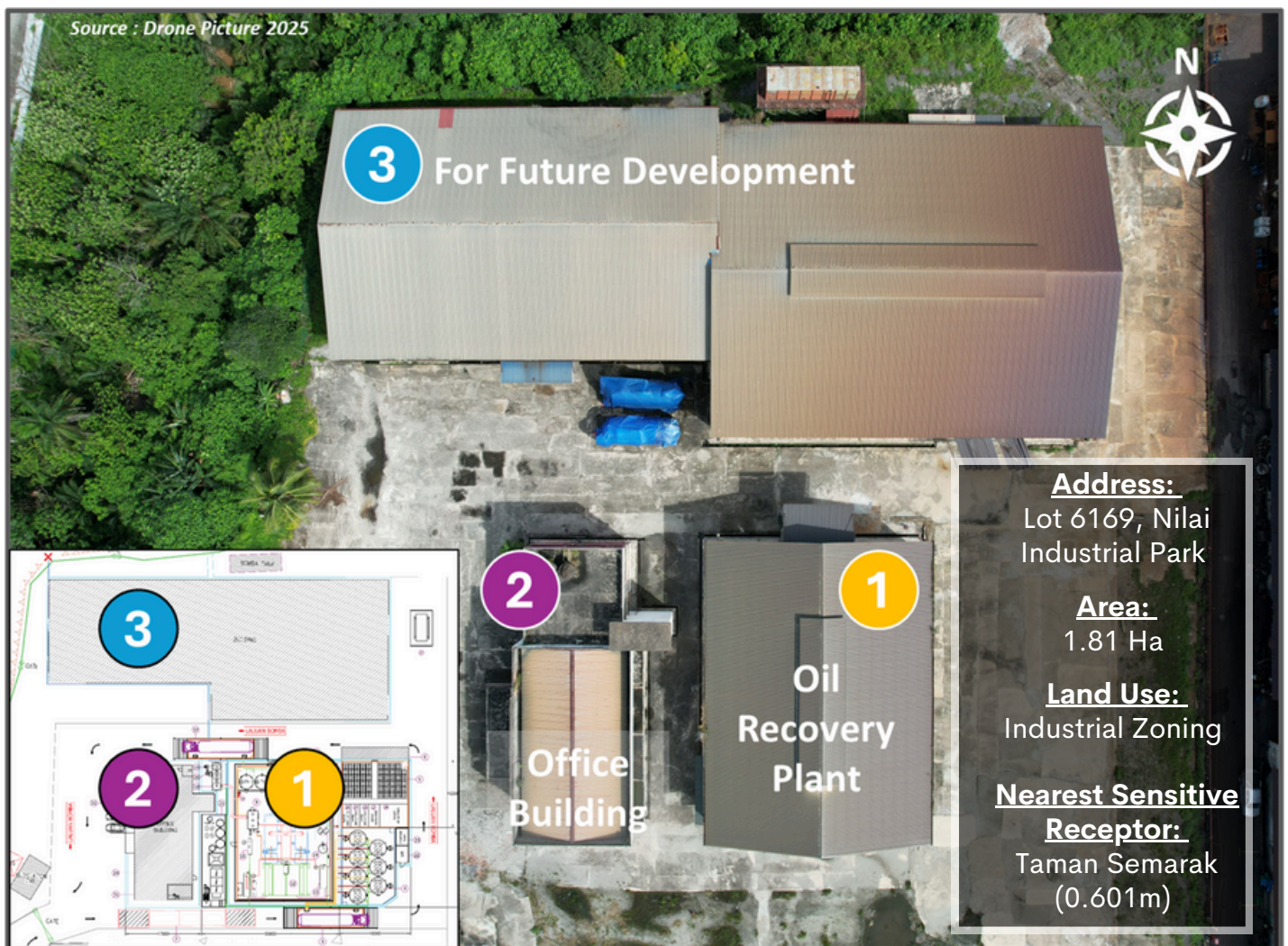
MS Waste Management Sdn. Bhd.

ENVIRONMENTAL CONSULTANT



AMR Environmental Sdn. Bhd.

PROPOSED PROJECT SITE DESCRIPTION AND LOCATION



CURRENT SITE CONDITION



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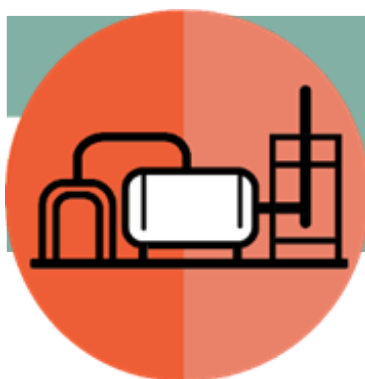
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PROPOSED ACTIVITY

OFF-SITE WASTE OIL RECOVERY PLANT: 2,700MT/MONTH

No.	SW Codes	Description	Processing Capacity (MT/Month)
1.	SW 305:	Spent Lubricating Oil	700
2.	SW 306:	Spent Hydraulic Oil	200
3.	SW 307:	Spent Mineral Oil-Wate Emulsion	300
4.	SW 309:	Oil-water mixture such as ballast water	600
5.	SW 310:	Sludge from mineral oil storage tank	400
6.	SW 311:	Waste oil or oily sludges	200
7.	SW 312:	Oily residue from automotive workshop, service station oil or grease interceptor	150
8.	SW 314:	Oil or sludge from oil refinery or petrochemical plant	150
Total MT/Month			2,700

PROPOSED FACILITY



OFF-SITE WASTE OIL RECOVERY PLANT
CAPACITY: 90 MT/DAY

INDUSTRIAL EFFLUENT TREATMENT SYSTEM (IETS)

CAPACITY: 30 m³/DAY



STORAGE FACILITY

INCOMING WASTE STORAGE TANK: 50 MT X 7 TANKS

INCOMING STORAGE (SW 310) DRUM/IBC: 135 m²

PRODUCT STORAGE TANK - 30 m³ X 2 TANKS

CARBON BLACK STORAGE AREA - 11m²



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EIA STUDY SCOPE



Quality Impact
Assessment Scopes



Qualified EIA
Consultants



Qualified Assistant
Consultants

EIA TEAM MEMBERS



Ir. Ammar Mohd
Rashid
Air Assessment &
Team Leader



Mohd Rashid Mohd
Yusof
Waste Management



Dr. Azli Arifin
Noise Quality Impact
Assessment



Ts. Adnan Yusop Ali
Quantitative Risk
Assessment



Ms Fasihah binti Mohd
Yusof
Water Quality Impact
Assessment



Mrs Fennysharty Hazli
Waste Management



Ms. W Nur Bazlin W
Mahadi
Baseline



Mr. Anas Mohd Rashid
Assistant Consultant



Ms Noor Alleysa Alis
Ramli
Assistant Consultant

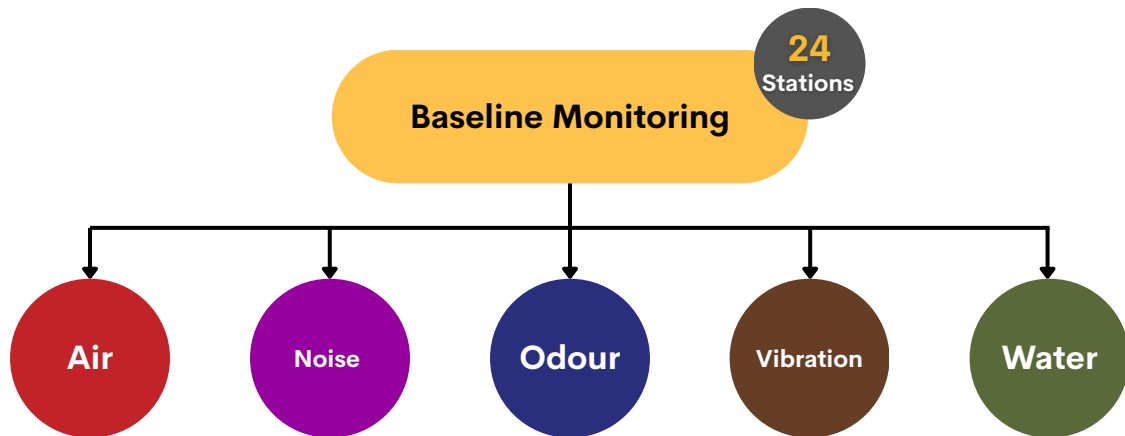


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BASELINE ENVIRONMENTAL MONITORING



BASELINE SAMPLING LOCATION





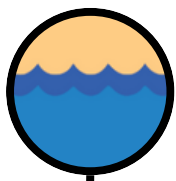
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KEY ENVIRONMENTAL CONCERN

WATER QUALITY



modelling
software

QUAL2K

3 Scenarios

Compliance of the IETS to the maximum thresholds under Standard A of the Environmental Quality (Industrial Effluent) Regulations 2009 indicates that the treated discharge may still contribute to observable impacts on the ambient water quality of Sg. Mahang.

QUANTITATIVE RISK ASSESSMENT



modelling
software

EFFECTS by GEXCON

Explosion

Fire

The credible scenario consequences assessed does not reach involuntary recipients of industrial risk surrounding the project, which is in compliance with DOE's risk acceptance criteria.

NOISE QUALITY



modelling
software

IMMI Noise Prediction

Construction

Operation

The proposed project complies with noise guideline.



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KEY ENVIRONMENTAL CONCERN

AIR QUALITY



modelling
software

**AIR DISPERSION MODEL
(BREEZE AERMOD VERSION 11 PRO)**

Normal Case

Worst Case

The predicted maximum ground-level concentrations for all pollutants remain within their respective guideline limits under both scenarios, except for NO₂ during the Worst Case (emergency) scenario. With the installation of the proposed Air Pollution Control System (APCS), emissions are expected to comply fully with the Clean Air Regulations 2014, as assured by the technology provider.

WASTE MANAGEMENT



Solid Waste

Scheduled Waste

No significant issues are anticipated in relation to solid waste management, and the potential environmental impacts associated with scheduled waste are expected to be minimal with proper handling and control measures in place.

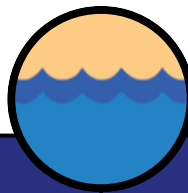


MITIGATION MEASURES



AIR QUALITY

Construction	Operation
Open burning is prohibited on-site at all times	Air pollution control systems for flue gas treatment shall be in continuous operation to remove pollutants from the emissions
Maintain and check the construction equipment and machineries regularly	The Air Pollution Control System (APCS) requires periodic and regular maintenance



WATER QUALITY

Construction	Operation
Any potential spillages shall be controlled with the presence of perimeter drain, sump pit and bund within the process area.	Sampling should be conducted regularly at predetermined intervals to ensure consistent monitoring and early detection of any changes in effluent quality.
A monitoring and audit programme shall be carried out	Appointing full time competent person to manage, monitor, analyse and report the operation of the IETS.



NOISE QUALITY

Construction	Operation
Noise control engineering techniques will be in use where practical	Perform periodic noise monitoring
Transportation of construction materials shall be scheduled to minimize noise	Regular maintenance and inspection of all plant facilities especially for noise generating equipments



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MITIGATION MEASURES



WASTE MANAGEMENT

Construction	Operation
Open burning is prohibited on-site at all times	Segregated according to their source and classify them into recyclable and non-recyclable categories
Contractor shall provide a designated temporary covered stockpile area within the site	Implement proper packaging and labelling in accordance with DOE guidelines.



QUANTITATIVE RISK ASSESSMENT

Construction	Operation
Not Applicable	Emergency response procedures shall cover incidents involving any chemicals handled on-site.
Not Applicable	Establish an Emergency Response Plan (ERP)



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IMPACT AND COMPLIANCE MONITORING

SUMMARY OF PROPOSED IMPACT MONITORING

No.	Monitoring Components	Number of Stations	Monitoring Stations	Sampling Frequency
During Construction Phase				
1.	Ambient Air Quality	3	A1, A2 and A4	Quarterly
2.	Water Quality	2	SW4 and SW 6 (additional station after the discharge point)	Quarterly
3.	Noise Quality	6	N1, N2, N3, N4, N5 and N7	Quarterly
4.	Vibration Level	1	V1	Quarterly
5.	Odour Quality	3	O1, O2 and O4	Quarterly
During Operation Phase				
1.	Ambient Air Quality	3	A1, A2 and A4	Quarterly
2.	Water Quality	2	SW4 and SW6 (additional station after the discharge point)	Quarterly
3.	Noise Quality	6	N1, N2, N3, N4, N5 and N7	Quarterly
4.	Odour Quality	3	O1, O2 & O4	Quarterly

SUMMARY OF PROPOSED COMPLIANCE MONITORING

No.	Monitoring Components	Number of Stations	Monitoring Stations	Sampling Frequency
During Operation Phase				
1.	Stack Emission Quality	1	Off-Site Waste Oil Recovery Plant	Quarterly
2.	Effluent Quality	1	Final discharge point of the IETS	Monthly



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SUMMARY OF IMPACT RANK

MITIGATION MEASURES HAVE BEEN FULLY INTEGRATED INTO THE PROJECT DESIGN AND OPERATIONAL ACTIVITIES TO ENSURE EFFECTIVE MANAGEMENT OF ALL IDENTIFIED ENVIRONMENTAL IMPACTS.

No.	Environmental Impact	Impact Rank
1.	Air Quality	Low
2.	Waste Management	Low
3.	Water Quality	Medium
4.	Quantitative Risk Assessment	Medium
5.	Noise Quality	Low

THE PROPOSED PROJECT DEVELOPMENT WILL NOT IMPOSE SIGNIFICANT ADVERSE IMPACT TO THE ENVIRONMENT IN THE VICINITY OF THE PROPOSED SITE.

IT IS RECOMMENDED THAT THE PROPOSED DEVELOPMENT OF THE OFF-SITE WASTE OIL RECOVERY FACILITY TO BE APPROVED, SUBJECT TO THE PROJECT PROPONENT'S COMMITMENT TO COMPLY WITH ALL RELEVANT ENVIRONMENTAL GUIDELINES AND TO IMPLEMENT THE NECESSARY MITIGATION MEASURES TO ENSURE ADHERENCE TO STATUTORY REQUIREMENTS AND RECOMMENDED CRITERIA.



RINGKASAN EKSEKUTIF

Infografik

Jadual Pertama EIA
AMR.2025.MSWM.EIA

Tajuk Projek

PROPOSED DEVELOPMENT OF AN OFF-SITE WASTE OIL RECOVERY FACILITY LOCATED AT LOT 6169, NILAI INDUSTRIAL PARK, MUKIM SETUL, DISTRICT OF SEREMBAN, NEGERI SEMBILAN FOR MS WASTE MANAGEMENT SDN. BHD. (MSWM)

PENGGERAK PROJEK



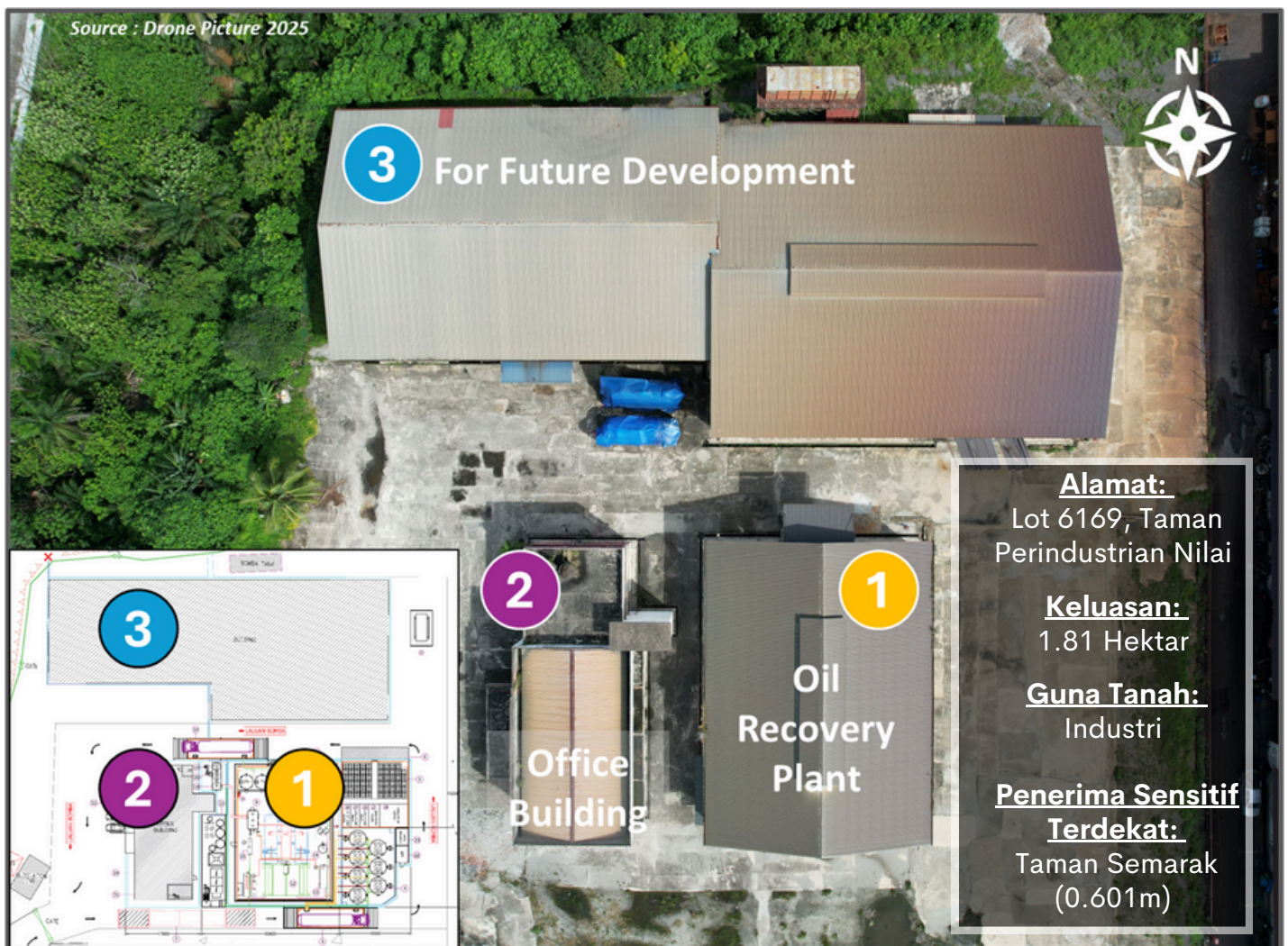
MS Waste Management Sdn. Bhd.

JURURUNDING ALAM SEKITAR



AMR Environmental Sdn. Bhd.

LOKASI SERTA DISKRIPSI TAPAK PROJEK CADANGAN



KEADAAN SEMASA TAPAK

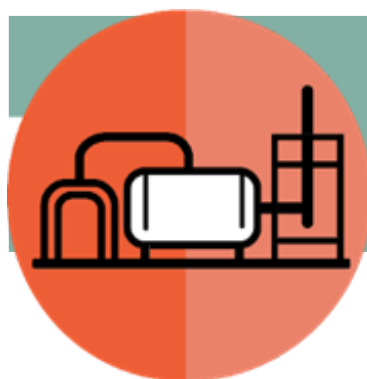


AKTIVITI CADANGAN

PEMEROLEHAN KEMBALI SISA MINYAK: 2,700MT/BULAN

No.	Kod BT	Diskripsi	Kapasiti Pemprosesan (MT/Bulan)
1.	SW 305:	Spent Lubricating Oil	700
2.	SW 306:	Spent Hydraulic Oil	200
3.	SW 307:	Spent Mineral Oil-Wate Emulsion	300
4.	SW 309:	Oil-water mixture such as ballast water	600
5.	SW 310:	Sludge from mineral oil storage tank	400
6.	SW 311:	Waste oil or oily sludges	200
7.	SW 312:	Oily residue from automotive workshop, service station oil or grease interceptor	150
8.	SW 314:	Oil or sludge from oil refinery or petrochemical plant	150
Jumlah MT/Bulan			2,700

FASILITI CADANGAN



PEMEROLEHAN KEMBALI SISA MINYAK LUAR TAPAK

KAPASITI: 90 MT/HARI

SISTEM PENGOLAHAN INDUSTRI EFLUEN (IETS)

KAPASITI : 30m³/HARI



FASILITI PENSTORAN

INCOMING WASTE STORAGE TANK: 50 MT X 7 TANKS

INCOMING STORAGE (SW 310) DRUM/IBC: 135 m²

PRODUCT STORAGE TANK - 30 m³ X 2 TANKS

CARBON BLACK STORAGE AREA - 11 m²



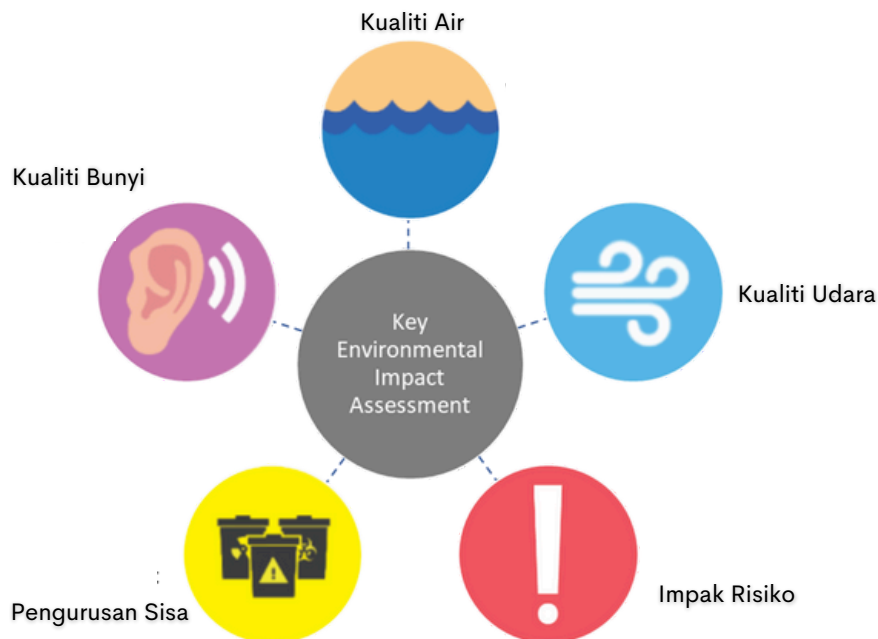
RINGKASAN EKSEKUTIF

Infografik

Jadual Pertama EIA

AMR.2025.MSWM.EIA

SKOP KAJIAN EIA



Skop Kajian Impak Kualiti



Perunding EIA Berdaftar



Pembantu Jururunding Berdaftar

PASUKAN EIA



Ir. Ammar Mohd Rashid
Penilaian Kualiti Udara
&
Ketua Pasukan



Dr. Azli Arifin
Penilaian Kualiti Bunyi



Ms Fasihah binti Mohd Yusof
Penilaian Impak Kualiti Air



Mohd Rashid Mohd Yusof
Pengurusan Sisa



Ts. Adnan Yusop Ali
Penilaian Impak Risiko



Mrs Fennysharty Hazli
Pengurusan Sisa



Ms. W Nur Bazlin W Mahadi
Kajian Garis Dasar



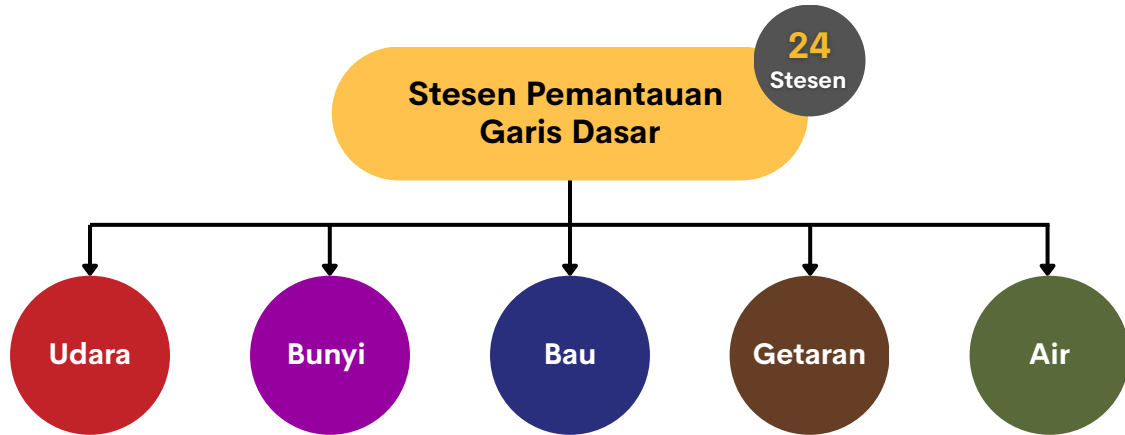
Mr. Anas Mohd Rashid
Pembantu Jururunding



Ms Noor Alleysa Alis Ramli
Pembantu Jururunding



PEMANTAUAN GARISDASAR ALAM SEKITAR



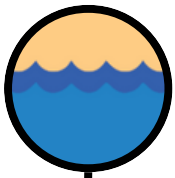
LOKASI PEMANTAUAN GARISDASAR





KEBIMBANGAN UTAMA ALAM SEKITAR

KUALITI AIR



Perisian
Permodelan

QUAL2K

3 Senario

Pematuhan IETS terhadap had maksimum di bawah Standard A, Peraturan Kualiti Alam Sekeliling (Efluen Industri) 2009 menunjukkan bahawa pelepasan terawat masih berpotensi menyumbang kepada kesan yang dapat diperhatikan terhadap kualiti air ambien Sungai Mahang.

PENILAIAN RISIKO KUANTITATIF



Perisian
Permodelan

EFFECTS by GEXCON

Letupan

Kebakaran

Akibat senario bolehpercaya yang dinilai tidak mencapai penerima risiko industri secara involuntari di kawasan sekitar projek, ianya mematuhi kriteria penerimaan risiko JAS

KUALITI BUNYI



Perisian
Permodelan

IMMI Noise Prediction

Pembinaan

Operasi

Projek yang dicadangkan mematuhi garis panduan alam sekitar.

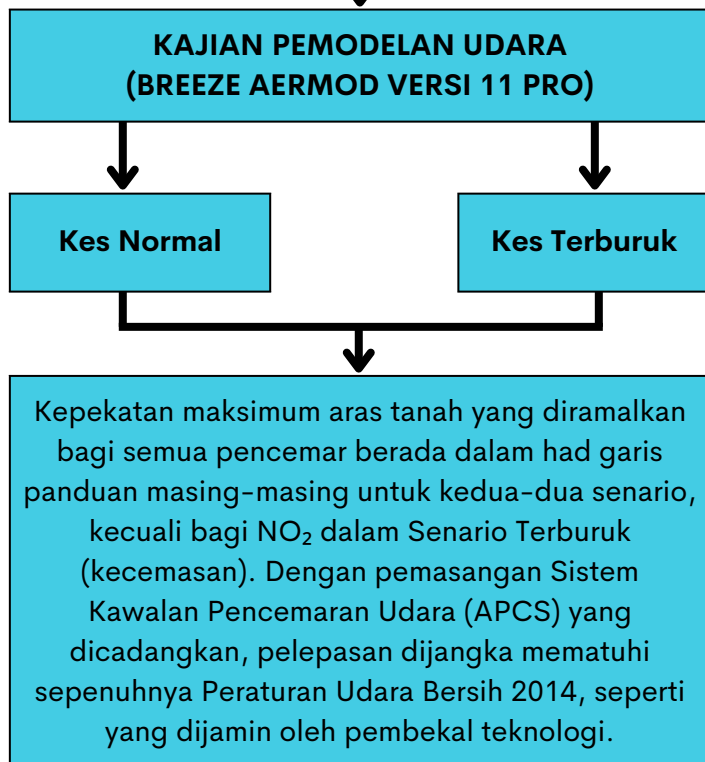


KEBIMBANGAN UTAMA ALAM SEKITAR

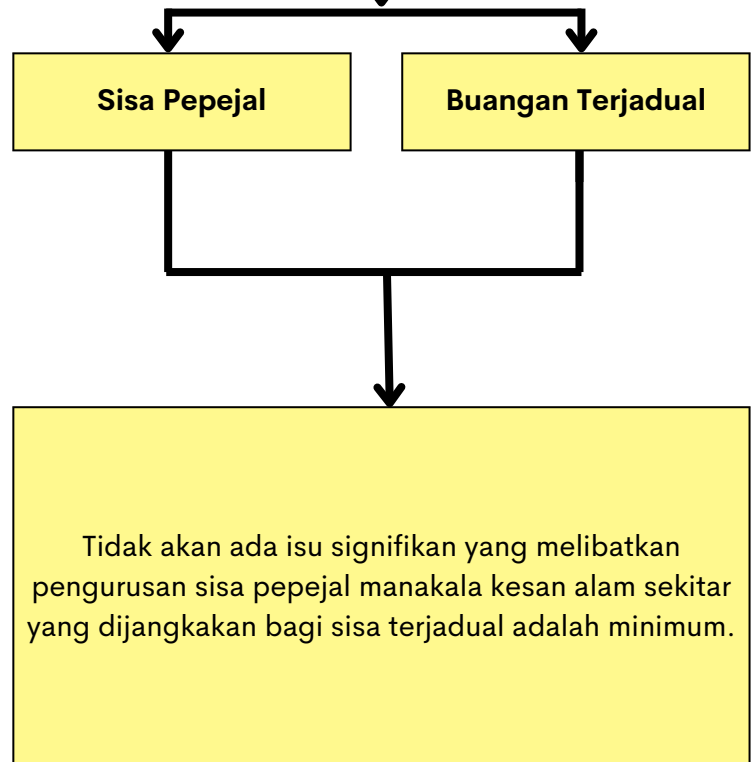
KUALITI UDARA



Perisian
Permodelan



PENGURUSAN SISA



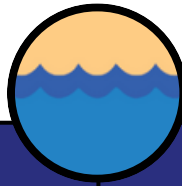


LANGKAH MITIGASI



KUALITI UDARA

Pembinaan	Operasi
Pembakaran terbuka adalah dilarang di tapak pada setiap masa;	Sistem kawalan pencemaran udara untuk rawatan gas serombong hendaklah beroperasi secara berterusan untuk membuang bahan pencemar daripada pelepasan.
Menyelenggara dan memeriksa peralatan dan jentera pembinaan dengan kerap.	Sistem Kawalan Pencemaran Udara (APCS) memerlukan penyelenggaraan berkala dan rutin.



KUALITI AIR

Pembinaan	Operasi
Sebarang potensi tumpahan akan dikawal melalui penyediaan longkang perimeter, kolam <i>sump</i> dan benteng di dalam kawasan proses.	Pensampelan hendaklah dijalankan secara berkala pada selang masa yang telah ditetapkan bagi memastikan pemantauan yang berterusan serta pengesanan awal terhadap sebarang perubahan dalam kualiti efluen.
Satu program pemantauan dan audit hendaklah dijalankan	Melantik orang kompeten sepenuh masa untuk mengurus, memantau, menganalisis dan melaporkan operasi ETP.



KUALITI BUNYI

Pembinaan	Operasi
Teknik kejuruteraan kawalan bunyi akan digunakan jika praktikal	Pengangkutan bahan binaan hendaklah dijadualkan bagi meminimumkan bunyi bising
Melaksanakan pemantauan bunyi secara berkala	Penyelenggaraan dan pemeriksaan berkala semua kemudahan loji yang mengeluarkan bunyi bising



LANGKAH MITIGASI



PENGURUSAN SISA

Pembinaan	Operasi
Pembakaran terbuka adalah dilarang di tapak pada setiap masa	Diasingkan mengikut sumbernya dan klasifikasikannya ke dalam kategori kitar semula dan tidak boleh dikitar semula
Kontraktor hendaklah menyediakan kawasan simpanan simpanan sementara yang ditetapkan di dalam tapak	Melaksanakan pembungkusan dan pelabelan yang betul mengikut garis panduan JAS.



PENILAIAN RISIKO KUANTITATIF

Pembinaan	Operasi
-	Prosedur tindak balas kecemasan hendaklah merangkumi kejadian yang melibatkan sebarang bahan kimia yang dikendalikan di tapak.
-	Wujudkan Pelan Tindakan Kecemasan (ERP)



PEMANTAUAN IMPAK DAN PEMATUHAN

RINGKASAN CADANGAN PEMANTAUAN IMPAK

No.	Komponen Pemantauan	Jumlah Stesen	Stesen Pemantauan	Kekerapan Persampelan
Sewaktu Fasa Pembinaan				
1.	Kualiti Udara Ambien	3	A1, A2 dan A4	Suku Tahunan
2.	Kualiti Air	2	SW4 dan SW 6 (Tambahan satu stesen selepas takat pelepasan terakhir)	Suku Tahunan
3.	Kualiti Bunyi	6	N1, N2, N3, N4, N5 dan N7	Suku Tahunan
4.	Tahap Getaran	1	V1	Suku Tahunan
5.	Kualiti Bau	3	O1, O2 dan O4	Suku Tahunan
Sewaktu Fasa Operasi				
1.	Kualiti Udara Ambien	3	A1, A2 and A4	Suku Tahunan
2.	Kualiti Air	2	SW4 and SW6 (Tambahan satu stesen selepas takat pelepasan terakhir)	Suku Tahunan
3.	Kualiti Bunyi	6	N1, N2, N3, N4, N5 dan N7	Suku Tahunan
4.	Kualiti Bau	3	O1, O2 dan O4	Suku Tahunan

RINGKASAN CADANGAN PEMANTAUAN PEMATUHAN

No.	Komponen Pemantauan	Jumlah Stesen	Stesen Pemantauan	Kekerapan Persampelan
Sewaktu Fasa Operasi				
1.	Kualiti Pelepasan Cerobong	1	Fasiliti Pemerolehan Luar Tapak Sisa Minyak	Suku Tahunan
2.	Kualiti Effluent	1	Takat Pelepasan Terakhir IETS	Bulanan



RUMUSAN TAHAP IMPAK

LANGKAH MITIGASI TELAH DIINTEGRASIKAN SEPENUHNYA KE DALAM REKA BENTUK PROJEK DAN AKTIVITI OPERASI BAGI MEMASTIKAN PENGURUSAN YANG BERKESAN TERHADAP SEMUA IMPAK ALAM SEKITAR YANG DIKENAL PASTI.

No.	Impak Alam Sekitar	Tahap Kesan
1.	Kualiti Udara	Rendah
2.	Pengurusan Sisa	Rendah
3.	Kualiti Air	Medium
4.	Penilaian Risiko Kuantitatif	Medium
5.	Kualiti Bunyi	Rendah

PEMBANGUNAN PROJEK YANG DICADANGKAN TIDAK AKAN MEMBERIKAN IMPAK BURUK YANG SIGNIFIKAN TERHADAP ALAM SEKITAR DI KAWASAN PERSEKITARAN TAPAK CADANGAN.

ADALAH DISYORKAN AGAR PEMBANGUNAN FASILITI PEMEROLEHAN LUAR TAPAK SISA MINYAK INI DIPERTIMBANGKAN UNTUK KELULUSAN, TERTAKLUK KEPADA KOMITMEN PEMOHON PROJEK UNTUK MEMATUHI SEMUA GARIS PANDUAN ALAM SEKITAR YANG BERKAITAN SERTA MELAKSANAKAN LANGKAH-LANGKAH MITIGASI YANG DIPERLUKAN BAGI MEMASTIKAN PEMATUHAN TERHADAP KEPERLUAN STATUTORI DAN KRITERIA YANG DITETAPKAN.