

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

**CADANGAN PROJEK PELEBURAN SISA
KUPRUM DI LOT 10636, JALAN PERMATA
1/7, ARAB MALAYSIAN INDUSTRIAL PARK,
NILAI, NEGERI SEMBILAN OLEH TETUAN
COPROD SDN. BHD.**

VOLUME 1

JULY 2026

Project Proponent:

COPROD SDN. BHD.

Lot No. 1559, Kampung Jaya Industrial Area
47000, Sungai Buloh, Selangor

Tel: 03-6157 8614



ASIAN ENVIRONMENTAL SOLUTIONS
SDN. BHD. (741262 - A)
"Sustainable Environmental Solutions"

TITLE

- Cadangan Projek Peleburan Sisa Kuprum di Lot 10636, Jalan Permata 1/7, Arab Malaysian Industrial Park, Nilai, Negeri Sembilan oleh Tetuan Coprod Sdn. Bhd.

AREA

- Coprod Sdn. Bhd. intends to operate a factory to manufacture copper ingot and wire bar at Arab Malaysian Industrial Park.
- The raw material is clean copper scraps with 99.9% purity level.
- The overall land area for the project is estimated at 4,572 square feet

PROJECT BACKGROUND

- The proposed Project will be operating on an existing factory on Lot 10636
- Proposed facility shall process total of 750MT/month
- The quantity of product manufactured shall be 448.65MY/month (~450MT/month) of copper ingot and 299.10MT/month (~300MT/month) of copper wire bar.
- As it is an existing building, there shall be no land clearing works or earthworks required for the project development

PRESCRIBED ACTIVITY

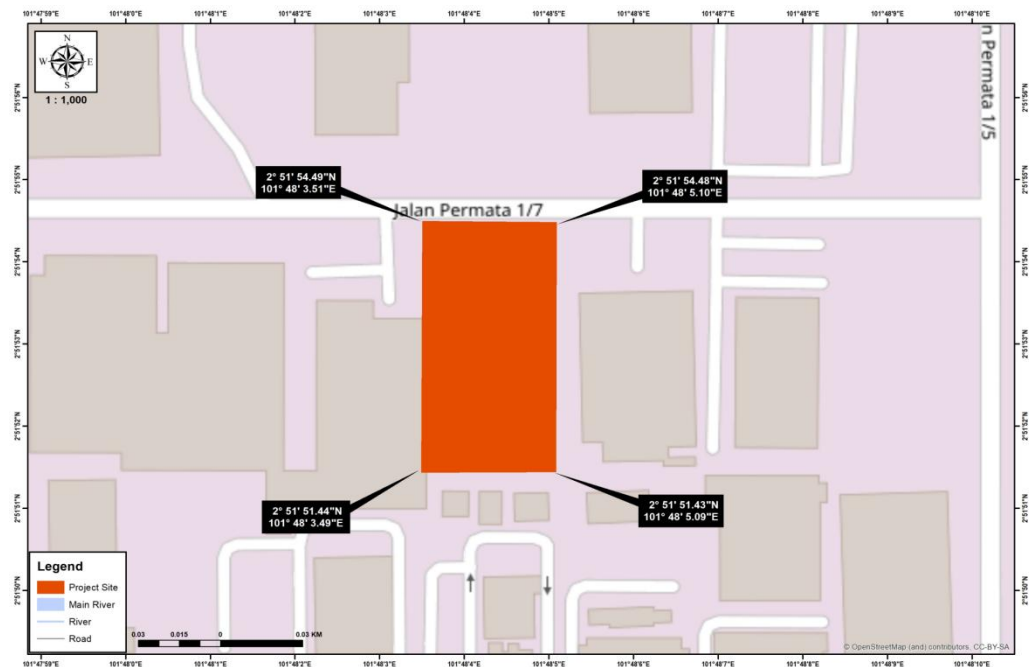
- First Schedule Activity 14: Treatment and Disposal of Waste of the EIA Order relating to the (b) Solid Waste:
(ii) Construction of recovery plant or recycling plant

PROJECT PROPONENT

Coprod Sdn. Bhd.
Lot No. 1559, Kampung jaya
Industrial Area,
47000, Sungai Buloh, Selangor

ENVIRONMENT CONSULTANT

Asian Environmental Solutions
Sdn. Bhd.
C3-2-1, Solaris Dutamas,
No.1, Jalan Dutamas 1,
50480, Kuala Lumpur



PROJECT CONCEPT

The Project Proponent, Coprod Sdn. Bhd. wants to utilise their fully built-up existing facility located in an industrial setting to be used for the expansion of their operations of clean copper scraps recycling. Coprod Sdn. Bhd. was set up with the objective of recycling copper scraps and turn into copper ingot and copper wire bar. Their equipment (Super-D Type Drum Furnace, Induction Furnace, Pit-Type Crucible Furnace and APCS systems) are able to cater for the incoming raw material of 750 MT/month and product of 747.75MT/month in the form of copper ingot and copper wire bar.

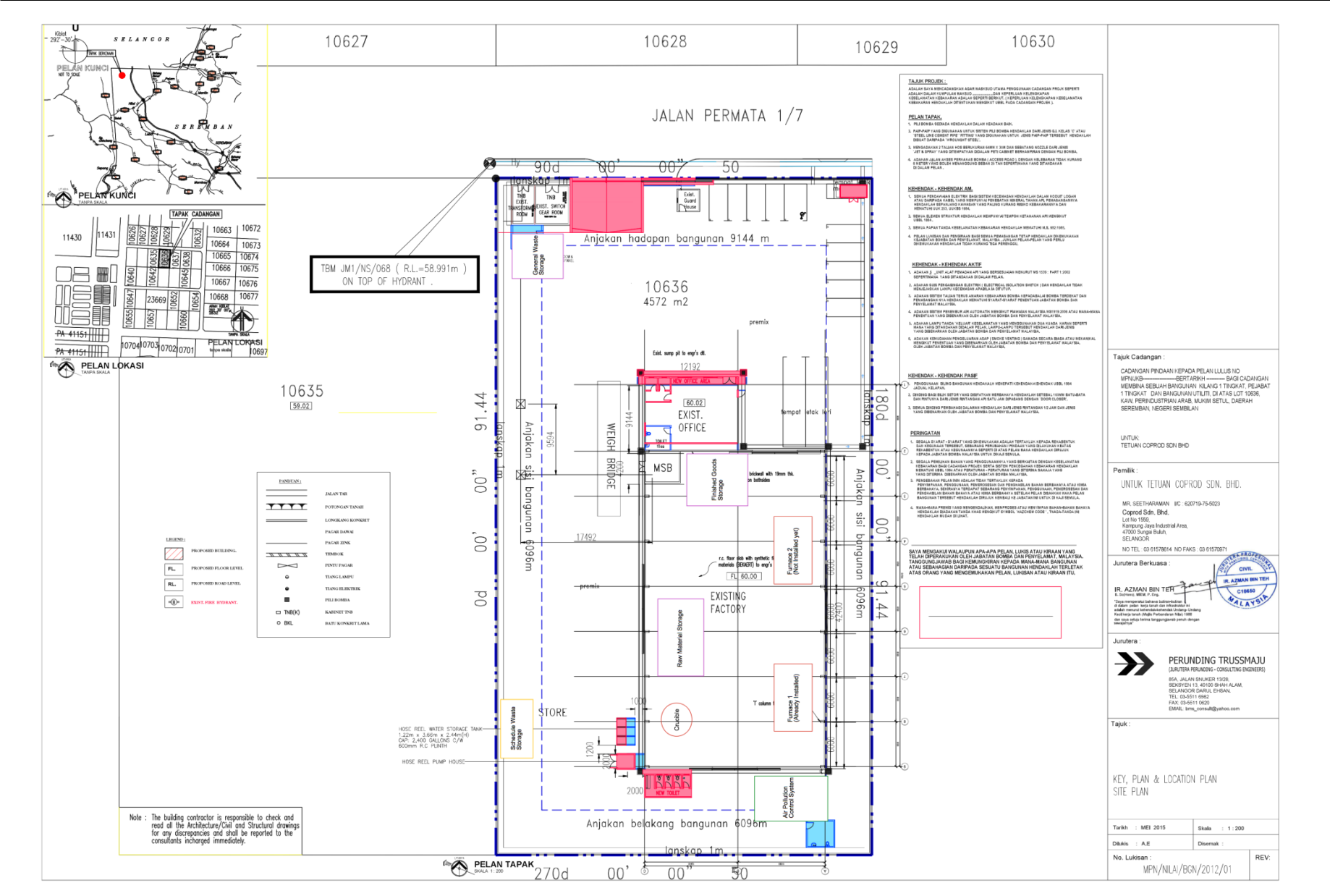
SUMMARY OF RAW MATERIALS, PRODUCTS AND WASTE MATERIAL

Input	Input Material		Quantity (MT/month)	
	Copper scraps with 99.9% purity	Raw material	= 750 MT/month	
Output	Output Material		Quantity (MT/month)	
	Copper ingot and copper wire bar	Product	747.75 ✓ Copper ingot = 448.65 ✓ Copper wire bar = 299.10 Total product volume = 747.75MT/month	
	APCS	APCS residue	= 2.25 MT/month	

WASTE ACCEPTANCE CRITERIA

- Copper scraps are clean and dry material without any contamination of oil or chemicals
- Project Proponent will only receive raw material from reliable sources followed by receiving stage inspection on spectrometer
- During operation, the raw material in the form of copper scraps will be directly melted in the furnace without any further treatment
- At the point of receiving raw material (copper scraps), any non-compliant received at the factory will be rejected, notified and returned to the supplier.

FACTORY LAYOUT PLAN



OVERALL PROCESS FLOW OF PROJECT OPERATION



STEP 1

Incoming: Raw Material
Factory Reject Clean Copper



STEP 2

Raw Material Loaded into Furnace
1) Step 1: Melt Down Copper
2) Step 2: Oxygenate Copper using compressed Air



STEP 3

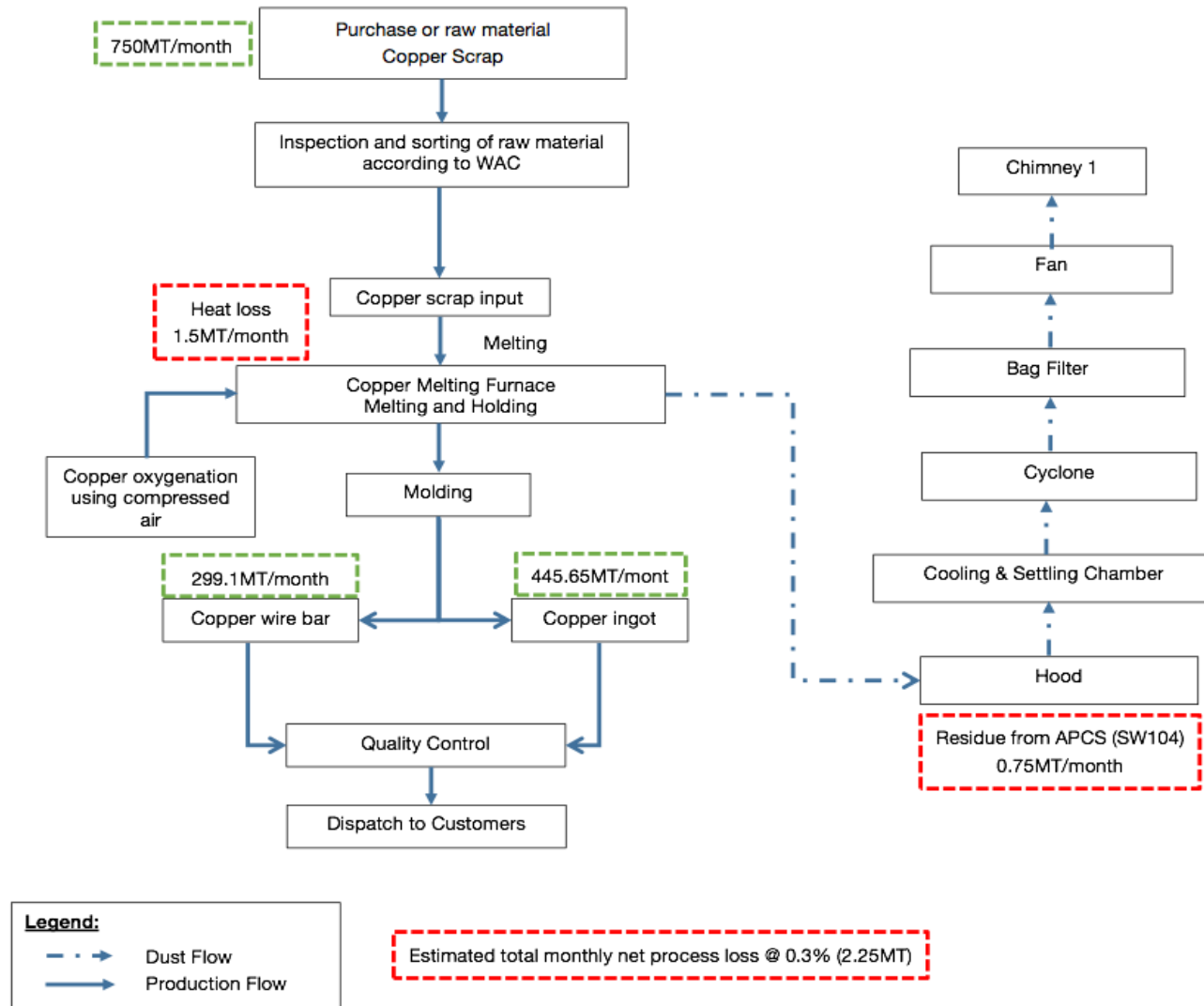
Melting Down Process Completion
Step 1: Quality Check
Step 2: Upon QC Pass proceed for unload and casting to Ingots or wire bars



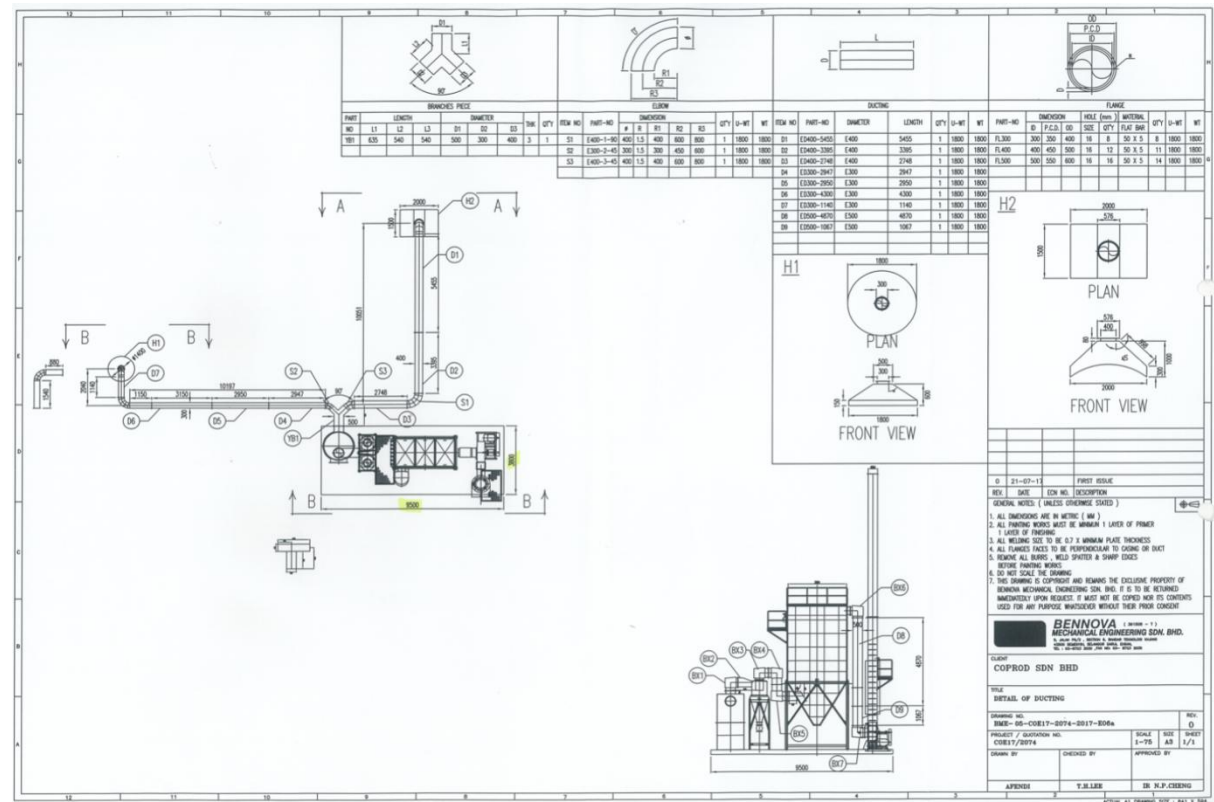
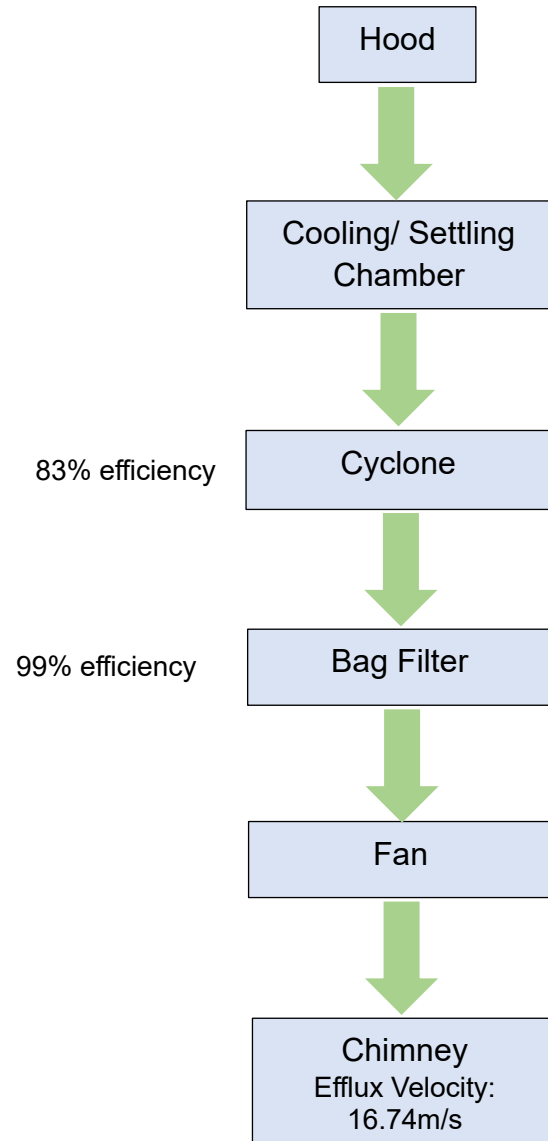
STEP 4

Final Product Ready for Sales
Item 1: Copper Wire Bar
Item 2: Copper Ingots

MASS BALANCE FOR THE CAPACITY 25MT/DAY (750 TPM)



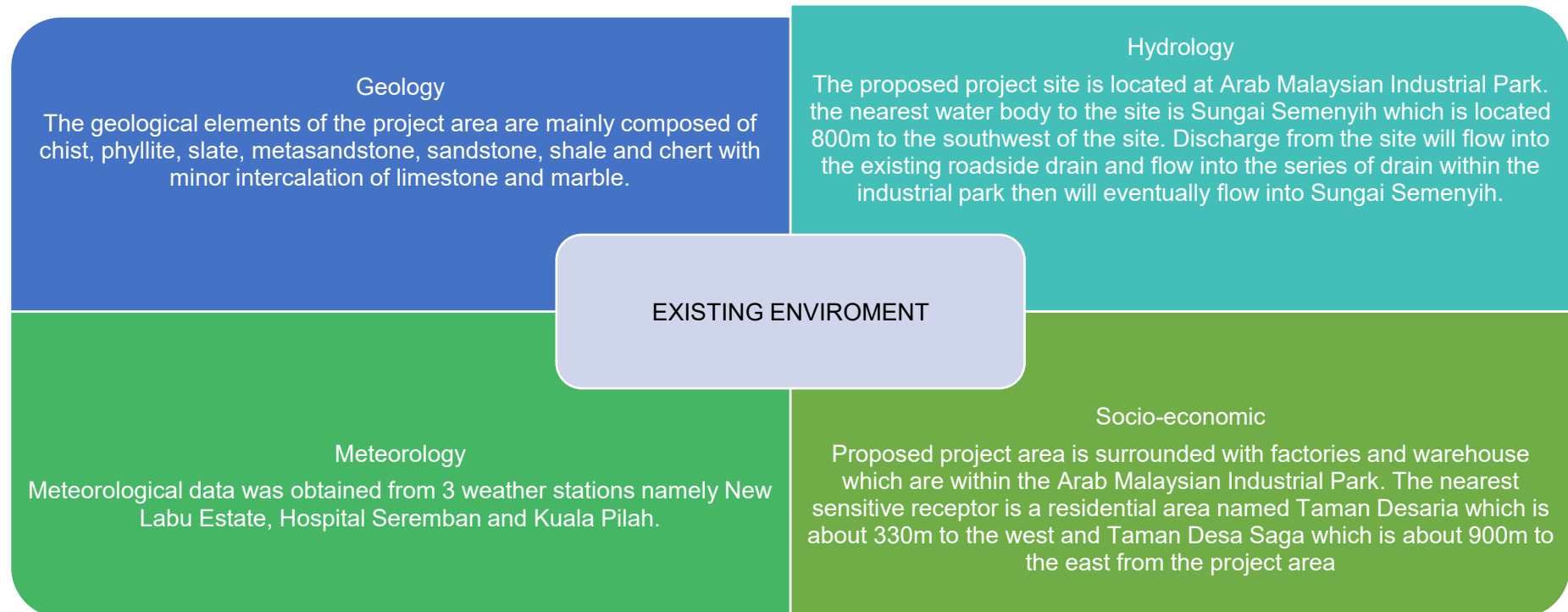
AIR POLLUTION CONTROL SYSTEM PROCESS FLOW



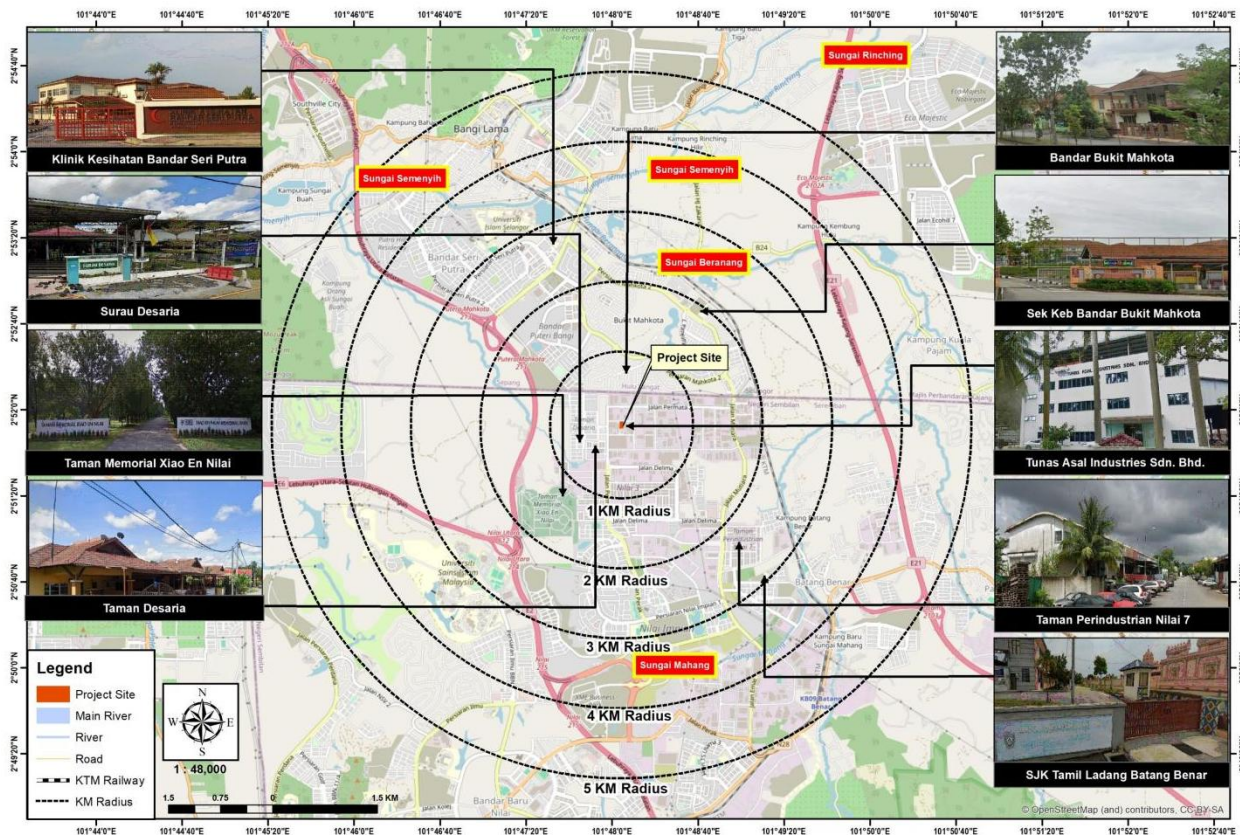
PROJECT DEVELOPMENT AND IMPLEMENTATION

OPERATIONAL AND MAINTENANCE

- The factory will operate for a maximum of 24 hours per day and shall only cease operations during interim and annual scheduled shutdown. Equipment and machinery have been placed at the factory and just need maintenance and repairing work (if any) before commencement once approval is obtained. The equipment shall be maintained and repaired by the project proponent in accordance with the annual maintenance plan, best industry practices and standard of procedures.
- Most of the equipment are installed at the factory and waiting for approval prior to commencement.
- Testing and commissioning prior to re-commencement of operations will be in 2 weeks and scheduled maintenance and replacement of defective part will also be done in 2 weeks.



EXISTING LANDUSE (5KM RADIUS)



BASELINE SAMPLING

Monitoring Location	Coordinates	Description
WATER		
W1	2°51'54.51"N 101°48'5.02"E	Existing Drain (Upstream)
W2	2°51'54.53"N 101°48'3.55"E	Existing Drain (Downstream)
AIR/NOISE/ODOUR		
A1/N1/O1	2°51'54.29"N 101°48'4.04"E	In front of the Project Site
A2/N2	2°51'48.92"N 101°47'53.08"E	Bungalow Lot at Taman Bukit Mahkota
A3/N3	2°52'9.71"N 101°48'18.41"E	At open space located at Taman Sri Perasing
A4/N4	2°52'10.16"N 101°47'45.00"E	Bandar Puteri Bangi

Air Quality

Test Parameter	Test Method	Results				*Malaysian Guidelines
		A1	A2	A3	A4	
PM 10	MiniVol Sampler TAS 5988	56 µg/m³	54 µg/m³	52 µg/m³	50 µg/m³	100 µg/m³
PM 2.5	MiniVol Sampler TAS 5988	14 µg/m³	13 µg/m³	12 µg/m³	11 µg/m³	35 µg/m³
Sulfur Dioxide (SO ₂)	ISC 704A	ND (<5) µg/m³	ND (<5) µg/m³	ND (<5) µg/m³	ND (<5) µg/m³	80 µg/m³
Nitrogen Dioxide (NO ₂)	ISC 408	ND (<5) µg/m³	ND (<5) µg/m³	ND (<5) µg/m³	ND (<5) µg/m³	70 µg/m³
Carbon Monoxide (CO)	In house method SM 098	ND (<2) mg/m³	ND (<2) mg/m³	ND (<2) mg/m³	ND (<2) mg/m³	10 mg/m³
Ozone	In house method SM 097	ND (<10) µg/m³	ND (<10) µg/m³	ND (<10) µg/m³	ND (<10) µg/m³	100 µg/m³
Lead	USEPA Method 3050B, 1996	ND(<0.01) µg/m³	ND(<0.01) µg/m³	ND(<0.01) µg/m³	ND(<0.01) µg/m³	-
Date and Time of Sampling		8-9/05/2026 0700hrs - 0700hrs	11-12/05/2026 0700hrs - 0700hrs	12-13/05/2026 0700hrs - 0700hrs	13-14/05/2026 0700hrs - 0700hrs	

Noise Level

Sampling Location	Sampling Time	Leq dB(A)	*Recommended Noise Limit
N1	08/05/2026 – 09/05/2026 07.00 am – 10.00 pm	55.3	75.0 dB(A) for Day time
	08/05/2026 – 09/05/2026 10.00 pm – 7.00 am	44.5	75.0 dB(A) for Night time
N2	11/05/2026 – 12/05/2026 07.00 am – 10.00 pm	56.9	65.0 dB(A) for Day time 60.0 dB(A) for Night time
	11/05/2026 – 12/05/2026 10.00 pm – 7.00 am	45.4	
N3	12/05/2026 – 13/05/2026 07.00 am – 10.00 pm	57.6	
	12/05/2026 – 13/05/2026 10.00 pm – 7.00 am	46.2	
N4	13/05/2026 – 14/05/2026 07.00 am – 10.00 pm	58.4	
	13/05/2026 – 14/05/2026 10.00 pm – 7.00 am	47.3	

Odor

Sampling Location	Time of Analysis	Temperature (°C)	Wind Speed (m/s)	Humidity (%)	Wind Direction	Weather	Results (OU/m³)	Limit Guideline (OU/m³)
O1	Morning	27.7	0.4	82.4	North	Sunny	1.4 OU/m³	7

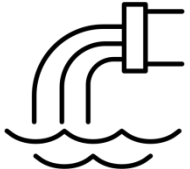
Note: # Guideline limit referred to Proposed Odour Regulation 201X, Schedule (Regulation 3-Others)

¹ Specific for boundary point (7OU/m³)

Water Quality

Test Parameter	Test Method	May 2026		Class IIB NWQS
		W1	W2	
pH	APHA 4500-H B	6.32	6.28	6-9
Temperature, °C (On –Site)	APHA 2550 B	27.9	27.7	+ 2 °C
Dissolved Oxygen, mg/L (On –Site)	APHA 4500 O-G	6.10	6.20	5-7
Dissolved Oxygen, % saturation	APHA 4500 O-G	73.83	75.04	-
Conductivity, µS/cm	APHA 2510 B	203	189	-
Turbidity, NTU	APHA 2130 B	23.7	22.4	50
Biochemical Oxygen Demand (BOD)* 5 days@20°C, mg/L	APHA 5210 B & APHA 4500 O-G	3.15	3.05	3
Chemical Oxygen Demand (COD), mg/L	APHA 5220 C	22.4	21.8	25
Total Suspended Solids, mg/L	APHA 2540 D	25.0	25.3	50
Oil and Grease, mg/L	APHA 5520D	<0.5	<0.5	7:N
Ammoniacal Nitrogen, mg/L	APHA 4500-NH3 B&F	0.13	0.16	0.3
Nitrate as NO3, mg/L	APHA 4500-NO3 D	1.23	1.12	7
E-Coli, CFU/100mL	APHA 9222 I: 2023	24	20	-
Mercury (Hg), mg/l	APHA 3112B	<0.2	<0.2	0.001
Cadmium (Cd), mg/l	APHA - 3120B	<0.2	<0.2	0.01
Lead (Pb), mg/l	APHA - 3120B	<0.1	<0.1	0.05
Chromium, Trivalent (Cr3+), mg/l	In-house No. W26	0.07	0.04	-
Iron (Fe), mg/l	APHA - 3120B	0.18	0.12	1
Tin (Sn), mg/l	USEPA 6010D	<0.01	<0.01	-
Boron (B), mg/l	APHA - 3120B	0.248	0.214	1
Copper (Cu), mg/l	APHA - 3120B	<0.05	<0.05	0.02
Arsenic (As), mg/l	In-house No. W126	<0.0005	<0.0005	0.05
Chromium, Hexavalent (Cr6+), mg/l	APHA 3500-Cr B	<0.005	<0.005	0.05
Manganese (Mn), mg/l	APHA 3120 B	0.05	0.04	0.1
Phosphorus as P, mg/L	USEPA 6010D	0.0485	0.0328	0.2
Nickel (Ni), mg/l	APHA 3120 B	0.08	0.06	0.05
Zinc (Zn), mg/l	APHA 3120 B	0.05	0.04	5
WQI Index	-	85.35	85.30	-
WQI Class	-	Class II	Class II	-

IMPACT ASSESSMENT AND MITIGATION MEASURES

Items	Potential Impacts	Pollution Prevention and Mitigation Measures (P2M2)
Water quality deterioration 	Oil and grease spillage	- Utilization of lubricants or fueling of machinery shall be carried out with grease trays - Waste materials should be properly segregated and collected
Air quality impact 	- Fugitive dusts from setting up, maintenance works - Vehicle & plant emissions - Air pollution and odour from process	- Copper recycling process are to be carried out in an enclosed area - All vehicles and plants involved with the Project must be regularly maintained - Regular maintenance of the Air Pollution Control System (APCS) - Open burning on the site premises is strictly prohibited
Noise quality impact 	- High noise emitting activities - Health and safety	- Enclosure to be provided to the high noise emission equipment - Silencer to be fitted to noisy equipment - Wear protective ear-mufflers to prevent hearing impairment/loss
Waste Generation Impact 	- Municipal waste - Scheduled waste	- Recycling of domestic waste material is encouraged - Bins must be cleaned regularly - All scheduled waste storage should be in line with the Guidelines for Packaging, Labelling and Storage of Scheduled Wastes In Malaysia - The scheduled wastes shall then be transported by a DOE licensed transporter
Safety and Health 	General safety and health issues	- Safety must be maintained at all times - All staff must be given suitable training with regard to emergency handling procedures - Security guards and surveillance cameras will be employed

COMPLIANCE MONITORING

D. PRODUCTION AND PROCESSING OF NON-FERROUS METALS WITH A CAPACITY ≥ 0.5 TONS PER DAY FOR LEAD OR CADMIUM OR ≥ 2 TONS PER DAY FOR OTHER METALS

Source	Pollutant	Limit value	Monitoring
Sinter plants (waste gas from the sintering belt)	Sum of SO ₂ and SO ₃ , expressed as SO ₂	500mg/m ³	Continuous*
	Sum of NO and NO ₂ expressed as NO ₂	400 mg/m ³	Continuous*
	Total PM	50 mg/m ³	Continuous*
	Total lead as Pb	1 mg/m ³	Periodic
	NM VOC	75 mg/m ³	Periodic
	PCDD/PCDF	0.1 ng TEQ/m ³	Periodic
Production of copper and zinc	Total PM	20 mg/m ³	Continuous*
Production of lead	Total PM	10 mg/m ³	Continuous*
Primary aluminium	Total PM	10 mg/m ³	Continuous*
	Fluorine compounds as HF	1 mg/m ³	Periodic
	Total Fluoride	1.5 mg/m ³	Periodic
	Sum of SO ₂ and SO ₃ expressed as SO ₂	100 mg/m ³	Continuous*
Secondary aluminium ⁽¹⁾	Total PM	10 mg/m ³	Continuous*
	Sum of NO and NO ₂ expressed as NO ₂	500 mg/m ³	Periodic
Smelting, alloying and refining of aluminium ⁽²⁾	Total PM	10 mg/m ³	Continuous*

Chimney No.	Parameters	Limit Value	Monitoring
Chimney 1	Total PM	20mg/m ³	Continuous*

IMPACT MONITORING

Monitoring location	Coordinates	Parameters	Description							
Water Quality Monitoring										
W1	2°51'54.51"N 101°48'5.02"E	Temperature, °C (On-Site) pH (On-site) Dissolved Oxygen, mg/L (On-Site) Turbidity, NTU BOD5 at 20°C, mg/L COD, mg/L Oil and Grease, mg/L Total Suspended Solids, mg/L Ammoniacal Nitrogen, mg/L Mercury, mg/L Cadmium, mg/L Lead, mg/L	Upstream of main drain in front of project site	Stack emission from chimney	Stack emissions will be monitored to ensure that Particulate Matter (PM ₁₀) emissions comply with the applicable limit.			Monthly or as per the EIA Approval Conditions.		
W2	2°51'54.53"N 101°48'3.55"E	Chromium, Trivalent (Cr3+), mg/L Iron (Fe), mg/L Tin (Sn), mg/L Boron (B), mg/L Copper, mg/L Arsenic , mg/L Chromium, Hexavalent (Cr6+), mg/L Manganese, mg/L Nickel, mg/L Zinc, mg/L E.Coli, CFU/100mL	Downstream of main drain in front of Project Site					CEMS, if required, will be implemented according to DOE requirements.		
Noise Level Monitoring										
N1	2°51'54.29"N 101°48'4.04"E							L _{Aeq} L ₁₀ L ₉₀ L _{max} L _{min}	In front of Project Site	Quarterly or as per the EIA Approval Conditions.
N2	2°51'48.92"N 101°47'53.08"E								Taman Desaria	
N3	2°52'9.71"N 101°48'18.41"E				Bungalow Lot at Taman Bukit Mahkota					
N4	2°52'10.16"N 101°47'45.00"E				Bandar Puteri Bangi					
Odour Monitoring										
O1	2°51'54.29"N 101°48'4.04"E				Odour Level	In front of Project Site	Quarterly or as per the EIA Approval Conditions.			
Air Quality Monitoring										
A1	2°51'54.29"N 101°48'4.04"E	Particulate Matter 10 micron (PM ₁₀)	In front of Project Site							
A2	2°51'48.92"N 101°47'53.08"E	Particulate Matter 2.5 micron (PM _{2.5})	Taman Desaria							
A3	2°52'9.71"N 101°48'18.41"E	Sulfur Dioxide (SO ₂) Nitrogen Dioxide (NO ₂) Carbon Monoxide (CO)	Bungalow Lot at Taman Bukit Mahkota							
A4	2°52'10.16"N 101°47'45.00"E	Ozone (O3)	Bandar Puteri Bangi							

PERFORMANCE MONITORING

No.	Performance Monitoring Items	Remarks	Frequency
1.	Air Pollution Control System (APCS) i.e. cyclone and bag filter	◆ To ensure proper servicing of components of the APCS, inspecting equipment for wear and tear and replacing as necessary, cleaning and greasing moving parts of equipment, and replacing items that have a limited lifespan. ◆ Inspect inlet pumps, motors and controls of the blower. ◆ Check for unusual occurrences in process ◆ Observe control panel indicators ◆ Ensure that the copper residue are treated as scheduled waste and disposed properly by a licensed contractor. ◆ Filters and material collection devices should be emptied and replaced as necessary. ◆ Regular checks of the APCS for any loose or damaged parts, corrosion, airflow rate and centrifugal fan. ◆ Ensure the differential pressure should be within recommended pressure drop. Pressure drop, typically measured in inches of water column, is a good indicator of the amount of dust that has collected on the filter media and, if continually monitored, the condition of the filters. Ensure there will be an effective cleaning system, if there is not a proper system, dust will continue to build on the	Weekly Daily When necessary When necessary Weekly Weekly

		bags. The result will be an increased pressure drop and reduced volume of ventilation air at the pick-up points. Further, airstream velocities within the ductwork will decrease and cause dropout of dust in the ducts. This may choke the entire system and render it ineffective. ◆ Periodic maintenance for the solenoid and diaphragm valves depending on the quality of supplied compressed air. ◆ Regular checking of the roller chain to ensure it is tight and oiled lightly. Periodic lubrication may be advisable when service is abnormal with respect to speed, temperature, exposure to moisture, dirt, or corrosive chemicals, or where extremely long life is required	When necessary Monthly
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TAJUK

- Cadangan Projek Peleburan Sisa Kuprum di Lot 10636, Jalan Permata 1/7, Arab Malaysian Industrial Park, Nilai, Negeri Sembilan oleh Tetuan Coprod Sdn. Bhd.

KAWASAN

- Coprod Sdn. Bhd. bercadang menggunakan kilang sedia ada, yang terletak di dalam Arab Malaysian Industrial Park sebagai loji pulih guna (luar tapak)
- Keluasan tanah keseluruhan untuk projek itu dianggarkan seluas 4,572 kaki persegi

LATAR BELAKANG PROJEK

- Projek cadangan akan beroperasi di dalam kilang sedia ada di atas Lot 10636
- Kemudahan yang dicadangkan akan memproses sejumlah 750MT/bulan bahan mentah
- Kuantiti produk yang dihasilkan adalah 448.65MT/bulan (~450MT/bulan) jongkong kuprum dan 299.10MT/bulan (~300MT/bulan) bar kuprum
- Memandangkan ia adalah kilang sedia ada, tiada kerja pembersihan tanah atau kerja tanah diperlukan untuk pembangunan projek

AKTIVITI YANG DITETAPKAN

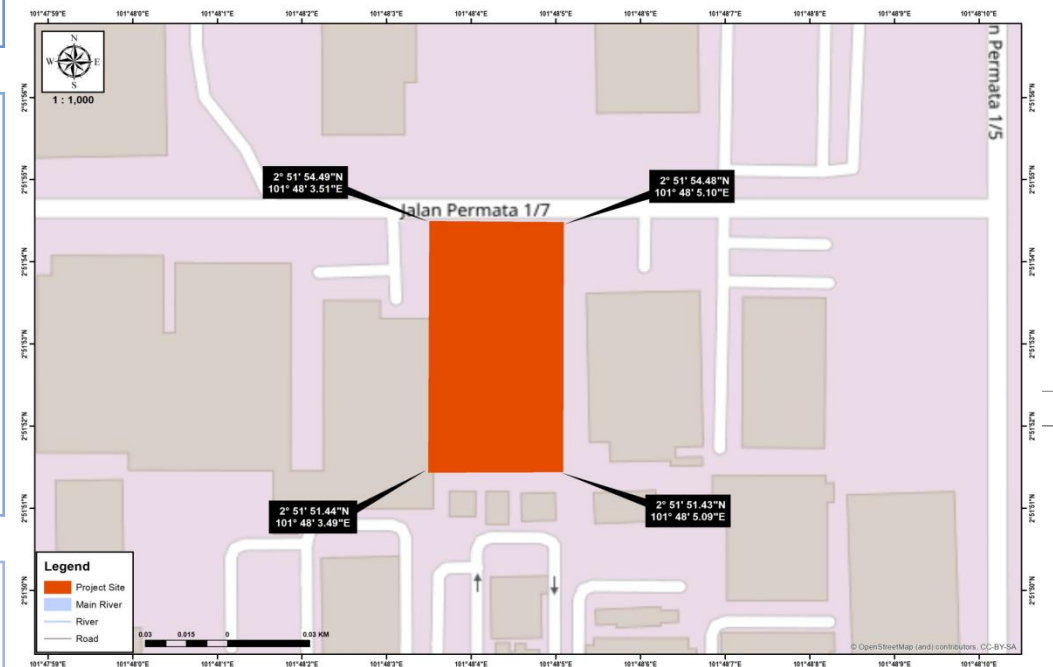
- Jadual Pertama Aktiviti 14: Rawatan dan Pelupusan Sisa berkaitan dengan (i) Sisa Pepejal: (ii) Pembinaan loji pulih guna atau loji kitar semula

PENGERAK PROJEK

Coprod Sdn. Bhd.
Lot No. 1559, Kampung jaya
Industrial Area,
47000, Sungai Buloh, Selangor

PERUNDING ALAM SEKITAR

Asian Environmental Solutions
Sdn. Bhd.
C3-2-1, Solaris Dutamas,
No.1, Jalan Dutamas 1,
50480, Kuala Lumpur



KONSEP PROJEK

Penggerak Projek, Coprod Sdn. Bhd. mahu menggunakan kemudahan sedia ada yang terletak dalam kawasan perindustrian bagi penambahan operasi kitar semula sisa kuprum bersih. Coprod Sdn. Bhd. telah ditubuhkan dengan objektif mengitar semula sisa kuprum dan di proses menjadi jongkong kuprum dan bar kuprum. Peralatan yang digunakan (Super-D Type Drum Furnace, Induction Furnace, Pit-Type Crucible Furnace and APCS systems) mampu memproses bahan mentah yang masuk sebanyak 750 MT/bulan dan akan diproses menjadi jongkong kuprum dan bar kuprum sebanyak 747.75MT/bulan.

BAHAN MENTAH, PRODUK DAN BAHAN SISA

Input	Bahan Input		Kuantiti (MT/bulan)	
	Sisa kuprum dengan ketulenan 99.9%	Bahan mentah	750 MT/bulan	
Output	Bahan Output		Kuantiti (MT/bulan)	
	Jongkong kuprum dan bar kuprum	Produk	✓ Jongkong Kuprum = 448.65 ✓ Bar kuprum = 299.10	
	APCS	Sisa APCS	= 2.25 MT/bulan	

KRITERIA PENERIMAAN SISA

- Sisa kuprum adalah bahan yang bersih dan kering tanpa dicemari minyak atau bahan kimia
- Penggerak Projek hanya akan menerima bahan mentah daripada sumber yang boleh dipercayai diikuti semasa peringkat pemeriksaan dengan spektrometer
- Dalam fasa operasi, bahan mentah dalam bentuk sekerap kuprum akan dileburkan secara terus ke dalam relau tanpa sebarang rawatan lanjut.
- Ketika menerima bahan mentah (sisa tembaga), sebarang ketidakpatuhan yang diterima di kilang akan ditolak, dimaklumkan dan dikembalikan kepada pembekal.

PELAN SUSUN ATUR KILANG



GAMBARAJAH PROSES DAN OPERASI PROJEK



STEP 1

Incoming: Raw Material
Factory Reject Clean Copper



STEP 2

Raw Material Loaded into Furnace
1) Step 1: Melt Down Copper
2) Step 2: Oxygenate Copper using compressed Air



STEP 3

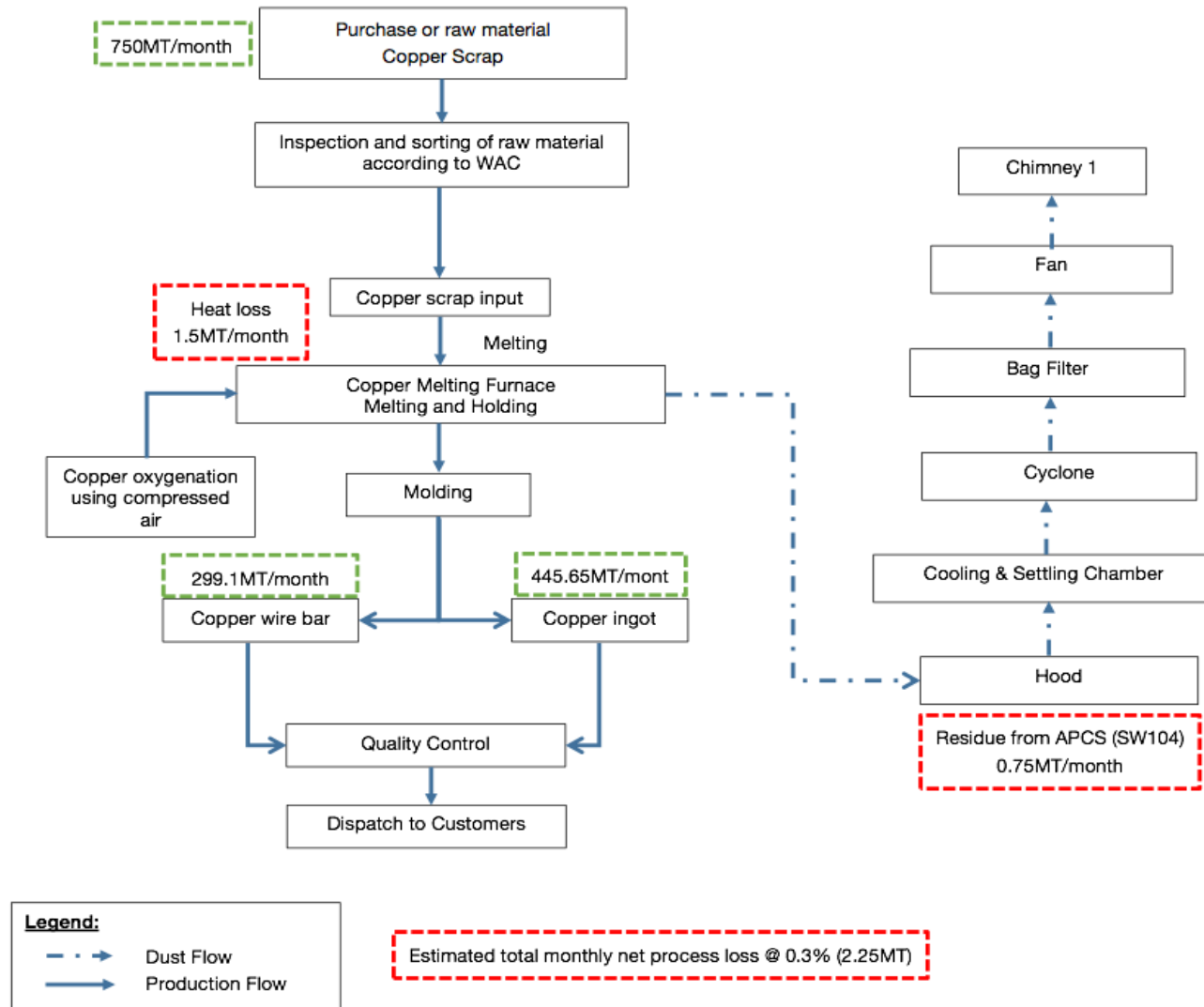
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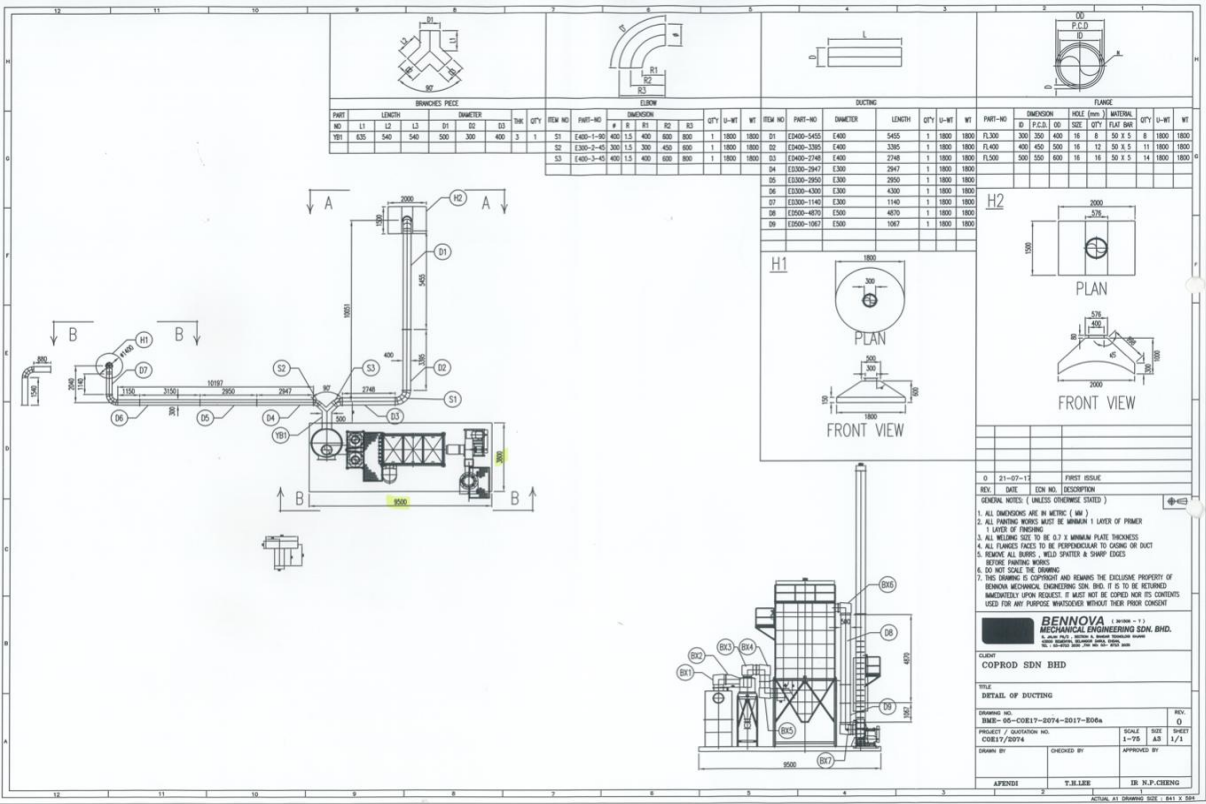
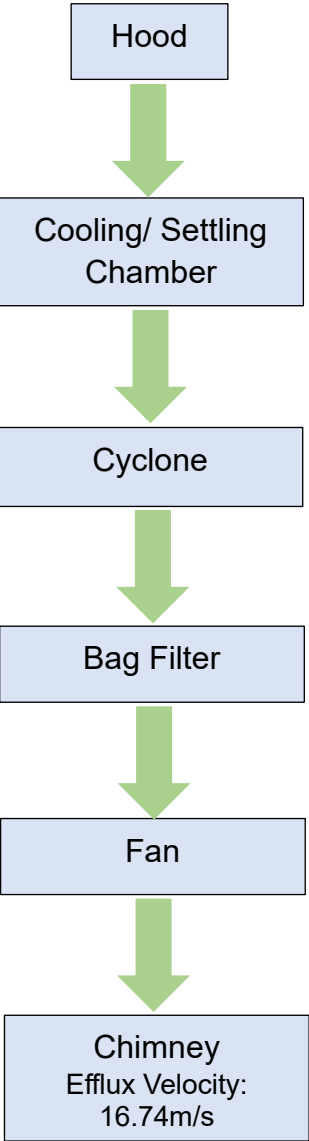
STEP 4

Final Product Ready for Sales
Item 1: Copper Wire Bar
Item 2: Copper Ingots

IMBANGAN JISIM BAGI KAPASITI 25MT/HARI (750 TPB)



ALIRAN PROSES SISTEM KAWALAN PENCEMARAN UDARA



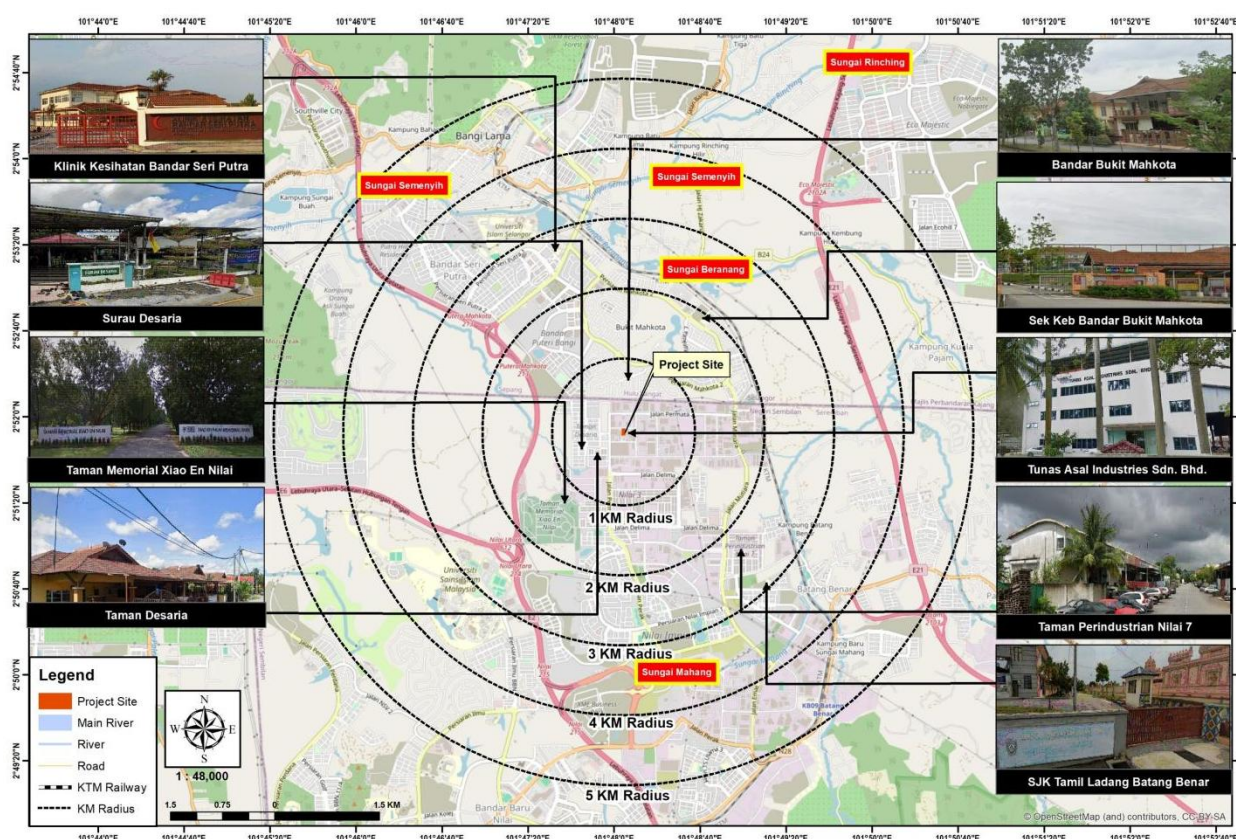
PEMBANGUNAN DAN PERLAKSANAAN PROJEK

OPERAI DAN PENYELENGGARAAN

- Kilang ini akan beroperasi selama maksimum 24 jam sehari dan hanya akan menghentikan operasi semasa penutupan sementara dan tahunan yang dijadualkan. Peralatan dan jentera telah diletakkan di kilang dan hanya memerlukan kerja penyelenggaraan dan pembaikan (jika ada) sebelum kilang beroperasi sebaik sahaja kelulusan diperoleh. Peralatan hendaklah diselenggara dan dibaiki oleh pemaaju projek mengikut pelan penyelenggaraan tahunan, amalan industri terbaik dan prosedur piawai.
- Kebanyakan peralatan dipasang di kilang dan menunggu kelulusan sebelum beroperasi.
- Pengujian dan pentauliahan sebelum operasi dimulakan semula akan dilakukan dalam masa 2 minggu dan penyelenggaraan berjadual serta penggantian bahagian yang rosak juga akan dilakukan dalam masa 2 minggu.



GUNA TANAH SEDIA ADA (5KM RADIUS)



PENSAMPELAN DASAR

Lokasi Persampelan	Koordinat	Penerangan
AIR		
W1	2°51'54.51"N 101°48'5.02"E	Longkang sedia ada (hulu)
W2	2°51'54.53"N 101°48'3.55"E	Longkang sedia ada (hilir)
UDARA/BUNYI/BAU		
A1/N1/O1	2°51'54.29"N 101°48'4.04"E	Hadapan kawasan tapak
A2/N2	2°51'48.92"N 101°47'53.08"E	Lot banglo di Taman Bukit Mahkota
A3/N3	2°52'9.71"N 101°48'18.41"E	Kawasan lapang di Taman Sri Perasing
A4/N4	2°52'10.16"N 101°47'45.00"E	Bandar Puteri Bangi

Kualiti Udara

Test Parameter	Test Method	Results				*Malaysian Guidelines
		A1	A2	A3	A4	
PM 10	MiniVol Sampler TAS 5988	56 µg/m³	54 µg/m³	52 µg/m³	50 µg/m³	100 µg/m³
PM 2.5	MiniVol Sampler TAS 5988	14 µg/m³	13 µg/m³	12 µg/m³	11 µg/m³	35 µg/m³
Sulfur Dioxide (SO ₂)	ISC 704A	ND (<5) µg/m³	ND (<5) µg/m³	ND (<5) µg/m³	ND (<5) µg/m³	80 µg/m³
Nitrogen Dioxide (NO ₂)	ISC 408	ND (<5) µg/m³	ND (<5) µg/m³	ND (<5) µg/m³	ND (<5) µg/m³	70 µg/m³
Carbon Monoxide (CO)	In house method SM 098	ND (<2) mg/m³	ND (<2) mg/m³	ND (<2) mg/m³	ND (<2) mg/m³	10 mg/m³
Ozone	In house method SM 097	ND (<10) µg/m³	ND (<10) µg/m³	ND (<10) µg/m³	ND (<10) µg/m³	100 µg/m³
Lead	USEPA Method 3050B, 1996	ND(<0.01) µg/m³	ND(<0.01) µg/m³	ND(<0.01) µg/m³	ND(<0.01) µg/m³	-
Date and Time of Sampling		8-9/05/2026 0700hrs - 0700hrs	11-12/05/2026 0700hrs - 0700hrs	12-13/05/2026 0700hrs - 0700hrs	13-14/05/2026 0700hrs - 0700hrs	

Kualiti Bunyi

Sampling Location	Sampling Time	L _{eq} dB(A)	*Recommended Noise Limit
N1	08/05/2026 – 09/05/2026 07.00 am – 10.00 pm	55.3	75.0 dB(A) for Day time
	08/05/2026 – 09/05/2026 10.00 pm – 7.00 am	44.5	75.0 dB(A) for Night time
N2	11/05/2026 – 12/05/2026 07.00 am – 10.00 pm	56.9	65.0 dB(A) for Day time 60.0 dB(A) for Night time
	11/05/2026 – 12/05/2026 10.00 pm – 7.00 am	45.4	
N3	12/05/2026 – 13/05/2026 07.00 am – 10.00 pm	57.6	
	12/05/2026 – 13/05/2026 10.00 pm – 7.00 am	46.2	
N4	13/05/2026 – 14/05/2026 07.00 am – 10.00 pm	58.4	
	13/05/2026 – 14/05/2026 10.00 pm – 7.00 am	47.3	

Kualiti Bau

Sampling Location	Time of Analysis	Temperature (°C)	Wind Speed (m/s)	Humidity (%)	Wind Direction	Weather	Results (OU/m³)	Limit Guideline (OU/m³)
O1	Morning	27.7	0.4	82.4	North	Sunny	1.4 OU/m³	7

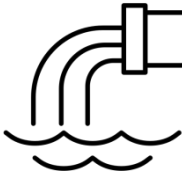
Note: # Guideline limit referred to Proposed Odour Regulation 201X, Schedule (Regulation 3-Others)

¹ Specific for boundary point (7OU/m³)

Kualiti Air

Test Parameter	Test Method	May 2026		Class IIB NWQS
		W1	W2	
pH	APHA 4500-H B	6.32	6.28	6-9
Temperature, °C (On –Site)	APHA 2550 B	27.9	27.7	+ 2 °C
Dissolved Oxygen, mg/L (On –Site)	APHA 4500 O-G	6.10	6.20	5-7
Dissolved Oxygen, % saturation	APHA 4500 O-G	73.83	75.04	-
Conductivity, µS/cm	APHA 2510 B	203	189	-
Turbidity, NTU	APHA 2130 B	23.7	22.4	50
Biochemical Oxygen Demand (BOD)* 5 days@20°C, mg/L	APHA 5210 B & APHA 4500 O-G	3.15	3.05	3
Chemical Oxygen Demand (COD), mg/L	APHA 5220 C	22.4	21.8	25
Total Suspended Solids, mg/L	APHA 2540 D	25.0	25.3	50
Oil and Grease, mg/L	APHA 5520D	<0.5	<0.5	7:N
Ammoniacal Nitrogen, mg/L	APHA 4500-NH3 B&F	0.13	0.16	0.3
Nitrate as NO3, mg/L	APHA 4500-NO3 D	1.23	1.12	7
E-Coli, CFU/100mL	APHA 9222 I: 2023	24	20	-
Mercury (Hg), mg/l	APHA 3112B	<0.2	<0.2	0.001
Cadmium (Cd), mg/l	APHA - 3120B	<0.2	<0.2	0.01
Lead (Pb), mg/l	APHA - 3120B	<0.1	<0.1	0.05
Chromium, Trivalent (Cr3+), mg/l	In-house No. W26	0.07	0.04	-
Iron (Fe), mg/l	APHA - 3120B	0.18	0.12	1
Tin (Sn), mg/l	USEPA 6010D	<0.01	<0.01	-
Boron (B), mg/l	APHA - 3120B	0.248	0.214	1
Copper (Cu), mg/l	APHA - 3120B	<0.05	<0.05	0.02
Arsenic (As), mg/l	In-house No. W126	<0.0005	<0.0005	0.05
Chromium, Hexavalent (Cr6+), mg/l	APHA 3500-Cr B	<0.005	<0.005	0.05
Manganese (Mn), mg/l	APHA 3120 B	0.05	0.04	0.1
Phosphorus as P, mg/L	USEPA 6010D	0.0485	0.0328	0.2
Nickel (Ni), mg/l	APHA 3120 B	0.08	0.06	0.05
Zinc (Zn), mg/l	APHA 3120 B	0.05	0.04	5
WQI Index	-	85.35	85.30	-
WQI Class	-	Class II	Class II	-

PENILAIAN IMPAK DAN LANGKAH-LANGKAH MITIGASI

Items	Potential Impacts	Pollution Prevention and Mitigation Measures (P2M2)
Kualiti Air 	● Tumpahan minyak & gris	● Penggunaan pelincir atau pengisian bahan api jentera hendaklah dijalankan dengan <i>grease tray</i> ● Bahan buangan hendaklah diasingkan dan dikumpulkan dengan betul
Impak Kualiti Udara 	● Debu dari pemasangan, kerja-kerja penyelenggaraan ● Pelepasan kenderaan & loji ● Pencemaran bau dan udara semasa proses	● Kerja-kerja pulih guna lead dross hendaklah dijalankan di kawasan tertutup ● Semua kenderaan dan alat pemrosesan mesti sentiasa diselenggara ● Penyelenggaraan tetap Sistem Kawalan Pencemaran Udara (APCS) ● Pembakaran terbuka di premis tapak adalah dilarang sama sekali
Impak Bunyi Bising 	● Aktiviti yang mengeluarkan bunyi yang kuat ● Kesihatan & keselamatan	● Kepungan disediakan untuk peralatan yang mengeluarkan bunyi bising ● Penyenyap dipasang pada peralatan yang bising ● Pemakaian PPE seperti <i>ear muffler</i>
Impak Sisa Pepejal 	● Sisa perbandaran ● Sisa buangan terjadual	● Kitar semula bahan buangan domestik adalah digalakkan ● Tong sampah mesti dibersihkan dengan kerap ● Semua penyimpanan sisa terjadual hendaklah selaras dengan Garis Panduan Pembungkusan, Pelabelan dan Penyimpanan Sisa Terjadual ● Buangan terjadual kemudiannya hendaklah diangkut oleh pengangkut berlesen

Kesehatan & Keselamatan 	Isu keselamatan dan kesihatan am	- Amalan kerja selamat dipraktikkan - Pekerja mesti diberi latihan yang sesuai berkenaan dengan prosedur pengendalian kecemasan - Pengawal keselamatan dan kamera pengawasan akan digunakan
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PEMANTAUAN PEMATUHAN (COMPLIANCE MONITORING)

D. PRODUCTION AND PROCESSING OF NON-FERROUS METALS WITH A CAPACITY ≥ 0.5 TONS PER DAY FOR LEAD OR CADMIUM OR ≥ 2 TONS PER DAY FOR OTHER METALS

Source	Pollutant	Limit value	Monitoring
Sinter plants (waste gas from the sintering belt)	Sum of SO ₂ and SO ₃ , expressed as SO ₂	500mg/m ³	Continuous*
	Sum of NO and NO ₂ expressed as NO ₂	400 mg/m ³	Continuous*
	Total PM	50 mg/m ³	Continuous*
	Total lead as Pb	1 mg/m ³	Periodic
	NM VOC	75 mg/m ³	Periodic
	PCDD/PCDF	0.1 ng TEQ/m ³	Periodic
Production of copper and zinc	Total PM	20 mg/m ³	Continuous*
Production of lead	Total PM	10 mg/m ³	Continuous*
Primary aluminium	Total PM	10 mg/m ³	Continuous*
	Fluorine compounds as HF	1 mg/m ³	Periodic
	Total Fluoride	1.5 mg/m ³	Periodic
	Sum of SO ₂ and SO ₃ expressed as SO ₂	100 mg/m ³	Continuous*
Secondary aluminium ⁽¹⁾	Total PM	10 mg/m ³	Continuous*
	Sum of NO and NO ₂ expressed as NO ₂	500 mg/m ³	Periodic
Smelting, alloying and refining of aluminium ⁽²⁾	Total PM	10 mg/m ³	Continuous*

No. Cerobong	Parameter	Limit Value	Monitoring
Chimney 1	Total PM	20mg/m ³	Continuous*

PEMANTAUAN IMPAK (IMPACT MONITORING)

Monitoring location	Coordinates	Parameters	Description
Water Quality Monitoring			
W1	2°51'54.51"N 101°48'5.02"E	Temperature, °C (On-Site) pH (On-site) Dissolved Oxygen, mg/L (On-Site) Turbidity, NTU BOD5 at 20°C, mg/L COD, mg/L Oil and Grease, mg/L Total Suspended Solids, mg/L Ammoniacal Nitrogen, mg/L Mercury, mg/L Cadmium, mg/L Lead, mg/L	Upstream of main drain in front of project site
W2	2°51'54.53"N 101°48'3.55"E	Chromium, Trivalent (Cr3+), mg/L Iron (Fe), mg/L Tin (Sn), mg/L Boron (B), mg/L Copper, mg/L Arsenic, mg/L Chromium, Hexavalent (Cr6+), mg/L Manganese, mg/L Nickel, mg/L Zinc, mg/L E.Coli, CFU/100mL	Downstream of main drain in front of Project Site
Air Quality Monitoring			
A1	2°51'54.29"N 101°48'4.04"E	Particulate Matter 10 micron (PM ₁₀)	In front of Project Site
A2	2°51'48.92"N 101°47'53.08"E	Particulate Matter 2.5 micron (PM _{2.5})	Taman Desaria
A3	2°52'9.71"N 101°48'18.41"E	Sulfur Dioxide (SO ₂) Nitrogen Dioxide (NO ₂) Carbon Monoxide (CO)	Bungalow Lot at Taman Bukit Mahkota
A4	2°52'10.16"N 101°47'45.00"E	Ozone (O ₃)	Bandar Puteri Bangi

Stack emission from chimney	Stack emissions will be monitored to ensure that Particulate Matter (PM ₁₀) emissions comply with the applicable limit.			Monthly or as per the EIA Approval Conditions. CEMS, if required, will be implemented according to DOE requirements.
Noise Level Monitoring				
N1	2°51'54.29"N 101°48'4.04"E	L _{Aeq} L ₁₀ L ₉₀ L _{max} L _{min}	In front of Project Site	Quarterly or as per the EIA Approval Conditions.
N2	2°51'48.92"N 101°47'53.08"E		Taman Desaria	
N3	2°52'9.71"N 101°48'18.41"E		Bungalow Lot at Taman Bukit Mahkota	
N4	2°52'10.16"N 101°47'45.00"E		Bandar Puteri Bangi	
Odour Monitoring				
O1	2°51'54.29"N 101°48'4.04"E	Odour Level	In front of Project Site	Quarterly or as per the EIA Approval Conditions.

PEMANTAUAN PRESTASI (PERFORMANCE MONITORING)
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No.	Pemantauan Prestasi	Keterangan	Kekerapan
1.	Sistem Kawalan Pencemaran Udara (SKPU) iaitu siklon dan penapis beg	◆ Untuk memastikan servis komponen SKPU yang mapan, pemeriksaan peralatan yang haus dan lusuh dan menggantikannya jika perlu, membersihkan dan melincirkan bahagian peralatan yang bergerak, dan menggantikan barang yang mempunyai jangka hayat terhad adalah satu keperluan. ◆ Periksa pam masuk, motor dan kawalan blower. ◆ Periksa kejadian luar biasa dalam proses ◆ Perhatikan penunjuk panel kawalan ◆ Penapis dan peranti pengumpulan bahan hendaklah dikosongkan dan digantikan jika perlu. ◆ Pemeriksaan berkala bagi SKPU untuk sebarang bahagian yang longgar atau rosak, kakisan, kadar aliran udara dan kipas emparan. ◆ Memastikan perbezaan tekanan berada dalam penurunan tekanan yang disyorkan. Penurunan tekanan, biasanya diukur dalam inci turus air, merupakan petunjuk yang baik tentang jumlah habuk yang terkumpul pada media penapis dan, jika sentiasa dipantau, keadaan penapis. Pastikan terdapat sistem pembersihan yang berkesan, jika tiada sistem yang betul, habuk akan terus terkumpul pada beg. Hasilnya ialah peningkatan penurunan tekanan dan pengurangan jumlah udara pengudaraan di titik pengambilan. Tambahan pula, halaju aliran udara dalam saluran akan berkurangan	Mingguan Harian Bila perlu Bila perlu Bila perlu Mingguan Mingguan

		dan menyebabkan habuk tercicir dalam saluran. Ini boleh menyebabkan seluruh sistem tercekik dan menjadikannya tidak berkesan. ◆ Penyelenggaraan berkala untuk injap solenoid dan diafragma bergantung pada kualiti udara termampat yang dibekalkan. ◆ Periksa rantai roller secara berkala untuk memastikan ia ketat dan sedikit berminyak. Pelinciran berkala mungkin dinasihatkan apabila servis tidak normal berkenaan dengan kelajuan, suhu, pendedahan kepada lembapan, kotoran atau bahan kimia yang menghakis, atau di mana jangka hayat yang sangat panjang diperlukan	Bila perlu Bulanan
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