EXECUTIVE SUMMARY

Proposed Scheduled Waste Incinerator & Scheduled Waste Recovery Plant at part of Lot 43852 (PT6327)/ H.S.(D) 206502, Bandar Sri Sendayan, Daerah Seremban, Negeri Sembilan Darul Khusus.

Proposed Plant is part of the existing industrial lot (currently an empty land)

Latitude 02°39'58.9"N & Longitude 101°49'54.1"E

Comes Under the Jurisdiction of Majlis Bandaraya Seremban (MBS)

Proposed Plant located at Kawasan Perindustrian Sendayan TechValley

Proposed Plant an off-site Scheduled Waste Incinerator & Recovery Facility

Project Proponent

SPM Resources Sdn. Bhd.
No. 3A, Jalan Kilang 51/205,
Kawasan Perindustrian Seksyen 5,
46050, Petaling Jaya, Selangor Darul Ehsan
Tel: 03-7785 5659
Attn.: Mr. Sivachandran Ramanathan

Environmental Consultant

Tag Enviro Consultants Sdn. Bhd.
Unit 27B-5, Block E1, Jalan PJU 1/42,
Dataran Prima, 47301 Petaling Jaya,
Selangor Darul Ehsan.
Tel.: 03-7804 7770 Fax: 03-7804 7702
Attn.: Mr. Kumar Annavoo

Qualified Person

EIA Team Leader
Kumar Annavoo - Solid Waste Management & Scheduled Waste Management

EIA Consultants
Kee Chong Yee - Water Quality Assessment
Lim Sze Fook - Air Quality Assessment
Adnan Yusop Ali - Quantitative Risk Assessment
Noraishah Zamani - Socio Economy Study
Prof Dr. Jamal Hisham – Health Impact Assessment
Hazura Yaacob – Noise

Supporting Consultants
Ir. Soh Kang Peng - Air Pollution Control System (APCS)

The Proposed Project is a schedule waste final disposal & recovery plant, which falls under the

Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 2015,
Second Schedule: Item 14 (a)(i),
First Schedule: Item 14 (a)(i) &
First Schedule: Item 14 (a) (iii)

made under Section 34A of the Environmental Quality Act 1974.

<u>Second Schedule</u>
Item 14: Waste Treatment and Disposal
(a) Scheduled Waste: (i) Construction of Thermal Treatment Plant.

<u>First Schedule</u>
Item 14: Waste Treatment and Disposal
(a) Scheduled Waste: (i) Construction of Recovery Plant.

<u>First Schedule</u>
Item 14: Waste Treatment and Disposal
(a) Scheduled Waste: (iii) Construction of Storage Facility (off-site).

Therefore, an EIA report is required.

Statement of Need

The Proposed Final Disposal of Scheduled Waste using Incinerator and Scheduled Waste Recovery Plant will help the Government's policies to ensure a proper scheduled waste disposal system at the same time utilization of resources which has economic values to be obtained from the recovery process.

- SPM Resources Sdn. Bhd. plans to establish a Proposed Incineration Process as final scheduled waste disposal will give emphasis to the marine based scheduled waste. The Proposed Incineration Plant includes about 55% of the total capacity of waste collected are from Marine Based Scheduled wastes.

- The Proposed Recovery Process which involves waste oil (i.e., lubricant, hydraulic, oil & water emulsion) will recover valuable product (i.e., recovered oil).

- Through the implementation of the Proposed Plant, other economic benefit
    - Employment opportunities
    - Revenue generation

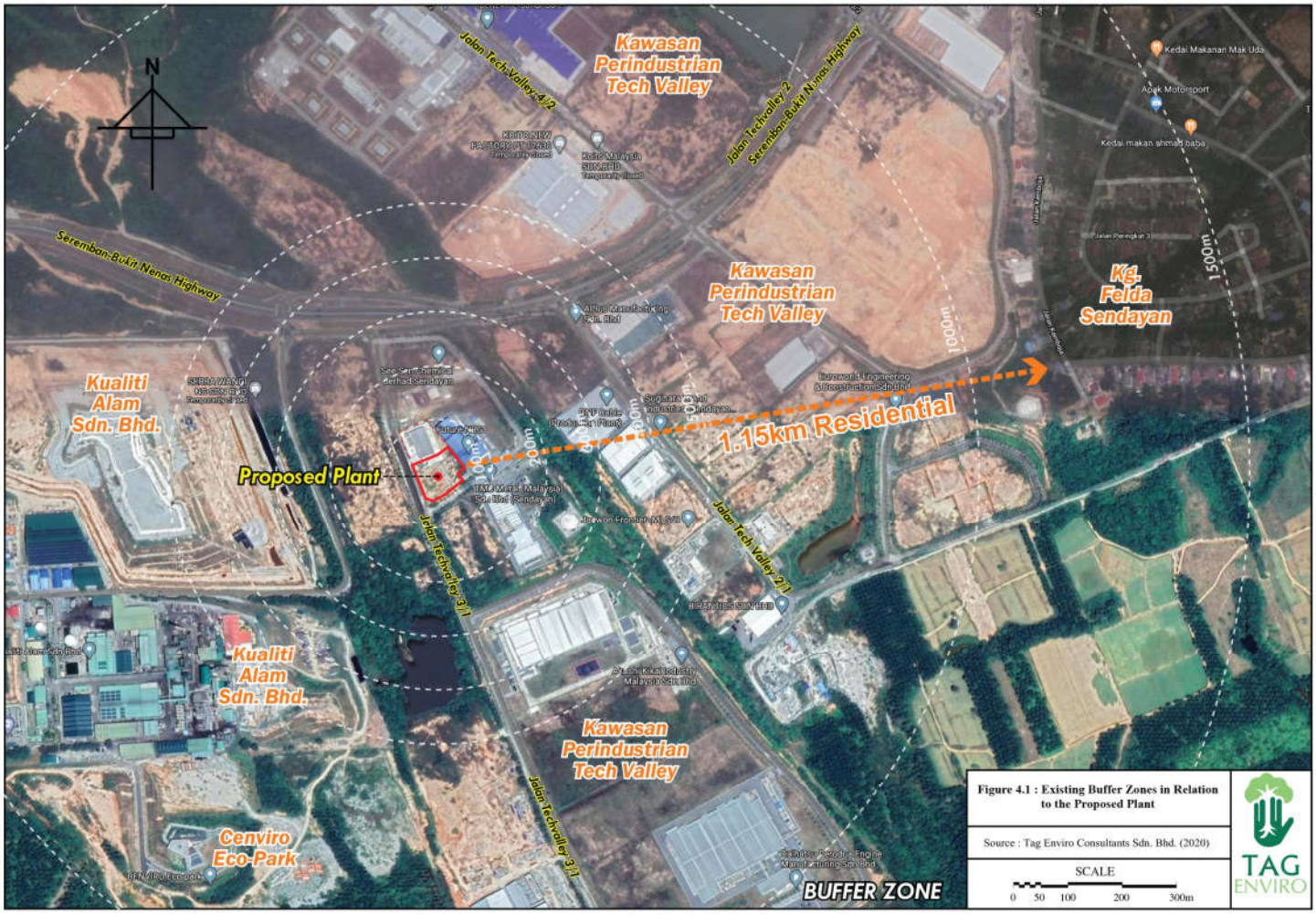
Aerial View

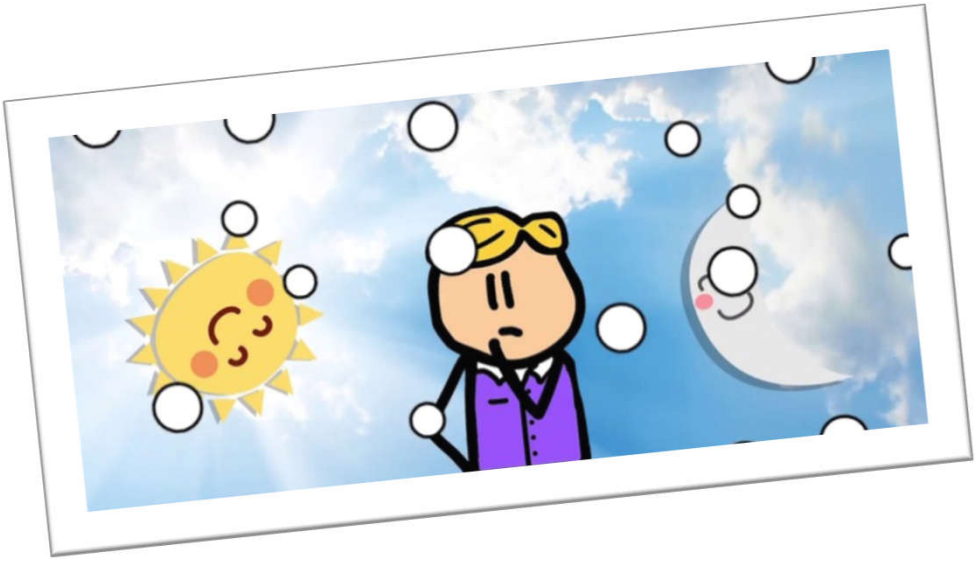
Located at Kawasan Perindustrian Sendayan Techvalley, Bandar Sri Sendayan, Negeri Sembilan.

Blok Perancangan (BP) 2: Seremban (Draf Rancangan Tempatan Malaysian Vision Valley) 2045.

Immediate surroundings are industrial lots within the industrial area. Nearest sensitive receptor is Kg Felda Sendayan (1.15 km).

Sensitive Receptors





The Proposed Project involves establishment and operation of Scheduled Waste Incinerator (final disposal) and Scheduled Waste Recovery Plant.

Proposed Capacity (MT/mth) of the Proposed Incinerator

Waste Code	Description [as in EQ (Scheduled Waste) Reg. 2005]	Capacity, MT/month
SW 311	Waste of oil or oily sludge	1400
SW 309	Oil-water mixture such as ballast water	900
SW 308	Oil tanker sludges	900
SW 314	Oil or sludge from oil refinery plant maintenance operation	500
SW 310	Sludge from mineral oil storage tank	400
SW 408	Contaminated soil, debris or matter resulting from cleaning up of a spill of chemical, mineral oil or scheduled wastes	350
SW 315	Tar or tarry residues from oil refinery or petrochemical plant	300
SW 204	Sludges containing one or several metals including chromium, copper, nickel, zinc, lead, cadmium, aluminium, tin, vanadium and beryllium	150
SW 304	Press cake from pretreatment of glycerol soap lye	150
SW 312	Oily residue from automotive workshop, service station oil or grease interceptor	150
SW 313	Oil contaminated earth from re-refining of used lubricating oil	150
SW 104	Dust, slag, dross, or ash containing aluminium, arsenic, mercury, lead, cadmium, chromium, nickel, copper, vanadium, beryllium, antimony, tellurium, thallium or selenium excluding slag from iron and steel factory	100
SW 410	Rags, plastics, papers or filters contaminated with scheduled wastes	100
SW 411	Spent activated carbon excluding carbon from the treatment of potable water and process of the food industry and vitamin production	100
SW 421	A mixture of scheduled wastes	100
SW 422	A mixture of scheduled and non-scheduled wastes	100
TOTAL		5850

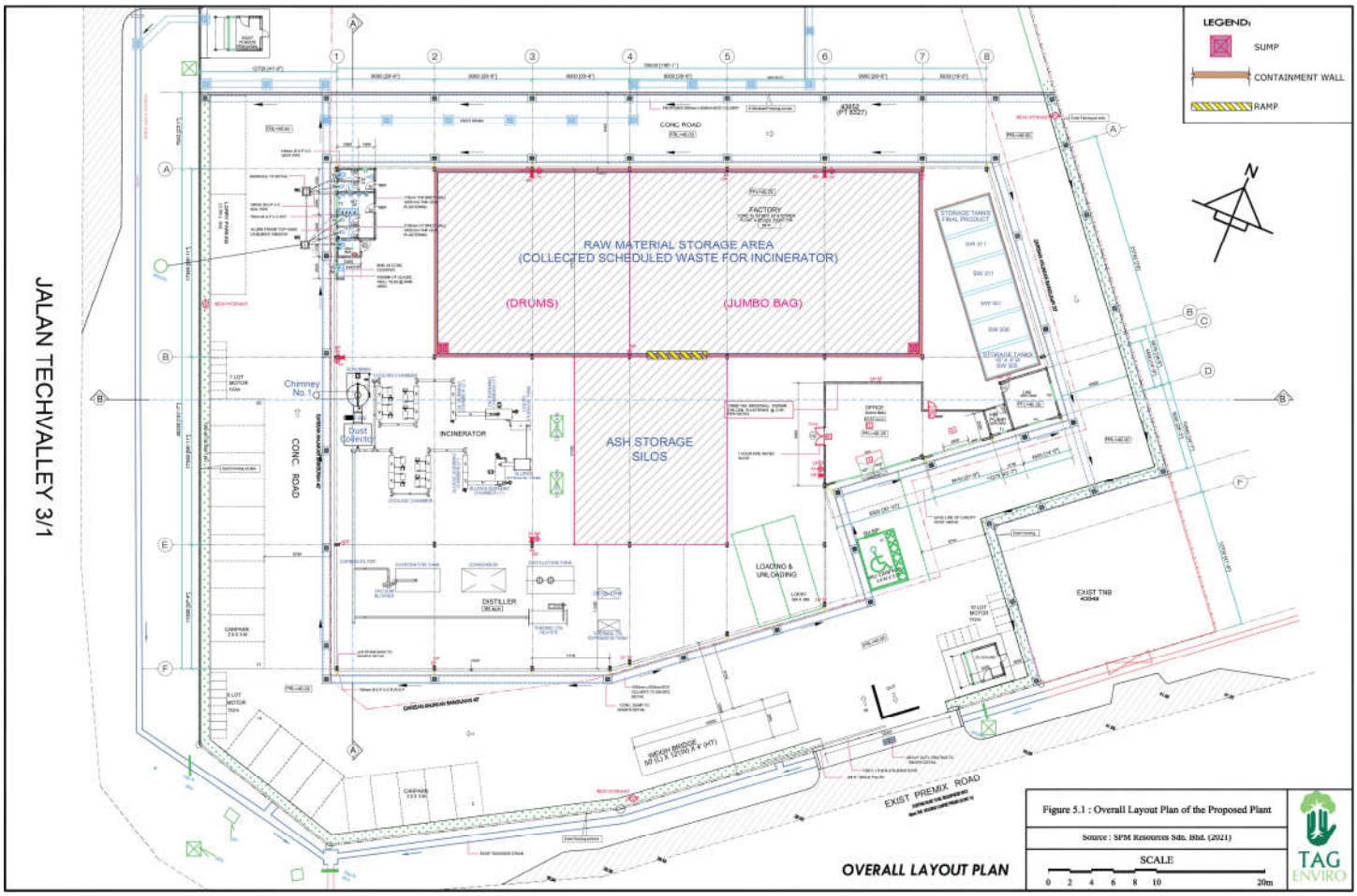
The Proposed Project involves establishment and operation of Scheduled Waste Incinerator (final disposal) and Scheduled Waste Recovery Plant.

Proposed Capacity (MT/mth) of the Proposed Recovery

Waste Code	Description [as in EQ (Scheduled Waste) Reg. 2005]	Capacity, MT/month
SW 305	Spent lubricating oil	200
SW 306	Spent hydraulic oil	300
SW 307	Spent mineral oil-water emulsion	450
SW 311	Waste of oil or oily sludge	1000
TOTAL		1,950

PROJECT DESCRIPTION

Overall Layout Plan for the Proposed Plant



Proposed Process Description - Incineration Process

- The incineration process (16 waste codes) for the final disposal will be using an incinerator unit equipped with:
  - sludge storage tank,
  - oil storage tank,
  - primary sludge & oil burning chambers,
  - two units of secondary burning chambers,
  - two units of cooling chambers,
  - a dust collector system with bag filters,
  - wet scrubber unit and
  - a chimney stack for final emission.

- The stored scheduled wastes will be transferred to sludge storage tank which has storage capacity of 6 MT.

- The collected scheduled wastes [i.e., liquid (mixture of oil & water), semi-solid and solid] will be fed into the sludge storage tank via loading hopper at the top portion.

- The heavier sludge will be settled at the bottom and the liquid (oil & water) will be floating at the upper part of the tank.

- The liquid (oil & water) on top will be pumped into a liquid (oil & water) storage tank with a capacity of 1 MT.

- The settled sludge will be transferred directly to Sludge Incinerator (i.e., Primary Burning Chamber) using screw conveyor.

- The sludge burning chamber - equipped with 3 units of Bentone B65 model burners using diesel with fuel consumption of 60 kg/hr.

- The liquid (oil & water) at the liquid storage tank will be pumped to Liquid Incinerator (Primary Burning Chamber) through two pipes.

- The two pipes will be equipped with 8 nozzles for each pipe fixed at the top of the liquid burning chamber.

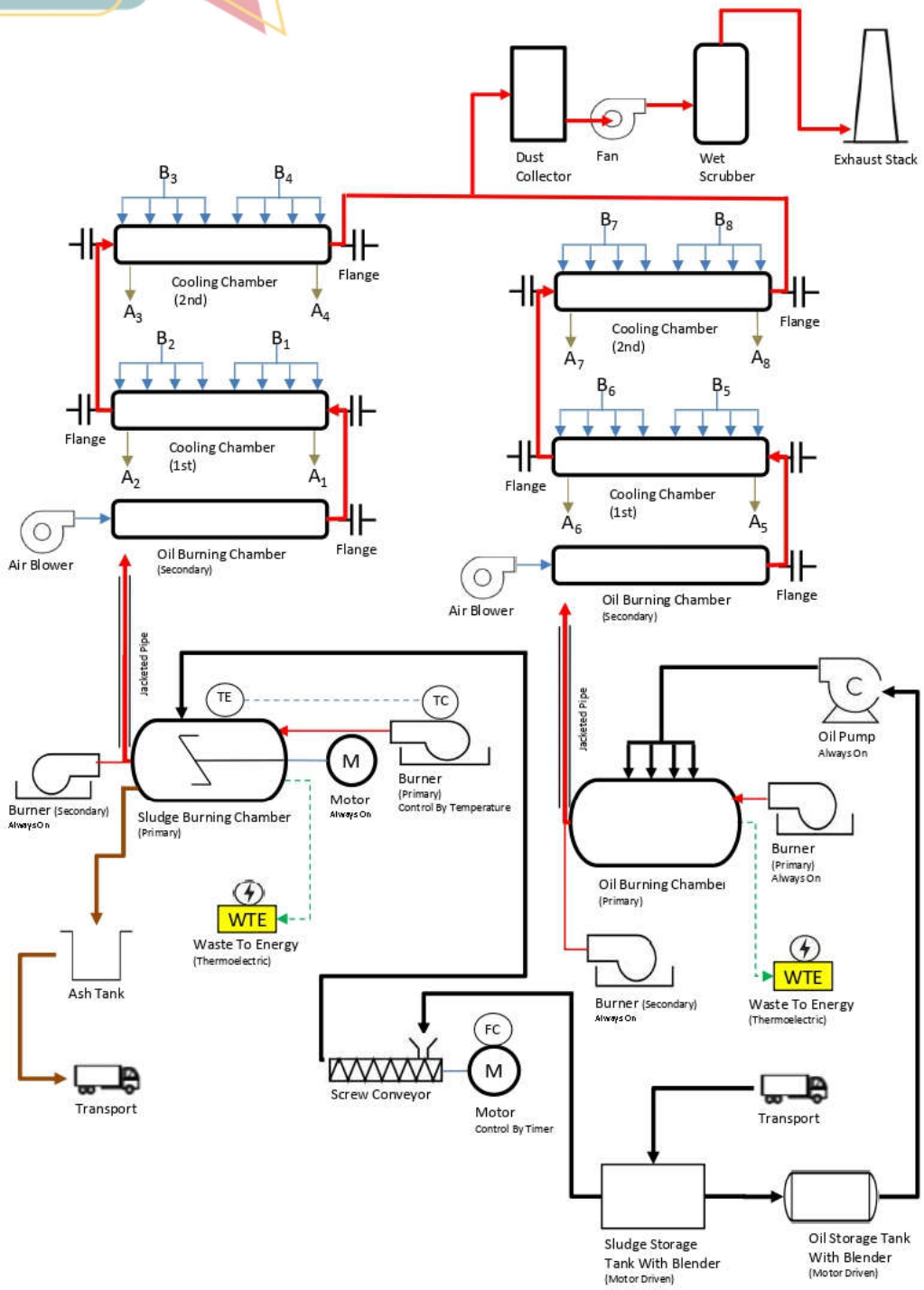
- The liquid burning chamber with 2 units of Bentone B65 burners - using diesel with fuel consumption of 60kg/hr.

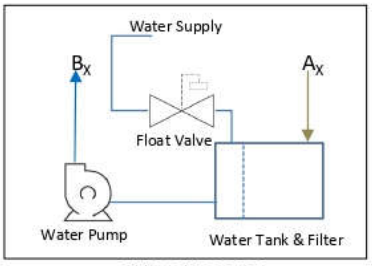
PROJECT DESCRIPTION

- The operating temperature for both the primary burning chambers (i.e., Sludge Incinerator and Liquid Incinerator) are 1000 ℃.
- The fume generated from each primary burning chamber, will be ventilated through jacketed pipe to the secondary burning chambers with an operating temperature of 800 - 600 ℃.
- The contaminant in the fume will be further incinerated at secondary burning chambers.
- Both the secondary burning chambers are equipped with a unit each of Bentone B40 model burner which will be using diesel with fuel consumption of 15 kg/hr.
- The fume then will be ventilated through two sets of cooling chambers to cool down the fume temperature.
- The temperature will be reduced to 400 ℃ at first cooling chamber and 200 - 100 ℃ at second cooling chamber.
- The water at the cooling chambers will be recycled and regularly top up to cater the water loss due to evaporation during the cooling process.
- The fume after the secondary cooling chamber will be ventilate out at about 100 ℃ prior to enter APCS.
- The proposed APCS will consist of dust collector & bag filters to trap particulate matters and a pack-column wet scrubber unit to treat gaseous contaminant prior to emission to atmosphere via 15 m height chimney.
- Two (2) by-products expected from the incineration process.
    - ❑ The heat generated from the primary chambers will be used to produce electricity (i.e., 150 kW) and will be used internally at the Proposed Plant.
    - ❑ The ash generated at the sludge incinerator (i.e., sludge primary burning chamber) will be used for brick and cement production.

PROJECT DESCRIPTION

P & ID of the Incineration Process

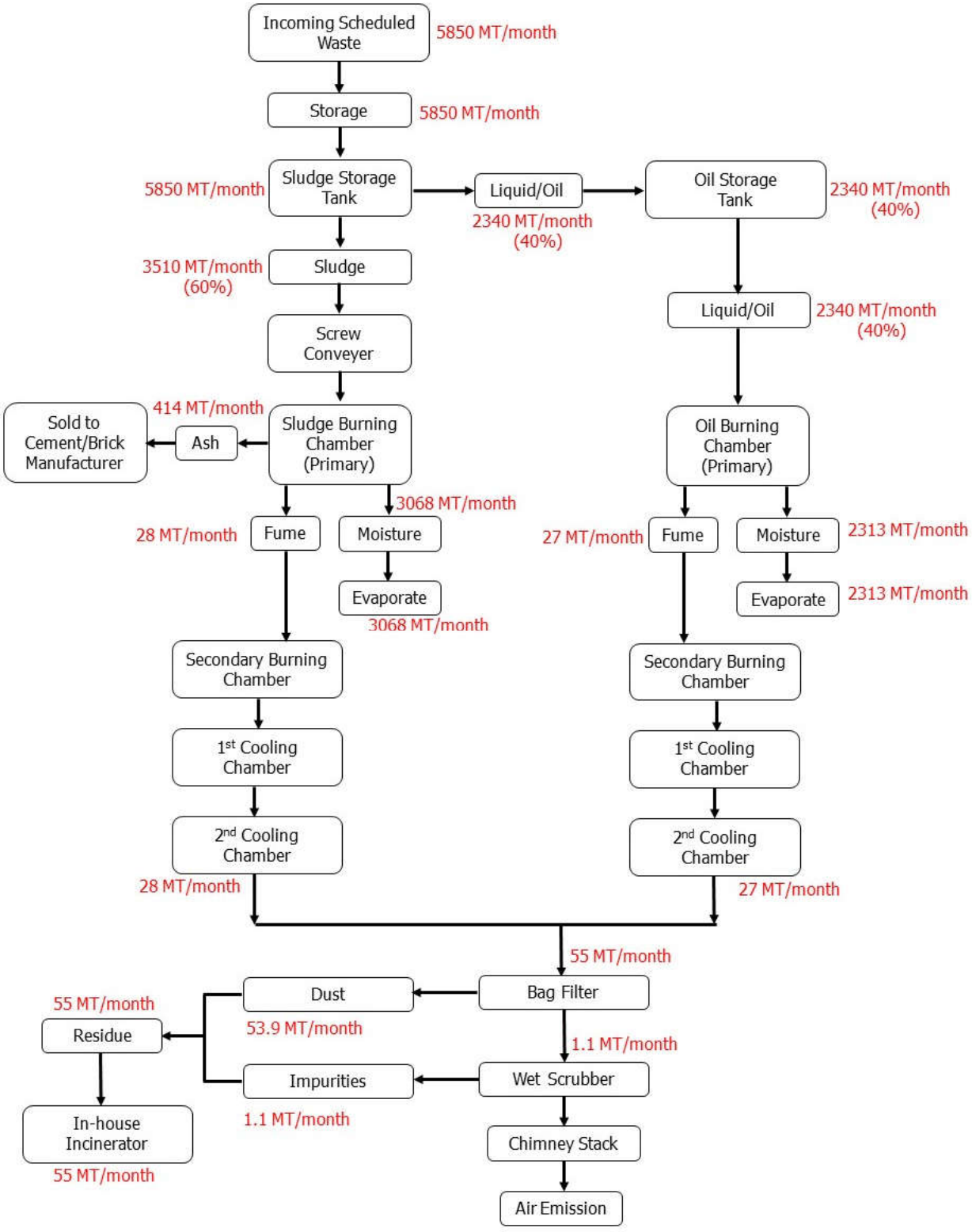




SUB-DIAGRAM

PROJECT DESCRIPTION

Process Flow Chart and Mass Balance



Proposed Process Description – Recovery Process (Distillation)

- Waste oil will be collected from 4 different types of scheduled wastes:
  - SW 305 [spent lubricating oil, (200 MT/month)],
  - SW306 [spent hydraulic oil (300 MT/month)],
  - SW 307 [spent mineral oil-water emulsion (450 MT/month)] and
  - SW 311 [waste of oil or oily sludge (1000 MT/month)].

- The collected waste oil will undergo oil recovery process using ***Distiller Machine*** (proposed distillation process).

- The capacity of the machine is 30 m3/batch, and the recovery process will be carried out in batches (3 batches/day).

- The spent oil fed into the machine will be going through heating process (95 -100 °C) to separate the water from oil.

- Water evaporates as steam and ventilated to a condenser unit where condensation process will condense the steam to distilled water.

- The distilled water will be used for cooling tower and the excess water will be channeled to evaporator for evaporation process.

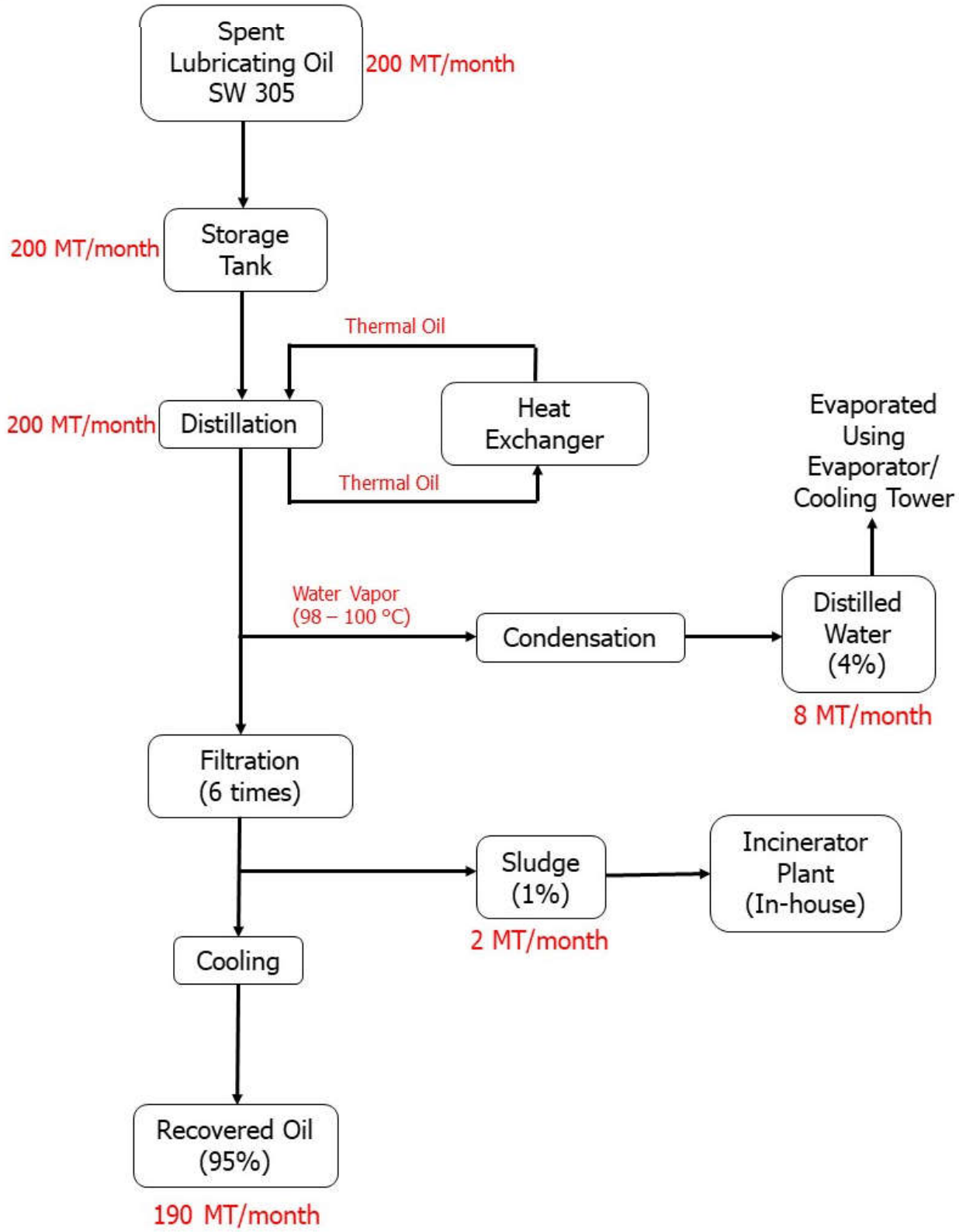
- The oil will be going through filtration process (6 times) to eliminate any solid particles. The filtered solids will be sent to proposed incinerator plant for final disposal (in-house).

- The filtered oil will be stored at the finished product storage area.

- The fume generated from the burner will be ventilated through dust collector and wet scrubber system.

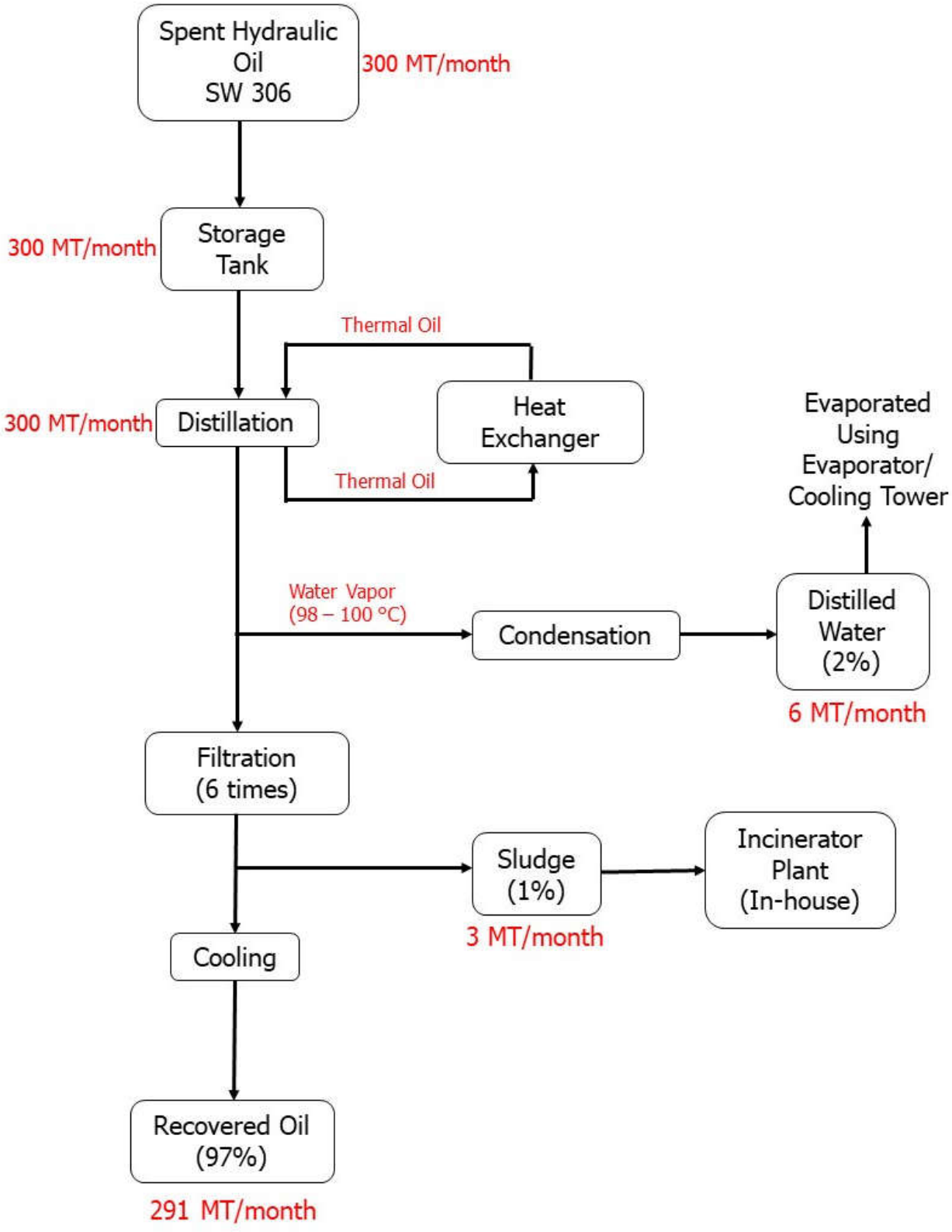
PROJECT DESCRIPTION

Process Flow Chart and Mass Balance for SW 305



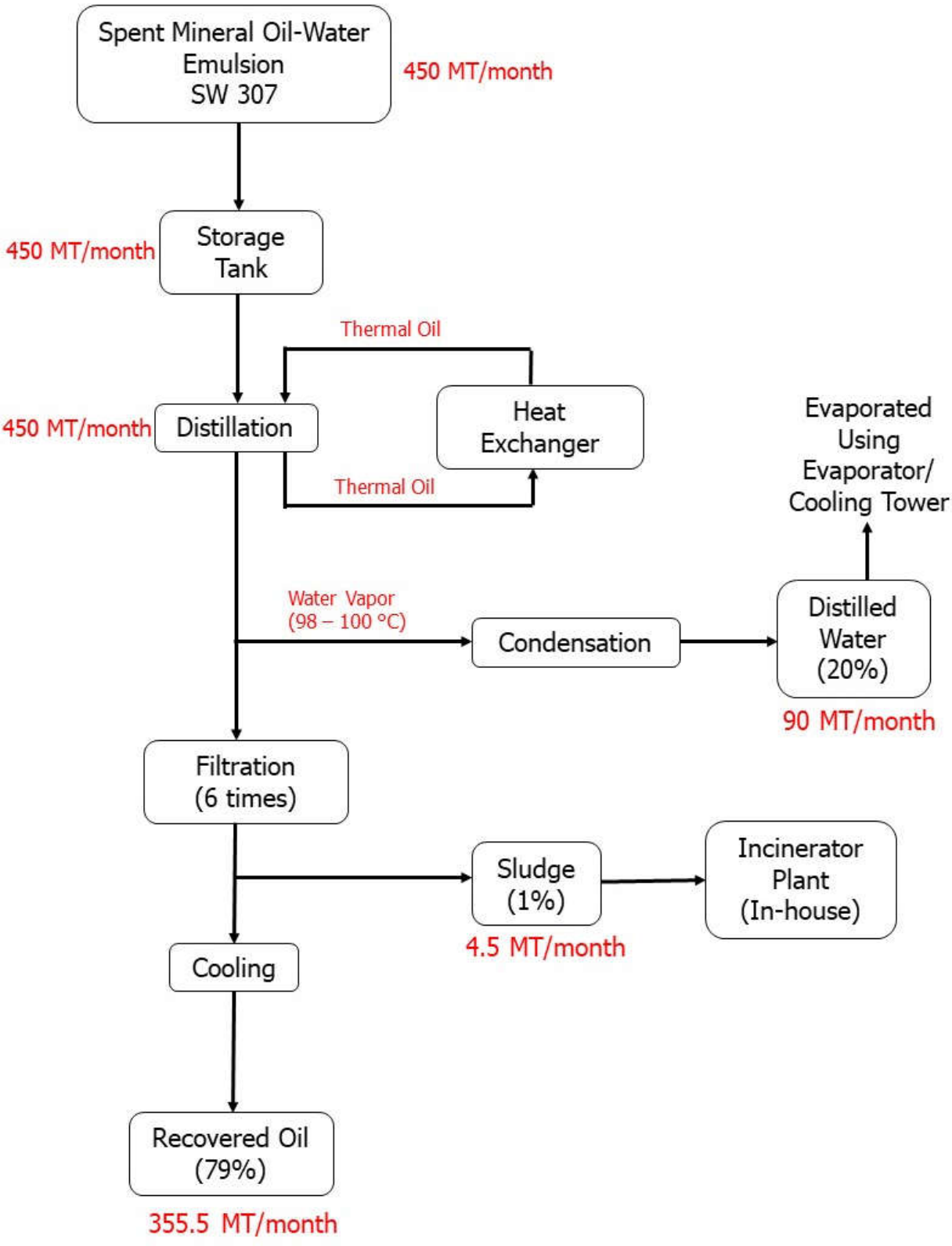
PROJECT DESCRIPTION

Process Flow Chart and Mass Balance for SW 306



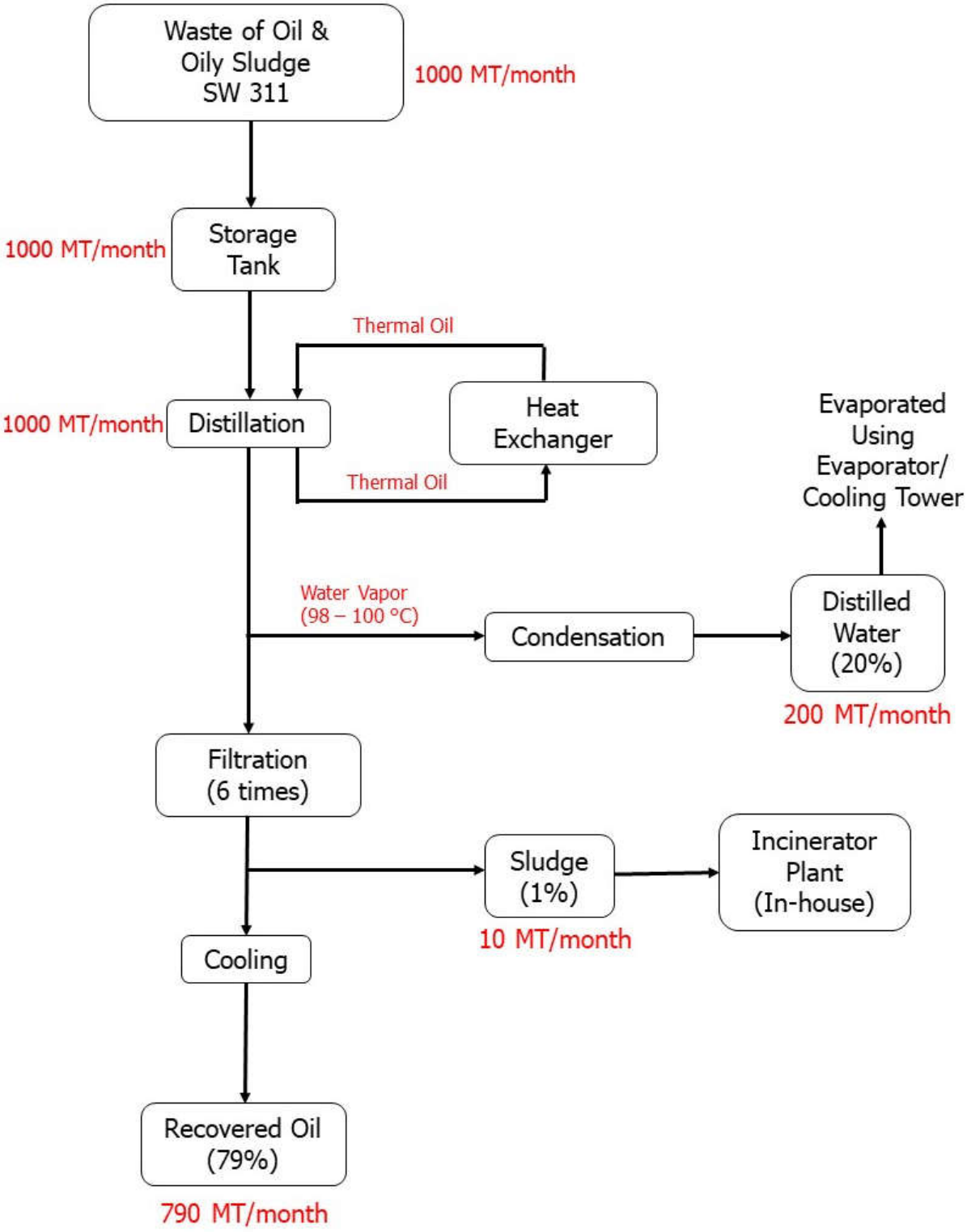
PROJECT DESCRIPTION

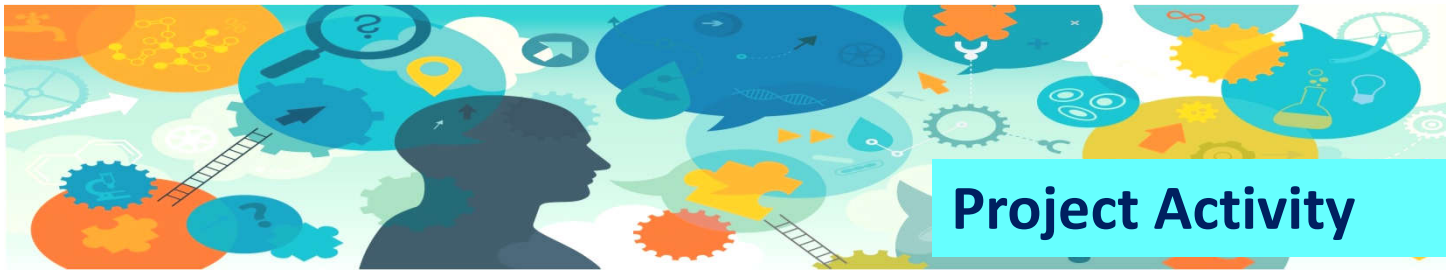
Process Flow Chart and Mass Balance for SW 307



PROJECT DESCRIPTION

Process Flow Chart and Mass Balance for SW 311





Project Activity

The proposed development includes

- ❖ Pre-construction;
- ❖ Construction;
- ❖ Operation and
- ❖ Abandonment Stages.

Pre-Construction Activities

- ❑ Documentation.
- ❑ Environmental studies (baseline sampling, surrounding area survey).

Construction Activities

- ❑ Plant Preparation & Equipment Installation
  - Mobilization
- ❑ Construction Works
  - Plant erection as per the Proposed Layout Plan components
  - Installation of Processing Units and Control Measure equipment

Operation Activities

- ❑ Proposed Incineration Process (16 scheduled waste codes) for final disposal.
- ❑ Recovery process (4 scheduled waste codes) to produce recovered oil.
- ❑ Monitoring of possible pollutants – implementation of control measures.

Abandonment Stages

- ❑ Dismantling of the Plant equipment.
- ❑ Clearing of the structures and construction material properly.
- ❑ Clearing and proper disposal of remaining scheduled wastes.
- ❑ Rehabilitation of the Plant area which includes testing for any soil contamination.
- ❑ Preparation of Plant Closure Plan

Existing Environment

Physical Environment

- Industrial area is located on a flat land and it is an empty lot with platform to erect the proposed Plant building.
- The drainage pattern within Sendayan Techvalley consists of manmade permanent concrete drainage system.
- The surface runoff from the main drain will be channeled through box culvert across the internal road to the JPS detention pond before discharge to Sg. Jijan and finally to Sg. Jimah.
- Land use within 5 km radius encompass by urban development which consists of industrial, waste disposal centers, residential and agriculture (oil palm).
- Nearest sensitive receptor is Kg. Felda Sendayan which is located 1.15 km away from the Proposed Plant.

Biological Ecosystem

- The Proposed Plant is located within Kawasan Perindustrian Sendayan Techvalley.
- No significant biological ecosystem exists within the industrial lot.

Sosioeconomic Environment

- The socioeconomic activity at the immediate surrounding area is more to industrial based activities with various industrial components(i.e., Sendayan Techvalley). The nearest residential is Kg. Felda Sendayan which is about 1.15 km away from the Proposed Plant

Impact Assessment and Mitigation Measures

Construction Phase

Transportation of Construction Material

Impact

- Movement of vehicles might cause dust dispersion and exhaust emission.
- Spillages of construction material on public road.
- Movement of vehicles might cause noise impact at residential areas.

Mitigation Measures

- Covering raw material with canvas sheet to avoid dust dispersion and spillages.
- Regular maintenance of the vehicles will minimize dark smoke of exhaust emission and noise level.
- Avoid densely populated areas, to minimize traffic congestion, noise and to maintain road safety.

Water Quality

Impact

- Surface water from the exposed areas during construction might contribute to sedimentation problem.
- Possibility of oil spillages from machineries might contaminate the surface runoff.

Mitigation Measures

- Only minor earthworks involved especially the foundation works.
- The bare surface will be immediately covered with concrete and this will minimise the sedimentation problem.
- Oil and grease for the machineries will be stored at designated storage area with proper bunding.
- Spill trays will be used to avoid spillages.

Impact Assessment and Mitigation Measures

Construction Phase

Construction Noise

Impact

- Equipment/machinery used for the construction might emitted intermittent noise.
- Installation of plant component might generate noise (i.e., drilling, hacking).
- Movement of vehicles might cause noise impact at the adjacent areas.

Mitigation Measures

- Usage of low noise emitting equipment, provision of silencer and mufflers for the machineries will minimize the noise level.
- Regular maintenance of equipment/machinery will minimize noise level.
- Limit noise emitting activities at day time only.

Solid Waste Generation

Impact

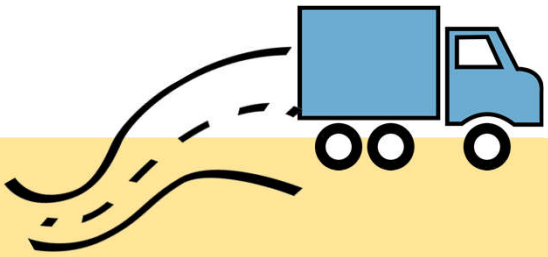
- Source of solid waste mainly the construction debris and municipal waste by workers.

Mitigation Measures

- Implementation of solid Waste Management on-site.
- Provision of adequate dumpster and rubbish bins.
- Proper collection and disposal of solid waste at the approved dumpsite.
- Open burning of any solid waste is strictly prohibited.

Impact Assessment and Mitigation Measures

Operational Phase



Scheduled Waste Transportation

Impact

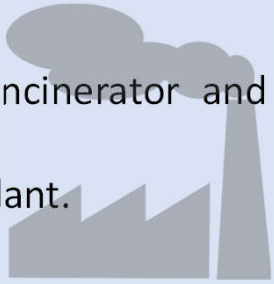
- Spill from transport vehicles or container and risk of accidents and point source pollution discharging into the nearby waterways.

Mitigation Measures

- Proper mode of transport & safety features.
- Well trained and experienced drivers.
- Avoid densely populated areas
- Transportation and handling in accordance with SDS.
- Establishment of an ERP framework detailing action required in case of accidents leading to spillages.

Air Emission

Impact



- Emission expected from the burning chambers of the incinerator and heating process at distillation unit.
- Fugitive dust generation during the activities at Proposed Plant.

Mitigation Measures

- The incineration and recovery processes carried out in enclosed building area of the Proposed Plant.
- The fume generated from the incineration process and recovery process will be ventilated to APCS which include dust collector & bag filter and wet scrubber system.
- Only treated emission will be released via chimney.
- Good house keeping practices to minimise fugitive dust generation.

Impact Assessment and Mitigation Measures

Operational Phase

Water Pollution

Impact

- No effluent will be generated from the Proposed Plant.
- Spillages of collected scheduled waste might contaminate the drainage system.

Mitigation Measures

- All the scheduled wastes will be stored at the designated storage area which is equipped with concrete floor, adequate bund wall and sumps to collect any spillages.
- Spill kits and grease interceptor will be provided to mitigate any event of spillages at the Plant.

Scheduled Waste Management

Impact

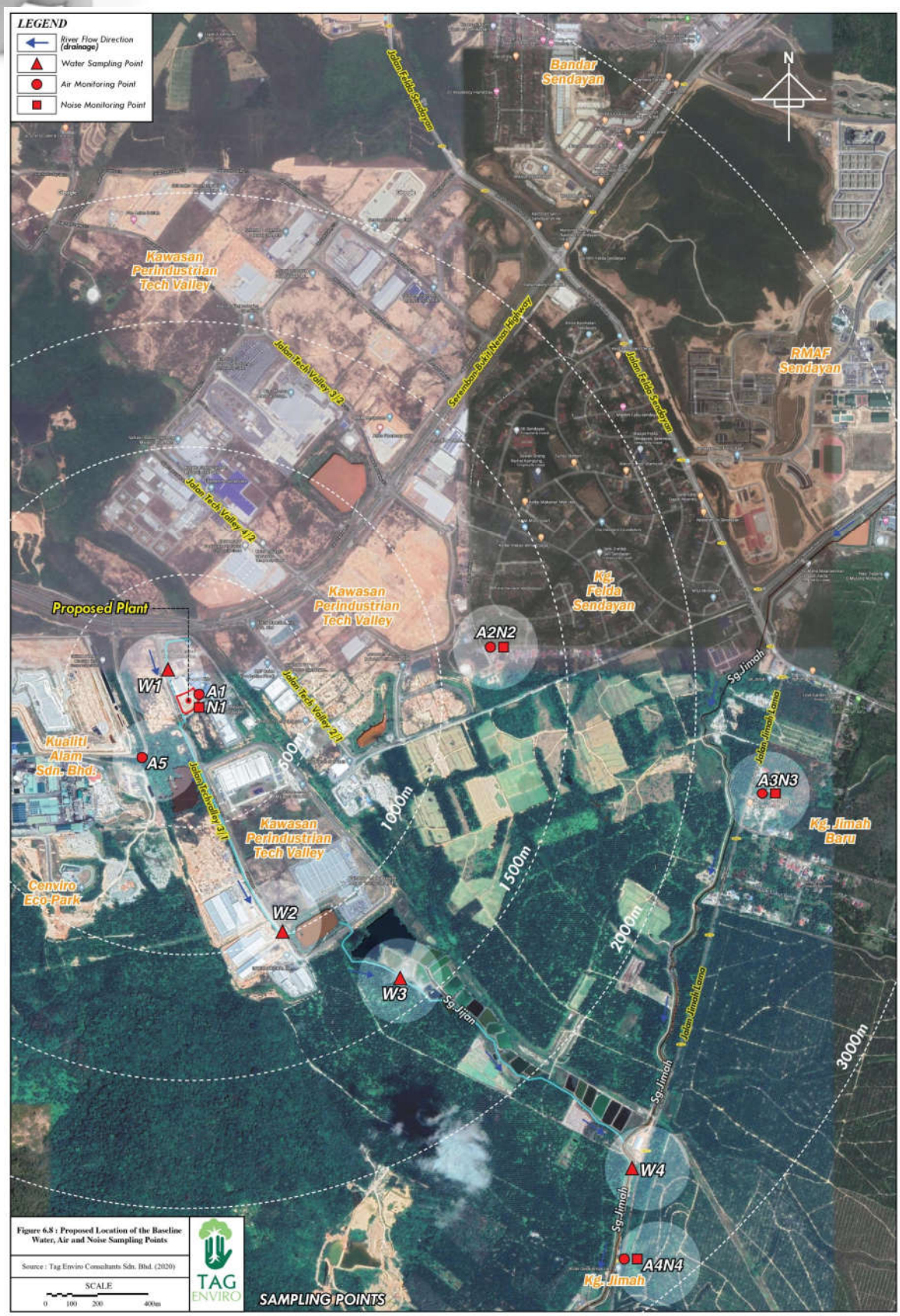
- Generation of residual waste (SW 501) from the recovery process and used drums and jumbo bags (SW 409) are expected

Mitigation Measures

- Aspect of storage in accordance with the EQ (Scheduled Waste) Regulation 2005.
- Residual waste generated will be sent for final disposal to the incinerator at the Proposed Plant.
- Used drums and jumbo bags(SW 409) will be sent to by licensed recyclers;
- Proper storage area in accordance with the *Guidelines for Packaging, Labeling and Storage of Scheduled Wastes in Malaysia*.

Monitoring Program

Water, Air and Noise Sampling Points



Monitoring Program – Water Quality

Sampling Point	Description
W1	Concrete Drain upstream of the Proposed Plant
W2	Concrete Drain downstream of the Proposed Plant
W3	Middle portion of Sg. Jijan
W4	Downstream of Sg. Jimah

Test Parameter	W1	W2	W3	W4	NWQS Class IIB
Temperature, ^{o}C	27.3	27.7	27.4	27.3	-
pH	6.01	6.97	7.03	6.58	6.0 – 9.0
Ammonical Nitrogen, mg/l	ND (<0.01)	1.10	ND (<0.01)	0.07	0.3
BOD_5 at 20 ^{o}C, mg/L	6	14	5	5	3
COD, mg/L	21	49	15	16	25
Total Suspended Solids, mg/L	55	12	8	35	50
Colour, TCU	27	12	32	21	150
Mercury (Hg), mg/L	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	0.001
Cadmium (Cd), mg/L	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	0.01
Chromium Hexavalent, mg/L	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	0.05
Arsenic (As), mg/L	ND (<0.003)	ND (<0.003)	ND (<0.003)	ND (<0.003)	0.05
Cyanide (CN), mg/L	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	0.02
Lead (Pb), mg/L	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	0.05
Chromium Trivalent, mg/L	ND (<0.02)	ND (<0.02)	ND (<0.02)	ND (<0.02)	-
Copper (Cu), mg/L	ND (<0.03)	0.08	ND (<0.03)	ND (<0.03)	0.02
Manganese (Mn), mg/L	0.24	0.07	0.11	0.17	0.10
Nickel (Ni), mg/L	0.06	0.06	0.06	0.06	0.05
Tin (Sn), mg/L	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	-
Zinc (Zn), mg/L	0.14	0.03	0.02	0.01	5.0
Boron (B), mg/L	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	1.0
Iron (Fe), mg/L	1.04	1.26	1.35	1.68	1.0
Aluminium, mg/L	7.38	0.09	0.05	0.13	-
Barium, mg/L	0.01	ND (<0.01)	ND (<0.01)	ND (<0.01)	1.0
Selenium, mg/L	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.001)	0.01
Fluoride, mg/L	0.25	0.37	0.12	0.09	1.5
Argentum (Ag), mg/L	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	0.05
Formaldehyde, mg/L	ND (<0.1)	ND (<0.1)	ND (<0.1)	ND (<0.1)	-
Phenol, mg/L	ND (<0.001)	0.002	0.003	0.007	10
Free Chlorine (Cl_2), mg/L	ND (<0.4)	ND (<0.4)	ND (<0.4)	ND (<0.4)	-
Sulphide (S^{2-}), mg/L	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	0.05
Oil and Grease, mg/L	ND (<1)	ND (<1)	ND (<1)	ND (<1)	40

Monitoring Program – Noise Level

Sampling Point	Description
N1	Open Space near Proposed Plant Boundary
N2	Nearest sensitive receptor, Kg. Felda Sendayan
N3	Residential area of Kg. Baru Jimah
N4	Residential area of Kg. Jimah

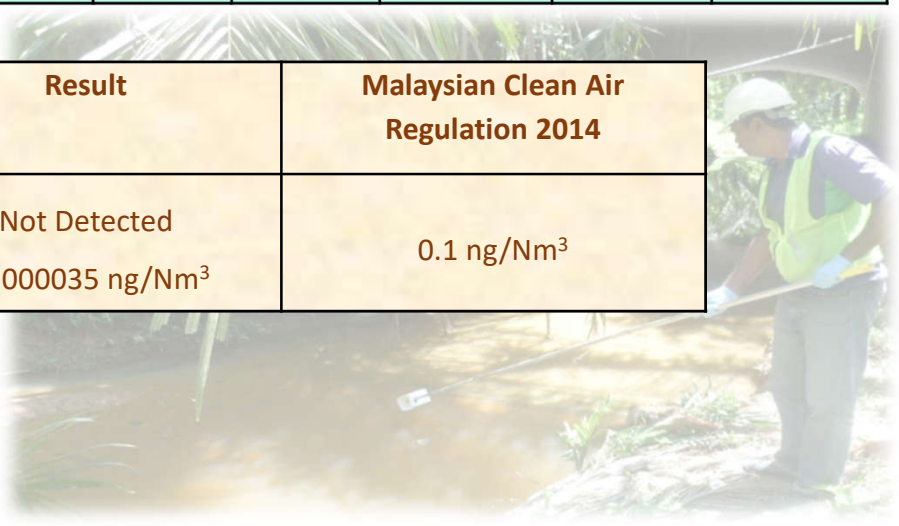
Time Monitored	Average (dB)						Maximum Permissible Sound Level LA_{eq} (dB)*
	LA_{eq}	LA_{10}	LA_{50}	LA_{90}	LA_{min}	LA_{max}	
N1							
Day Time	56.7	61.1	56.1	53.1	49.3	110.5	**75**
Night Time	53.3	56.2	52.8	51.0	49.6	78.0	**75**
N2							
Day Time	51.6	58.5	50.2	46.5	44.7	92.1	**65**
Night Time	49.1	55.5	46.8	45.4	44.4	61.2	**60**
N3							
Day Time	52.1	58.0	52.0	45.4	42.1	103.0	**65**
Night Time	49.0	50.8	50.0	46.0	46.4	50.8	**60**
N4							
Day Time	53.2	59.7	52.3	49.1	37.6	88.4	**65**
Night Time	49.1	47.3	45.8	55.1	45.0	62.6	**60**

Monitoring Program – Air Quality

Sampling Point	Description
A1	Open Space near Proposed Plant Boundary
A2	Nearest sensitive receptor, Kg. Felda Sendayan
A3	Residential area of Kg. Baru Jimah
A4	Residential area of Kg. Jimah
A5	Boundary of Kualiti Alam Sdn. Bhd.

Parameter	Unit	Plant Boundary A1	Kg. Felda Sendayan A2	Kg. Jimah Baru A3	Kg. Jimah A4	Boundary of Kualiti Alam A5	Averaging Time (hours)	MAAQS 2020
PM_{10}	µg/m³	35	24	14	28	20	24	100 µg/m³
$PM_{2.5}$	µg/m³	18	15	10	18	11	24	35 µg/m³
SO_2	µg/m³	28	22	16	20	22	24	80 µg/m³
NO_2	µg/m³	24	20	12	15	18	24	70 µg/m³
CO	mg/m³	5	7	9	5	7	8	10 mg/m³
O_3	µg/m³	<1	<1	<1	<1	<1	8	100 µg/m³
VOC	µg/m³	<1	<1	<1	<1	<1	Real time reading	N/A
Arsenic	µg/m³	<1	<1	<1	<1	<1	N/A	N/A
Cadmium	µg/m³	<1	<1	<1	<1	<1	N/A	N/A
Mercury	µg/m³	<1	<1	<1	<1	<1	N/A	N/A
Lead	µg/m³	<1	<1	<1	<1	<1	N/A	N/A
Hydrochloric Acid	µg/m³	<1	<1	<1	<1	<1	N/A	N/A

Test Parameter	Result	Malaysian Clean Air Regulation 2014
Dioxins and Furans	Not Detected <0.000035 ng/Nm³	0.1 ng/Nm³



Proposed Monitoring Program

Performance Monitoring

The performance monitoring for the Proposed Plant will involve the air pollution control system (APCS).

PM

Compliance Monitoring

The compliance monitoring which includes the assessment and documentation of the compliance with EIA approval conditions and license approval conditions).

CM

Impact Monitoring

The impact monitoring will be conducted case by case basis. IM will be carried if there is any unclear or are any uncertainties in the long-term impact evaluation to the receptors (i.e., the workers, or the nearest sensitive receptors).

IM

Proposed Monitoring Program

Compliance Monitoring	Standards/Limits	Frequency	Sampling Location
Water Quality River/Stream/Drainage System Parameters: Temperature, pH, DO, BOD, COD, TSS, Oil & Grease, Ammoniacal Nitrogen and Heavy Metals.	National Water Quality Standards (NWQS) Class IIB	Quarterly	• Upstream of Proposed Plant • Downstream of Proposed Plant
Ambient Air Quality Parameters: $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO, Ozone and Volatile Organic Compound (VOC), HCl. Heavy Metals, Dioxin & Furan.	Malaysian Ambient Air Quality Standards, 2013 (MAAQS)	Quarterly	• Plant Boundary • NSR 1 (Kg. Felda Sendayan)
Noise Level LAeq, L10, L90, Lmin, Lmax	Schedule 2 of The Guidelines for Environmental Noise Limits and Control 2019	Quarterly	• Plant Boundary • NSR 1 (Kg. Felda Sendayan)

Compliance Monitoring for Chimney Stack		
Parameters	**Limit Value**	**Monitoring Frequency**
Total PM	100 mg/m^3	Continuous
NMVOC as Total Organic Carbon	10 mg/m^3	Continuous
Hydrogen Chloride (HCl)	40 mg/m^3	Continuous
Hydrogen Fluoride (HF)	1 mg/m^3	Continuous
Sum of SO_2 and SO_3, as SO_2	50 mg/m^3	Continuous
Sum of NO and NO_2, as NO_2	200 mg/m^3	Continuous
Carbon monoxide (CO)	20 mg/m^3	Continuous
Cadmium (Cd) and Thallium (Tl)	0.005 mg/m^3	Periodic
Mercury (Hg)	0.05 mg/m^3	Periodic
Antimony (Sb), Arsenic (As), Lead (Pb), Chromium (Cr), Cobalt (Co), Copper (Cu), Manganese (Mn), Nickel (Ni), Vanadium (V)	Total 0.5 mg/m^3	Periodic
PCDD/PCDF	0.1ng TEQ/m3	Periodic