



Electronic Scheduled Waste Information Systems

Waste Acceptance Criteria Concept & Process Walkthrough





Why Implement Waste Acceptance Criteria?

<u>Classification of waste in hazardous or non-hazardous, where</u> waste can be specifically identified with composition of waste for accurate recovery treatment, disposal or recycle.

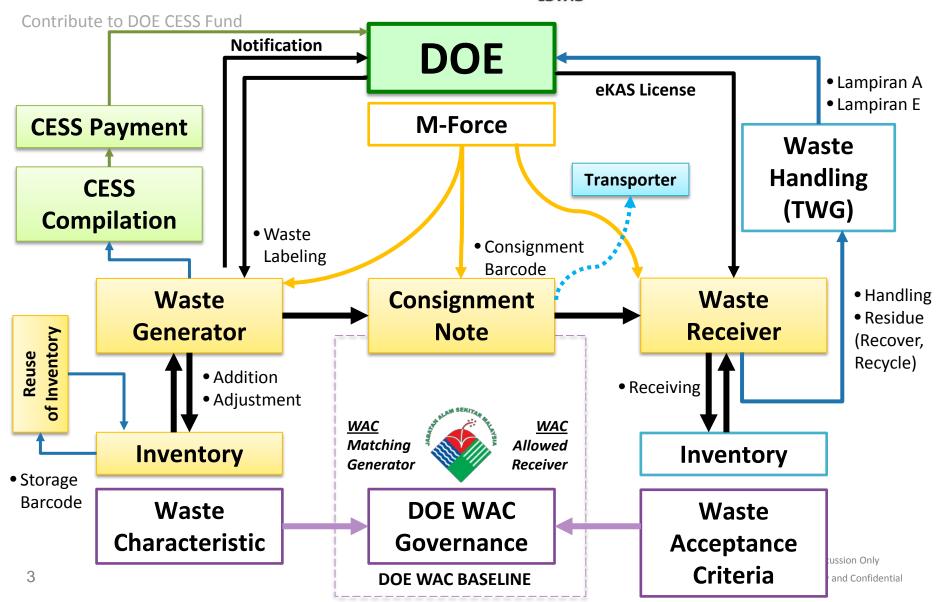
The proposed WAC functionality in eSWIS, enabled DOE to perform list of activities as below:

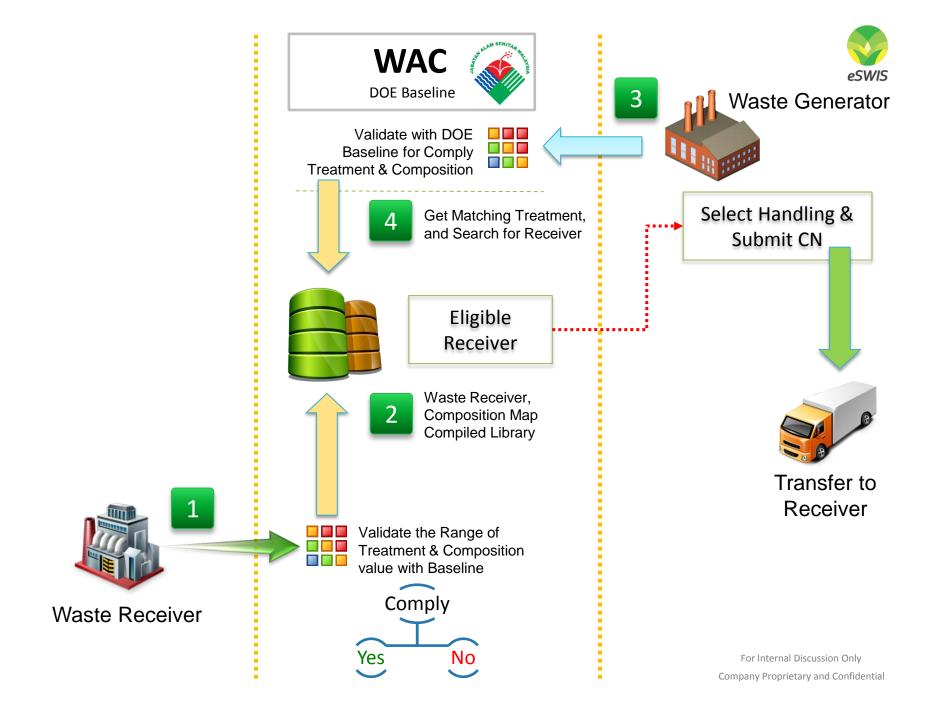
- 1. Unify Waste Code, Type & Waste Labelling on a right practice
- 2. Effectively Compile Licensed Receiver According to Authorized Waste Code, License Status, and Allowed Treatment / Service
- 3. Establishing Governance on Generator submitted waste via consignment note and tracing with waste composition

eSWIS Operation Framework











Overview on Roles for Waste Acceptance Criteria







Waste Acceptance Baseline

- Component Listing
- Specify of Waste Code
- Allow Disposal or 3R
- Define Baseline by Type & Composition
- Potential Treatment

Waste Acceptance Criteria

- Linked with License & Waste Code Allowed
- Define Allowed Treatment
 / Handling (disposal / 3R)
- Define Composition Values & response to Compliance

Waste Characteristic

- Linked with Notified Waste Code
- Specification of Composition
- Select of Treatment
- List of Qualified Waste Receiver



Waste Code, Waste Type & Composition with Label Guideline from DOE

Baseline

Baseline from DOE

Statistic

Mapping to WR & WG

Establish Governance

- Monitor waste code, type and list of receiver
- Review generator inputs with the defined baseline
- Tracking of consignment trend with defined mass balance

Based on <u>Active License</u> <u>& Allowed Waste Code</u> to define service offered



Acceptance

Acceptance Range from WR

Service Offer

Justify Correct Receiving

Treatment / Service

- Updates of service offered
- Self-service justify on receiving of Waste By Type of treatments offer
- Continuous update of receiving parameter & refresh to Generator



For capture of <u>Notified</u> <u>WG generated waste</u> characteristic

Criteria Characteristic from WG



Waste Code : SW306 Waste Type : Liquid Waste Name : Spent Hydraulic Oil

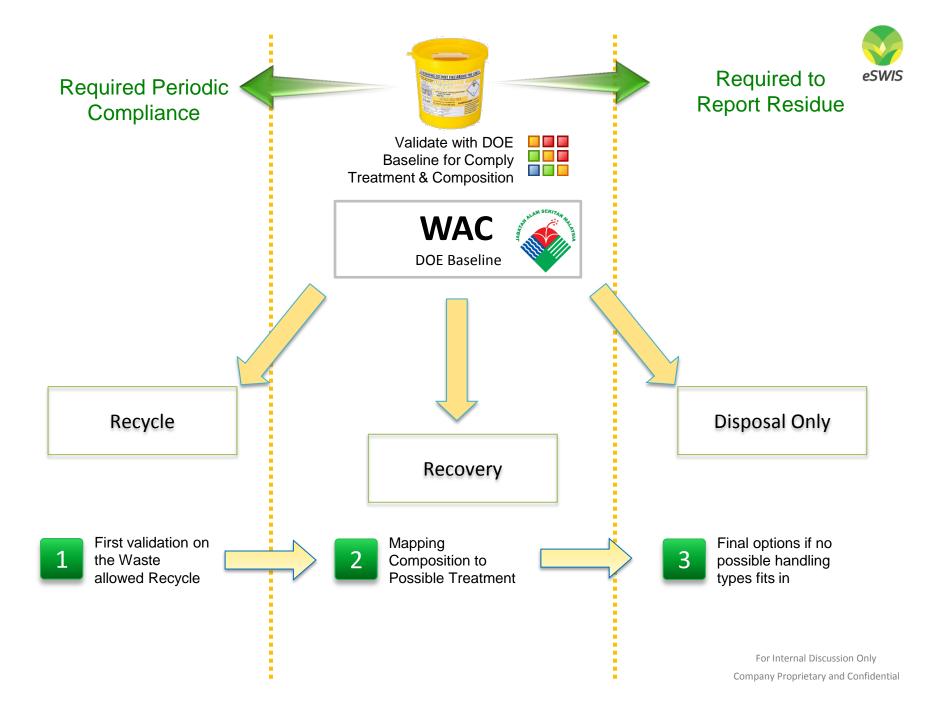
Click below links to download :



Actual Sized Template

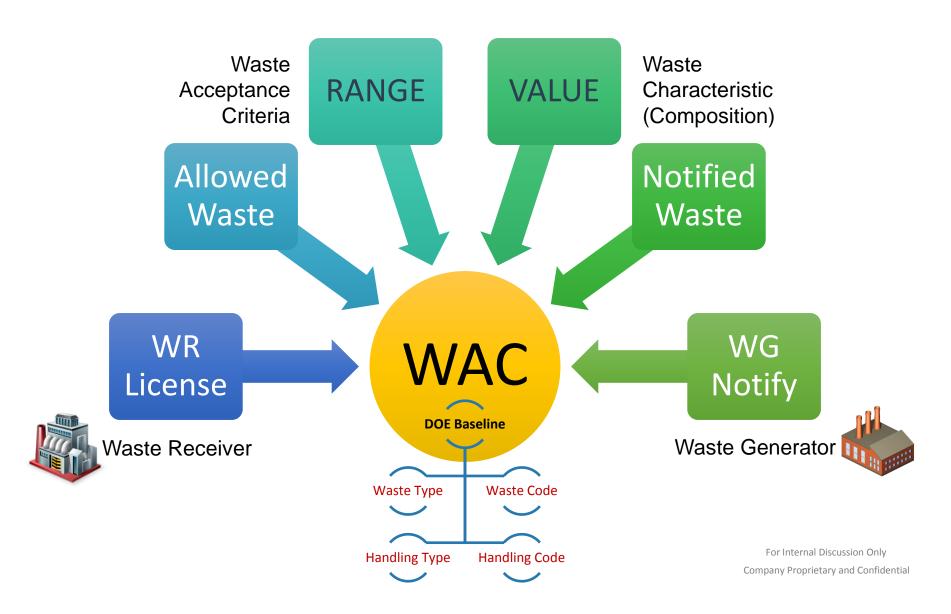
Actual Sized Template



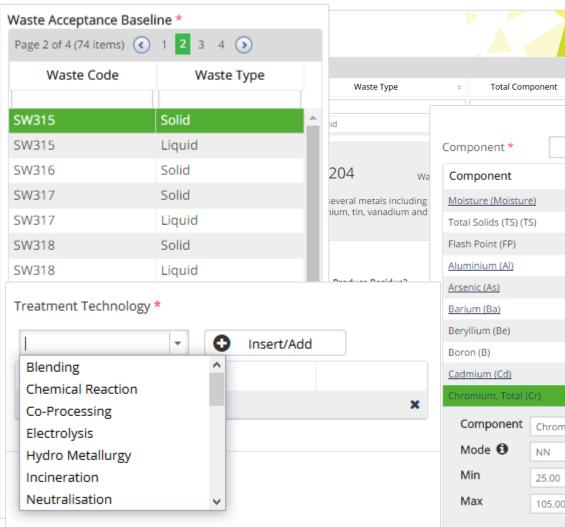


Overview of WAC Validation Process





Preview of Waste Acceptance Baseline

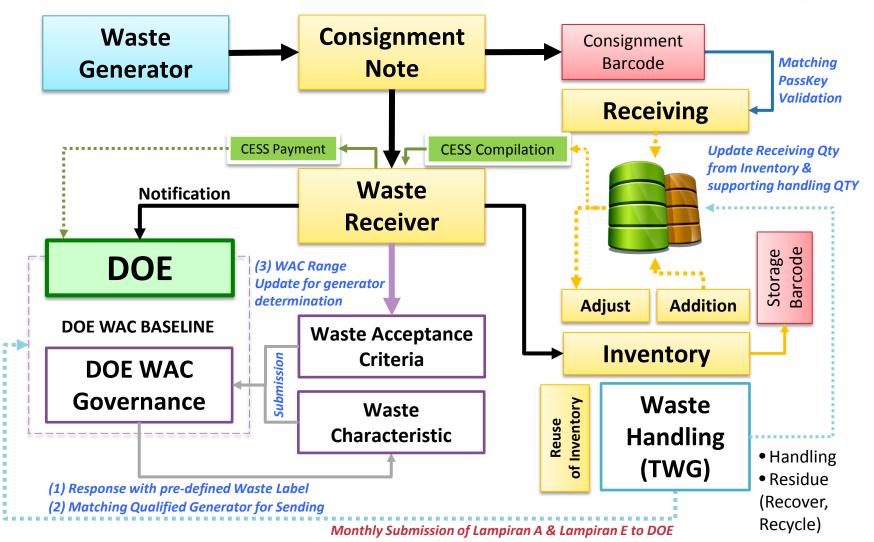


+ Total Com	ponent	÷	Submitted By	÷		Submitted D	ate	÷	
omponent *				- 0	In	sert/Add			
Component		Unit	Mode	Min		Max			
Moisture (Moisture	<u>e)</u>	%	-	5.00		85.00			×
Total Solids (TS) (T	S)	%	D	15.00		100.00			×
Flash Point (FP)		°C	D	100.00		300.00			×
Aluminium (Al)		mg/kg	-	350.00		3750			×
Arsenic (As)		mg/kg	D			1.00			×
Barium (Ba)		mg/kg	D			4.00			×
Beryllium (Be)		mg/kg	-			1.20			×
Boron (B)		mg/kg	D			2.00			×
Cadmium (Cd)		mg/kg	NN			0.02			×
Chromium, Total (Cr)	mg/kg	NN	25.00		105.00			×
Component	Chromiu	ım, Total (O	Ir)	Unit	mg/k	g			
Mode 📵	NN								•
Min	25.00					%			
Max	105.00					%			

eSWIS

Operation Framework – Receiver Focus







Preview of Waste Acceptance Criteria for

G Back E Save ≓ Unit Converter				🛓 est	alco2 🏦	ESTALCO SD	N. BHD. 🕞
Waste Acceptance Criteria *	Waste Code : SW204 Wast Sludges containing one or several metals including chromium, c cadmium, aluminium, tin, vanadium and beryllium	e Type : Solid opper, nickel, zinc, lead,	Ref Code				
	Recovery Disposal Offered Treatment / Service	Offered Treatment : Incinera Composition Map % Prod			% Residue		
	*Please Click to Select The Treatment	Component		NIL Min	%	Max	96
PEROKSIDA ORGANIK	# Treatment	Moisture (Moisture)	%			20.00	
	1 Incineration •	Aluminium (Al)	mg/kg			100.00	
1 2		Beryllium (Be)	mg/kg			1.20	
		Lead (Pb)	mg/kg			155.00	
Click below links to download:		Nickel (Ni)	mg/kg			12000.00	
🖻 Label 🛛 📴 Form		Cadmium (Cd)*	mg/kg			0.02	
Actual Sized Template		Chromium, Total (Cr)*	mg/kg			105.00	
		Cobalt (Co)*	mg/kg			33000.00	

Clarification of Waste Acceptance Criteria



🔨 To supply acceptance range of waste code

To supply offered treatment & service

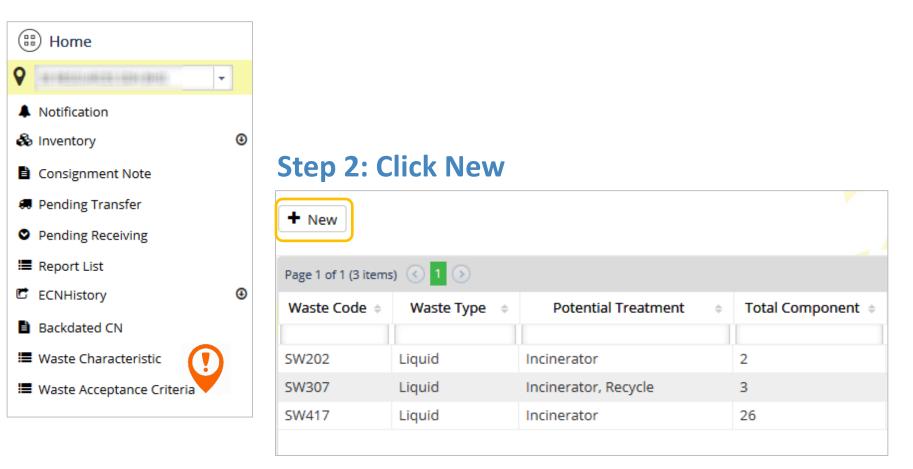
Linked with licensed waste code



Waste Acceptance Criteria



Step 1: Navigate to Waste Acceptance Criteria



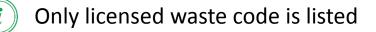


Step 3: Select Waste Code & Type

Waste Acceptance Criteria *

Missing waste code, please click here to verify.

Waste Code	Waste Type
SW206	Liquid
SW305	Liquid
SW306	Liquid
SW312	Solid
SW312	Liquid
SW322	Liquid
SW323	Liquid
SW409	Solid
SW410	Solid



To check licensed waste code, navigate to Facility List

Step 4: Select Offered Treatment / Service



	/er,						
				% Resid	ue		
Component	Unit	NIL	Min	%	Max	%	
Density (Den)*	g/L		2.00		3.00		
Boiling Point (BP)*	°C		30.00		45.00		
Aluminium (Al)*	mg/l		2.50		3.50		
🐺 Fill	in Min	1 & M	ax of	each	comr	onen	 t
	Composition Map * 96 Component Density (Den)* Boiling Point (BP)* Aluminium (Al)*	ComponentUnitDensity (Den)*g/LBoiling Point (BP)*°CAluminium (Al)*mg/l	Composition Map * % Product Component Unit NIL Density (Den)* g/L □ Boiling Point (BP)* °C □ Aluminium (AI)* mg/l □	Composition Map * % Product Component Unit NIL Min Density (Den)* g/L 2.00 Boiling Point (BP)* °C 30.00 Aluminium (Al)* mg/l 2.50	Composition Map * % Product % Resid Component Unit NIL Min % Density (Den)* g/L 2.00 0 Boiling Point (BP)* °C 30.00 0 Aluminium (Al)* mg/l 2.50 0	Composition Map * % Product % Residue Component Unit NIL Min % Max Density (Den)* g/L 2.00 3.00 Boiling Point (BP)* °C 30.00 45.00 Aluminium (Al)* mg/l 2.50 3.50	Composition Map * % Product % Residue Component Unit NIL Min % Max % Density (Den)* g/L 2.00 3.00 45.00 45.00

Step 5: Navigate to Recycle & Disposal Tab (if available)



C h e	Chemical Composition I	Map *							
m	Component	Unit	NIL Min	% Max	96				
c a	Colour*	ADMI	2.00	9.00	Che	ck			
I P	Fill on Min & Max of each component								
		C	•						
			% Conversion	: 0.01% = 1,0	00,000				
over	y Recycle <mark>Disposa</mark>	•	% Conversion	: 0.01% = 1,0	00,000				
C h	y Recycle Disposal		% Conversion	: 0.01% = 1,0	00,000				
C h e			% Conversion	: 0.01% = 1,0	96				
C h e m i c	Chemical Composition N	Мар							
C h e m i	Chemical Composition N	Мар	NIL Min	% Max	96				

Step 6: Click Save button to confirm submission





A simple Unit Converter provided

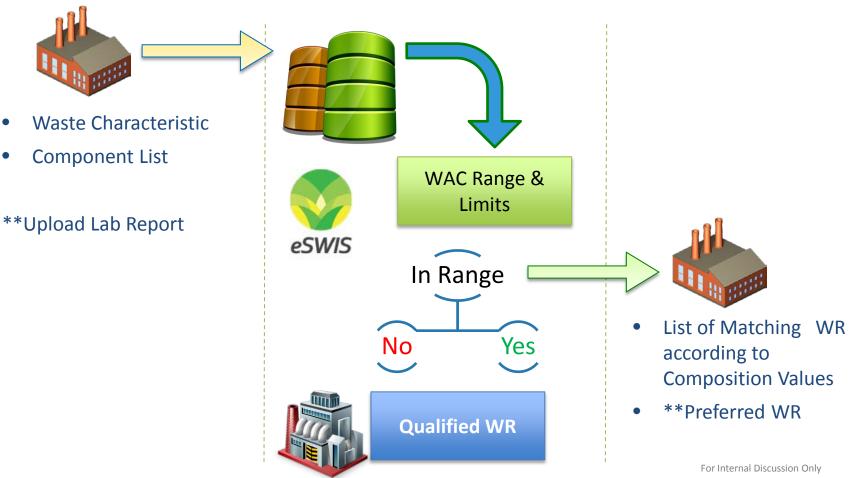
	Unit Converter									
SOLID			-							
1	=	1000.00								
g/kg	•	mg/kg	Ŧ							
	ОК									

Waste Acceptance Criteria will be listed

+ New			
Page 1 of 1 (3 items	s) 🔇 <mark>1</mark> 🔊		
Waste Code 💠	Waste Type 🔅	Potential Treatment 🛛 🗢	Total Component 💠
SW202	Liquid	Incinerator	2
SW307	Liquid	Incinerator, Recycle	3
SW417	Liquid	Incinerator	26



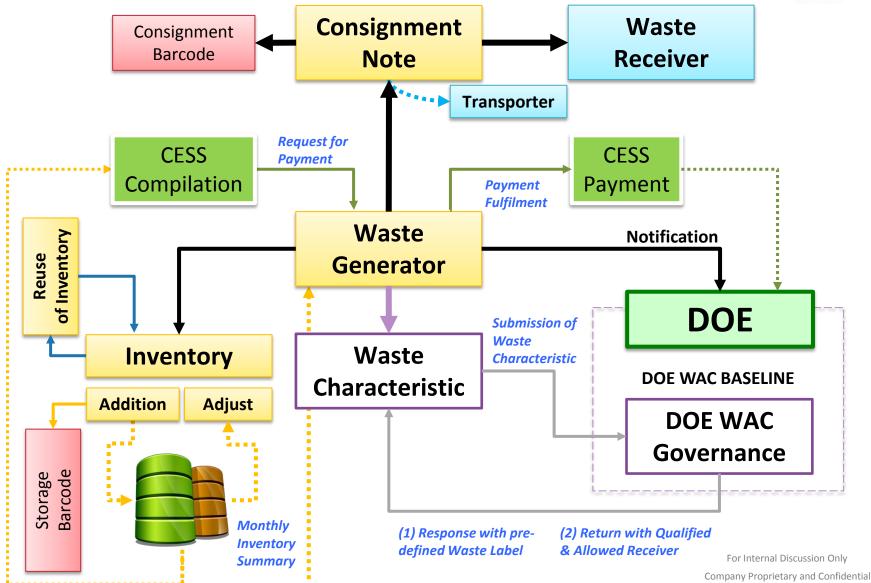
Internal System Flows for Waste Generator & Receiver



Company Proprietary and Confidential

Operation Framework – Generator Focus





Preview of Waste Characteristic for Generator

Back 🖺 Save 🗖 🗖 Unit Converter 🔒 Uplo	ad 🏾 🤊 History					💄 ipaper 🏦 IN	TERNATIONAL PAPER PACKA	
	Waste Code	• : SW204 wa	ste Type : Solid	Notification Waste Name Submission Notification (MT/month) Ref Code	e Date Qty	: 2016101834475 No : : 18/10/2016 : 0.0000	e	
	Compositio		Supporting Report	ie %				
PEROKSIDA ORGANIK	Moisture (N Total Solictor Flash Poir	(TE) (TE)	04 100	oporting Repo	rt			
1 2	Aluminiu	Recycle	very 📄 Disp	osal	ter	•	•	
Click below links to download:	<u>Arsenic (A</u> <u>Barium (E</u>	Co	mpany		State	Treatment	Last Request QTY (MT/month)	TWG Request
	Beryllium	AKSHAANI AUTO SDN. BHD.			KEDAH	Recovery	0.0000	Send
🗳 Label 🛛 🖾 Form	Boron (B)	DHAKSHINAMOORTY MANUFAG	TURING SDN BHD		KEDAH	Recovery	0.0000	Send
Actual Sized Template	Cadmium	ESTALCO SDN. BHD.			JOHOR	Recovery	0.0000	Send
	Caulifium	KHT RECYCLE SDN BHD			JOHOR	Recovery	0.0000	Send
		M & M RECYCLING SDN. BHD.			JOHOR	Recovery	0.0000	Send
		MATERIALS SERVICE COMPLEX	SDN BHD		JOHOR	Recovery	0.0000	Send
		MEGATRAX PLASTIC INDUSTRIE	S (PG) SDN. BHD.		KEDAH	Recovery	0.0000	Send
		RST MANUFACTURING (M) SDN	BHD. (R. SATAYASILA	TRADING SDN.B	JOHOR	Recovery	0.0000	Send
		SHAN POORNAM METALS SDN	BHD		JOHOR	Recovery	0.0000	Send
		SOUTHERN STRENGTH (M) SDN	BHD		JOHOR	Recovery	0.0000	Send

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Waste Characteristic Definition



Preview of Waste Characteristic Composition Inputs & Label Determination

🕒 Back 🖺 Save 🗖 Unit Converter 🕹 Upload	J History					🙎 ipapér	
	Waste Code : SW417 Wa	ste Type	: Liqui	d Sub Not (MT	ification No. ste Name mission Date ification Qty '/month) Code	: 5015 : ink waste : 06/06/2012 : 4.0000	Note
	Composition Map Eligible Receivers	Suppo	rting Rej	port			1
	Component	Unit	NIL	/alue	%		
	Total Solids (TS) (TS)	%					
PEPEJAL MUDAH TERBAKAR (BUANGAN)	Viscosity (Viscosity)	сР					
	Water content (WC)	%					
1	Flash Point (FP)	°C					
	Arsenic (As)	mg/l					
Click below links to download:	Barium (Ba)	mg/l					
Label 🖸 Form	Boron (B)	mg/l					
Actual Sized Template	Cadmium (Cd)	mg/l					
	Chromium, Total (Cr)	mg/l					

Declaration of Waste Characteristic



To supply characteristic of generated waste

🔆 Linked with notified waste code

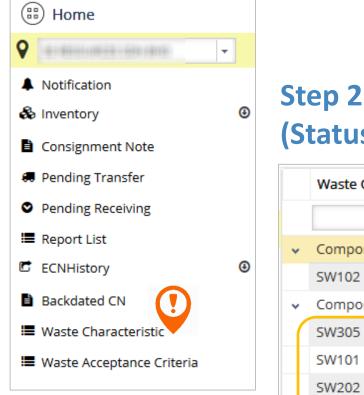
🔨 To upload supporting lab reports & documents



Waste Acceptance Characteristic



Step 1: Navigate to Waste Acceptance Characteristic



Step 2: Select Waste Code (Status: Pending Assigned)

	Waste Code	Waste Type	Ref Code	Submitted By	Submitted Date
•	Component Statu	us: Assigned			
	SW102	Solid			22/03/2016
•	Component Statu	us: Pending Assign	ed		
	SW305	Liquid			
	SW101	Solid			
	SW202	Solid			
	SW204	Solid			

Step 3: Fill in component value



components such as accumulators, mercury	blies cont y-switche			Submission D Notification Q (MT/month) Ref Code	: 27/02/2017 : 0.0000				
Composition Map Eligible Receivers	Supporti	ng Re	port						
Component L	Unit I	NIL	Value	%					
Density (Den) g	g/L		2.0000						
Boiling Point (BP)	°C		35.000	D					
Aluminium (Al)	mg/l		2.5000						

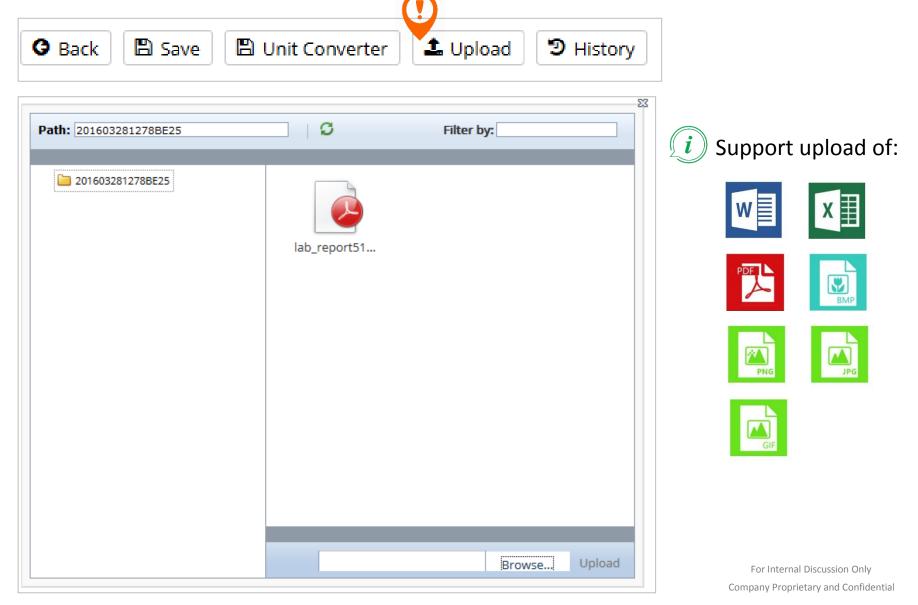


Compulsory to fill value of component with *

% Conversion : 0.01% = 1,000,000

Step 4: Click Upload button to upload supporting lab report

eSWIS



Step 5: Click Save button to confirm submission



G Back

🖺 Save

🖺 Unit Converter

🌲 Upload

C History

Step 6: Select Waste Code (Status: Assigned)

	Waste Code	Waste Type	Ref Code	Submitted By	Submitted Date
•	Component Statu	us: Assigned			
	SW102	Solid			22/03/2016
*	Component Statu	us: Pending Assigr	ned		
	SW305	Liquid			
	SW101	Solid			
	SW202	Solid			
	SW204	Solid			

Step 7: Navigate to Eligible Receiver tab



Composition Map	Eligible Receivers	Supporting Repo	rt			
Recycle	Recovery		ter	•	•	
	Company		State	Treatment	Last Request QTY (MT/month)	TWG Request
			NEGERI SEMBILAN	Recoverv	0.0000	Send

i Provided with Designated Filter for easy searching and viewing

Uploaded report & documents will be listed in Supporting Report tab

omposition	Мар	Eligible Receivers	Supporting R	eport
Submission	Date	Submitted I	Зу	Document
27/02/2017		agbarrel		lab_report12.pdf
27/02/2017		agbarrel		lab_report11.pdf
27/02/2017		agbarrel		lab_report1.pdf

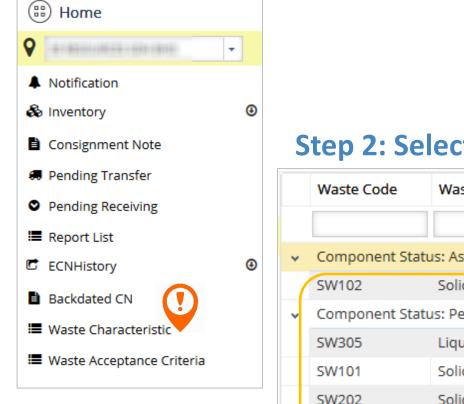
For Internal Discussion Only

Company Proprietary and Confidential

Waste Labeling & Definition



Step 1: Navigate to Waste Acceptance Criteria / Characteristic



Step 2: Select a waste code

	Waste Code	Waste Type	Ref Code	Submitted By	Submitted Date
•	Component Statu	is: Assigned			
(SW102	Solid		Acadelia marteria	22/03/2016
¥	Component Status: Pending Assigned				
	SW305	Liquid			
	SW101	Solid			
	SW202	Solid			
	SW204	Solid			

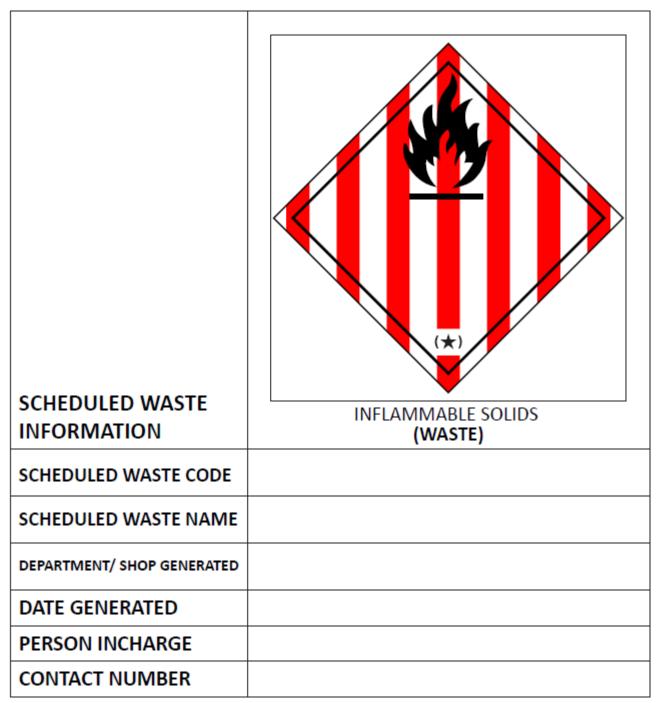
Step 3: Preview waste label thumbnail & download



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eSWIS

PEPEJAL MUDAH TERBAKAR (BAHAN)						
	SCHEDULED W	ASTE INFORMATION				
	SCHEDULED WASTE CODE					
	SCHEDULED WASTE NAME					
	DEPT / SHOP GENERATED					
	DATE GENERATED					
	PERSON IN CHARGE					
	CONTACT NUMBER					



Direct download of ready made Label & Form template for Generator

- Accurate Hazardous Signage
- Correct Measure 10cm x 10cm
- Uniform
 Designed
 Layout

Proposed Placement of Label – Drum

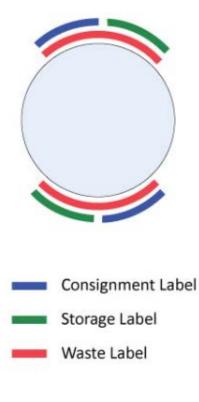












Proposed Placement of Label – Carton Box











Proposed Placement of Label – Jumbo Bag



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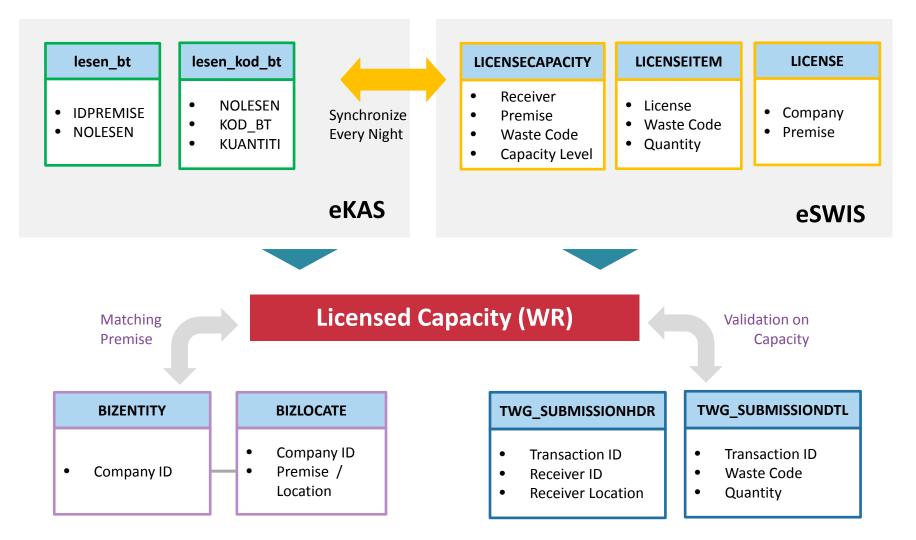






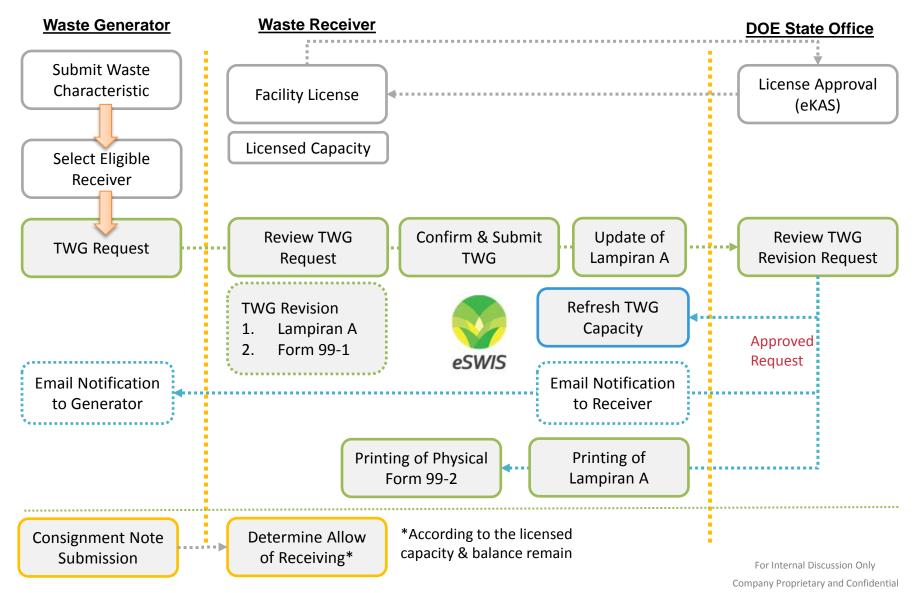
eSWIS

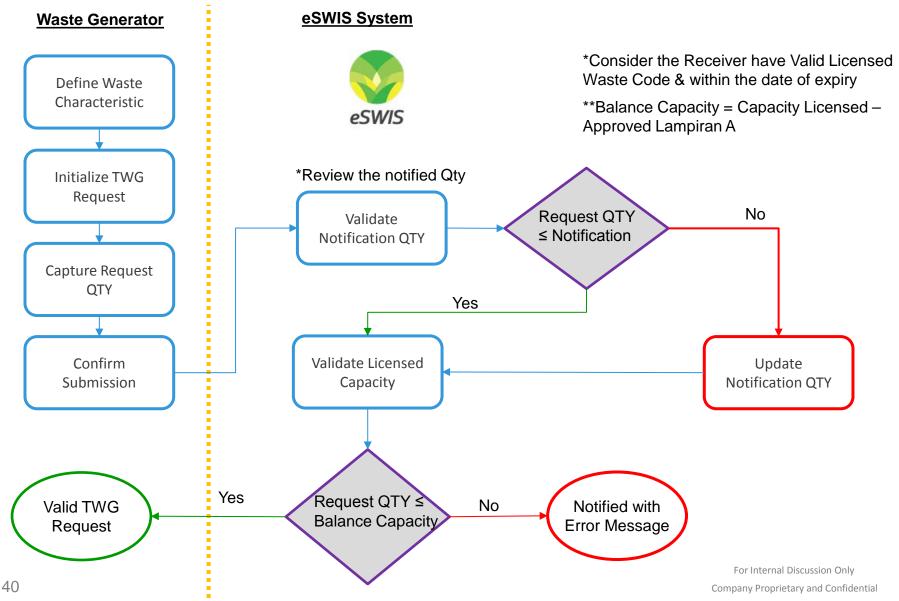
Overview on Licensed Capacity



TWG Operational Process Overview

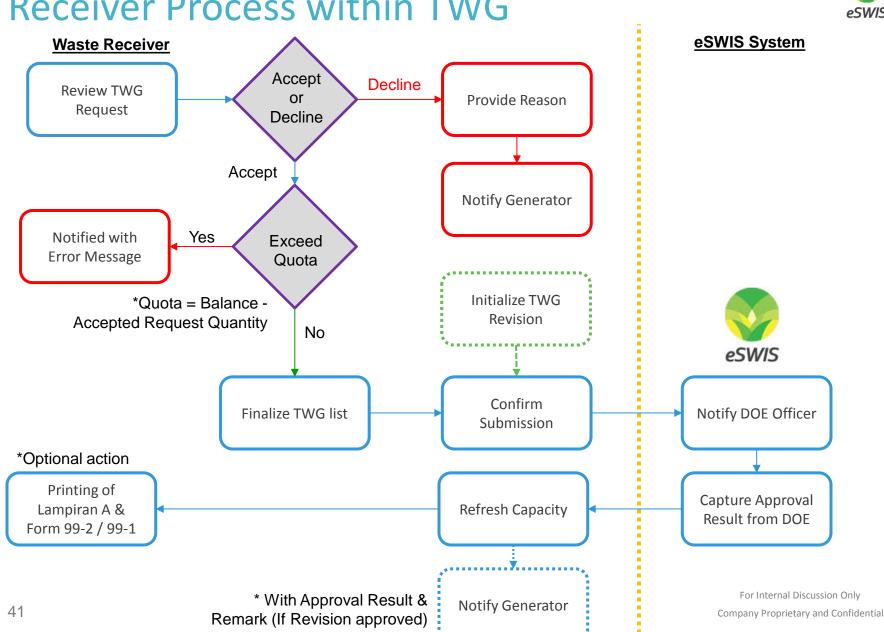






Validation Process within TWG - Generator



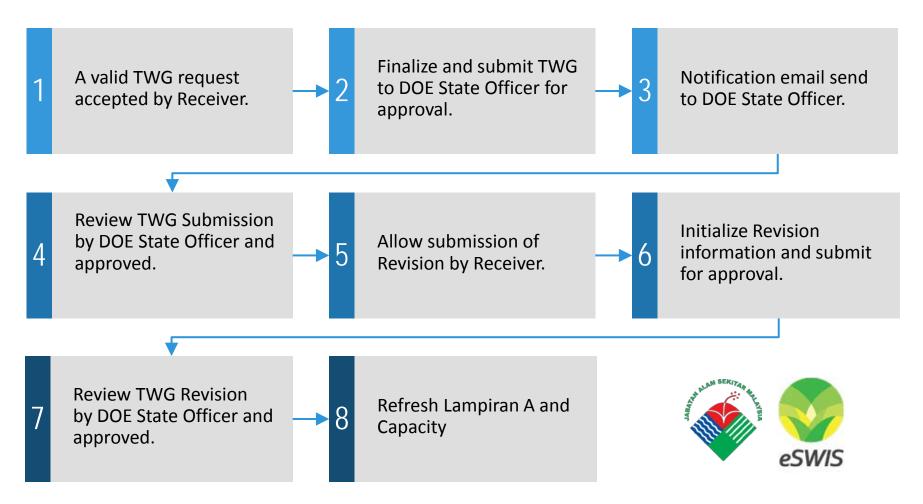


Receiver Process within TWG



Summary Process of TWG Revision





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Review of Licensed Waste Code Capacity



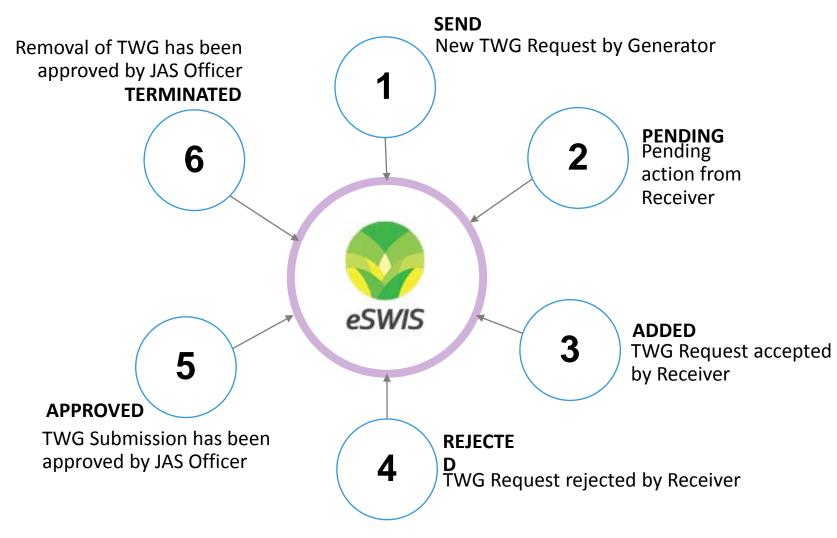
Main		Waste Code	Capacity Level (MT/year)	Balance Licensed (MT/year)
JOHOR 🔻	DOE File No.:	SW109	200.0000	200.00
Registration Approval	Location Details:	SW110	200.0000	200.00
Notification Monitor	Tel :			
Inventory	Fax			
ConsignmentNote	traging under raise proved			
Report List	JOHOR MALAYSIA			
Mass Balance Monitoring				
Waste Acceptance Baseline	View Details			
TWGMonitor	~			
🖞 Waste Code Capacity				
3 TWG Approval				

Submission of TWG Request



Overview of TWG Request Status





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Overview of TWG Request



	Waste Code : SW109 Waste Type : Waste containing mercury or its compound	Solid No. Waste Name		Ref Code Note ification : 1.5000 (MT)	
	Composition Map Eligible Receivers Supporting	g Report Filter	v	*	
	Company	State	Treatment	Last Request QTY TWG Request	
PEROKSIDA ORGANIK	AKSHAANI AUTO SDN. BHD.	KEDAH	Recovery	1.0000 Added	
	DHAKSHINAMOORTHY MANUFACTURING SDN.BHD	KEDAH	Recovery	1.0000 Added	
	ESTALCO SDN. BHD.	JOHOR	Recovery	1.0000 Pending	
	KHT RECYCLE SDN BHD	JOHOR	Recovery	0.0000 <u>Send</u>	
	M & M RECYCLING SDN. BHD.	JOHOR	Recovery	0.0000 <u>Send</u>	
Click below links to download:	MATERIALS SERVICE COMPLEX MALAYSIA SDN BHD	JOHOR	Recovery	0.0000 <u>Send</u>	
	MEGATRAX PLASTIC INDUSTRIES (PG) SDN. BHD.	KEDAH	Recovery	0.0000 <u>Send</u>	
Label	RST MANUFACTURING (M) SDN. BHD. (R. SATAYASILA TRADINO		Recovery	0.0000 <u>Send</u>	
Actual Sized Template	SHAN POORNAM METALS (JOHOR) SDN BHD	JOHOR	Recovery	0.0000 <u>Send</u>	
	SOUTHERN STRENGTH (M) SDN BHD	JOHOR	Recovery	0.0000 <u>Send</u>	



Highlight Features for Generator

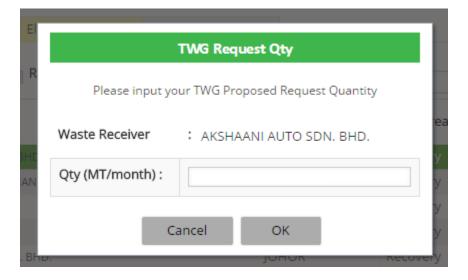
Notification : 2016091618G6QY4K No. Waste : Mercury Name Submission : 16/09/2016 Notification : 1.5000 Date Qty (MT)

Display Notification Quantity

Recycle Recovery Disposal		-	*	
Company	State	Treatment	Last Request QTY	TWG Request
AKSHAANI AUTO SDN. BHD.	KEDAH	Recovery	1.0000	Added
DHAKSHINAMOORTHY MANUFACTURING SDN.BHD	KEDAH	Recovery	1.0000	Added
ESTALCO SDN. BHD.	JOHOR	Recovery	1.0000	Pending
KHT RECYCLE SDN BHD	JOHOR	Recovery	0.0000	Send
M & M RECYCLING SDN. BHD.	JOHOR	Recovery	0.0000	Send
MATERIALS SERVICE COMPLEX MALAYSIA SDN BHD	JOHOR	Recovery	0.0000	Send
MEGATRAX PLASTIC INDUSTRIES (PG) SDN. BHD.	KEDAH	Recovery	0.0000	Send
RST MANUFACTURING (M) SDN. BHD. (R. SATAYASILA TRADING SDN.B	JOHOR	Recovery	0.0000	Send
SHAN POORNAM METALS (JOHOR) SDN BHD	JOHOR	Recovery	0.0000	Send
SOUTHERN STRENGTH (M) SDN BHD	JOHOR	Recovery	0.0000	Send

Remove Select filter & display Last Request Quantity

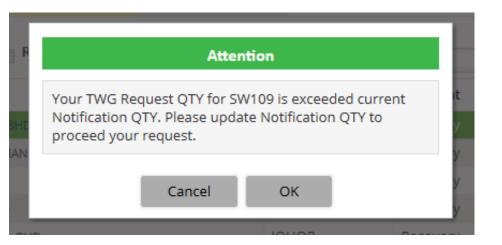




Input TWG Request Quantity by Generator

*TWG Request will auto multiply 12 for yearly quantity

Validation of TWG Request Quantity with Notification Quantity





I WG Ke	quest Qty (MT/mo	onth) : 3.00
Current Qty	,	New Qty
1.0000		
MT/month		MT/month
	Suggested Otv	: 3.00 MT/month or abo
Last Notification In		
Notification No.	ormation	
Notification No. Waste Code	ormation : 2016091618G	
Notification No. Waste Code Waste Type	formation 2016091618G SW109	
Last Notification In Notification No. Waste Code Waste Type Waste Name Last Update By	Formation 2016091618G SW109 Solid	

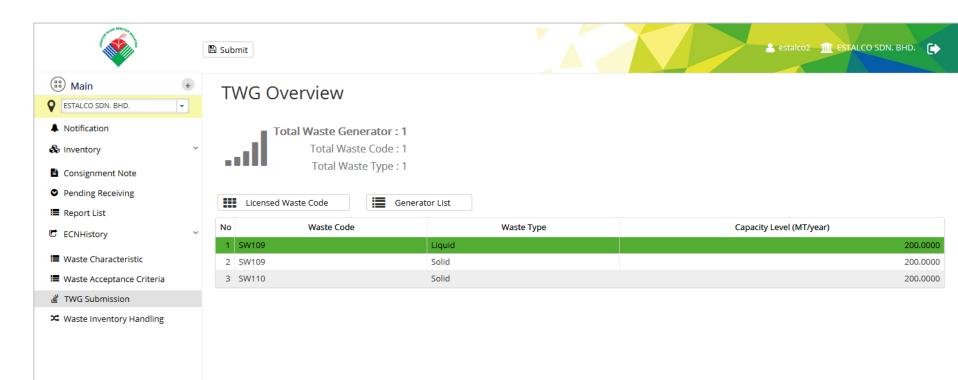
Allow update of Notification Quantity

Display necessary information of Notification for reference DEMOSTRATION

Acceptance of TWG Request



Overview of TWG Submission page – Licensed Waste Code





Overview of TWG Submission page – Generator List



	🖺 Sub	omit						🔓 estalco2 🏾 🏛	ESTALCO SDN. BHI	o. 🕞
😨 Main 🔹	T	WG Overview								
ESTALCO SDN. BHD.										
Notification		Total Waste Generator : 3	Licer	sed Ca	pacity for SV	V109 :				
linventory 🗸	_	Total Waste Code : 2	200.0000 MT/year							
Consignment Note		Total Waste Type : 1		Balance 200.0000 MT/year			/year			
Pending Receiving			Quota 162.3992 MT/year			· /				
📕 Report List			Quota			162.3992 IVI I	/year			
C ECNHistory ~				_	-					
📕 Waste Characteristic		Licensed Waste Code Generat	or List	•	Show Less					
📕 Waste Acceptance Criteria	No	Waste Generator	Waste	Waste	Request Monthly Qty	Year-to-Date Qty (MT) 🚯	Estimated Yearly Qty	Status	Last Update	
📓 TWG Submission			Code	Туре	(MT) 1		(MT) O			
🗴 Waste Inventory Handling	1	INTERNATIONAL PAPER PACKAGING MALAYSI	SW109	Solid	1.0000	0.0000	12.0000	Accepted	15/10/2016	Û
	2	LOCAL ASSEMBLY SDN BHD	SW109	Solid	2.1334	0.0000	25.6008	Accepted	15/10/2016	li 🗎
	3	UNISTEEL TECHNOLOGY (M) SDN BHD (BLOK 4)	SW110	Solid	1.0000	0.0000	12.0000	Accepted	15/10/2016	匬





Highlight Features of Receiver

Switch between Licensed Waste Code & Generator List

	Licensed Waste Code Generator List				
No	Waste Code	Waste Type	Capacity Level (MT/year)		
1	SW109	Liquid	200.0000		
2	SW109	Solid	200.0000		
3	SW110	Solid	200.0000		

Display all Licensed Waste Code with capacity level

Progress bar to display balance capacity & quota when select a Generator in the list

Licensed Capacity for SW109 :		
200.0000 MT		
Balance	200.0000 MT	**Balance = Capacity Licensed – Approved Lampiran A
Quota	188.0000 MT	**Quota = Balance - Accepted Request Quantity

DEMOSTRATION

Revision of TWG Request



Overview of TWG Revision



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TWG Revision

Date:	15 October 2016
DOE File No:	AS(B)J50/013/905/015
No. License:	999041
Expiry Date:	31 December 2016
Reason *	

Waste Monthly Received Proposed Generator Name Waste Name Remark Code Quantity Quantity Quantity (MT) (MT) (MT/month) INTERNATIONAL PAPER PAC... SW109 Mercury 1.0000 0.0000 LOCAL ASSEMBLY SDN BHD SW109 2.1334 0.0000 Mercury UNISTEEL TECHNOLOGY (M) ... SW110 Cadmium 1.0000 0.0000

Estimated

Yearly

New

ESTALCO SDN. BHD.

Location Details: [0102J36267141]

PLO 603 Jalan Miel 1, Off Jln Keluli 9 Kawasan Meil Fasa 4, 81900 PASIR GUDANG JOHOR BAHRU JOHOR MALAYSIA

Reporting Officer: View Details

LIM MAY LEE

Supervisor

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