



SCDF
The Life Saving Force
... for a safer Singapore

SINGAPORE CIVIL DEFENCE FORCE



Date: 21 Feb 2023

To: TRADERS, FREIGHT FORWARDERS, CARGO AGENTS AND CARRIERS

TRANSPORT CIRCULAR: REQUIREMENTS ON ROAD TRANSPORTATION OF DANGEROUS GOODS

1. Updated Circular

This circular will **supersede** and replace the previous circular. The update is:

- 12 new chemicals will be added to the scheduled list of SCDF-licensed dangerous goods. [refer to table indicated under **Annex E** of this Circular or Fire Safety (Petroleum & Flammable Materials) Regulations.

2. Road Transportation of Petroleum and Flammable Materials (P&FM)

The road transportation of petroleum and flammable materials in Singapore is regulated under the Fire Safety (Petroleum and Flammable Materials) Regulations. Local and foreign-registered vehicles, e.g. road tankers, prime movers, trailers, lorries, etc. carrying scheduled petroleum and flammable materials are subject to SCDF's transport licensing scheme and requirements stipulated under the regulations.

Foreign-registered vehicles licensed to transport scheduled petroleum and flammable materials must enter Singapore only via Tuas Checkpoint. After immigration clearance by the Immigration and Checkpoints Authority (ICA), these vehicles are required to stop at Cargo Examination Hall Arrival Lane 6 (A6) and report to the SCDF officers for driver verification and vehicle inspection. Failure to do so will be deemed as non-compliance with the enforcement action being taken.

3. Transport Licence

A vehicle transporting scheduled petroleum and/or flammable materials must clearly display SCDF-issued transport licence at top right-hand corner of the vehicle windscreen at all times. Prior to licence issuance, a third-party vehicle inspection is required. Any bulk tank carried on the vehicle must also be tested and certified by a Professional Engineer. The transport licence can be issued up to a maximum duration of 2 years. Applications for transport licences may be submitted online via GoBusiness licensing portal.



SCDF – A member of the Home Team

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4. Permitted Times for Transport

The following table shows the approved timings for transportation of scheduled P&FM.

S/N	Description	Permitted Times
1.	Petroleum and flammable materials transported at —	
	(a) Woodlands Checkpoint	None
	(b) Tuas Checkpoint (except transport described in items 2 and 9)	5 a.m. to 5 p.m.
2.	Petroleum and flammable materials, other than Schedule 1 chemical, transported between Tuas Checkpoint and Jurong West Industrial Estate, Tuas Industrial Estate or Jurong Island	Any time
3.	Petroleum and flammable materials, other than Schedule 1 chemical, transported within Jurong West Industrial Estate, Tuas Industrial Estate and Jurong Island	Any time
4.	Petroleum and flammable materials, other than Schedule 1 chemical, for transshipment transported between Brani Terminal, Pasir Panjang Terminal, Keppel Terminal or Tuas Terminal —	
	(a) where the Commissioner is given 24 hours' prior notice of the proposed time of transport	Any time
	(b) where the Commissioner is not given the prior notice mentioned in paragraph (a)	7 a.m. to 7 p.m.
5.	Unless item 1, 2, 3 or 4 applies, transport of LPG cylinders for domestic purposes or use at an eating place or a restaurant	7 a.m. to 9 p.m.
6.	Unless item 1, 2, 3 or 4 applies, transport of diesel or acetylene to an industrial premise or a construction site —	
	(a) of less than 3 metric tonnes	Any time
	(b) of 3 metric tonnes or more, where the Commissioner is given 24 hours' prior notice of the proposed time of transport	Any time
	(c) of 3 metric tonnes or more, where the Commissioner is not given the prior notice mentioned in paragraph (b)	7 a.m. to 7 p.m.
7.	Unless item 1, 2, 3 or 4 applies, transport of petroleum and flammable materials, other than Schedule 1 chemical, in a tube trailer	9 a.m. to 5 p.m.
8.	Unless item 1, 2, 3 or 4 applies, transport of liquefied natural gas (LNG) in an ISO-tanker	9 a.m. to 5 p.m.
9.	Transport of Schedule 1 chemicals	9 a.m. to 5 p.m.



S/N	Description	Permitted Times
10.	Where no other item in this table applies, transport of petroleum and flammable materials	7 a.m. to 7 p.m.

5. Approved Transportation Routes

Vehicles transporting licensed P&FM are required to adhere to the approved routes³ as indicated in the table below.

¹ SCDF may review the approved hours for specific transportation based on TQRA findings or when there is a change in risks to the operating environment.

² For transportation of 3 metric tons or more beyond 7am-7pm, 24hr in-advance notification is required via the e-mail stated under **Annex C**.

³ Vehicles licensed by NEA or SPF are required to adhere to the approved routes as regulated by the respective agencies.

⁴ SCDF may review the approved routes for specific transportation based on TQRA findings or when there is a change in risks to the operating environment.

⁵ For construction worksites within or along restricted areas, 24hr in-advance notification is required via the e-mail stated under **Annex C**.

S/N	TYPE OF TRANSPORT	APPROVED ROUTES ⁴
1.	Transportation of petroleum and flammable materials to Petrol Service Stations	Refer to Annex A
2.	Transportation of petroleum and flammable materials to all other approved destinations, unless any other condition stated in this table applies	Refer to Annex B
3.	Transportation of Acetylene in cylinders	Refer to Annex B Deliveries will also be permitted to construction worksites ⁵ , outside of Annex B
4.	Transportation of petroleum and flammable materials in tube trailers (e.g. hydrogen) or cryogenic tankers (e.g. LNG)	Refer to approved routes in accordance with Transport QRA (TQRA) or as approved by SCDF
5.	Other hazardous substances regulated by NEA/SPF, i.e. corrosives, toxics, explosives and its precursors	Refer to NEA/SPF
6.	Transportation of bulk LPG	Within Jurong West Industrial Estate, Tuas Industrial Estate or Jurong Island only
7.	Transportation of LPG in cylinders	Except CBD, Benjamin Sheares Bridge, CTE, KPE, MCE, Fort Canning Tunnel, Woodsville & Sentosa Gateway tunnels



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8.	Transportation of diesel	Except CBD, Benjamin Sheares Bridge, CTE, KPE, MCE, Fort Canning Tunnel, Woodsville & Sentosa Gateway tunnels
9.	Transportation of scheduled chemicals	Refer to approved routes in accordance with Transport QRA (TQRA) or as approved by SCDF

6. HazMat Transport Driver Permit

Driver of a licensed vehicle is required to hold a valid HazMat Transport Driver Permit (HTDP) at all times when transporting petroleum or flammable materials. Prior to issuance of the permit, the driver must pass security screening and attend HazMat Transport Driver Course at SCDF Accredited Training Institutions (ATIs). Upon passing the course, the driver may be issued with HTDP at the Civil Defence Academy. The permit is valid for a period of two years.

7. Tracking of Licensed Vehicles

HazMat Transport Vehicle Tracking System (HTVTS) was implemented on 1 Jul 2005 as part of national efforts to enhance safety and security of Singapore with emphasis on road transportation of dangerous goods. Licensed vehicles carrying (or having the capacity to carry) the following are required to be fitted with a tracking device, in-vehicle immobilizer and orange-colored (colour code: 3284 (CW84) or Sikkens LP2B) licence plate:

- a. Scheduled petroleum and flammable materials of total net quantity **3 Metric Tons (MT)** or more;
- b. Petroleum and/or flammable materials in tube trailers, e.g. hydrogen or LNG cryogenic tankers in any quantity; or
- c. Schedule 1 chemical in any quantity.

HTVTS-tracked vehicles will be deemed as transporting dangerous goods unless an advanced 24hr notification is sent to inform SCDF. These vehicles must adhere to approved routes and permitted transport timing at all times. Failure to do so constitutes a transport violation where vehicle will be immobilized to stop vehicle from traversing further.

With effect from 01 Apr 2007, in-vehicle immobilizer feature was incorporated. In the event of a violation, the vehicle horn and hazard warning lights on the vehicle will be activated. SCDF will then dispatch fire station responders to investigate the cause of the violation and contact the company concerned. Company is required to immediately contact the driver to take corrective actions and report to SCDF (via the 24/7 HTVTS Hotline: 68483666/ 6848 3337). Company must also ensure that the driver remains contactable at any moment when the vehicle has been immobilized.

In the event that the driver is detained by Police for suspected security violation or if vehicle is found without the driver, SCDF will contact the affected company to make arrangement to drive or tow away the vehicle within 1 hour of the arrest. Company also has to provide SCDF with contact particulars of the company personnel towing back the vehicle.



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Please take note that both company (licensee) and driver may be subject to enforcement actions and penalties meted out for the violation committed.

Licensee is required to inform SCDF and tracking installation vendor when their HTVTS-tracked vehicle will be sold to another party, scrapped or when transport licence ceased to be renewed respectively.

A lead-time of between 2 and 4 weeks is required by tracking installation vendor for HTVTS tracking unit replacement and annual inspection.

8. Advanced Notifications

If licensed vehicle is not transporting dangerous goods at any specified time, bypassing or seeking authorized entry into restricted areas such as Ministries, Embassies, Sentosa Island, etc. the company must notify SCDF. Licensee is required to complete the notification form (**Annex C**) and e-mail it to SCDF at least **24 hours in-advance**. Transport schedule (if any), routes taken and legitimate reasons for exemption are to be listed. (refer to **Annex C**)

For access into Central Business District (CBD), with effect from **01 Jul 2019**, a self-service verification kiosk for drivers (refer to **Annex D**) will commence operation. Drivers are required to follow the video instructions as shown in the kiosk to do self-verification. Upon successful verification from kiosk, drivers can then proceed into the CBD.

Note: The requirement to seek approval to access CBD has been enforced since 1 Oct 2005. It will be the responsibility of HazMat drivers to proceed to the kiosk for verification prior to making their way into the CBD. Entry into CBD without authentication and clearance from SCDF will be deemed as a violation.

Drivers encountering any issue pertaining to the use of self-service verification kiosk may contact HTVTS 24hr-Hotline at 6848 3666 / 6848 3337 for assistance.

9. Other Transport Requirements

In addition to the requirements highlighted in this Circular, other key requirements are:

- a. Availability of Transport Emergency Response Plan (TERP) in vehicle transporting petroleum and flammable materials.
- b. Additional security requirements (e.g. armed escorts) for Schedule 1 chemicals

Details of regulatory requirements can be accessed via Singapore Statutes Online website (<https://sso.agc.gov.sg>).

10. Further enquiries

For further enquiries or assistance, to contact:

HTVTS Hotline
HazMat Department (HQ SCDF)
Tel: 6848 3666 / 6848 3337 (24hr)
SCDF_HTVTS_HTDS_Ops_Centre@scdf.gov.sg



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ANNEX A

APPROVED ROUTES TO PETROL SERVICE STATIONS

Adam Rd
Alexandra Rd
Aljunied Rd
Admiralty Rd
Admiralty Rd East
Admiralty Rd West
Ang Mo Kio Ave 1
Ang Mo Kio Ave 2
Ang Mo Kio Ave 3
Ang Mo Kio Ave 5
Ang Mo Kio Ave 6
AYE
Balestier Rd
Bartley Rd
Bedok Rd
Beach Road (before Rochor Road Junction)
Bedok North Ave 1
Bedok North Ave 4
Bedok North Rd
Bedok South Ave 1
Bedok South Rd
Bendemeer Rd
Benoi Rd
Binjai Park (up to Petrol Service Station)
BKE
Boon Keng Rd
Boon Lay Ave
Boon Lay Drive
Boon Lay Way
Boundary Rd
Braddell Road
Bukit Batok East Ave 3
Bukit Batok East Ave 6
Bukit Batok Rd
Bukit Batok St 25
Bukit Batok West Ave 5
Bukit Panjang Ring Road
Bukit Timah Rd
Changi Rd
Changi Coast Rd
Chai Chee Rd



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Chai Chee St
Choa Chu Kang Ave 3
Choa Chu Kang Drive
Choa Chu Kang North 6
Choa Chu Kang Rd
Choa Chu Kang Way
Clementi Ave 2
Clementi Ave 6
Clementi Rd
Commonwealth Ave
Commonwealth Ave West
Corporation Rd
Crawford St
CTE (above ground)
Delta Rd
Dunearn Rd
East Coast Rd
Elias Rd
Eunos Link
Farrer Rd
Frankel Ave
Genting Lane
Geylang Lor 22
Geylang Lor 24A
Geyland Rd
Ganges Ave
Guillemard Rd
Havelock Rd
Holland Rd
Hougang Ave 2
Hougang Ave 3
Hougang Ave 4
Hougang Ave 8
Hougang Ave 10
Jervois Rd (up to Petrol Service Station)
Jln Ahmad Ibrahim
Jln Anak Bukit
Jln Bahar
Jln Boon Lay
Jln Bukit Merah
Jln Buroh
Jln Eunos



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Jln Jurong Kechil
Jln Kayu
Jln Leban (up to Petrol Service Station)
Jurong East Ave 1
Jurong East Central
Jurong East St 11
Jurong East St 31
Jurong Island Highway
Jurong Pier Rd
Jurong Port Rd
Jurong Town Hall Rd
Jurong West Ave 1
Jurong West Ave 2
Jurong West Ave 4
Jurong West Ave 5
Jurong West St 41
Jurong West St 74
Jurong West St 75
Jurong West St 93
Kallang Bahru
Kallang Place
Kallang Pudding Rd
Kallang Pudding Rd
Kallang Rd
Kallang Way
Killiney Rd
Keppel Rd
Kim Keat Link
KJE/ BKE
Lavender St
Lentor Ave
Lok Yang Way
Lor Bakar Batu
Lornie Rd
Lorong Ah Soo
Lorong Chuan
Lower Delta Rd
Loyang Ave
Macpherson Rd
Mandai Ave
Mandai Rd
Marsiling Rd
Marymount Rd
Mei Chin Rd (up to Petrol Service Station)
Moulmein Rd



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Mountbatten Rd
New Upper Changi Rd
Nicoll Drive
North Buona Vista Rd
Old Airport Rd
Old Jurong Rd
Old Tampines Rd
Outram Rd
Pandan Gardens
Pandan Loop
Pandan Rd
Pasir Panjang Rd
Pasir Ris Dr 1
Pasir Ris Dr 3
Pasir Ris Dr 12
Paya Lebar Rd
Penjuru Rd
PIE
Pioneer Rd
Punggol Central
Punggol Rd
Queensway Rd
River Valley Rd
Rochor Canal Rd
Sembawang Rd
Sengkang East Ave
Sengkang East Rd
Sengkang East Way
Serangoon Central
Serangoon North Ave 5
Serangoon Rd
Shipyard Rd
Siglap Rd
Sims Ave
Sims Ave East
Sixth Ave
Sims Way
Sixth Lok Yang Rd
Stevens Rd
Still Rd
Sungei Rd
SLE
Tampines Ave 1



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Tampines Ave 7
Tampines Ave 9
Tampines Ave 10
Tampines St 34
Tanjong Kling Rd
Tanjong Penjuru Rd
Teban Gardens Crescent
Telok Blangah Rd
Thomson Rd
Toa Payoh Lor 1
Toa Payoh Lor 4
Toa Payoh Lor 6
Toh Tuck Ave
TPE
Tuas Rd
Ulu Pandan Rd
Upper Aljunied Rd
Upper Bukit Timah Rd
Upper Changi Rd North
Upper Changi Rd East
Upper East Coast Rd
Upper Jurong Rd
Upper Paya Lebar Rd
Upper Serangoon Rd
Upper Thomson Rd
West Coast Highway
West Coast Link
West Coast Rd
West Coast Way
Whampoa North
Whitley Rd
Woodlands Ave 1
Woodlands Ave 2
Woodlands Ave 3
Woodlands Ave 5
Woodlands Ave 9
Woodlands Centre Rd
Woodlands Rd
Xilin Ave
Yio Chu Kang Link
Yio Chu Kang Rd
Yishun Ave 1
Yishun Ave 4
Yishun Ave 5
Yishun Ave 7



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Yishun Ave 9
Yishun Central
Yishun Ring Rd
Yuan Ching Rd
Yung Ho Rd



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ANNEX B

APPROVED ROUTES TO OTHER DESTINATIONS

Admiralty Rd
Admiralty Rd East
Admiralty Rd West
Aljunied Rd
Ang Mo Kio Ave 3
Ang Mo Kio Ave 5
Ang Mo Kio Industrial Park 2
Aviation Park Rd
AYE
Bedok North Ave 1
Bedok North Ave 4
Bedok North Rd
Bedok South Ave 1
Bedok South Ave 3
Bedok South Rd
Bendemeer Rd
BKE
Boon Keng Rd
Braddell Rd
Bukit Timah Rd
Chai Chee Rd
Chai Chee Street
Changi Business Park
Changi Coast Rd
Changi South Ave 3
Clementi Rd
CTE (above ground)
Defu Ave 1
Dunearn Rd
Eunos Industrial Park
Eunos Link
Gul Rd
Hougang Ave 3
Harbour Drive
Jln Anak Bukit
Jln Ahmad Ibrahim



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Jln Buroh
Jln Eunus
Jln Kayu
Jln Toa Payoh
Jurong Island Highway
Jurong Pier Rd
Kallang Bahru
Kallang Pudding Rd
Kallang Way
Kampong Ampat



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Keppel Rd
KJE
Loyang Ave
Loyang Cres
Loyang Way
Macpherson Rd
Mactaggart Rd
Marina Coastal Drive
Marina Link
Marymount Rd
New Upper Changi Rd East
Nicoll Drive
Pasir Panjang Rd
Pasir Ris Drive 1
Pasir Ris Drive 12
Pasir Ris Wafer Fab Park
Pasir Ris Industrial Drive 3
Penjuru Rd
Penjuru Slipway
PIE
Pioneer Rd
Playfair Rd
Seletar Aerospace
Seletar Aerospace Cres
Sembawang Rd
Shipyards Rd
Simei Ave
Straits Boulevard
SLE
Tampines Ave 10
Tanah Merah Coast Rd
Tanah Merah Besar Rd
Tanjong Kling Rd
Tanjong Penjuru Rd
Telok Blangah Rd
Telok Paku Rd
Thomson Rd
TPE
Tuas Ave 7
Tuas Ave 10
Tuas South Ave 3



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Tuas South Boulevard
Tuas West Rd
Upper Bukit Timah Rd
Upper Changi Rd
Upper Changi Rd East
Upper Jurong Rd
West Coast Highway
Woodlands Centre Rd
Woodlands Industrial Park D
Woodlands Industrial Park E
Woodlands Rd
Xilin Ave
Yio Chu Kang Rd
Yishun Ave 7
Yishun Industrial Park A



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Attn: HTVTS_HTDS Operator (TEL: 6848 3666 / 6848 3337)
(Email: SCDF_HTVTS_HTDS_Ops_Centre@scdf.gov.sg)

Date: _____

24HR-NOTIFICATION FOR TRANSPORTATION

Vehicle No./ Type of Veh/ Driver's Hp contact numbers	Start Date and Time	End Date and Time	Products Transported / Qty	Tpt Routes To Destination/	CBD Gantry (If applicable)
	(duration period not more than 4hrs)				

Name: _____

Contact No: _____

Designation: _____

Company: _____

Email: _____

For Official Use Only

Remarks

Processed by: _____

Name: _____

Signature: _____



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ANSON ROAD SELF-VERIFICATION KIOSK



Anson Location
Beside Tanjong Pagar Complex, next to Keppel Road

Front View



Rear View





S/N	Chemical	Schedule	Key Transport Licence Conditions
1	O-Alkyl (\leq C10, including cycloalkyl) N, N-dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidocyanidates	S1A	<ul style="list-style-type: none"> 12 months transport licence validity only Compulsory to provide armed escorts Transport not more than 100 mg at any one time Transport timing, 0900hrs to 1700hrs only
	E.g. Tabun: O-Ethyl N, N-dimethyl phosphoramidocyanidate		
2	Sulphur mustards	S1A	
	(a) 2-Chloroethylchloromethylsulfide		
	(b) Mustard gas: Bis(2-chloroethyl)sulfide		
	(c) Bis(2-chloroethylthio)methane		
	(d) Sesquimustard: 1,2-Bis(2-chloroethylthio)ethane		
	(e) 1,3-Bis(2-chloroethylthio)-n-propane		
	(f) 1,4-Bis(2-chloroethylthio)-n-butane		
	(g) 1,5-Bis(2-chloroethylthio)-n-pentane		
	(h) Bis(2-chloroethylthiomethyl)ether		
	(i) O-Mustard: Bis(2-chloroethylthioethyl)ether		
3	N, N-Dialkyl (Me, Et, n-Pr or i-Pr) phosphoramidic dihalides (>30% purity)	S2B	<ul style="list-style-type: none"> 12 or 24 months transport licence validity
4	N,N-Dialkyl (Me, Et, n-Pr or i-Pr) aminoethane-2-ols and corresponding protonated salts (>30% purity)	S2B	
5	Pinacolyl alcohol : 3,3-Dimethylbutan-2-ol	S2B	
6	Trimethyl phosphite	S3B	
7	Triethyl phosphite	S3B	



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S/N	Chemical	Schedule	Key Transport Licence Conditions
8	Dimethyl phosphite monochloride (>30% purity)	S3B	<ul style="list-style-type: none">12 or 24 months transport licence validity
9	Sulfur monochloride (>30% purity)	S3B	
10	Sulfur dichloride (>30% purity)	S3B	
11	Ethyldiethanolamine (>30% purity)	S3B	
12	Methyldiethanolamine (>30% purity)	S3B	

Unless as specified under the above-mentioned table, licensing conditions will be subjected to transport requirements as indicated in this Circular or Fire Safety (Petroleum & Flammable Materials) Regulations.