

AD 2 - AERODROMES

WSAT AD 2.1 AERODROME LOCATION INDICATOR AND NAME	
WSAT - TENGAH AIRPORT	

WSAT AD 2.2 AERODROME GEOGRAPHICAL AND ADMINISTRATIVE DATA		
1	<i>ARP coordinates and site at AD</i>	012315N 1034229E
2	<i>Direction and distance from (city)</i>	-
3	<i>Elevation/Reference temperature</i>	15.24m (50ft) / 31.5°C
4	<i>MAG VAR</i>	31'E (2005)
5	<i>AD Administration, address, telephone, telefax, telex, AFS</i>	RSAF Tengah Airbase Choa Chu Kang Road Singapore 669638 Telephone: (65)67612222 (Base Operations Centre) AFS : WSATYWYX
6	<i>Types of traffic permitted</i>	IFR
7	<i>Remarks</i>	Emergency Diversion Aerodrome for Singapore Changi Airport

WSAT AD 2.3 OPERATIONAL HOURS		
1	<i>Aerodrome Administration</i>	2300/1100 Sun/Mon to Thu/Fri, 2300/0500 Fri/Sat; Public hol and outside the above times prior permission required from RSAF Headquarters via Tengah Ops. For emerg diversions Ad avbl at 2 hours notice. Only Aerodrome Control Service provided. No radar service avbl outside opr hours during Ad non-operating times.
2	<i>Customs and Immigration</i>	by prior arrangement
3	<i>Health and Sanitation</i>	by prior arrangement
4	<i>AIS Briefing Office</i>	-
5	<i>ATS Reporting Office</i>	-
6	<i>MET Briefing Office</i>	-
7	<i>Air Traffic Services</i>	-
8	<i>Remarks</i>	-

WSAT AD 2.4 HANDLING SERVICES AND FACILITIES		
1	<i>Cargo Handling Facilities</i>	-
2	<i>Fuel / Oil Types</i>	JET A1, F3
3	<i>Fuelling Facilities / Capacity</i>	2300/1100 Sun/Mon to Thu/Fri; 2300/0500 Fri/Sat; Public holidays & outside opr hr PPR fm RSAF HQ via Tengah Ops.
4	<i>Hangar space for visiting aircraft</i>	-
5	<i>Repair facilities for visiting aircraft</i>	-
6	<i>Remarks</i>	Nil

WSAT AD 2.5 PASSENGER FACILITIES		
1	<i>Hotels</i>	-
2	<i>Restaurants</i>	-
3	<i>Transportation</i>	-
4	<i>Medical Facilities</i>	-
5	<i>Banks and Post Offices</i>	-
6	<i>Tourist Office</i>	-
7	<i>Remarks</i>	Nil

WSAT AD 2.6 RESCUE AND FIRE FIGHTING SERVICES		
1	<i>AD category for fire fighting</i>	CAT 6
2	<i>Rescue equipment</i>	Adequately provided as recommended by ICAO
3	<i>Capability for removal of disabled aircraft</i>	Sufficient salvage equipment provided by Airfield Ground Services section at Military bases.
4	<i>Remarks</i>	All Airport Emergency Services personnel are trained in rescue and fire-fighting as well as medical first-aid.

WSAT AD 2.7 SEASONAL AVAILABILITY - CLEARING	
The aerodrome is available throughout the year.	

WSAT AD 2.8 APRONS, TAXIWAYS AND CHECK LOCATIONS DATA		
1	<i>Apron surface and strength</i>	-
2	<i>Taxiway width, surface and strength</i>	Strength : LCN80 (Taxiway E) Surface : Asphalt
3	<i>Remarks</i>	Nil

WSAT AD 2.10 AERODROME OBSTACLES	
<i>In approach / TKOF areas</i>	<i>In circling area and at aerodrome</i>
Nil	2 masts, HGT 6m, LGTD at NGT, located on the eastern shoulders: RWY 36 - 233m from threshold, 100m from RWY centreline RWY 18 - 273m from threshold, 100m from RWY centreline

WSAT AD 2.12 RUNWAY PHYSICAL CHARACTERISTICS					
<i>Designation RWY NR</i>	<i>TRUE & MAG BRG</i>	<i>Dimensions of RWY (m)</i>	<i>Strength (PCN) and surface of RWY and SWY</i>	<i>THR coordinates</i>	<i>THR elevation and highest elevation of TDZ of precision APP RWY</i>
1	2	3	4	5	6
18	184.5	2 743 x 45	LCN 70/Asphalt	-	50ft
36	004.5	2 743 x 45	LCN 70/Asphalt	-	50ft

12	<i>Remarks</i>	a) Intensive fixed wing flying operation east of runway. b) Helizone adjacent east of runway up to 800ft QNH. c) Arrestor Barrier both ends of runway. d) Hookwire cable installed 366m inwards from each end of rwy. e) Intense bird activity after rain, and up to 2 hour after dusk and dawn.
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WSAT AD 2.13 DECLARED DISTANCES					
<i>RWY Designator</i>	<i>TORA (m)</i>	<i>TODA (m)</i>	<i>ASDA (m)</i>	<i>LDA (m)</i>	<i>Remarks</i>
1	2	3	4	5	6
18	2 743	3 115	2 743	2 743	Nil
36	2 743	3 030	2 743	2 743	Nil

WSAT AD 2.14 APPROACH AND RUNWAY LIGHTING									
RWY	Apch Lgt type, Len Intst	THR Lgt colour WBAR	VASIS (MEHT) PAPI	TDZ Lgt Len	RCL Lgt, Len, spacing, colour, Intst	RWY edge Lgt, Len, spacing, colour, Intst	RWY End Lgt, colour WBAR	SWY Lgt, Len colour	Remarks
1	2	3	4	5	6	7	8	9	10
18	High Intst white centre line and two bars, superimposed omni-directional RED 'T' PAPI Sequenced flashing lights	Green	4 units PAPI on each side of RWY at 3.5° Glide Slope	Nil	Nil	High Intst omni-directional white variable Intst.	Red	Nil	Distance to run markers illuminated
36	High Intst white centre line and five bars, superimposed omni-directional RED 'T' PAPI Sequenced flashing lights	Green	4 units PAPI on each side of RWY at 3.5° Glide Slope	Nil	Nil	High Intst omni-directional white variable Intst.	Red	Nil	Distance to run markers illuminated

WSAT AD 2.15 OTHER LIGHTING, SECONDARY POWER SUPPLY	
<i>TWY Lighting</i>	blue edge lights
<i>IBN</i>	012400N 1034254E, FLG R 'TN' , operating hours HN and IMC.
<i>Remarks</i>	WDI lighted. Dispersal area floodlights

WSAT AD 2.17 ATS AIRSPACE	
1	<i>Designation and Lateral Limits</i> TENGAH ATZ 010842N 1034336E thence clockwise around the arc of radius 14 NM centred on 012242N 1034203E to 013215N 1033144E 012620N 1034544E 012150N 1034524E 011845N 1034414E 010842N 1034336E
2	<i>Vertical Limits</i> SFC to 3,000ft ALT
3	<i>Airspace Classification</i> D
4	<i>ATS Unit Callsign Language(s)</i> Tengah Tower English
5	<i>Transition Altitude</i> 11,000ft (3,350m)
6	<i>Remarks</i> Controlling Authority: Tengah Approach Contact Tengah APP on 130.0, 263.4 or 122.0MHz drg AD opr hr and SATCC (RSAF element) on 123.4 or 256.4MHz after Ad opr hr. Lgt acft to obtain clr on 130.0MHz 5 min before entering ATZ. Military acft dep from or ldg at Tengah airbase shall transit the airspace over Johor within the Tengah ATZ at or above 1,500ft.

WSAT AD 2.18 ATS COMMUNICATION FACILITIES				
<i>Service Designation</i>	<i>Call sign</i>	<i>Frequency P - Pri S-sec</i>	<i>Hours of operation</i>	<i>Remarks</i>
APP	Tengah Approach	P130.0 MHz P263.4 MHz S122.0 MHz	BTN 2300-1100 Sun/Mon to Thu/Fri; BTN 2300-0500 Fri/Sat; and On Sun, Public holidays and outside the above times, PPR from RSAF HQ via Tengah Ops.	AR1 range up to 60NM Maint Period: 0001-0900 4th Sat of ev month
TWR	Tengah Tower	P122.0 MHz P253.5 MHz S263.4 MHz		Avbl from both RWY headings Maint Period: 0001-0900 3rd Sat of ev month
	Tengah Ground	122.0 MHz 337.8MHz		
	Tengah Talkdown	130.0 MHz 290.8 MHz 328.5 MHz		
	Tengah Director	130.0 MHz 274.3 MHz		
ACC	Singapore Radar	P127.3 MHz S123.7 MHz	H24	For Awy B469, G219, G334, R208, L625, L629, L635, L642, M751, M753, M758, M761, M763, M771, N884, N891 and N892.
		133.8 MHz	0000-1430	
		P133.25 MHz S135.8 MHz	H24	For Awy A457, A464, A576, B466, R325 (all northbound) and R469.
		P134.4 MHz S128.1 MHz 255.4 MHz		For Awy A464, G579, A576 (all southbound), B470, G220, N875 and in area in the immediate vicinity of Singapore
				Radar Maint Period: Monthly - ev third Sat 1601-2359
	Singapore Radio	6 556 KHz 11 297 KHz	H24	SEA 1, SATCOM ser avbl SSB suppressed carrier
		5 655 KHz 8 942 KHz 11 396 KHz		SEA 2, SATCOM ser avbl SSB suppressed carrier
		6 556 KHz		SEA 3, SATCOM ser avbl SSB suppressed carrier
APP	Singapore Approach	P120.3 MHz S124.6 MHz		TAR - Intermediate approach to Singapore Changi Ap and other airports in Singapore - Dep from all airports in Singapore Maint Period: Monthly-ev first Thu 0000-0900 (ASR I) and ev fourth Sat 1601-2359 (ASR II)

WSAT AD 2.19 RADIO NAVIGATION AND LANDING AIDS					
<i>Type of Aid</i>	<i>Ident</i>	<i>Freq</i>	<i>Opr Hour</i>	<i>Coordinates</i>	<i>Remarks</i>
TACAN	TNG	CH86X	2300-1100 from Sun/Mon to Thu/Fri; 2300-0500 Fri/Sat; Sun, Public holidays & outside the above times prior permission required from RSAF HQ via Tengah Ops.	012336.00N 1034242.00E	043° Mag 0.55km from ARP Maint Period: 0001-0900 second Sat of ev month
SINJON DVOR/DME	SJ	113.5MHz CH82X	H24	011321.34N 1035115.22E	201° Mag 14.5km from THR RWY 02 (Paya Lebar) Antenna Hgt: 194ft AMSL. Coverage 200NM Maint Period: 0200-0600 third Thu of ev month

WSAT AD 2.20 LOCAL TRAFFIC REGULATIONS

**USE OF RSAF TENGAH AIR BASE AS AN EMERGENCY DIVERSION
AERODROME FOR SINGAPORE CHANGI AIRPORT**

1. INTRODUCTION

- 1.1 RSAF Tengah Air Base is nominated as the emergency diversionary aerodrome for Singapore Changi Airport. The arrangement outlined below is applicable for the handling of any civil aircraft movement that is diverted to RSAF Tengah Air Base.
- 1.2 It is emphasised that RSAF Tengah Air Base **is not an ICAO designated alternate aerodrome for Singapore Changi Airport** and therefore should not be flight planned as such. Its use by civil aircraft is permitted for emergency purposes only when Singapore Changi Airport runway is obstructed.

2. MANNING OF TENGAH AIR BASE

- 2.1 Tengah Air Base is open from 2300/1100 Sun/Mon to Thu/Fri, 2300/0500 Fri/Sat. It is closed on Sun and public holidays. Outside the above stipulated opr hours, Tengah Air Base can be opened on 2 hours' prior notice. This arrangement, if necessary, will be undertaken by the Duty Tower Controller or SATCC Supervisor of Singapore Changi Ap who will inform RSAF Headquarters via Tengah Ops.
- 2.2 Airline operators are requested to inform the Airport Manager and the Duty Tower or SATCC Supervisor at Singapore Changi Airport as soon as it is known that their service will require the use of Tengah Air Base. Revised ETAs/ETDs are to be notified as soon as known.

3. OPERATIONAL SERVICES

- 3.1 The layout of Tengah Airbase with the aircraft parking apron which is avbl for the use of civil aircraft (except B747 acft types) in the event of an emergency diversion from Singapore Changi Airport, is indicated in page WSAT AD 2-11. It is to be noted that only a limited number of civil aircraft can be accommodated at any one time.
- 3.2 Air-ground-air communication maintained by RSAF Tengah Tower/App for Ad Control Services is VHF 122.0MHz.

4. PASSENGER CLEARANCE

- 4.1 Once the aircraft has shutdown, only the Captain of the aircraft will be allowed out of the aircraft. All other passengers will remain in the aircraft due to space constraints and to avoid possible immigration problems.
- 4.2 Arrangements will be made to transport all the passengers back to Singapore Changi Airport for immigration processing.
- 4.3 The Airport Manager or his representative will be present at the Passenger Terminal to provide assistance when aircraft are required to land at Tengah Air Base.
- 4.4 No refreshment facilities are available.

5. SECURITY

- 5.1 All Airline personnel who are required to proceed to Tengah Air Base must wear their Singapore Changi Airport Passes at a prominent position and they will be escorted to the respective areas. All personnel not in possession of the laminated pass except Customs and Government Officers in uniform will be denied entry into Tengah Air Base by the RSAF Security Guard. Entry into the Air Base by both the airline personnel and service equipment is via the main gate. The Airline Engineering Coordinator shall be responsible for the proper positioning of the ground servicing equipment and vehicles in the Apron Area where arriving aircraft are to be parked.

- 5.2 No equipment, vehicles, stores, cargo or mail shall be left overnight at Tengah Air Base.
- 5.3 The security of civil aircraft parked in the Apron is the responsibility of the aircraft owner and any security service obtained shall first be cleared with the Tengah Air Base Security Authorities.

6. AIRCRAFT STAND ALLOCATION

- 6.1 Aircraft parking positions will be issued by the RSAF Tower Controller. A "follow-me" vehicle will be waiting at the accesses to guide the aircraft to the allocated parking stands.

7. COMMUNICATIONS

- 7.1 No VHF RTF surface movement frequency is available at Tengah Tower. Communication with the Tower will be by telephone, the nearest of which is in the Fire Station Building in front of the aircraft parking apron.

8. FUEL

- 8.1 Fuel avbl JET A1 F3X.

9. AIRCRAFT SERVICES

- 9.1 Airlines will have to provide their own services. Limited aircraft services can be obtained from the Aircraft Maintenance Unit by prior arrangement only.
- 9.2 Where essential facilities and services are not available at Tengah Air Base, such as the disposal of toilet waste or refuse, the resources available at Singapore Changi Airport shall be used.

10. RESCUE AND FIRE FIGHTING FACILITIES

- 10.1 The rescue and fire fighting facilities available at Tengah Airbase is up to ICAO CAT 6.

11. FULL EMERGENCY/CRASH PROCEDURE

- 11.1 In the event of a Full Emergency being declared on a civil aircraft diverted to Tengah Air Base, Full Emergency/Crash Procedures applicable to Singapore Changi Airport will equally apply to Tengah Air Base.
- 11.2 Alerting of all outside organisations such as the Singapore Civil Defence Force, Police, MINDEF and ambulance services shall be carried out by the Singapore Changi Airport Tower Controller.
- 11.3 The assembly point for all units attending to the Full Emergency incident will be at the Fire Station. No casualty clearance station is available at Tengah Air Base and in the event of an aircraft crash occurring, casualties if any, will be transported directly from the scene of crash to the Singapore General Hospital.

12. ATC SERVICE OUTSIDE OPERATING HOURS

- 12.1 Normal radar service will be provided by Singapore Radar (Civil). All aircraft diverting to Tengah will be vectored by Approach Control to SJ or to an agreed transfer control point before they are handed over to Tengah Tower. No radar service will be provided by Tengah.