

UAAA AD 2

Note: The following sections in this chapter are intentionally left blank: AD-2.10, AD-2.16

UAAA AD 2.1 Aerodrome Location Indicator And Name

UAAA - ALMATY

UAAA AD 2.2 Aerodrome Geographical And Administrative Data

| | | |
|---|--|--|
| 1 | ARP coordinates and site at AD | 432120N 0770238E 054°/2676m from THR 05R |
| 2 | Direction and distance from (city) | 31°, 8.1 NM from Almaty center |
| 3 | Elevation/Reference temperature | 2238 FT/29.5° C |
| 4 | Geoid undulation at AD ELEV PSN | -148 FT |
| 5 | MAG VAR/Annual Change | 5° E (2023) / 0.01° |
| 6 | AD Administration, address, telephone, telefax, telex, AFS | Post: Authority of Airport 2 Mailin str. 050039 Almaty, JSC "Almaty International Airport" Republic of Kazakhstan Phone: +7 (727) 3888888 Phone: +7 (727) 3888884 Fax: +7 (727) 3888885 AFS: UAAAAPBF AFS: UAAAAPDU Email: info@alairport.com |
| 7 | Types of traffic permitted (IFR/VFR) | IFR-VFR |
| 8 | Remarks | Nil |

UAAA AD 2.3 Operational Hours

| | | |
|----|----------------------------|---|
| 1 | AD Operator | H24 Phone: +7 (727) 3888888 |
| 2 | Customs and immigration | H24 Phone: +7 (727) 2703409 |
| 3 | Health and sanitation | H24 |
| 4 | AIS Briefing Office | H24 |
| 5 | ATS Reporting Office (ARO) | H24 Phone: +7 (727) 2573217 Fax: +7 (727) 2573724 |
| 6 | MET Briefing Office | H24 Phone: +7 (727) 2574029 Phone: +7 (727) 2572803 |
| 7 | ATS | H24 |
| 8 | Fuelling | H24 |
| 9 | Handling | H24 Phone: +7 (727) 3888445 |
| 10 | Security | H24 |
| 11 | De-icing | H24 |

| | | |
|----|---------|-----|
| 12 | Remarks | Nil |
|----|---------|-----|

UAAA AD 2.4 Handling Services And Facilities

| | | |
|---|---|---|
| 1 | Cargo-handling facilities | Modern handling up to 30 tonnes weight |
| 2 | Fuel/oil types | TS-1, RT(equivalent to Jet A-1)/ MS-20, MS-8P |
| 3 | Fuelling facilities/capacity | AVBL, Modern tankers without limitation |
| 4 | De-icing facilities | De-icing fluid treatment machines - 6 units |
| 5 | Hangar space for visiting aircraft | Available by prior request |
| 6 | Repair facilities for visiting aircraft | Repairs at aircraft repair base. |
| 7 | Remarks | Nil |

UAAA AD 2.5 Passenger Facilities

| | | |
|---|----------------------|--|
| 1 | Hotels | Airport hotel, city hotel |
| 2 | Restaurants | AVBL |
| 3 | Transportation | Buses, taxis |
| 4 | Medical facilities | Aid post at Airport Terminal, ambulance service, hospitals in Almaty |
| 5 | Bank and Post Office | Banks, bank ATM, currency exchange, post office |
| 6 | Tourist Office | AVBL |
| 7 | Remarks | Nil |

UAAA AD 2.6 Rescue And Fire Fighting Services

| | | |
|---|---|---|
| 1 | AD category for fire fighting | CAT A9 |
| 2 | Rescue equipment | Modern rescue equipment. 5 fire engines with a total volume of fire-fighting composition - 41000 liters. |
| 3 | Capability for removal of disabled aircraft | Recovery equipment available: Lifting bags Kunz RLB 30-14, 30-17, 45-17. Lifting capacity up to 44t. Dollies Kunz 7-1000, 90-2200, load capacity 10t and 90t. Kunz Lifting Sling system, lifting capacity range 3t-55t. Ground Reinforcement mats Kunz Mammoth-Trakmat. Chains, jacks, hoists, hooks. |
| 4 | Remarks | Nil |

UAAA AD 2.7 Seasonal Availability - Clearing

| | | |
|---|-----------------------------|---|
| 1 | Types of clearing equipment | 10 plow-brush equipment with turbo pipes, 3 rotors, 3 wind machines, 5 spraders (reagent sprayers), 5 pushers for cleaning the snow shafts, 1 sidewalk cleaning machine per runway, 2 graders, 2 bulldozers, 1 snow rolling machine, Other modern snow removal equipment. The anti-icing granular reagent "NKMM" and the anti-icing liquid reagent NORDWEIF of the NORM brand are used to remove ice from airfield coatings. |
|---|-----------------------------|---|

| | | |
|---|----------------------|---|
| 2 | Clearance priorities | 1. RWY 2. TWY 3. Stands |
| 3 | Remarks | (Seasonal availability: All seasons, caution advised in winter during snow conditions) At surface condition code 2 and below: RWY 05R/23L closed |

UAAA AD 2.8 Aprons, Taxiways And Check Locations/Positions Data

| | | | | | |
|---|---|---|--------------------------------|-----------|----------------|
| 1 | Apron surface and strength | APRON | STANDS | SURFACE | STRENGTH |
| | | 1 | 3-6 | CONC+ASPH | PCN 61/F/C/W/T |
| | | | 12-13,13A,13B | CONC+ASPH | PCN 55/R/B/X/T |
| | | 2 | 65-66 | CONC+ASPH | PCN 56/R/A/X/T |
| | | | 67-69 | CONC+ASPH | PCN 73/F/C/X/T |
| | | 3 | 47-50 | CONC+ASPH | PCN 66/F/C/X/T |
| | | | 51-56 | CONC+ASPH | PCN 51/F/C/X/T |
| | | | 57-60, 59A, 60A, 71-73 | CONC+ASPH | PCN 55/R/B/W/U |
| | | 4 | 1-2 | CONC+ASPH | PCN 21/F/C/W/T |
| | | | 61-62 | CONC+ASPH | PCN 24/F/C/X/T |
| | | | 63-64 | CONC+ASPH | PCN 45/F/C/X/U |
| | | | 42A, 42-46A | CONC+ASPH | PCN 12/F/C/X/T |
| | | 5 | 29-31, 31A | CONC+ASPH | PCN 24/R/B/X/T |
| | | | 32A, 32-36 | CONC+ASPH | PCN 26/R/B/X/T |
| | | | 26-28 | CONC+ASPH | PCN 33/R/B/X/T |
| | | 6 | 201,202,203 | CONC | PCN 56/R/B/W/T |
| | | | 204/204L/204R 205/205L/205R | CONC | PCN 71/R/B/W/T |
| 2 | Taxiway width, surface and strength | TWY | WIDTH (M) | SURFACE | STRENGTH |
| | | A | 22.5 M | CONC+ASPH | PCN 69/R/B/W/T |
| | | B | 23 M | CONC+ASPH | PCN 66/F/C/X/U |
| | | C | 22.5 M | CONC+ASPH | PCN 55/R/B/X/U |
| | | D | 37 M | CONC+ASPH | PCN 71/F/C/X/T |
| | | E | 24 M | CONC+ASPH | PCN 71/F/C/X/T |
| | | F | 23 M | CONC+ASPH | PCN 66/F/C/X/T |
| | | H | 45 M | CONC+ASPH | PCN 66/F/C/X/U |
| | | K | 25 M | CONC+ASPH | PCN 55/R/B/X/U |
| | | L | 25 M | CONC+ASPH | PCN 81/F/C/X/T |
| 3 | Altimeter checkpoint location and elevation | THR RWY 23R - 677,3 m/2222,1ft THR RWY 23L - 681,6 m/2236,2 ft | | | |
| 4 | VOR checkpoints | Nil | | | |
| 5 | INS checkpoints | Nil | | | |
| 6 | Remarks | Nil | | | |

UAAA AD 2.9 Surface Movement Guidance And Control System And Markings

| | | |
|---|---|--|
| 1 | Use of aircraft stand ID signs, TWY guide lines and visual docking/parking guidance system of aircraft stands | Guidance sign board at entrance of RWY, guidance sign designating taxiways and apron Cat IIIB - RWY 23R: parking guidance system via TWY K at aircraft stand 6 or 7. RWY 23L: parking guidance system via TWY A at aircraft stand 4 or 5. |
| 2 | RWY and TWY markings and LGT | Markings of thresholds, touchdown zones, centre line, fixed distance markers, RWY edges, RWY designations, taxi holding positions, taxiway centre lines, stands |
| 3 | Stop bars | TWY: A, B, C, D, K, L, F, E, H. RED |
| 4 | Other runway protection measures | Nil |
| 5 | Remarks | RWY23L: centerline lights on exit from RWY to TWY A and lights on rapid exit from RWY to TWY C. Yellow / Green. RWY23R: centerline lights on exit from RWY to TWY K and TWY L and lights on rapid exit from RWY to TWY D. Yellow / Green. TWY A: Holding lights in front of ILS RWY05L zone. Yellow. |

UAAA AD 2.10 Aerodrome Obstacles

NIL

UAAA AD 2.11 Meteorological Information Provided

| | | |
|----|---|--|
| 1 | Associated MET Office | Meteorological service Almaty Phone: +7 (727) 2572803 Phone: +7 (727) 2574029 |
| 2 | Hours of service MET Office outside hour | H24 |
| 3 | Office responsible for TAF preparation: Periods of validity | Meteorological service Almaty 24 HR (0024, 0606, 1212, 1818) |
| 4 | Trend forecast Interval of issuance | TREND 30 min |
| 5 | Briefing/consultation provided | Personal consultation (English, Russian) |
| 6 | Flight documentation/languages used | TAF, METAR, SPECI, SIGMET, GAMET, AIRMET English |
| 7 | Charts and other information AVBL for briefing or consultation | S, U85, U70, U50, U40, U30, U25, U20, prognostic charts of wind and temperature at flight levels (FL), max wind, T, prognostic charts P85, P70, P50, P40, P30, P25, P20, SWH, SWM of WAFC, SWM+SWH, SWL of Kazakhstan; |
| 8 | Supplementary equipment AVBL for providing information | Doppler weather radar (METEOR-635C) |
| 9 | ATS units provided with information | Briefing, TWR, APP, ACC |
| 10 | Additional information | AIS "MeteoBriefing" for preparation of flight documentation and for meteorological service of crews distantly |

UAAA AD 2.12 Runway Physical Characteristics

| Designation s RWY NR | TRUE BRG | Dimensions of RWY (M) | Strength (PCN) and surface of RWY and SWY | THR coordinates RWY end coordinates THR geoid undulation | THR elevation and highest elevation of TDZ of precision APP RWY | Slope of RWY-SWY |
|-------------------------------|----------|-----------------------------|--|---|--|---------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 05R | 55,81° | 4400 X 45 | 65/R/B/X/T CONC+ASPH | 432028.46N 0770102.85E - -148.3 FT | THR 2227.7 FT TDZ 2228 FT | See AOC type A |
| 23L | 235,84° | 4400 X 45 | 65/R/B/X/T CONC+ASPH | 432148.52N 0770344.44E - -149 FT | THR 2236.2 FT TDZ 2236 FT | |
| 05L | 55,82° | 4500 X 45 | 51/R/A/W/T CEMENT/ CONC | 432050.44N 0770130.67E - -148.6 FT | THR 2221.5 FT TDZ 2223 FT | See AOC type A |
| 23R | 235,85° | 4500 X 45 | 51/R/A/W/T CEMENT/ CONC | 432212.33N 0770416.00E - -149 FT | THR 2222.1 FT TDZ 2231 FT | |

| SWY dimensions | CWY dimensions (M) | Strip dimensions (M) | RESA dimensions (M) | Location and description of arresting system | OFZ | Remarks |
|----------------|--------------------|----------------------|---------------------|--|------|---|
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| Nil | 300 X 150 | 4700 X 283 | 90 X 150 | Nil | AVBL | The strip RWY 05R/23L not symmetrical extend transversely axis direction RWY at a distance: 150m fm the NW side, 133m fm the SE side RWY 05R/23L Turn Pad LEN 120 m, the total width of the turn pad and TWY «A»105 m REF. AD 2.24.1 RWY 05R/23L Turn Pad LEN 110 m, the total width of the turn pad and TWY «F»75 m REF. AD 2.24.1 Turn Pad LEN 110 m, the turn pad and runway 75 m REF. AD 2.24.1 RWY 05R/23L Turn Pad LEN 120 m, the total width of the turn pad and TWY «E»65 m REF. AD 2.24.1 RWY 05L/23R end 23 R. The length of the turn pad area is 150 m, the width of the turn pad area is 95 m. AD 2.24.1 |
| Nil | Nil | 4700 X 283 | 90 X 150 | Nil | AVBL | |
| Nil | 300 X 150 | 4800 X 300 | 90 X 150 | Nil | AVBL | |
| Nil | 300 X 150 | 4800 X 300 | 90 X 150 | Nil | AVBL | |

UAAA AD 2.13 Declared Distances

| RWY Designator | TORA (M) | TODA (M) | ASDA (M) | LDA (M) | Remarks |
|----------------|----------|----------|----------|---------|---------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 05R | 4400 | 4700 | 4400 | 4400 | Nil |
| 23L | 3880 | 3880 | 4400 | 4400 | Nil |
| 05L | 4500 | 4800 | 4500 | 4500 | Nil |
| 23R | 4500 | 4800 | 4500 | 4500 | Nil |
| TWY F - 23R | 3528 | 3828 | 3528 | Nil | Nil |
| TWY B - 05R | 3681 | 3981 | 3681 | Nil | Nil |
| TWY C - 05R | 3085 | 3385 | 3085 | Nil | Nil |
| TWY D - 05L | 2957 | 3257 | 2957 | Nil | Nil |

| RWY Designator | TORA (M) | TODA (M) | ASDA (M) | LDA (M) | Remarks |
|---------------------|----------|----------|----------|---------|---------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| TWY D - 23R | 1543 | 1843 | 1543 | Nil | Nil |
| TWY E - 05L | 2010 | 2310 | 2010 | Nil | Nil |
| TWY E - 23R | 2490 | 2790 | 2490 | Nil | Nil |
| TWY D - 05R | 2320 | 2620 | 2320 | Nil | Nil |
| TWY D - 23L | 1560 | 1560 | 2080 | Nil | Nil |
| TWY E - 05R | 1010 | 1310 | 1010 | Nil | Nil |
| TWY E - 23L | 2870 | 2870 | 3390 | Nil | Nil |
| TWY C - 23L | 795 | 795 | 1315 | Nil | Nil |
| Turning Bay A - 23L | 2180 | 2180 | 2700 | Nil | Nil |
| Turning Bay A - 05R | 1700 | 2000 | 1700 | Nil | Nil |

UAAA AD 2.14 Approach And Runway Lighting

| RWY Designator | APCH LGT type, LEN, INTST | THR LGT colour, WBAR | VASIS, (MEHT), PAPI | TDZ, LGT LEN | RWY Centre Line LGT Length, 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 |
| 05 R | CAT I (PALS) 720 M LIH | GRN Nil | PAPI LEFT/3° | Nil | 4400m, spacing 15m, 0-3500m white, 3500-4100m red/white, 4100-4400m red | 4400m, spacing 60m, 0-3798m white, last 600m yellow LIH | RED Nil | Nil | (Warning: ALS RWY 05 shortened to 720m) |
| 23 L | CAT IIIB (PALS) 900 M LIH | GRN Nil | PAPI LEFT/3° | 900 m | 4400m, spacing 15m, 0-3500m white, 3500-4100m red/white, 4100-4400m red | 4400m, spacing 60m, 0-3798m white, last 600m yellow LIH | RED Nil | Nil | Running impulse lights combined with approach lights, from 900 to 300 m from the threshold |

| RWY Designator | APCH LGT type, LEN, INTST | THR LGT colour, WBAR | VASIS, (MEHT), PAPI | TDZ, LGT LEN | RWY Centre Line LGT Length, 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 |
| 05 L | CAT I (PALS) 870 M LIH | GRN Nil | PAPI LEFT/3° | Nil | 4500m, spacing 15m, 0- 3600m white, 3600- 4200m R/W, 4200- 4500m red | 4500m, spacing 60m, 0-3900 white, last 600m yellow LIH | RED Nil | Nil | Nil |
| 23 R | CAT I (PALS) 900 M LIH | GRN Nil | PAPI LEFT/3° | Nil | 4500m, spacing 15.0m, 0- 3600m white, 3600- 4200m R/W, 4200- 4500m red | 4500m, spacing 60m, 0-3900m white, last 600m yellow LIH | RED Nil | Nil | Nil |

UAAA AD 2.15 Other Lighting, Secondary Power Supply

| | | |
|---|--|---|
| 1 | ABN/IBN location, characteristics and hours of operation | ABN: Nil IBN: Nil |
| 2 | LDI location and LGT Anemometer location and LGT | LDI: Nil |
| 3 | TWY edge and centre line lighting | EDGE: All TWY CL: TWY A, C, D, F, K, L Parking maneuvering lights and stop lights on stands - 4, 5, 6, 201, 202, 203, 204L, 204, 204R, 205L, 205, 205R. |
| 4 | Secondary power supply/switch-over time | AVBL, 0 sec |
| 5 | Remarks | RWY 23L: Side approach lights - 270 m from the THR. Red. |

UAAA AD 2.16 Helicopter Landing Area

NIL

UAAA AD 2.17 ATS Airspace

| | | |
|---|--------------------------------|---|
| 1 | Designation and lateral limits | ALMATY CTR 432628N 0770533E - 433119N 0771523E - 432614N 0772005E - 431119N 0765000E - 431624N 0764515E - 431729N 0764725E - 431659N 0764807E - 431853N 0765356E - 432102N 0765419E - 432507N 0770249E then a counter-clockwise arc radius 1.6 NM centered on 432640N 0770322E - 432628N 0770533E |
| 2 | Vertical limits | 5200 FT ALT / GND |
| 3 | Airspace classification | D |

| | | |
|---|-----------------------------------|-------------------------------------|
| 4 | ATS unit call sign Language(s) | ALMATY TOWER EN ALMATY VYSHKA RU |
| 5 | Transition altitude | 10000 FT |
| 6 | Hours of applicability | H24 |
| 7 | Remarks | Nil |

UAAA AD 2.18 ATS Communication Facilities

| Service designation | Call sign | Frequency | SATVOICE number(s) | Logon address | Hours of operation | Remarks |
|-----------------------------------|--|------------------------|--------------------|---------------|--------------------|---------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| APP | ALMATY APPROACH (EN) ALMATY PODKHOD (RU) | 118.3 MHZ | Nil | Nil | H24 | Nil |
| ATIS | ALMATY ATIS (EN) ALMATY ATIS (RU) | 129,8 MHZ 135,1 MHZ | Nil | Nil | H24 | Nil |
| RADAR | ALMATY RADAR (EN) ALMATY KRUG (RU) | 126.8 MHZ | Nil | Nil | H24 | Nil |
| SMC | ALMATY GROUND (EN) ALMATY RULENIE (RU) | 121,7 MHZ | Nil | Nil | H24 | Nil |
| TWR | ALMATY TOWER (EN) ALMATY VYSHKA (RU) | 119,4 MHZ | Nil | Nil | H24 | Nil |
| Production and dispatcher service | ALMATY TRANZIT (EN) ALMATY TRANZIT (RU) | 131.900 MHZ | Nil | Nil | As AD | Nil |
| DELIVERY | ALMATY DELIVERY (EN) ALMATY DELIVERY (RU) | 120.8 MHZ | Nil | Nil | H24 | Nil |

UAAA AD 2.19 Radio Navigation And Landing Aids

| Type of aid, MAG VAR, ILS Classification, Type of supported OP (for VOR/ILS/MLS, give declination) | ID | Frequency, Channel number | Hours of operation | Position of transmitting antenna coordinates | Elevation of DME transmitting antenna | Service volume radius from the GBAS reference point | Remarks |
|--|-----|---------------------------|--------------------|--|---------------------------------------|---|---------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| DVOR/DME (5°E/2023) | ATA | 116.4 MHZ CH 111X | H24 | 432229.4N 0770507.0E | 2200 FT | Nil | Nil |
| ILS LOC 05R I/D/2 | ILM | 110.3 MHZ | H24 | 432159.6N 0770406.7E | | Nil | Nil |
| GP 05R I/C/2 | | 335 MHZ | | 432030.9N 0770117.7E | | | |
| DME 05R | ILM | CH 40X | | 432030.9N 0770117.7E | 2200 FT | | |

| Type of aid, MAG VAR, ILS Classification, Type of supported OP (for VOR/ILS/ MLS, give declination) | ID | Frequency, Channel number | Hours of operation | Position of transmitting antenna coordinates | Elevatio n of DME transmitt ing antenna | Service volume radius from the GBAS reference point | Rema rks |
|---|-----|---------------------------------|-----------------------|--|---|--|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| ILS LOC 23L III/E/2 | IAL | 108.1 MHZ | H24 | 432018.8N 0770043.4E | | Nil | Nil |
| GP 23L III/T/2 | | 334.7 MHZ | | 432138.5N 0770335.9E | | | |
| DME 23L | IAL | CH 18X | | 432138.5N 0770335.9E | 2300 FT | | |
| ILS LOC 05L I/D/4 | IMA | 109,1 MHZ | H24 | 432223.6N 0770438.8E | | Nil | Nil |
| GP 05L I/C/4 | | 331,4 MHZ | | 432059.1N 0770138.7E | | | |
| DME 05L | IMA | CH 28X | | 432059.1N 0770138.7E | 2200 FT | | |
| ILS LOC 23R III/E/4 | IAA | 111,3 MHZ | H24 | 432037.6N 0770104.8E | | Nil | Nil |
| GP 23R III/T/4 | | 332,3 MHZ | | 432210.7N 0770401.6E | | | |
| DME 23R | IAA | CH 50X | | 432210.7N 0770401.6E | 2200 FT | | |

UAAA AD 2.20 Local Aerodrome Regulations

1. Airport regulations

Aircraft movement along aerodrome is conducted under its own power and by towing vehicles. Taxiing and towing are carried out by established marking. Aircraft taxiing (towing) and take-off on a runway are conducted with the clearance of Almaty ATS unit.

At the apron stands it is allowed the start-up and testing of engines on idle modes upon request from "Almaty Taxiing" air traffic controller with regard to safety measures.

Start-up of engines at the stands 3-6 is prohibited. When there is out-of-use APU the start-up of one engine before towing to engine start-up place is conducted with the clearance of "Almaty Taxiing" air traffic controller.

Testing (run-up) of aircraft engines on modes exceeding the idle is carried out at the stand 69.

The crew can perform start-up of engines in the process of aircraft towing if this procedure is considered by flight operations manual of aircraft and agreed with the technical staff of the towing group.

Aircraft towing with the started engine (start-up during towing) at snowy, icy (slippery) apron is prohibited.

To replace aircraft wheels with a jack, only on hard surfaces (concrete, concrete slabs)

When deicing is needed flight crew notifies the "Almaty Taxiing" air traffic controller when requesting clearance for towing (start-up of engines). Deicing at the aircraft stands 1-6 is prohibited. Coordination of the deicing process is conducted by "Almaty Transit" at the frequency of 131.900 MHz. Deicing is performed:

- at the stands with asphalt-concrete surfacing;

- on the centerline of the apron.

Coordination air traffic controller of "Almaty Transit" designates the stand number, the docking procedure of aircraft and place of start-up, based on of the real situation on the apron, the presence of short-term limitations and parking prohibitions and aircraft movement on the aerodrome manoeuvring area.

Simultaneous parking procedure of freight aircraft with code F to aircraft stands 65-66 is carried out via towing.

2. Taxiing to/from aircraft stands

Towing, start-up of engines and taxiing of aircraft into/from the stands are conducted with the clearance of "Almaty Taxiing" air traffic controller.

Before the flight the crew must listen to the ATIS information, in the period of 5 minutes to 25 minutes before the departure time establish contact with the "ALMATY DELIVERY" on a frequency of 120.800 MHz, report the current ATIS information index and receive ATC clearance. Before tow/start engines establish contact with the "ALMATY GROUND" on a frequency of 121.700 MHz, report the current ATIS information index, the parking stand number, request permission to tow/start engines.

Depending on the ground and air situation, runway operational direction the taxiing control unit enters "holding procedure of start-up clearance" with the timing and start-up sequence of aircraft.

When runway operational direction is 23R or 23L the departure clearance with the heading of 051° is issued at the moment of crew request for aircraft start-up clearance (towing).

Regardless of the time of day aircraft accompanying (leading) is performed by follow me car when low visibility procedures is in effect, in the lack of visibility of marking intended for aircraft movement or by request of the flight crew.

Contact with "Almaty Tower" ATC unit is carried out by command of "Almaty Taxiing" air traffic controller.

Taxiing to aircraft stands 4-6 equipped by aircraft positioning system is performed singly or by follow me car up to the entrance into the coverage area of the system. Taxiing onto aircraft stands is performed by using indication of positioning system. In case of system failure, taxiing is performed by aircraft marshaller signals.

Taxiing to stands 201-205, 204L/204R, 205L/205R equipped with Automatic Visual Docking Guidance Systems (AVDGS) is either conducted autonomously or guided by a follow-me vehicle until the aircraft enters the coverage area of the system. Docking at the stand is carried out according to the indications provided by the positioning system. In case of system failure, docking is performed based on signals from the marshaller.

Taxiing onto aircraft stands that unequipped with parking system is performed by aircraft marshaller signals.

The order of taxiing in/out to/from aircraft stands:

- Taxiing onto/out aircraft stand close to the VIP-south building is performed by the follow me car. Taxiing onto aircraft stands 1-2, 63, 64 heading on VIP-south building is performed under its own power, taxiing out is performed by towing.
- Taxiing onto aircraft stands 3-6, 32A-34 is carried out under its own power, taxiing out is carried out by towing to the start-up place.
- Taxiing onto aircraft stand 12-13, 13A, 13B is carried by towing, taxiing out is carried out under its own power.
- Taxiing into/out of aircraft stands 48-56 shall be carried out under its own power by ATC instruction.
- Taxiing and taxiing on MS 47 under tow.
- Taxiing onto/out of aircraft stands 57-58, 71-73 is carried out under its own power.
- Taxiing onto aircraft stands 59A, 60A (heading on south) is carried out under its own power when aircraft stands 58, 59, 60, is free, taxiing out is carried out by towing.
- Taxiing of aircraft that not exceeded the size of IL-76 onto aircraft stands 59-60, is carried out under its own power when aircraft stands 59A, 60A is free, taxiing out is carried out under its own power when aircraft stands 59A, 60A is free.

- Taxiing onto aircraft stands 59A, 60A is carried out by towing, taxiing out is carried out under its own power when aircraft stands 59, 60 is free.
- Taxiing onto aircraft stands 65-69 is carried out under its own power, taxiing out is carried out by towing.
- Taxiing onto/out of aircraft stand 79 is carried out under its own power after the "Follow-me" car.
- Taxiing onto aircraft stands 201-205, 204L/204R, 205L/205R is carried out under its own power, taxiing out is carried out by towing to starting point.

3. Limitations during taxiing

Aircraft turns with code C and higher from TWY B to RWY 05R/23L to the side of the threshold 05R and from runway 05R/23L to TWY B from the threshold 05R are prohibited.

Taxiing and towing of all aircraft types is allowed with a wingspan not exceeded of wingspan of B747-400.

Aircraft not higher than 10,4m are placed on aircraft stands 63.

Crossing of holding position marking of RWY 23L/05R and 05L/23R by aircraft taxiing via TWY-F, TWY-D and TWY-E without ATC clearance is prohibited.

Crossing of holding position marking of RWY 05L/23R by aircraft taxiing via TWY-K and TWY-L towards RWY 05L/23R without ATC clearance is prohibited.

Taxiing of a Boeing 747-800 (Boeing 747-8f and Boeing 747-8i) is possible only on apron № 2 via TWY - L. Further taxiing of a Boeing 747-800 (Boeing 747-8f and Boeing 747-8i) is possible from apron № 2 via TWY - B and TWY - H for arrival and departure, also taxiing is possible via RWY 05L/23R, RWY 05R/23L, TWY-C, TWY-D, TWY-E and TWY-F. Taxiing on aprons № 1, 3, 4, 5, 6 for this type of aircraft is prohibited.

The aircraft must leave the occupied parking area no later than 1 minute after receiving permission to tow. In case of delay in the start of towing, the responsible person, the apron service repeatedly requests permission or cancels towing.

4. Take-off and landing

When reaching the designated holding point close to runway the flight crew informs "Almaty Tower" ATC unit and reports the readiness for take-off.

After receiving the report from the flight crew about readiness for take-off "Almaty Tower" ATC unit may allow the flight crew to line up position and immediate take-off, depending on the air situation. The flight crew must inform the "Almaty Tower" ATC unit if they cannot perform immediate take-off.

When the RWY is occupied, or the absence of suitable intervals "Almaty Tower" ATC unit allows the flight crew only to line up.

The flight crew, which needs to conduct taxiing backwards on RWY 05R or 05L for the line-up position of RWY 23R or 23L from TWY A, TWY K, TWY D or TWY E, should be permitted to taxiing on RWY 05R or 05L by "Almaty Tower" ATC unit.

The RWY used for taxiing, performs the functions of TWY or main TWY for the lining-up or vacating the RWY. Herewith, aircraft crew must comply with all taxiing procedures in accordance with the requirements of the Aircraft Flight Manual and other regulatory documents, including taxiing speed:

- under the normal conditions of the environment and the RWY condition, should not exceed 30 knots (55 km/h) at long distances on the runway and should not exceed 20 knots (37 km/h) at short distances on the runway;
- under the low visibility procedures and meteorological conditions contributing to the deterioration of the RWY condition should not exceed 10 knots (18 km/h).

Pre-flight checks by crew in the cockpit must be completed before the line-up position. Checks on the runway, should be minimized.

Flight crew performs take-off immediately after receiving clearance for take-off. If the flight crew cannot comply

with above requirement, they should inform about it the "Almaty Tower" ATC unit before taxiing onto the RWY, and to inform about the required delay time.

Depending on the air or the ground situation it is allowed to take-off from the intersection of TWY with the runway on-request of the flight crew or by initiative "Almaty Tower" ATC unit. Take-off is carried out from the point on the runway, where available characteristics of the runway is comply with required for the actual take-off mass of the aircraft and take-off conditions. The pilot-in-command takes the final decision about the take-off from the taxiway and runway intersection.

Warming-up and testing of engines before take-off is conducted on a runway or on taxiway by "Almaty Tower" ATC unit clearance after the request of the flight crew.

Tailwind takeoff and landing of aircraft is allowed for accelerating the traffic of airplanes flow on request of flight crew or at the initiative of ATSU. Responsibility for taking decision about such take-off or landing lies with the pilot-in-command of aircraft.

In order to reduce runway occupancy time, "Almaty Tower" ATC unit may issue a clearance to land beyond the landing area of the runway (except the aircraft of categories "heavy" and "superheavy") or expedite vacating of the runway. If it is impossible to perform the required operation, the crew shall immediately inform the air traffic controller.

The pilot-in-command takes the final decision about take-off or landing in meteorological conditions are inconsistent with aerodrome operating minima. In this case the air traffic controller clearance for takeoff or landing is not pilot-in-command compelling to complete it and the responsibility for the final decision and the outcome of the take-off or landing lies with the pilot-in-command of aircraft.

Runway allocation is carried out by ATSU taking into account upwind landing or takeoff of aircraft, in case if accidents prevention concept, runway configuration, meteorological conditions and operating procedures of landing approach or air traffic conditions do not preferred another direction. To increase runway capacity it is allowed aircraft release with reverse course from operating direction of the runway (take-off and landing in opposite directions) under the following conditions:

- radar control;
- before reaching 3200 FT by departed aircraft and establishing contact with ATC unit it's prohibited to arriving aircraft descent below 8000 FT;
- aircraft release is carried out according flight supervisor clearance and after provisional approval between the points of ATS aerodrome control center.

Turning pad and turning pad marking, with width 75m, are available on the RWY 05R/23L on the distance 2730m from RWY 05 THR.

RWY 05R/23L at surface condition code 4 and below TKOF and LDG prohibited.

5. Operations on parallel runways 05R / 23L and 05L / 23R

Both runways are intended for departures and arrivals.

Note: In view of the fact that the distance between the runway centerlines is 209 m, there are restrictive bearings and boundaries that do not allow establishing procedures for the divergence of the courses during take-off, the minimum time and linear intervals for all take-off and landing operations are set to the same as with a single runway; simultaneous take-offs and landings under any conditions with parallel runways are not performed.

Flight supervisor decides which runway in use based on analysis of the air and meteorological situation, surface condition, the operability of radio and lighting facilities, and meteorological equipment.

When aircraft is on the holding position on taxiway C, taxiway D, taxiway E or taxiway F, the runway located behind the aircraft is considered as occupied and is not used for takeoff or landing.

Additional departure procedures:

- it is permitted to line-up on each runway at the same time; the aircraft that will take-off the second in sequence shall be informed about take-off delay;

- the permission for take-off at the same time from both runways is not issued;
- to prevent the approach of the aircraft in the case of missed approach of arriving aircraft, the permission for take-off from the parallel runway is not given if the linear separation between the arriving and departing aircraft is 2.2 NM or less.

Additional arriving procedures:

- pilots should conduct preliminary preparation for landing on each of the operating runway, if both runways are in use;
- if an ILS approach is performed on one runway, approach to second runway can be performed as DVOR DME, RNP approach or visual approach (simultaneous ILS operation on parallel runways is prohibited);
- redirection of aircraft to parallel runway during ILS, DVOR DME or RNP approach in IFR conditions after turn to the final approach leg and in VFR flight or IFR flight in VMC after 3 NM from landing RWY THR is not allowed;
- redirection of aircraft to parallel RWY in all cases shall be performed after flight crew report about readiness to approach to another RWY.

6. Training and practice flights, check-test and check flights (flyover)

Training and practice flights, check-test and check flights (flyover) of aircraft are carried out in accordance with the requirements established by the flight operation Regulations in Civil Aviation.

IFR flight is conducted in accordance to established procedures for instrumental take-off and landing approach. After take-off, the crew maintains the specified conditions given by the air traffic controller for entering the approach procedure. VFR flight is performed by an agreed route with the ATSU.

Number of aircraft carried out training or practice flight, check-test and check flights (flyover) within Almaty TMA 1, TMA 2 and CTR, is determined by the air traffic manager of the aerodrome based on the presence of prohibited and restriction areas, air and meteorological conditions.

Depending on the intensity of flights and activated restrictions, flight supervisor could limit the number of training aircraft, to suspend or prohibit the training flights.

Check-test aircraft flights are performed during the daytime with visibility at least 2000 m and the ceiling at least 650 ft for all types of aircraft.

7. Fuel draining

Fuel draining is conducted only in emergency situations that do not allow to decrease the aircraft landing mass by running out of fuel.

Fuel draining is conducted by the designated route of ATSU on height agreed with crew:

- Route 1: USUGA - ADABA - TIPSA - USUGA (not lower 8000 FT ALT);
- Route 2: DESOK - TIRBA - BAGNA - DESOK (not lower 10000 FT ALT).

In an emergency, the crew could drain the fuel out of the designated route.

If the flight crew needs a radio-silence during the fuel draining, the duration is agreed between the crew and air traffic controller.

Aircraft separation when fuel draining is carried out in accordance with the Procedures for Air Navigation Services "Air Traffic Management" (PANS-ATM) doc 4444 ATM / 501.

8. Procedures in low visibility conditions

LVP are in effect when RVR is less than 550 m.

The beginning of LVP is reported by the ATIS or by the ATSU with following message: "Low visibility procedures" are in operation.

RWY 05R, RWY 05L, RWY 23R, RWY 23L are equipped for take-off in LVP conditions.

RWY 23R, RWY 23L are equipped for precise approach and landing by category II, IIIA and IIIB.

The crossing of the turned on lights of the line "STOP" is prohibited.

A-SMGCS based on SMR, SSR, MLAT and ADS-B supports surface movement operations based on established operational procedures.

The crew of the aircraft is informed by the ATS unit about change of the operational status of the radio technical, lighting and meteorological equipment.

In the conditions of categories II and III, ATS units apply additional horizontal separation of the aircraft.

When **RVR is less than 350 m**:

- turning of aircraft at 180° in the ends of 23R, 23L and in the extension "A" is **prohibited**.

When **RVR not less than 300 m**

- aircraft taxiing on aprons and taxiways (except for TWY C, TWY E, TWY D, TWY F) is carried out only after the "follow-me car";
- RWY 23R and RWY 23L are used for precise approach and landing by category II.

When **RVR is less than 300 m**

- TWY B, TWY H, TWY E not equipped with RCL are not used for taxiing;
- RWY 23R and RWY 23L are used for precise approach and landing by category IIIA.

9. Helicopter flights

Helicopter taxiing is carried out taking into account wind limitations, according to the flight manual, with constant visibility of the landmarks ahead.

Helicopters with a trolley type of undercarriage move through the air from the parking place to the place of take-off and back along the route assigned by the dispatcher "Almaty taxiing" behind the escort vehicle under the responsibility of the helicopter commander.

Helicopter engines at parking spot №61-62 are started only for warming up and testing at low gas.

Helicopter engines for departure from parking spot №61-62 should be started at parking traverse parking spot №62 in front of TWY A.

Engines may be started, check hover, take-off/landing by helicopter during daytime from (to) parking spot near VIP-south building, from (to) apron №4 and conjunction TWY-B, at intersection TWY-B with TWY-H and at section TWY-H between TWY-K and TWY-L, in compliance with established intervals between takeoffs and landings of aircraft, provided the established weather minimum for flights under Air Approach Lane (special Air Approach Lane) is met. Responsibility for takeoff (landing) in this case rests with the helicopter commander.

Helicopters take off from the airfield after:

- the crew's request for a control hover and obtaining permission to perform it from the control tower dispatcher;
- the helicopter crew completes a control hover;
- the crew's report of readiness for takeoff (by plane, by helicopter), and obtaining permission for takeoff from dispatcher the Tower a control tower controller.

For helicopter take-off, helicopter landing after control hover is not necessary. The helicopter commander determines the control hover altitude, but the helicopter performing the control hover should not interfere with other aircraft taking off and landing.

In the presence of weather conditions or smoke on part of the runway that reduce visibility to values below the

established weather minimum for Air Approach Lane flights (special Air Approach Lane), it is permitted to land on that part of the runway where the weather conditions correspond to the minimum (beginning/middle/end). The helicopter commander is responsible for making such a landing.

Takeoff with run-up and landing with run-in, helicopter takeoff and landing at night and when performing Air Approach Lane flight are performed from/on the runway.

UAAA AD 2.21 Noise Abatement Procedures

1. NOISE ABATEMENT DEPARTURE PROCEDURE

DEP from RWY05L and RWY05R Aircraft operators shall follow NADP 1 noise abatement departure procedure, according to ICAO Doc. 8168 OPS/611 VOL III (PANS-OPS VOL III).

2. NOISE ABATEMENT DEPARTURE PROCEDURE

RWY23L and RWY23R Aircraft operators shall follow NADP 1 noise abatement departure procedure, according to ICAO Doc. 8168 OPS/611 VOL III (PANS-OPS VOL III). The use of noise abatement departure procedure 1 (NADP1) as mentioned in ICAO Doc 8168 Volume III is recommended for all jet aircraft departures from ALA airport. If for operational reasons compliance with the recommended procedure is not possible, procedure NADP2 may be used.

3. Arrival procedures

for details see UAAA AD 2.22 para 7 CONTINUOUS DESCENT OPERATION

4. Selection of RWY in use

1. The term "RWY in use" indicates the RWY that, at a particular time, is considered by ALA TWR to be the most suitable for use by the types of aircraft expected to land or take-off at the aerodrome.

2. Accepting a runway is a pilot's decision. If the pilot-in-command considers the runway-in-use not usable for the reason of safety, he shall request permission to use another runway. ATC will accept such request, if traffic and air safety conditions permit.

UAAA AD 2.22 Flight Procedures

1. General provisions

In the aerodrome area of Almaty the flights are conducted on IFR and VFR.

While VFR and IFR flights in aerodrome control area of Almaty is necessary:

- Have a permission of ATSU prior to entry into the relevant area of responsibility;
- At the request of the ATSU to inform the location;
- Follow the instructions of the appropriate ATSU;
- To have and continuously support two-way radio communication in the VHF range.

IFR and VFR flights are conducted at assigned flight level (altitude) in accordance with the rules of vertical, longitudinal and lateral separation maintaining the established intervals.

IFR flights take precedence over the VFR flights.

If it is necessary, the arriving aircraft hold a course for to the holding area. To regulate the longitudinal intervals between aircraft crew can be instructed to conduct the flight in orbit (turn at 360 °) with statement of the place and side of the turn.

In the event of a threat to flight safety it is allowed to change assigned flight altitude (flight level) and crabbing from desired track. If you deviate from assigned desired track or flight altitude the pilot-in command immediately inform about their actions the ATS, which controls the aircraft.

During the initial contact with the "Almaty Approach" air traffic controller at a frequency of 118.3 MHz, the crew

informs an index of current ATIS information and identification index of aircraft.

"Almaty Approach" or "Almaty Circuit" designate the information about activities of the forbidden zones, restricted flight area, danger areas, airdropping of parachutes and flight of balloons in the aerodrome area borders in real time, overflying permit and the go-around route "Almaty Approach" or "Almaty Circuit".

IFR flights are not carried out beyond the limiting bearing determined by the geographical coordinates 431116N 0763518E (R238° D24.5 ATA) - 431042N 0765041E (R217° D15 8. ATA) - 432229N 0770507E (DVOR/DME ATA) - 432733N 0774145E (R074° D27.2 ATA), below flight level FL190.

2. Procedures of IFR flights within an aerodrome control area (CTR)

Takeoff and initial climb is conducted by standard routes shown on the Standard Instrument Departure (SID) charts Runway 05R / L (runway 23L / R) or on trajectory defined by ATS.

Arrival is carried out by standard routes shown on the Standard instrument arrival (STAR) Runway 05R/L (runway 23L / R) or on trajectory defined by ATS.

The flight crew is required to withstand the prescribed standard route of Instrument departure (SID) and arrival (STAR), and in the case of deviations, go on an assigned track immediately.

If an aircraft, forces to standard Instrument departure route (SID) is issued a clearance for climb to (altitude), located above the flight level shown on the SID, an aircraft follows the published vertical profile of a SID, if such restrictions are prescribed standard route of Instrument departure.

In those cases, when arriving at a standard instrument arrival route (STAR) aircraft is cleared to descend to a flight level lower than flight level of the STAR, an aircraft follows the published vertical profile of STAR, if such restrictions are not cancelled by ATS.

The flight crew must withstand specified limit airspeed, if otherwise specified from the ATS. The translational indicated airspeed regulation of aircraft is applied for a traffic flow regulation in order to ensure intervals necessary for landing, taking into account the characteristics of the aircraft.

"Almaty Circuit" and "Almaty Tower" ATC units determine ability to perform visual landing approach based on the analysis of air condition and weather conditions.

3. VFR procedures within the aerodrome control zone (CTR)

Air traffic service in the control zone of the Almaty aerodrome is carried out by the controller of the "Tower" ATC unit. The aircraft flights within CTR are performed on absolute altitudes according to the QNH pressure of the Almaty airfield. Flight altitudes are calculated by the aircraft crew in accordance with the Civil Aviation Flight Rules of the Republic of Kazakhstan.

Air traffic controller of "Tower" ATC unit assigns the altitude (flight level) of the flight, the functions of Air traffic service does not include ground and artificial obstacles collision avoidance.

The aircraft crew shall ensure that the clearance issued by the ATS unit in this regard is safe. Bypass of artificial obstacles by the aircraft crew is carried out independently.

Transit VFR flights of the aircraft through the CTR of the Almaty aerodrome are carried out with permission and under the control of the "Tower" ATC unit in accordance with the airspace classification.

Coordination of the entrance and the conditions for the transit of the CTR airspace of the Almaty aerodrome by the aircraft crews flying in uncontrolled airspace is carried out in accordance with the current rules. The aircraft crew, five minutes prior to the scheduled entry time into the aerodrome control zone, requests permission from the «Tower» ATC unit to enter, specifying the entry point and flight altitude. Entry is allowed only after obtaining approval under the conditions, conveyed by the «Tower» ATC unit.

Crossing the runway alignment, within Almaty CTR, is made only with the permission of the air traffic controller of the "Tower" ATC unit at a safe altitude according to the QNH pressure of the aerodrome.

Entry of aircraft of category A and helicopters flying in VFR at 5200ft and below to the control zone (CTR) is carried out only with the permission of the air traffic controller of the "Tower" ATC unit through the reference waypoint.

After passing the reference waypoint the air traffic controller of the "Tower" ATC unit issues permission to fly

to the nearest turn of the corresponding flight circle.

When the aircraft enters the runway "05 Left" / "05 Right" (left flight circle), enter the circle:

- from reference waypoints MIKE, YANKEE, ZULU, PAPA, VICTOR, holding JULIETT – left hand turns
- from reference waypoints SIERRA, ROMEO, OSCAR, holding TANGO – right hand turns

When the aircraft enters the runway "23 Left" / "23 Right" (right flight circle), enter the circle:

- from reference waypoints MIKE, YANKEE, ZULU, PAPA, VICTOR, holding JULIETT – right hand turns
- from reference waypoints SIERRA, ROMEO, OSCAR, holding TANGO – left hand turns

Entry of aircraft into the flight circle for landing approach is carried out only with the permission of the air traffic controller of the "Tower" ATC unit.

The reference waypoints of CTR are used by the air traffic controller of the "Tower" ATC unit to regulate the sequence of aircraft landing at the Almaty aerodrome and as holding areas for aircraft of categories A and helicopters. Flights of aircraft in holding area are performed by the command of the air traffic controller of the "Tower" ATC unit at the specified altitude and are performed with a left turn. If the air situation requires the aircraft to hold in the immediate vicinity of the runway, the air traffic controller of the "Tower" ATC unit allows the orbit (left / right 360 ° turn) at any designated radial distance from DVOR / DME ATA.

Exit of aircraft of category A and helicopters flying in VFR at 5200ft and below from the control zone (CTR) is carried out at the shortest distance (unless otherwise prescribed by the the air traffic controller of the "Tower" ATC unit) through the reference waypoint.

When the aircraft departs from the runway "05 Left" / "05 Right":

- to reference waypoints MIKE, YANKEE, ZULU, PAPA, VICTOR – left hand turns
- to reference waypoints SIERRA, ROMEO, OSCAR – right hand turns

When the aircraft departs from the runway "23 Left" / "23 Right":

- to reference waypoints MIKE, YANKEE, ZULU, PAPA, VICTOR – right hand turns
- to reference waypoints SIERRA, ROMEO, OSCAR – left hand turns

Table 1: Visual reference of VFR flights within Almaty CTR

| No | Waypoint name | Type | Visual reference | Geographical coordinates | Radial and distance from DVOR/DME «ATA» |
|----|---------------|------------|---------------------------------------|--------------------------|---|
| 1 | OSCAR | Entry/exit | power transmission line pole | 432152N 0771116E | 093° / 4,5 NM |
| 2 | ROMEO | Entry/exit | SW outskirts of Alatau | 432018N 0770807E | 130° / 3,1 NM |
| 3 | SIERRA | Entry/exit | SE outskirts of Besagash | 431749N 0770306E | 192° / 4,9 NM |
| 4 | TANGO | Holding | Eastern outskirts of Tuzdybastau | 431953N 0770453E | 179° / 2,6 NM |
| 5 | VICTOR | Entry/exit | Water basin / lake of Zhalkamys river | 432732N 0770743E | 015° / 5,4 NM |
| 6 | PAPA | Entry/exit | Eastern outskirts of Kyzyltu | 432504N 0770450E | 350° / 2,6 NM |
| 7 | MIKE | Entry/exit | warehouse of "Metro" hypermarket | 431853N 0765356E | 241° / 8,9 NM |

Table 1: Visual reference of VFR flights within Almaty CTR

| No | Waypoint name | Type | Visual reference | Geographical coordinates | Radial and distance from DVOR/DME «ATA» |
|----|---------------|------------|--|--------------------------|---|
| 8 | JULIETT | Holding | southern outskirts of Zhana Kuat cottage town | 432318N 0770147E | 284° / 2,6 NM |
| 9 | YANKEE | Entry/exit | Y-shaped road intersection (Burundaiskaya Street and Highway) | 432102N 0765419E | 255° / 8 NM |
| 10 | ZULU | Entry/exit | separate structure of utility building (south of the intersection of the Esentai and Baskarasu rivers) | 432302N 0765829E | 271° / 4,9 NM |

4. Radar procedures within a aerodrome control area (CTR)

To regulate the order of the landing approach and compliance with safe intervals from any point of the scheme it is possible to control the movement of aircraft for altitude and direction by ATS air traffic controller by radar vectoring. Direction for reaching the flight level (altitudes) is carried out in accordance with the ATC Surveillance Minimum Altitude Chart ICAO.

Landing approach procedures with the help of surveillance radar is not applied.

In the absence of radar control, but the stable operation of the flight and navigation equipment the flight crew is allowed to conduct the landing approach in accordance with the published IFR approach procedures in accordance without radar or conduct a visual landing approach.

During IFR flights in the absence of radar control and unstable operation of aircraft navigation equipment the decrease from the lower safe flight level (FL200) is not allowed. In this case, the aircraft should follow the alternate aerodrome.

5. Radio contact loss (failure)

Warning: the procedures are conducted during radio contact loss (failure) have differences with standards, recommended practices and regulations of ICAO (Annex 2 ICAO).

When radio communication loss the crew must:

- switch on SOS-signal, set up code 7600;
- use the emergency frequency of 121.5 MHz, radio contact with other aircraft and ATS points;
- guard the frequency DVORATA (116,4 MHz) or locator beacon (763 kHz) for getting information and air traffic controller instruction;
- when radio contact losing after takeoff to land or follow the destination aerodrome in accordance with the conditions, issued by the ATS;
- conduct aerodrome approach and landing approach by approach procedure;
- when flight without a radio contact at night the location of aircraft denote by periodic switching on the landing lights or beacon lights flashing.

6. The emergency landing procedure

In the event of an emergency on the aircraft at takeoff phase, aircraft pilot-in-command determines the necessary manoeuvre in order to ensure the safety of aircraft.

7. Continuous Descent Operation

1. CDOs are performed during periods of low traffic density at ATC discretion.
2. CDOs are executed only by ACFT that use standard arrival procedures RNAV1 based on GNSS.
3. Although these procedures are designed as a closed path, they permit distance planning for CDO, allowing the ACFT Flight Management System/Computer (FMS/FMC) to accurately execute automated optimized descents when:
 - ACFT is cleared to proceed to a waypoint or via a combination of waypoints in order to provide an optimum lateral flight path up to and including the FAP and thus the exact distance to the RWY is known prior to start of the continuous descent operation; or
 - the pilots of the ACFT that to be vectored to final are provided with distance-to-go information.
4. CDOs are authorized only when following conditions are respected:
 - ILS of RWY intended for landing is in operation;
 - no adverse weather conditions that may affect CDO;
 - no system degradations that may affect GNSS or ILS operation.
5. After receiving "WHEN READY DESCEND TO (LEVEL)" or "DESCEND TO (LEVEL) AT PILOTS DISCRETION" clearance the pilot is allowed to plan/optimize vertical profile in order to apply CDO to FAP.
6. Depending on traffic, CDO may start from TOD or lower levels.
7. In accordance with appropriate ATC clearances, CDO can start from the TOD when ACFT is cleared to a waypoint or via a combination of waypoints for direct routing/shortcut and the horizontal trajectory is defined up to and including the FAP. Thus, the exact distance to RWY is known and the descent profile can be readily calculated by the appropriate on board system (FMS) prior to start of the CDO.
8. After clearance "WHEN READY DESCEND TO (LEVEL) " or "DESCEND TO (LEVEL) AT PILOTS DISCRETION" pilot should maintain the cruising/last assigned level until the optimal descent point/TOD that is determined by pilot or FMS, then start descent with no extra requests unless other ATC instructions are issued.
9. If necessary ATC may issue additional instructions: "WHEN READY DESCEND TO (LEVEL), REPORT LEAVING (or REPORT TOP-OF-DESCENT)"
10. Considering airspace structure, ATC issues an instruction to descend to level(s) above level of FAP. Wherein ATC issues further descent instruction prior to CDO flight reaching 3000 feet (900 m) above last assigned level.
11. It is preferable if CDO is commenced from top of descent. If it is not feasible due to traffic, CDO may be initiated from any lower level.
12. As a portion of the procedure consists of vectoring, the specific distance to RWY threshold is not known to a pilot prior to start of the CDO. In such cases, ATC will provide the pilot with an estimate of the flight track-miles to the RWY threshold as distance-to-go information. The pilot will use this information to determine the optimum descent rate to achieve a CDO.

8. Continuous Climb Operation

Continuous Climb Operations (CCO) are conducted along standard instrument departure routes (SID RNAV1) using GNSS. The feasibility of CCO is determined by the ATC based on the current air traffic situation and operational traffic density.

UAAA AD 2.23 Additional Information

1. Accepted exceptions, exemptions and restrictions in aerodrome certificate.

| Regulatory reference | Requirement of regulations | Description of exceptions, exemptions and restrictions | Measures taken and validity period |
|--|---------------------------------------|--|--|
| Section 2. point 16. Standards of Aerodromes (Heliports) Operation Civil Aviation Republic Kazakhstan. | Runway strip physical characteristics | Runway strip for runway 05R/23L, has dimensions less than the established in legislation. | An equivalent level of safety has been approved 25.09.2020 to 31.12.2022 |
| Section 10. point 168. Standards of Aerodromes (Heliports) Operation Civil Aviation Republic Kazakhstan. | The length of the approach lights | The length of the approach lights with landing direction 51* for runway 05R/23L is less than the established in legislation. | Does not affect for operations. |
| Section 2. point 43. Standards of Aerodromes (Heliports) Operation Civil Aviation Republic Kazakhstan. | Radius of turn-off curve | Radius of turn-off curve is less than the established in legislation. | Restrictions on turning-off for aircrafts with the code letter C and higher until the reconstruction of this section |

2. Ornithological situation in the aerodrome area.

The ornithological situation in the aerodrome area is determined by the seasonal and daily migration of birds. The Almaty aerodrome is surrounded by fields and residential areas, and on the approach to RWY 23L, 23R by agricultural fields.

2.1 Seasonal migration of birds (time)

The period of spring migration - activity from late February to late May, the most active peak migration in April, but there may be changes when the climatic conditions change. The danger is posed by rooks, jackdaws, pigeons, buzzards, kestrels, kites, pheasants, cranes, owls, rolling rollers, ducks, waders, etc. Bird activity is observed in the morning hours from 00:00 to 03:00 (UTC) and in the evening from 12:00 to 15:00 (UTC).

The period of autumn migration is active from mid-August to the end of November, also depending on the climate and sharp changes in weather conditions.

The danger is posed by rooks, jackdaws, pigeons, buzzards, kestrels, kites, pheasants, cranes, owls, rolling rollers, ducks, waders, etc.

The most active flight hours are from 23:00 to 03:00 (UTC), evening movements from 11:00 to 15:00 (UTC).

The intensity of bird migration increases during agricultural work and the maturation of cereals and other crops.

During these times, pilots are advised to turn on landing lights when flying in the aerodrome area, during takeoff, landing approach, and during climb and descent.

Spring and Autumn periods are characterized by movements of migratory birds: rooks flights 300-600 individuals from 01:00 to 03:00 hours (UTC) from west to east and from 12:00 to 15:00 (UTC) from east to west at the altitude of 200-600 FT.

In **summer**, in the morning and evening hours, a flight of flocks of birds of prey from 5 to 20 individuals is observed at a relative altitude of up to 600 FT and rollers at an altitude of 33 FT. All year round, there are flights of pigeons, corvids at relative altitude of up to 200 FT in flocks of 15-25 individuals and more.

2.2 Direction

The main directions of migration in spring are from southwest to northeast, in autumn in the opposite direction. In autumn, in the area of the aerodrome and at the aerodrome, a large number of mynah, black crows are accumulated, representing a serious danger for flights from sunrise to sunset.

On the territory of the airside area, the main flights occur from NW to SE and in the opposite direction.

2.3 Altitude

The altitude of flights depends on the season and weather conditions. Different types of birds fly at different heights.

Approximate heights of flights of various bird species found on the airfield and near the airside area and aerodrome:

- ducks - from 295 to 9842 FT;
- larks and various waders - from 131 to 4593 FT;
- birds of prey - from 328 to 26246 FT;
- lane and pink starlings - from 133 to 1509 FT;
- swallows - from 16 to 66 FT;
- seagulls - from 328 to 1640 FT;
- sparrows - from 16 to 49 FT;
- owls - from 16 to 98 FT;
- pheasants - from 3 to 16 FT;

2.4 Intensity of bird migration

Bird migration takes place around the clock.

2.5 Daily migration of birds

2.5.1 Daily migration of birds (time)

From dawn to the onset of evening twilight

2.5.2 Direction

Flights over the terrain and to feeding bases with the intersection of the takeoff and landing course from NW to SE.

2.5.3 Altitude

Flights from 32 to 492 FT. Mass flights of corvids at altitudes of 164-1640 FT.

2.6 Radar control over the flying of birds

Radar control over the flying of birds in the area of the aerodrome is not provided.

2.7 Information transmission

Information about the ornithological situation is transmitted via the ATIS broadcasting channel in English and Russian and, if necessary, through the ATM dispatcher. In case of complication of the ornithological situation in the aerodrome area, it is possible for a short-term inclusion in the ATIS report of additional concretizing information about the peculiarities of the ornithological situation.

UAAA AD 2.24 Charts Related To An Aerodrome

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