SAUDI ARABIAN OIL COMPANY (Saudi Aramco)

GENERAL INSTRUCTION MANUAL

ISSUING ORG. AVIATION DEPARTMENT

SUBJECT BUDGETING, CONSTRUCTION, APPROVAL AND MAINTENANCE OF AIRSTRIPS AND HELIPORTS

GI NUMBER	Approved		
1305.000			
ISSUE DATE	REPLACES		
* 01/16/2005	02/19/2001		
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CONTENT:

This instruction describes the procedure for budgeting, construction approval and maintenance of airstrips and heliports.

1.0 **DEFINITIONS:**

- 1.1 Saudi Aramco Airstrip: A runway intended for use by Saudi Aramco aircraft. Generally, these airstrips will be built and maintained by Saudi Aramco within the Saudi Aramco concession.
- 1.2 Saudi Aramco Heliport: A helicopter landing site intended for use only Saudi Aramco aircraft or Saudi Aramco Contracted aircraft. Generally, these heliports will be built and maintained by Saudi Aramco within Saudi Aramco concession. Helidecks are included within this definition.
- 1.3 Remote Site Airstrip: A Saudi Aramco Airstrip for temporary use only. Generally, these airstrips will not be paved and are used primarily by the Drilling and Workover and Geophysical Departments.
- 1.4 User Department: A Saudi Aramco Department, Division, or Saudi Aramco contractor requiring air transportation services (either airplane or helicopter) by the Saudi Aramco Aviation Department.

2.0 BUDGETING PROCEDURES FOR AIRSTRIPS AND HELIPORTS AND REMOTE SITE AIRSTRIP:

- 2.1 The Aviation Department is the proponent for all airstrip and heliport construction. As the proponent, the Aviation Department must be included early in the budget cycle for the planning of airstrip and heliport construction.
- 2.2 Aviation User Departments will prepare an estimate of their airstrip and heliport construction requirements during the annual budget cycle. The estimate for construction will be submitted to the Aviation Department along with the User Department annual estimate of requirements for flying support hours, if appropriate. Upon agreement of airstrip and heliport construction requirements between the Aviation User Department and the Aviation Department, the construction requirements will be submitted to the Roads and Wellsites Department for their acceptance and estimate of costs.
- 2.3 A decision is then made between the Aviation User Department and the Roads & Wellsites Department whether the construction will be budgeted in the Roads and Wellsites Department or the Aviation User Net Direct Budget. The distribution of costs by account will be given to the Aviation Department.
- 2.4 Costs for each airstrip and heliport will be accumulated in a type 67 account established by Aviation for this purpose, namely 67-17893XXX by original entry code on each Maintenance Work Order. A sub-item number

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MAINTENANCE OF AIRSTRIPS AND HELIPORTS

will be assigned by the Aviation Department by Form 690, to Ledger Accounting, identifying the account to which each sub-item will close.

3.0 CONSTRUCTION AND APPROVAL:

- 3.1 The Aviation User Department will notify the Aviation Department of the need for an airstrip or heliport by sending a letter to the Aviation Department, Ground Support Operations Division, Box 80, Dhahran. The letter will specify the type of airstrip or heliport with the approximate location by longitude and latitude and other details as appropriate. The Aviation Department will issue a MWO with cost data entered as chargeable to 67-17893. Aviation will assign a sub-entry number and issue a Form 690 to identify the account to which the construction is to be charged if an account from the Aviation User Department is to be used.
- 3.2 Roads & Wellsites Department will assign a MWO number and distribute the MWO copies to the Aviation User and the Aviation Department.
- The Aviation Ground Support Operations Division will arrange for a preliminary site selection visit with the 3.3 Aviation User Department, the Construction Agency, Facilities Planning Department if appropriate and Aviation Operations Division representatives. A preliminary site inspection form, Attachment 1, will be used and copies given to all parties insuring agreement on airstrip specifications, including length, width, orientation, maximum gradients, clearways, lighting, markings, facilities, and other details using Standard Drawings as references. Aviation Ground Support Operations Division will issue marked up standard drawings to the construction agency at the time of the preliminary site selection visit, indicating thereon the agreed specifications. The marked-up drawings will have the appropriate MWO clearly marked for file reference purposes.
- The Construction Agency will then proceed with the construction. GSOD will make site visits during the 3.4 construction to insure specification compliance. Upon completion of construction, the construction agency will provide GSOD with a certification on the airstrip length, width and gradient at five hundred feet intervals along the runway edge and center line. This certification will be accomplished on the final acceptance inspection worksheet. Final "as built" drawings will be provided with each helipad and airstrip constructed at the final acceptance inspection.
- The Ground Support Operations Division will arrange for a separate survey of the airstrip or heliport according 3.5 to the survey form attached for obstacle clearances.
- 3.6 The Ground Support Operations Division will arrange for a final acceptance inspection visit along with all the parties who attended the initial site selection visit. The final acceptance inspection worksheet will be accomplished, signed by all and copies distributed.

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4.0 MAINTENANCE OF AIRSTRIPS, HELIPORTS AND REMOTE SITE AIRSTRIPS:

- 4.1 Maintenance costs for airstrips and heliports will be accumulated under the type 67 account referenced above and cleared to an appropriate account by Form 690 in accordance with current budget preparation philosophies and agreements between Roads and Wellsites Department and Aviation Department for each budget cycle.
- 4.2 Maintenance on airstrips will normally be accomplished by the Roads and Wellsites Department, by work order from the Aviation Department. Budgeting details will coordinated between the two departments annually.
- 4.3 Desert airstrips are an exception to the above procedure. Exploration and Drilling will grade, water, and compact airstrips with such equipment as available when wellsite camps are inordinately distant. Drilling will be requested by an Aviation Ground Support Operations Division representative to accomplish this work after consulting with Wellsites Division.

Approved: Manager, Aviation Department	
Concur: Geophysical Department	
Concur: Roads & Heavy Equipment Department	
Concur: Drilling & Workover Department	

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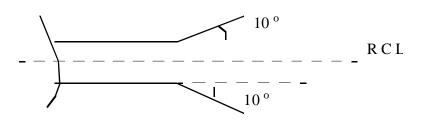
SAUDI ARABIAN OIL COMPANY (Saudi Aramco) GI NUMBER **Approved GENERAL INSTRUCTION MANUAL** 1305.000 ISSUE DATE REPLACES ISSUING ORG. AVIATION DEPARTMENT 02/19/2001 * 01/16/2005 APPROVAL PAGE NO. BUDGETING, CONSTRUCTION, APPROVAL AND **SUBJECT** AKD 4 OF 5 MAINTENANCE OF AIRSTRIPS AND HELIPORTS ATTACHMENT 1 - AIRSTRIP AND HELIPORT APPROVAL FORM AIRSTRIP/HELIPORT APPROVAL FORM AIRSTRIP/HELIPORT NAME AIRSTRIP/HELIPORT COORDINATES N_____ E PERSON RESPONSIBLE FOR COORDINATION **ACTIVITY SERVED:** DEPARTMENT _____ AND MAINTENANCE: DIVISION OR CAMP ______ NAME PHONE PRELIMINARY SITE INSPECTION Attended by:(Name) Date: Acceptable: _____ Exceptions _____ Location: Length of Site: Vertical Clearances: Orientation: Surface: Slope: FINAL AIRSTRIP INSPECTION Attended by:(Name) ______ Date: _____ Strip Length: Actual _____ Ft. Acceptable: ____ Exceptions & ____ Width: _____Ft. ____ Descriptions _____ Orientation: Surface: _____ Ft. Ft. Vertical Clearances: Windsock & Markers: Strip Elevation: Slope: CAMP LOCATION: N _____ CAMP NAME CAMP RADIO CALL: _____ RADIO FREQUENCY:____ NM BEACON FREQUENCY AND IDENT. RADIAL & DISTANCE (BEACON TO AIRSTRIP) Survey request from attached _____ Approved for ______ aircraft. AVIATION REPRESENTATIVE ____ * CHANGE NEW INSTRUCTION \square ** ADDITION COMPLETE REVISION □

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ATTACHMENT 2 - AIRSTRIP SURVEY FORM

AIRSTRIP SURVEY FORM

- 1. Reference dimensions to Saudi Aramco Drawing AA 032257
- 2. Specifics:
 - a) Date of survey information _____
 - b) Runway name _____
 - c) Runway location (longitude/latitude)
 - d) Length _____ (feet).
 - e) Width _____ (feet).
 - f) Elevation _____ (feet).
 - g) Mag heading of runway _____
 - h) Surface composition _____
 - i) Turnarounds (if any)
 - j) Windsock positions from R/W centerline and ends _____
- 3. Please describe on a separate sheet of paper:
 - a) Obstructions within a 2 mile radius from runway center.
 - 1. Mag bearing and feet from the runway center.
 - 2. Height in feet.
 - b) Obstructions to the approach/departure, please make a note of elevation reference station.
 - 1. From extended runway edge diverging to 108 from each runway edge including extended runway.



- 2. Minimum percent gradient greater than 1.5% required to clear all the obstacles within the path 5 N.M. from runway end. If there are no obstacles above the 1.5%, please note. Locate all the existing obstacles on the drawing and give gradient required to clear the obstacle from the end of the runway center line. Include both constructed and terrain obstacles.
- c) Profile of runway showing the elevation changes throughout the length (every 500 feet).
- d) Loading area (if any).
- e) Fencing (if any).
- f) Overrun or clearway smoothness, dimensions and earth compaction.

SUPERVISOR/SURVEYOR

Certifying the above information

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