Implementation Guide

Shell Group Requirements for Aircraft Operations (SGRAO) Issue 02 Rev03

Document Revision Information

Issue	Revision	Date	Amendment
02	00	20/09/2023	Initial Release
02	01	26/06/2024	Release of SGRAO PART691 & PART699
02	02	01/07/2024	Release of SGRAO PART697
02	03	06/01/2025	Release of SGRAO PART696

Contents

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Introduction

The SGRAO prescribes requirements applicable to the operation of any helicopter, fixed wing aircraft and RPAS/Drone-systems for Shell use:

(1) To Helicopter operations when used in;
    a. Passenger transport,
    b. Cargo (HESLO),
    c. Heli Hoist Operations (HHO),
    d. Survey,
    e. Medevac flights,
    f. Search and Rescue (SAR);
(2) To Fixed Wing Aircraft operations when used in:
    a. Passenger transport,
    b. Medevac /ambulance flights,
    c. Cargo Operations,
    d. Aerial Pipeline Inspection,
    e. Airborne Survey,
(3) To RPAS operations when used;
    a. VLOS Operations,
    b. BVLOS Operations,
(4) Business Unit Requirements
    a. Facility Requirements
    b. Contractual Requirements

The SGRAO does not apply:

(1) To ticketed/scheduled air services; nor
(2) Air transport operations under an NOV control, unless other agreements are in place.

This document will provide direction for aircraft operators and Shell Businesses in;

- Determining which standards are applicable per operation;
- The application of Additional Compliance Criteria (ACC) that is required for a limited number of specific risk areas;
- Guidance Material (GM), to aid implementation and assurance of the mandatory requirements.;
- Controlled deviation from the standard if needed in specific circumstances;

How to use this document

Compliance with the Shell Group Requirements for Aircraft Operations (SGRAO) is mandated through the Shell Performance Framework (SPF) Air Transport Standard (ATS) for all aviation activities, assets, & facilities including those conducted/owned by third parties regardless of contract mode.

The SGRAO is to be applied to all types and sizes of Air Transport Operators and aims to ensure effective and proportionate controls are in place to deliver the safety and operational goals of Shell Businesses.

Shell's principle is to apply industry standards where applicable and considered appropriate to our risk management philosophy. While Shell's aircraft operations standards have always been based on international aviation regulations (ICAO) and some national regulations, the primary industry document going forward will be the IOGP 69_-series. This document is still evolving to cover all types of operations, and each will be adopted as it becomes available to supersede the relevant legacy SGRAO section. The current applicability is defined in the Table 1 Applicability Matrix.

This document provides a mapping between the Mandatory Requirements, Additional Compliance Criteria and Guidance Material and needs to be used in conjunction with the following documents;

- IOGP Report 69x – Oil and Gas Aviation Recommended Practices (OGARP) overview,
- IOGP Report 69x-0 - Key elements of aviation management
- IOGP Report 690 – Offshore Helicopter Recommended Practices (OffHRP),
- IOGP Report 691 – Fixed Wing Commercial Air Transport (FWCAT)
- IOGP Report 696 – Remotely Piloted Air Systems (RPAS)
- IOGP Report 697 – Offshore Helidecks and facilities (FAC)
- IOGP Report 699 – Offshore emergency response services
- SGRAO AOR – Aircraft Operator Requirements (AOR)
- SGRAO BUR – Business Unit Requirement (BUR)
- SGRAO FAC – Facility Requirement (FAC)
- GFS – Shell General Functional Standard for Helidecks

UNDERSTANDING AND APPLICATION OF THE SGRAO

Applicability Matrix

The current SGRAO is transitioning the "Aircraft Operator Requirements" (AOR) to "Industry" standards. During the transition, some legacy Shell AORs will remain applicable for specific air transport operations. The Business Unit Requirements (BUR), articulating Shell Performance Framework requirements when applied to air transport and including helideck and aviation facility management requirements, will remain a separate document and helideck design requirements have now been transferred to GFS.

The matrix below indicates the applicable standard for each of the transport modes. For specific types of operation, where the 69-series has not yet been developed or where a particular topic (e.g. security) is not covered by 69report, "Supplemental Requirements", contained within existing AORs, remain applicable and are indicated in the table.

Type of Operation (Helicopter):	**Primary Standard**	**Version**	**Supplemental Requirements**	**Version**
Offshore Helicopter Operations (Passenger Transport, Twin Engine, Dual Pilot, IFR)	IOGP RP690	V1.3	SGRAO PART690 AOR SPO 01.01	V1.0 V4.0
Helicopter External Cargo Operations	AOR	V4.0	-	-
Heli Hoist Operations (HHO)	IOGP RP690	v1.3	AOR SPO 06.01	V4.0
Helicopter Survey Operations	AOR	V4.0	AOR SPO 04.01	V4.0
CAT Onshore Helicopter	AOR	V4.0	-	-
Offshore emergency response services	IOGP RP699	V1.0	SGRAO PART699	V1.0
Type of Operation (Fixed Wing):	**Primary Standard**	**Version**	**Supplemental Requirements**	**Version**
Passenger Operations	IOGP RP691	v1.0	SGRAO PART691	V1.0
Cargo Operations	IOGP RP691	v1.0	SGRAO PART691	V1.0
Aerial Pipeline Inspection	AOR	V4.0	AOR SPO 05.01	V4.0
Airborne Survey	AOR	V4.0	AOR SPO 07.01	V4.0
Type of Operation (RPAS):	**Primary Standard**	**Version**	**Supplemental Requirements**	**Version**
BVLOS & VLOS	IOGP RP696	V1.0	SGRAO PART696	V1.0
Type of Operation (Facility):	**Primary Standard**	**Version**	**Supplemental Requirements**	**Version**
Business Management of air transport	BUR	V4.0	-	-
Aerodromes Operations	BUR	V4.0	-	-
Offshore Helidecks and facilities	IOGP RP697	V1.0	GFS	34.85.00.12-Gen

Table 1; Applicability Matrix

Adopted Standards

Oil and Gas Aviation Recommended Practices (OGARP)

The development of the OGARP has been a great example of joint industry safety collaboration in pursuit of managing air transport risks, demonstrating care for our workforce. Collectively the reports will be referred to as Oil & Gas Aviation Recommended Practices (OGARPs).

The documents define contractable requirements reflecting industry best practice, developed in collaboration between oil and gas companies, aviation industry associations, and aircraft operators. Adopting them will provide the framework for effective management of a key material risk to the safety of personnel.

Shell Aircraft Operator Requirements (AOR)

The Shell AOR are the legacy requirements to manage Shell's air transport activity and remain applicable for operations not yet covered by the IOGP RP69_-series. The aim is to phase-out these specific Shell requirements in the foreseeable future.

Business Unit Requirements (BUR)

The BUR articulate SPF requirements when applied to air transport, defining specific mandatory air transport requirements, but also providing guidance for SPF implementation. It is the responsibility of the Shell Business (Through the TA1) to be in compliance with the Business Unit requirements. BUR requirements cover but are not limited to:

- Common HSSE Processes
- Procurement and contracting of Air Transport
- Managing contracts for Air Transport Operations
- Air Transport Facilities and operations
- Emergency Response and other essential support

General Functional Standard for Helidecks

This GFS specifies contractor requirements for the design of new-build helidecks on offshore fixed and floating platforms, including normally unattended installations.
Requirements are based on CAP 437 and include layout; sizing; structural design; marking and lighting; communication equipment; emergency equipment, refueling equipment; weather and motion monitoring systems; helicopter hoist operation area selection and marking and crane requirements. The GFS requirements are intended to be supplemented by Project Specific Requirements.

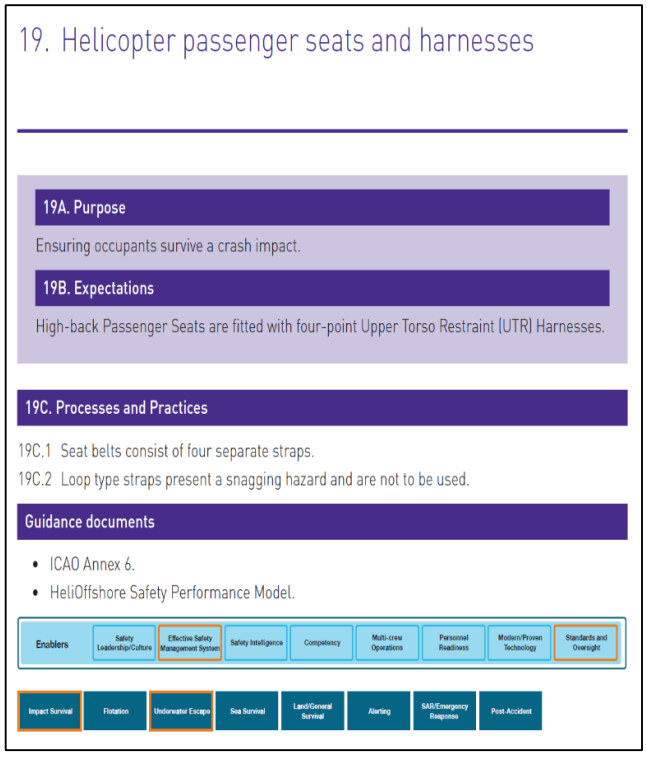
GFSs are intended for use in oil and gas production facilities. This GFS also can be applied in other similar facilities including non-hydrocarbon energy applications.

Identifying Mandatory Requirements

Through the Shell Performance Framework Air Transport Standard, the SGRAO defines and enforces the Mandatory requirements adopted from the different industry standards. This section identifies the "Mandatory Requirements" from each of the Adopted standards.

These Mandatory Requirements must be met to comply with the SGRAO.

IOGP R69_-Report



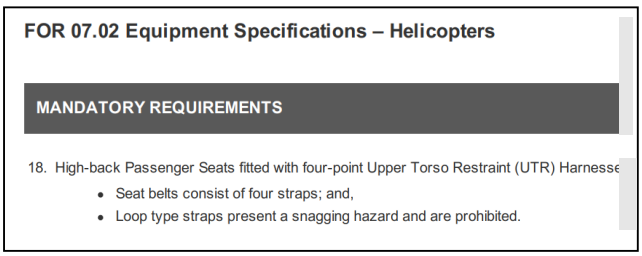
The "A-Item" provides the purpose of the requirement

The Mandatory Requirements are a combination of the "B-Items" (Expectations) and the "C-Items" (Processes and Practices).

In this example the B-Items, requires High-back seats fitted with four-point UTR harnesses.

The C-Items, provide on one hand additional explanation 19C1 on the four-point harness (4 separate straps) and introduces an additional requirement 19C2 not allowing

Shell Aircraft Operator Requirements



The Mandatory Requirements in the AOR are specified as such and include the line items, included sub bullets/numbers

Additional Compliance Criteria

For a limited set of IOGP requirements, Additional Compliance Criteria (ACC) are defined to provide specific additional controls to meet what Shell determines as ALARP. These ACC shall be considered as additional Mandatory Requirements.

Means of Compliance (MC)

Shell Businesses and contracted aircraft operators are required to comply with the Mandatory Requirements for the "Primary" and "Supplemental" standard as per the Applicability Matrix for operations carried out for Shell.

To demonstrate compliance with SGRAO endorsed requirements for assurance purposes, Shell Businesses and contracted operators are expected to be able to provide documentary evidence of systems, processes and procedures as well as physical evidence or observed practice where required.

Guidance Material

Guidance Material (GM) is non-binding explanatory and interpretation material issued to illustrate the meaning of a requirement or specification in the IOGP RP69_-series and aid implementation. It contains information, including examples, historic context and considerations to assist the user in the interpretation and application of the IOGP RP69_-series.

For the legacy Shell AOR requirements, the GM is included in the AOR document.

Definitions & Acronyms

For definitions and acronyms used in the IOGP RP69_-series, IOGP RP69X offers comprehensive explanation.

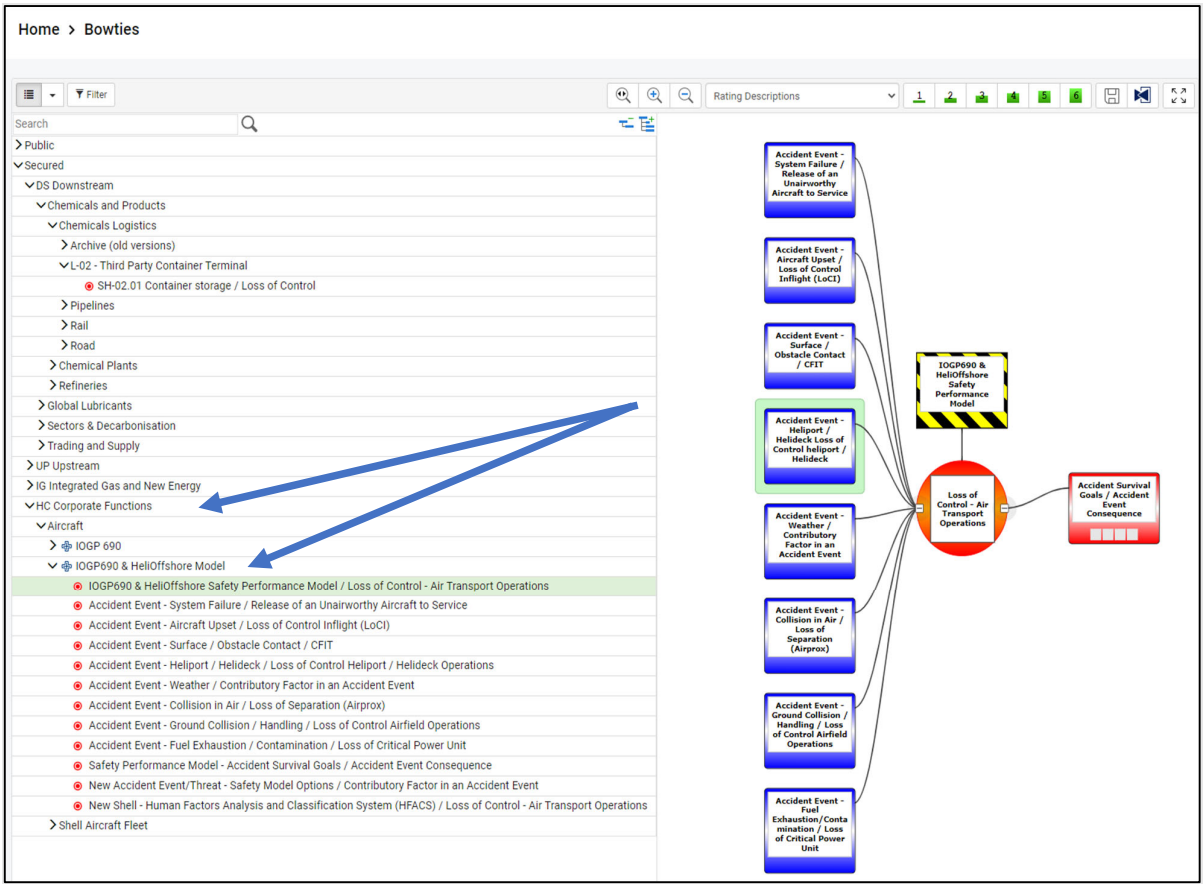
Bow-Tie Set

In addition to the Guidance Material a dedicated Bow-Tie Set is available from Shell Aircraft to aid and inform risk management processes and illustrate how the barriers should work together. The set is based on the Heli-Offshore performance model and the IOGP690 barriers.

Dedicated Bow-Tie sets are available for:

- PART-690
- PART-691
- PART-696

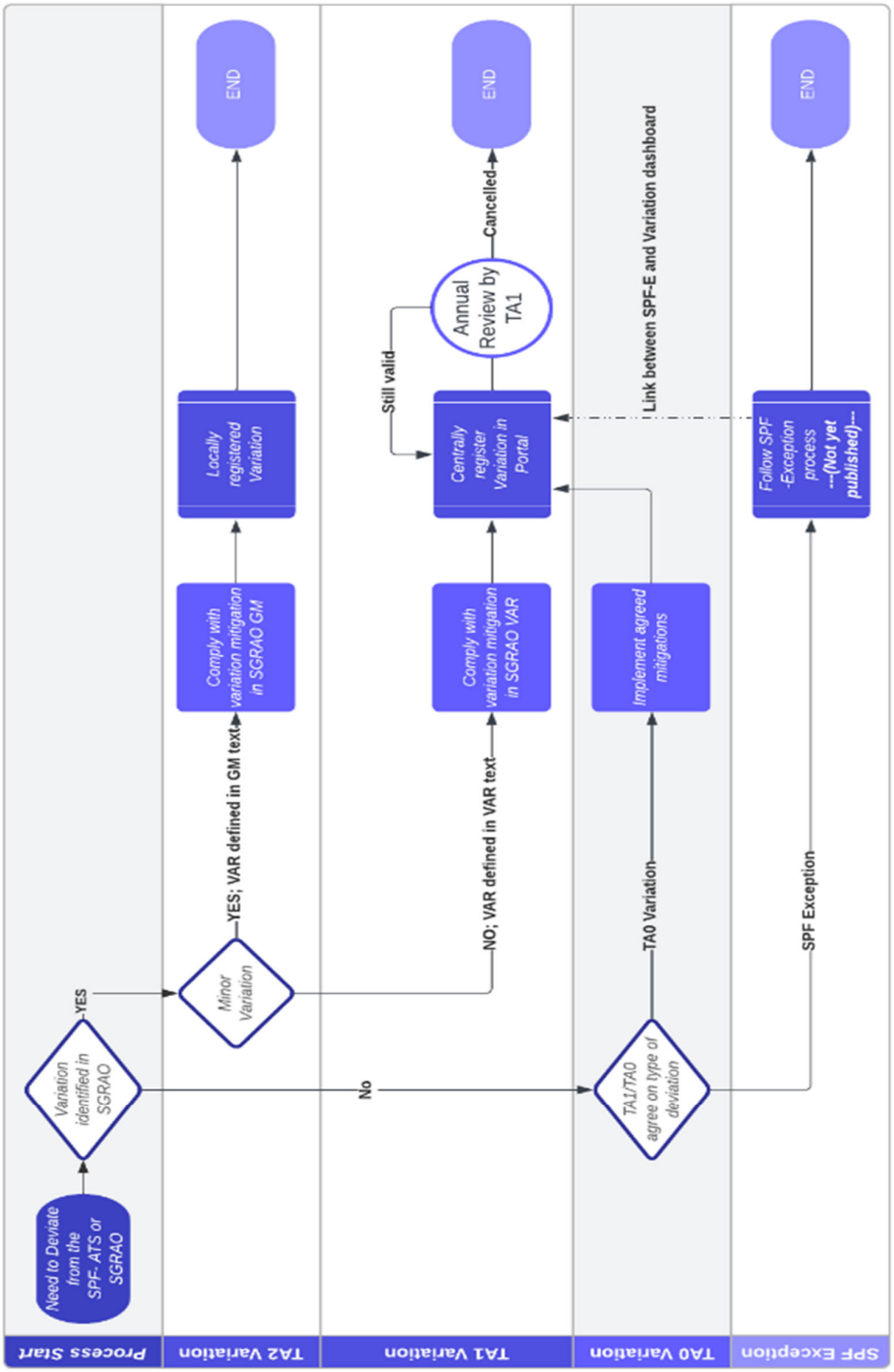
The Bow-Ties can be viewed using the web viewer using the following link:



DEVIATION POLICY

In accordance with the IOGP RP69x “Oil and gas aviation recommended practices” (req 11) a process needs to be in place to manage deviations from the company requirements (SGRAO).

In addition, the SPF has a documented process for exceptions from the SGRAO, the flowchart below will identify the applicable deviation process to use, when required.



Shell Performance Framework Exceptions

Where circumstances prevent an asset or business from complying with requirements of the Shell Performance Framework (SPF), the Transport Standard or result in material gaps to SGRAO requirements, the asset or business may raise an exception by using the exception process.

This process includes formal approval by the Business Unit Approver (EC-2) and Shell Aircraft (Discipline Head). Each exception will need an annual validation or reconfirmation for extension.

All Exceptions are centrally processed and registered and follow the SPF workflow for exceptions.

Variations (TA2, TA1 &TA0)

Variation means minor deviation to the mandatory requirements as defined in the Primary and Supplemental standards in Table 1. The variation process seeks to adopt a standard approach, yet leave flexibility and simplicity (or a specific bandwidth) for Shell Business to comply with the "Purpose" of the mandatory requirement. The Variation process also seeks to mirror the SPF Exceptions process by maintaining full visibility of in-force variations, to maintain a compliance risk picture and inform standards development.

The SGRAO recognizes three variation classifications;

TA2 Variations; Minor variations as defined in the guidance material section in the SGRAO PART. These variations are managed locally and are agreed between the TA1 and TA2.

TA1 Variations; A variation against one or more of the requirements listed in the table below (in the VAR section). These can be endorsed by a TA1 following a local risk assessment and with defined mitigation(s). The variation is to be recorded on the Shell Aircraft Variation Portal.

TA0 Variations; Variations against all other Primary and Supplemental standards in Table 1 require endorsement by the TA0 and should be submitted with an appropriate risk assessment and mitigations. These are also to be recorded on the Shell Aircraft Variation Portal. These variations are "one-off's" and can be applied to all IOGP/SGRAO requirements and they cannot create additional obligations for Shell Aircraft.

All variations are owned by the Regional TA1, who is required to centrally register the TA1 and TA0 variations using the Shell Aircraft Variation portal (ref Advisory Procedure Manual). Variations cannot exceed the duration of the contract and require an annual TA1 & TA0 review.

Contract Term Definition

High Exposure Contracts (HSSE)

High Exposure contracts typically refer to contracts that span a period of more than a year and involve a significant amount of work or provision of services. High exposure contracts may include ongoing maintenance or operational service agreements, or supply contracts, among others.
High exposure contracts could span a period of less than a month but with high risk like external cargo overpopulated area's.

Limited Exposure contracts (HSSE)

Limited Exposure Contracts refer to contracts that involve a smaller amount of work or provision of services. These contracts can range from ad hoc services, such as a one-off, to contracted services that involve a limited, defined scope of work.

NOTE: Contracts, including extensions, are considered to by high exposure when:

- **PART690: exceeding 100 hours per year for operations**
- **PART691: exceeding 200 hours per year for operations**
- **PART696: exposure definition provided in table 3 of PART696**
- **PART697: Visiting vessel on contract over 90 days or 10 landings (as per APM)**

For more guidance on contract moding, please refer to the "Contractor HSSE Management" SPOA.

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