



# HCIS & the Safety Directives

Understanding the New Directives and their Impact on the Projects and existing Security of Industrial Facilities in KSA  
(High Commission for Industrial Security, Ministry of Interior, KSA)



*The High Commission for Industrial Security is part of the Ministry of Interior. It is responsible for the development and implementation of security, safety and fire protection strategies kingdom-wide.*

# HCIS – Who are they?

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*The national security of Saudi Arabia, including the security of the economy and the well being of its population, depends directly on physical and operational safety of all types of industrial facilities across Saudi Arabia. Therefore, the HCIS shall have the ultimate authority on administering these requirements.*

*The HCIS is the “Authority having Jurisdiction”*

# HCIS – Who are they?

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*In the past the HCIS was known as the HCSS and worked to an old set of standards. The name was changed to the HCIS and a new set of standards were issued by Royal Decree in 2010. These new standards are the SEC and SAF directives and must be applied to every industrial project in Saudi Arabia. The Security directive is number 3870 dated 12/6/1431 Hajiri, and the Safety directive number is 3871 dated 12/6/1431 Hajiri. The dates equate to 20<sup>th</sup> May 2010 Gregorian.*

# HCIS History

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*HCIS approval for security and safety systems is NOT a blanket approval. It is an individual approval for each and every project no matter the owner or type of project*

# HCIS Approval

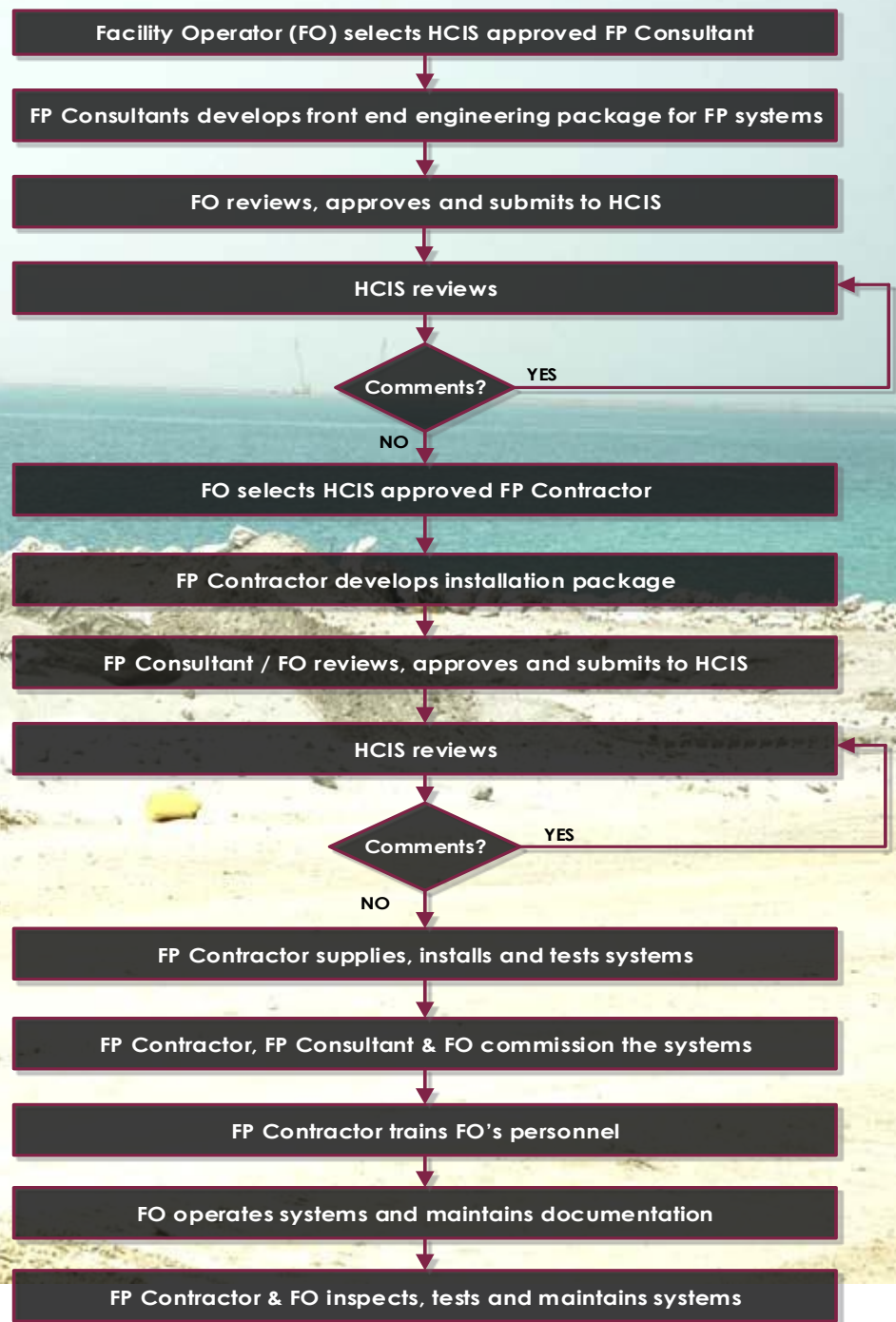
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# Safety Directives



# Fire Protection Workflow



## 4.5 - Requirements for Executing Fire Protection Projects (SAF)

4.5.1	Designers, suppliers, contractors shall be approved by the HCIS.
4.5.3	Contractors and suppliers shall be certified by the Ministry of Interior (Civil Defense) and Ministry Commerce and Industry.
4.5.4	The Owner shall submit qualification documents to the HCIS for approval.
4.5.5	The Owner shall ensure that the company selected for safety and fire protection related work shall adequate engineering capabilities and qualified manpower to design, install, test and maintain the safe fire protection systems and execute all other work requirements competently.
4.5.7	The HCIS reserves the exclusive right to approve or reject any candidate design agency performing work.
4.5.8	The Owner shall ensure that the company selected for safety and fire protection related work shall prior technical experience.
4.5.11	The HCIS shall have the right to reject any equipment, system, or suppliers.
4.5.14	The Owner shall not permit any start on safety and fire protection related work until HCIS approval for the design, contractor, major fire protection equipment and systems is received.



# The Safety Directives (1)

- SAF-01 General Requirements for Safety & Fire Protection Directives
- SAF-02 Environmental, Health & Safety Management
- SAF-03 Buildings for Industrial Facilities
- SAF-04 Fire Protection Systems & Equipment
- SAF-05 Industrial Drainage
- SAF-06 Plant Layout, Spacing & Access
- SAF-07 Onshore & Nearshore Wellsite Safety
- SAF-08 Storage Tanks & Storage Vessels
- SAF-09 Fireproofing in Plants
- SAF-10 Pressure Piping, Transportation Pipelines & Pressure Vessels
- SAF-11 Emergency Shutdown, Isolation & Depressuring
- SAF-12 Electric Safety
- SAF-13 Work Permits, Isolation of Energy & Hazardous Work

# The Safety Directives (2)

SAF-14 Manufacture, Transportation, Storage & Use of Explosive Materials

SAF-15 Private Industrial Fleet Vehicle Filling Stations

SAF-16 Bulk Plants and Air Fueling Support Facilities

SAF-17 Offshore Production Facilities

SAF-18 Mines And Mineral Processing Plants

SAF-19 Power Plants and Associated Facilities

SAF-20 Pre-Incident Planning and Management of Emergencies

SAF-21 Personal Protective Equipment

SAF-22 Portable Electric & Electronic Devices

SAF-23 Flammable/Combustible Liquids in Portable Containers (\*)

SAF-24 Hazardous Material in Portable Containers (\*)

SAF-25 Incident Reporting and investigations (\*)

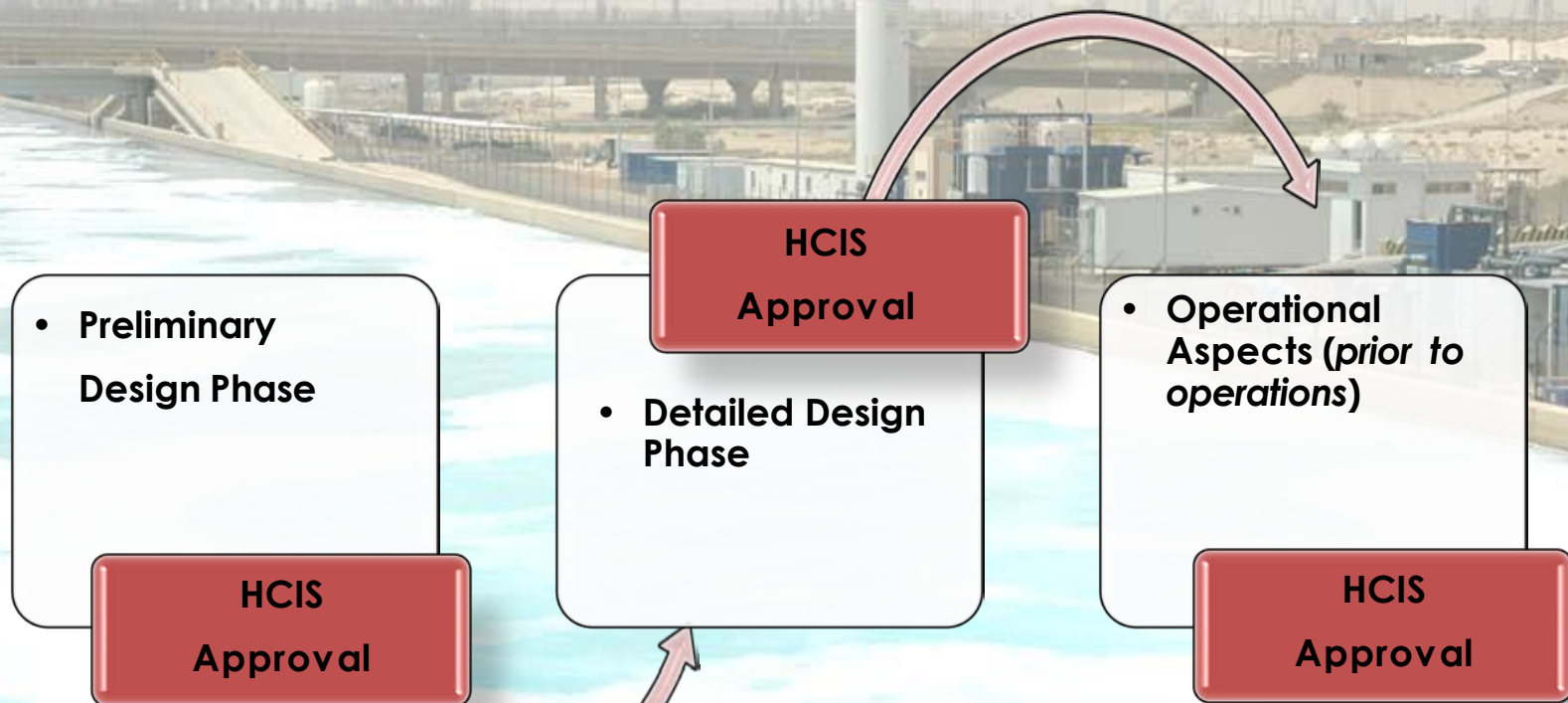
\* New SAFs

# Safety Directives Application

5.1.1	The HCIS has the ultimate authority to administer the directives.
5.1.2	The Host recent versions of HCIS Directives supersede others.
5.1.3	The HCIS Directives are applicable to all existing and new facilities, the expansion of existing facilities, and upgrades.
5.1.4	FOs shall comply with the newer versions of the SAF directives and upgrade facilities unless they have already upgraded, or in the process of upgrading in accordance with the 2010 versions of SAF directives.
5.1.5	The FO shall not start safety and fire protection related work until HCIS approval of the final design and equipment.
5.1.6	Any major design or installation changes after HCIS approval shall be submitted to HCIS for concurrence.
5.1.7	The FO shall correct any deficiency identified by HCIS surveys and reviews.



# Safety Directives

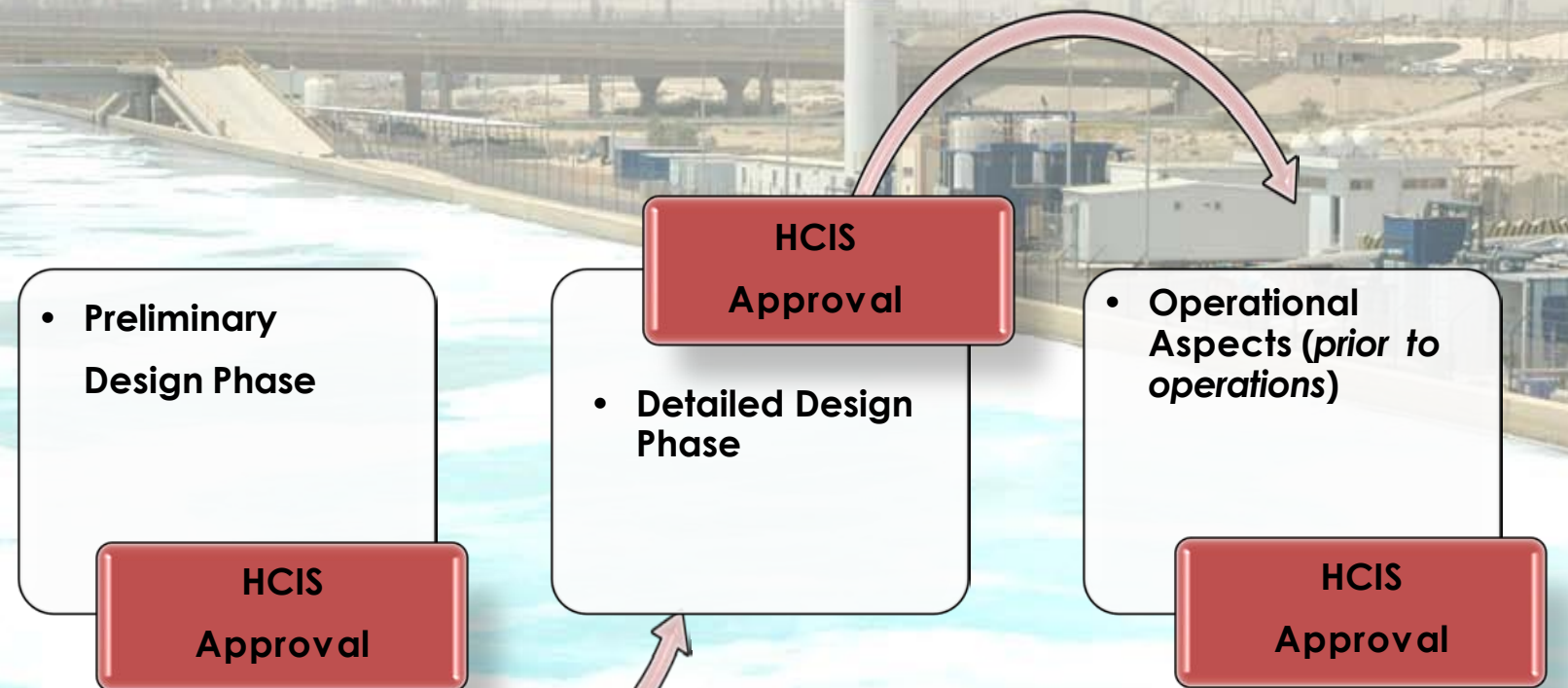


Normally carried out at the FEED stage to produce a document that meets HCIS requirements and an EPC can bid against

Produced by a local Saudi Fire contractor as part of a design, supply, install and commission contract.

Produced by either the owner or the EPC and must include all operational aspects of safety.

# Safety Directives



General plot plans showing fire main & pump house, site drainage, building spacing etc. and general specifications.

Detailed fire detection and protection layout including all types of extinguishing systems and hydraulic calculations.

Site operational systems including Incident Management System, permit to work system and all other safety related procedures.



# Safety Directives Procedure

- When the project is being designed at the FEED stage, a preliminary design for the site should be produced by the FEED engineers.
  - The FEED should take into account all 22 of the SAF standards.
    - The preliminary design has to be submitted to an HCIS approved consultant for approval before the plant owner submits to HCIS for final approval.
      - The HCIS consultant will produce a compliance matrix to show compliance/non-compliance to the HCIS codes and consult with the FEED engineers to then ensure that the preliminary design is 100% in compliance.
        - The preliminary design together with the compliance matrix is submitted by the plant owner to the HCIS for approval.



# Safety Directives Procedure

- The EPC will receive a bid package from the owner, based on the FEED preliminary engineering. This includes the requirement that the EPC selects a fire engineering company that meets the requirements of HCIS SAF 1.
  - The EPC should select fire contractor(s) that meets the requirements of the HCIS and submit the companies pre-qualification document to the HCIS consultant for comments. If the consultant approves the document, then EPC should submit to the plant owner for transmission to and approval by the HCIS.
    - The EPC should issue tender enquiries to the chosen approved contractor(s)
      - The EPC should award the contract for the design, supply, installation and commissioning of the fire systems to the approved fire contractor.



# Safety Directives Procedure

- The owner, in conjunction with EPC, will produce site operational systems including Incident Management System, Permit to work system and all other safety related procedures.
- The Incident Management System (IMS) shall meet the requirements of SAF20 and be integrated with the Site Security Systems and the Site wide fire alarm and fire protection system.
  - The IMS should be integrated from a hardware and software perspective to produce an easy to use system that can be used to:
    - ❖ Reduce loss of life
    - ❖ Reduce loss or damage to assets
    - ❖ Ensure any situation is controlled
    - ❖ Ensure the safety of personnel and Assets
    - ❖ Reduce hostile effects in the environment



# Safety Directives Procedure

- The IMS must provide
  - ❖ Fast, Effective Access to Critical Incident Data
  - ❖ Clear Command Communications
  - ❖ Common Operational Picture:
    - Shared across an incident
    - Shared between many agencies
  - ❖ Capacity to:
    - Operate on a massive scale
    - Operate over long timescales
    - Manage massive numbers of victims and resources
    - Minimize ecological and environmental damage



# Safety Directives Procedure

- The Incident Management System shall meet the requirements of the NFPA.
  - ❖ NFPA 450 Emergency Medical Services and Systems
  - ❖ NFPA 472 Competence of Responders to Hazardous Materials/ Weapons of Mass Destruction Incidents
  - ❖ NFPA 473 Competencies for EMS Personnel Responding to Hazardous Materials / Weapons of Mass Destruction Incidents
  - ❖ NFPA 1006 Rescue Technician Professional Qualifications
  - ❖ NFPA 1620 Pre-Incident Planning
  - ❖ NFPA 1670 Operations and Training for Technical Rescue Incidents
  - ❖ NFPA 1951 Protective Ensembles for Technical Rescue Incidents





# HCIS Reviews: Submission Documents

SAF-01	A list of non-compliances, if any
SAF-02	Risk Assessment Report Process Hazard Analysis Summary Pre Startup Safety Review (PSSR) Report
SAF-03	Building Siting Evaluation Building Occupancy Classifications Building Code Requirements Front-end Engineering Design Package
SAF-04	FP Systems Installation Drawings Detection and Alarm Cause & Effect Diagrams FP System Calculations Specific FP Equipment Data Sheets
SAF-05	Oily Water Sewer System Drawings Surface Water Drainage System Drawings
SAF-06	Plant Layout with Clearances marked
SAF-07	Risk Assessment Land Use Criteria
SAF-08	Storage Tank Data Fire Protection Systems for Storage Tanks
SAF-09	Fire Hazardous Area Map Fireproofing
SAF-10	Risk Assessment Land Use Criteria

# HCIS Reviews: Submission Documents

SAF-11	System Description Cause and Effect Diagram
SAF-12	Electrically Classified Area Maps
SAF-13	Based on Specific Request by HCIS
SAF-14	Risk Assessment for non-compliant Facilities Facility Map with Inter-building Distances Maximum Explosive quantities to be stored Structural details including barricade Magazine / Plant Ventilation Method Area Drainage System Documentation required in referenced SAFs Statement of Compliance signed by FO Management
SAF-15 / SAF-16 / SAF-17 / SAF-18 / SAF-19	Documentation required in referenced SAFs
SAF-20	Major drill dates (to be submitted 3 months prior)
SAF-23	Documentation required in referenced SAFs
SAF-24	Statement of compliance signed by FO management
SAF-25	Security Incident Report Major Incident Report Investigation Reports for Security and Major Incidents

# Submittal Rules

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| 7.2.1. | All submissions to the HCIS shall be in writing   |
| 7.2.2. | Additional documentation shall be submitted only when requested.  |
| 7.2.3. | All submissions shall be provided on a compact disk and in full size hard prints unless specifically allowed by the HCIS otherwise. |
| 7.2.4. | Resubmission shall be made when directed by HCIS.   |

**Thank you**