

Security Elements (Security Systems & Equipment)

**22 – 26 May 2022
Al Khobar - KSA**

Introduction

This five-day, intermediate level course for project managers, project engineers, and integrated project team discipline members addresses the key areas associated with capital project risk management. The course focuses on managing risk throughout the entire project life cycle.

This course is very much hands-on with class exercise case studies that focus on participant development of risk management deliverables. The class also addresses the methods that project team leaders can utilize to ensure that project team members and management buy in and are part of the risk management process.

Objectives

The Audience will learn, how to:

- Apply risk management to a capital project throughout the entire life cycle.
- Write a risk management plan and gain alignment with key stakeholders.
- Engage management and project team members in the risk management process.
- Systematically identify risks for your project.
- Determine those risks that are owned by the project team and those owned by management.
- Use risk assessment to analyze and prioritize risks for treatment.
- Develop robust risk mitigation plans.
- Control and monitor risk.
- Incorporate risk planning into project cost and schedule.
- Use the role of probabilistic cost and schedule in risk management.

Outline

Day 1:

SEC-01 General Requirements for Security Directives

8 Facility Security Classification (FSC)

8.1 General

8.1.1 The baseline security requirements definitions for a facility shall be based on its FSC.

8.1.2 Facilities shall be classified based on a five (5) level classification methodology with Class 1 being the highest level and Class 5 being the lowest level.

8.1.3 The business criteria for determining the FSC of a specific facility are defined in Appendix A.

8.1.4 Electrical substations and water pumping & storage facilities do not fit into the regular FSC criteria for facilities and their security requirements definitions are based on a Functional Classification (FC).

The details for the FC of Electrical Substations are in SEC-17 “Electrical Power Substations”.

8.1.5 HCIS reserves the exclusive right to determine the final FSC for a facility.

8.2 Business Criteria Analysis

- 8.2.1 The FO shall conduct a BCA to determine how the facility parameters match the business criteria specified in Appendix-A. This analysis shall be presented in the form of a Business Criteria Worksheet as shown in Appendix-B.
- 8.2.2 Each facility under the jurisdiction of HCIS shall have a FSC assigned based on the BCA.
- 8.2.3 Each criterion shall be addressed and its applicability to the facility in question shall be detailed so that the basis of the FSC recommendation can be evaluated by HCIS.
- 8.2.4 The FO shall complete this worksheet, with specific information and supporting documents, that addresses each applicable criterion.

Day 2:

8.3 Security Risk Assessment

- 8.3.1 The Security Risk Assessment (SRA) shall be executed by a HCIS approved Security Consultant as specified in SEC-15.
- 8.3.2 The FO shall conduct a SRA for the facility as specified below:
 - 8.3.2.1 An initial assessment of the facility to formulate the baseline security requirement.
 - 8.3.2.2 When the commissioning of a new facility is completed an SRA shall be conducted as follows;

x For Class 1 facilities	1 per year with follow-up meeting.
x For Class 2 facilities	1 per year.
x For Class 3 & 4 facilities	1 every 18 months.

- 8.3.2.3 When a new process or operation is proposed that may impact the existing security posture or as recorded by the latest SRA recommendations.
- 8.3.2.4 Expansion of existing facilities or any change in the physical layout of the facility that impacts the perimeter or gates.
- 8.3.2.5 When the threat substantially changes, at the discretion of the FO or when directed by HCIS
- 8.3.2.6 After a significant security incident.

8.3.3 The SRA shall incorporate the requirements stated in SEC-15.

8.3.4 The FO shall be responsible to ensure that the SRA shall be executed in accordance with any of the following SRA methodologies or standards:

- 8.3.4.1. American Petroleum Institute (API) - Standard 780, Security Risk Assessment Methodology for the Petroleum and Petrochemical Industries, First Edition, March 2013.
- 8.3.4.2. Center for Chemical Process Safety (CCPS), Guidelines for Analyzing and Managing the Security Vulnerabilities of Fixed Chemical Sites.
- 8.3.4.3. ASIS International: Risk Assessment Standard ANSI/ASIS/RIMS RA.1-2015.

Day 3:

SEC-05 Security Systems at Industrial Facilities;

1 Purpose

The purpose of this Security (SEC) directive is to provide requirements for the deployment of security systems at industrial facilities under the jurisdiction of the HCIS.

2 Scope

This Directive provides the minimum requirements for companies and establishments that are subject to the supervision of the High Commission for Industrial Security (HCIS), Ministry of Interior, for security systems used at industrial facilities.

Day 4:

5 General Requirements

5.1 Required Security Systems

The following security systems shall be installed at each facility as required by the facility FSC:

- | | |
|--|--------|
| x Access Control System | (ACS) |
| x Automatic License Plate Recognition System | (ALPR) |
| x Intrusion Detection & Assessment System | (IDAS) |
| x ID Management System | (IDMS) |
| x Video Assessment & Surveillance System | (VASS) |

5.2 System Design Constraints

5.2.1 Single Point of Failure

5.2.2 Redundancy

5.2.3 Hardware

5.2.4 Operating Systems

5.2.5 Communications & Data Networks

5.2.6 Database

5.2.7 Data Backup

5.2.8 External Systems Interface

5.2.9 Security

5.2.10 Power Supply

5.2.11 Environmental

5.2.12 Installation & Maintenance

5.2.13 Date/Time Synchronization

5.2.14 Tamper Protection

5.3 Access Control System

5.3.1 Architecture

5.3.2 Card Readers or Biometric Readers

5.3.3 Card Readers

5.3.4 Biometric Readers

5.3.5 Reader User interface

5.3.6 Single Entry Device

5.3.7 Alarm Annunciation

Status Display

Alarm Display

Printer

Audio Alarm Annunciation

Response Time

Operation

5.3.8 Emergency Release

5.3.9 ACS Cameras

5.3.10 Video Recording

5.3.11 Reporting Requirements

5.4 Automatic License Plate Recognition System

5.4.1 ALPR System Architecture:

5.4.2 License Plate Database

5.4.3 Cameras

5.4.4 Illuminators

5.4.5 Optical Character Recognition System

5.4.6 Alarm Annunciation System

Day 5:

5.5 Intrusion Detection & Assessment System

5.5.1 Cameras & Sensors

5.5.2 Intrusion Detection & Annunciation

5.5.3 User Interface & Displays

5.5.4 Performance Requirements

5.6 ID Management System

5.7 Video Assessment & Surveillance System

5.7.2 Geospatial Mapping Requirements

5.7.3 VASS Imagery Processing

5.7.4 Camera Placement

5.7.5 Lighting

5.7.6 Long-Range Surveillance

5.7.7 Video Recording

5.8 Camera Specifications

5.8.1 Image Quality

5.8.2 Focal Length & Zoom Capability

5.8.3 Field of View

5.8.4 Interface

5.8.5 Alarm Generation

5.8.6 Camera Housing

5.9 Plant Control Room

5.10 Integration Requirements

5.11 Security Control Center

6 Application of Requirements

7 Proof of Compliance

Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a binder containing a copy of the presentation slides and handouts
- Post-assessment

Program Support

This program is supported by interactive discussions, role-play, case studies and highlight the techniques available to the participants.

Schedule

The course agenda will be as follows:

- | | |
|---------------------|------------------|
| • Technical Session | 09.00-10.00 am |
| • Coffee Break | 10.00-10.15 am |
| • Technical Session | 10.15-12.15 noon |
| • Coffee Break | 12.15-12.45 pm |
| • Technical Session | 12.45-02.30 pm |
| • Course Ends | 02.00 pm |

Course Fees*

- **6,500 SAR**
**The price including VAT 15%*