Sample Case Study

Exam Types:

CFSE/CFSP

- Process Safety (Applications)
- Safety Hardware Development
- Safety Software Development
- Machinery Safety (Applications)
- Automotive Safety

CACE/CACS

- Integration Cybersecurity
- Automation Cybersecurity
- Software Development Cybersecurity

Candidate Check List

Application/Code of Conduct Due 2 weeks before exam	☐ Yes	☐ No
Education (E-mailed COPY of diploma and/or transcripts) Due 90 days after exam	☐ Yes	☐ No
Case Study (CFSE/CACE ONLY) Due 90 days after exam	☐ Yes	☐ No
Referee Statements CFSE/CACE (QTY 4) CFSP/CACS (QTY 2) Due 90 days after exam	☐ Yes	☐ No
Payment (2Checkout.com or academy@exida.com) MUST e-mail receipt for academy@exida.com or PO Due 2 weeks before exam	☐ Yes	☐ No

E-mail saved Case Study in **PDF format** to:
CFSE Administrator
admin@exidacfse.com

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IMPORTANT!: ALL information provided on this form must be **TYPEWRITTEN** (Handwritten Case Studies will **NOT** be accepted).
This form should be filled out by the candidate.

Name as documented on application

First Name		Middle Initial		Last Name	

Case study summary demonstrating my skills, knowledge, and responsibility for a significant element of the safety lifecycle in accord with the relevant areas of 61508/61511/62061. Process Safety Applications August 2006

My case study example is a project I worked on in 2005 where I was the process safety engineer responsible for coordinating the hazard identification and SIL target selection / layer of protection analysis activities for a an oil refinery upgrade project with an overall capital budget of approximately US$5 million. The process specifics of the project are proprietary however it involved several distillation columns plus a number of heat exchangers and pumps. The overall work process was guided by existing company procedures that have not been formally audited against 61511 but were generally consistent with the 61511 safety lifecycle.

After others on the team had confirmed the process flow diagram for initial project work, and the P&ID was complete at initial issue to the project, my first safety specific role was to participate in the HAZOP risk identification workshop providing process engineering input. I have participated in numerous HAZOPs before and as part of this team I made sure that we identified all likely hazards in all relevant modes of operation as required by 61511. After the HAZOP documentation was complete, I developed the list of potential safety instrumented functions, which was then reviewed by the instrumentation lead. This list of potential SIFs was one of the primary inputs to the SIL target selection workshop.

Since I have participated in a number of SIL target selection workshops in the past and provided input to the company engineering procedure, I was given the task of leading the workshop. As SIL target workshop leader, I was responsible for confirming participation from all of the relevant areas including maintenance, operations, process, instrumentation, project, health and safety in accordance with both 61511 and our company guidelines. I was similarly responsible for ensuring that we had the current P&IDs, process flow sheets, HAZOP report, company risk matrix and other documentation for the workshop in accordance with company procedure and 61511.

For the SIL/LOPA workshop itself, we used a quantitative risk matrix method with initiating event, basic consequences, and layer of protection effectiveness estimates based on the expert judgement of the team. Since a number of the team had not participated in such a workshop before, I was responsible for presenting the company introductory training material for the workshop. During the workshop we noted several functions where additional offline analysis was required to refine the estimates on both consequence and layer of protection effectiveness values. We evaluated a total of 49 potential SIFs with 31 functions that did not require a SIL rating, 13 SIL 1, four SIL 2, and one SIL 3 function assuming the initial estimated SIL levels for the pending functions are not changed. I was also responsible for ensuring that the results were clearly documented and sent on to the specification team to generate the safety requirements specification.

Although I had continuing process engineering responsibility for the project, my other safety lifecycle responsibilities were relatively limited and basically consisted of providing general process engineering review for elements of the installation, commissioning, operations planning and start up of the new equipment and its safety system.

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I certify that the statements above (including any attachments submitted) are accurate to the best of my knowledge. I hereby authorize the Board to verify any information submitted. I understand that any falsification of information in the case study (or attachment) may cause for rejection or withdrawal of the CFSE/ CACE designation.

Although every effort will be made to keep my application confidential, I understand that the CFSE AB is under not obligation to keep confidential any statements, material or information that I submit.

Applicants Signature		Referee's Signature	
Date		Date	

Applicant MUST have a supporting statement from Referee in relation to the case study mentioned above.

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