

C&C report past examples

Bi. Ability to handle health, hazard and safety aspects: to apply appropriate principles, good practice, meet legislative requirements etc

Example 1	<p>I attended a HAZOP for a new inlet works at a wastewater treatment works as an observer to gain experience. I then participated in two HAZOPs and the associated "Access, Lifting and Maintenance Reviews" for XXXX and XXXX projects described in questions Aii and Aiv.</p> <p>For the pilot plants at XXXX and XXXX described in questions Aiv and Av, I was responsible for producing risk assessments for the installation and operation of the pilot plants for use by contractors and process scientists, and ensuring H&S procedures were followed such as COSHH procedures, the use of access certificates and site inductions.</p> <p>I have arranged site visits for design teams, graduate engineers and work experience students and was responsible for using risk assessments to identify any onsite hazards, ensuring participants were properly inducted and had the appropriate personal protective equipment.</p> <p>I have received a range of H&S training to enable me to safely carry out my role as a process engineer (see CPD report for more details). The IOSH Managing Safety course gave me an understanding of health and safety law, accident causation and prevention, risk management and behavioural science.</p> <p>Through training on the Construction (Design and Management) Regulations 2007 (CDM) I understand my responsibilities as a Designer and apply them in my everyday work. These are to identify hazards early on in the design process, eliminate and reduce hazards as far as reasonably practical and provide adequate information about any risks associated with the design.</p> <p>For example when designing a chemical phosphorous removal system at XXXX I specified ferric sulphate rather than ferric chloride, as ferric sulphate causes less corrosion and so it safer to store. I also checked that the appropriate bunding of the chemical storage area had been included in the project scope.</p>
Example 2	<p>I am the EHS Advisor/Safety Engineer in the hazardous area committee for reviewing hazardous area assessments whenever there is a change to process materials, process, operating conditions and when a new equipment is brought into a hazardous area. I am the co-author of the current site hazardous area procedure.</p> <p>My role involves leading HAZOPs. I have attended the IChemE HAZOP Leadership and Management course as a development opportunity.</p> <p>I review 'Permit to Work' issued to ensure it is being filled out correctly and it is used appropriately.</p> <p>I have recently completed and graduated with a Diploma in the National Examination Board of Safety and Health.</p> <p>I provide advice to site to ensure that legislative requirements and good EHS practices are in place across site.</p> <p>I provide authoritative EHS advice to multi-disciplinary project teams dealing with site or area EHS development issues taking account of statutory and corporate requirements and site business objectives.</p> <p>I promote and monitor to the highest levels of EHS performance in line with statutory and corporate requirements.</p>

<p>Example 3</p>	<p>A technologist at an oil refinery, I carry out formal safe audits and field observations and suggest improvements to plant procedures and work methods. One such recommendation was for access and directions to an emergency safe haven in a plant area to be improved.</p> <p>As a process engineer with an EPC contractor, I evaluated the safety implications of increased throughput on an offshore oil production facility operated by an IOC. The increased throughput was from processing fully stabilized crude oil from an adjacent field in addition to plans to increase recovery at the local field. Specifically, I modelled the production system hydraulics (with the aid of specialist software) to investigate the impact of liquid surge (during emergency shutdown) on existing relief capacity and pipeline design pressures. The scenarios studied incorporated different production profiles, pipeline configurations and valve operation modes during emergency shutdown. My findings, which were accepted by the client, showed that the existing relief tank capacity and pipeline design pressures were satisfactory for the planned service.</p> <p>As a process engineer with an EPC contractor, I was part of a team of process engineers that undertook a flare and blowdown review of process installations in an oil field offshore Denmark. Specifically, I identified blowdown blocks around process equipment containing significant inventory from P&IDs and modelled gas blowdown using the depressurization utility module of the HYSYS software. This was for fire and non-fire cases. I assessed if depressurization to the lower of 100psig or 50% of the system pressure could be achieved in 15 minutes, as stipulated by API521. Based on the above findings, I made recommendations to the client vis-à-vis the resizing of non-compliant relief orifices.</p>
<p>Example 4</p>	<p>I raise and approve permits to work for contractors completing engineering and building work on site, including review of method statements and risk assessments. Specific risks within the site are considered, both in terms of task safety (e.g. we use large volumes of alcohols in some products and work in this area must take into account ignition risks from tools and equipment as well as more obvious "hot work") and in terms of customer safety via product quality (eg management of dust creation, air movement, potential product contamination).</p> <p>I have managed improvement and upgrade works within hazardous zoned areas, including review of the required ATEX zoning within the area (moving from previous over specified blanket zoning to more pragmatic approach) plus review of electrical and mechanical equipment suitability.</p> <p>During design stage for a new batch production process to be implemented on existing equipment, I took a lead role in the HAZOP for the project. Through my knowledge of the existing plant that the new process would be implemented on, the team proposed several safety interlock devices to improve the operational safety of the production team who would be manufacturing the product.</p> <p>I regularly support preparation for audits by HSE, MHRA and other regulatory bodies with safety, environmental or GMP focus, and must ensure that both the projects I implement and the documentation I produce meets the relevant requirements, eg PUWER assessments and IQ/OQ documentation.</p>