



ERSG/Project/FS/001/09

PROJECT:
INTEGRATED HAZOP / SIL

OUR SERVICES COVER THE
FOLLOWING AREAS:

- Process Hazard Analysis
- Enterprise Risk Management
- Project Management
- RUBI-Software
- Business Continuity Systems
- Process Safety Management
- Risk Training Solutions



ARAMCO: JU'AYMAH GAS PLANT INTEGRATED HAZOP / SIL STUDY

Project Intro.

ارامكو السعودية
Saudi Aramco



INDUSTRY: PETROCHEMICAL

SECTOR: OIL & GAS

JGP process engineers were researching ways to complete HAZOP and SIL assessments in a more effective and efficient way. A unique method was developed by ERSG consultants to conduct the HAZOP and SIL assessments in an integrated fashion.

The method would include the integration of HAZOP and SIL assessments as one using a combination of resources. ERSG was awarded a contract C. C. NO. 214700—to commenced delivery on 3 October 2009.

Project Scope

The project scope included a HAZOP/SIL study for the NGL Fractionation Modules (I, II and III) and Rerun operations at Area-2, R84-Fractionation Units. The HAZOP was carried out on normal, start-up and shutdown procedures. The work included one fractionation module and rerun unit consisting of 8 columns, 38 vessels, 1 tank and 202 P&ID drawings.

ERSG provided a project plan and schedule for each study that covered the following stages:

- Preparation for HAZOP/SIL study
- Conducting an integrated HAZOP/SIL study
- Final feedback, report submittal and integrated database

INTEGRATED HAZOP / SIL APPROACH SAVED 30% COST

Project Results

The integrated HAZOP/SIL project resulted in the following outcomes for the company and participants:

- 1: A 30% costs saving on the project due to an integrated HAZOP/SIL study
- 2: A PHA software package licensed to JGP
- 3: A single integrated HAZOP/SIL database
- 4: Highly skilled facilitator assisting with the determination of SIL's and oil and gas operations managers as HAZOP leaders
- 5: Identifying areas of improvement within the operations and maintenance management of the plant.
- 7: HAZOP certificates of attendance for all participants of 4 days or longer
- 8: Corrective action system included in the software database

CONTACT DETAIL

Enterprise Risk Solutions
Group Limited
P O Box 751
Albany Creek
QLD 4037
AUSTRALIA

Phone: +61 7 3325-0034
Fax: +61 7 3325-2946
E-mail: admin@ersgltd.com

WEBSITE: www.ersgltd.com

SOFTWARE APPLICATION

ERSG used the Lihou HAZOP software for the duration of the project which has resulted in JGP having a single HAZOP/SIL database that includes all the risk identified during the HAZOP and the SIL's assigned. All risks considered too high have been allocated to a manager to action and implementation progress will be monitored by the department through the software. The software can also be used for any future PHA studies including FMEA, FTA etc.