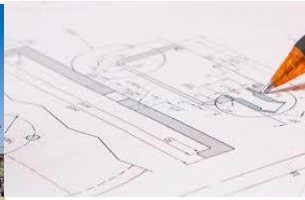
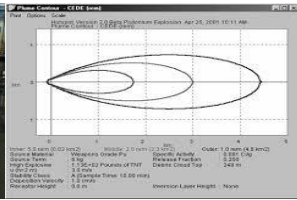
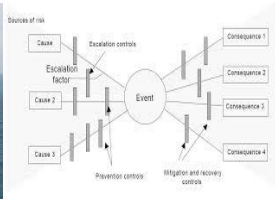


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PROCESS SAFETY AND INTEGRITY



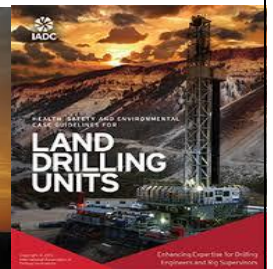
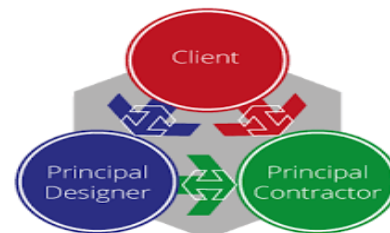
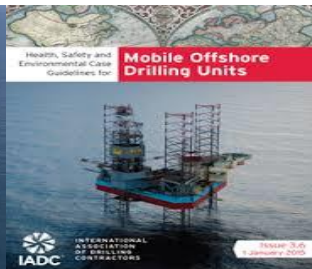
Hughes Risk Management Example Projects

Sample Process Safety and Integrity Studies				
Client	Basis	Location	Project	Scope
Qatar Gas Company	Direct	Doha and Raslaffan	Technical Authority for QG 3 and 4 project scopes	Provided support and guidance for the integration of new build facilities and hook up to existing. Developed HSE Cases and Performance standards for the facilities on and offshore. Interaction with Maersk drilling for the wells campaign.
BGTT	Direct	Trinidad	Dolphin, Poinsettia, Hibiscus, Beachfield and Evergreen facilities	Fire, Explosion and Risk Management review of all facilities and development of performance standards and outline WSE.
BGTT	Direct	Trinidad	Beachfield and Evergreen facilities	Construction and expansion HazId and Envid with all interconnection HazOp study
BGTT	Direct	Trinidad	Dolphin Platform	Passive fire protection constructability project for lightweight and novel design blast and fire wall
Repsol	Direct	Trinidad	Samman, Poui and Teak	Overall risk assessment and EERA review of the platforms and development of ALARP profile using bowties and QRA. Risk assessment of Well Work over (HWO) programmes and risk reviews including SIMOPS.
Wood Group	Direct	Aberdeen	BP Andrew	Technical lead for HSE and integrity work on the BP Andrew expansion project. Hazop, SIL, LOPA, QRA (overview) and performance standards and WSE development. HSE Case updates.
Petrofac Sharjah	Sub Contract	Sharjah	Qatar	Flare development and new compression facilities at Ras Laffan which included interfaces with existing facilities. Hazop, Risk Assessment, Flare dispersion and SCE listing.
TTOPCO	Sub contract	Kurdistan	CPF1, TLS, TPF and Pipelines	HAZID, Bowtie Analysis QRA, FERA and ALARP Risk reduction studies
TTOPCO	Direct	Kurdistan	CPF1, TLS, TPF and Pipelines	Interconnection HazOP study
TTOPCO	Direct	Kurdistan	CPF1, TLS, TPF and Pipelines	SCE and SECE Performance standards development and uploading into CMMS with WSE programme
Massy Wood group	Direct	Trinidad	EPC for Toucan and EDZ facilities	Hazop, Hazid, EERA, DSA and SCE listing, performance standards and QRA
ECI	Direct	Germany	CE Marking and installation risk reviews	Risk assessment and CE marking review for canning, conveying and safety interlock systems. SIL and FMECA studies used
ECI	Direct	KSA	Integrated Systems for canning and conveying	Risk assessment and CE marking review for canning, conveying and safety interlock systems. SIL and FMECA studies used

Hughes Risk Management Example Projects

Sample Process Safety and Integrity Studies				
Client	Basis	Location	Project	Scope
Centrica	Sub Contract	Yorkshire	Compression facilities upgrade	Construction and expansion HazId and EnvId with all interconnection HazOp study
Wood Group	Direct	Aberdeen and Glasgow	BP Andrew	Technical lead for HSE and integrity work on the BP Arura project expansion project. Hazop, SIL, LOPA, QRA (overview) and performance standards and WSE development. HSE Case updates.
Massy Wood group	Direct	Trinidad	EPC for Repsol Poui and Teak expansion projects	Hazop, Hazid, EERA, DSA and SCE listing, performance standards and QRA
KOC	Staff and Sub Contract to ABS	KSA	Facilities review and upgrade technical Safety support	HazOp of existing facilities and interface with new compression and booster stations. Development of overall QRA for the complete facility including Offshore platforms and export lines
KOC	Staff and Sub Contract ABS	Kuwait	Asset Integrity Management	Using existing QRA outputs review of all KOC booster stations and pipeline p onshore facilities to determine integrity levels and establish feedback and performance indicators for CMMS
Wood Group	Direct	Aberdeen and Glasgow	BP and Talisman	Technical lead for HSE and project Hazop, SIL, LOPA, QRA (overview) and performance standards and WSE development. HSE Case updates
Witco Surfactants / Goldsmith	Direct with RMC	Workington	HazOp of DMS and Tanker Loading systems	Conducted HazOP on DMS tankage and loading facilities Tanker transport risk assessment Offside DMS f and n curve linked to established ERP
Pentagon Chemicals	Direct with RMC	Workington	Risk assessment and overall PHA	Conducted full risk assessment of the Workington facilities via workshops and QRA presentations. PHA of Pressurised systems and storage for expansion considerations EIA overview
Gates Chemicals	Direct with RMC	Warrington	Risk assessment and overall PHA	Conducted full risk assessment of the Warrington facilities via workshops and QRA presentations. HazOP revalidation of processing facilities EIA overview
Chemoxy	Direct with RMC	Middleburgh	Risk assessment and overall PHA	Conducted full risk assessment of the Workington facilities via workshops and QRA presentations. Offsite sensitivity plots for chemical releases EIA overview

HSE Cases and Regulatory submissions – Drilling and Wind



Hughes Risk Management Example Projects

Sample HSE Case and Regulatory Submission Projects – Wind, Drilling Offshore and Onshore				
Client	Basis	Location	Project	Scope
Shelf Drilling	Sub contract	Dubai and selected regions	IADC HSE Cases and MHRA	HSE Case development for 1o Jack up drilling units with MHRA reports and bowtie analysis. HSE Case and MHRA report For 3 X Jack ups included full ADNOC JUIMS compliance and FERA/QRA studies and bowtie analysis Combined Operations plan review for DOHA and on hire to Maersk Drilling ERP updates
Transocean	Sub contract	Nigeria and Gabon	IADC HSE Cases and MHRA	HSE Case development for 2 Jack up drilling and 2 semi-submersible units with MHRA reports and bowtie analysis.
Hercules	Sub contract	KSA	IADC HSE Cases and MHRA	HSE Case development for a Jack up drilling units with MHRA report and bowtie analysis.
Exalo Drilling	Sub contract	Ethiopia	IADC HSE Cases and MHRA	HSE Case development for a land rig operations with MHRA report and bowtie analysis. Ex Register and ATEX review
Weatherford Drilling	Sub contract	Kenya	IADC HSE Cases and MHRA	HSE Case development for a land rig operations with MHRA report and bowtie analysis
SMP Drilling	Sub contract	Kenya	IADC HSE Cases and MHRA	HSE Case development for a land rig operations (SMP5 and 6) with MHRA report and bowtie analysis HSE Case training package for SMP 6
TTOPCO	Sub contract	Kurdistan	IADC HSE Cases and MHRA	HSE Case development for a land rig operations with MHRA report and bowtie analysis
Energy Drilling	Direct	China	IADC HSE Cases and MHRA	HSE Case and MHRA report For 3 X Tender Assist Barges included full Hazard. SCE programme and bowtie analysis
Seadrill	Sub contract and Direct	Brazil Singapore UAE Ghana China	IADC HSE Cases and MHRA IADC HSE Cases and MHRA IADC HSE Cases and MHRA IADC HSE Cases and MHRA IADC HSE Cases and MHRA	HSE Cases and MHRA report For 2 X UDW drilling units included full Hazard , SCE programme and bowtie analysis HSE Case and MHRA report For 1 X Tender Assist Barge included full Hazard, SCE programme, performance Stds and bowtie analysis HSE Case and MHRA report For 1 X Jack up included full ADNOC JUIMS compliance and FERA/QRA studies and bowtie analysis HSE Case and MHRA report For 1 X Semi-Submersible included full Hazard, SCE programme, performance Stds and bowtie analysis HSE Case and MHRA report For 1 X Jack up included full Hazard and SCE programme and bowtie analysis

Hughes Risk Management Example Projects

Sample HSE Case and Regulatory Submission Projects – Wind, Drilling Offshore and Onshore

Client	Basis	Location	Project	Scope
Shelf Drilling	Sub contract	Dubai and selected regions	IADC HSE Cases and MHRA	HSE Case development for 10 Jack up drilling units with MHRA reports and bowtie analysis. HSE Case and MHRA report For 3 X Jack ups included full ADNOC JUIMS compliance and FERA/QRA studies and bowtie analysis Combined Operations plan review for DOHA and on hire to Maersk Drilling ERP updates
Diamond Offshore	Sub contract	Australia	HSE Cases and MHRA	HSE Case development for 3 Ocean class semi-submersible units with MHRA reports ERP updates
Attwood Oceanic's	Sub contract	Australia	HSE Cases and MHRA	HSE Case development for 2 Jack Ups and a Simultaneous production operation with MHRA reports ERP updates
Tullow Oil	Sub contract	London		Supporting the development of the HSE Case Directive and guidance material for contractor integration of HSE Case into Tullow operations Development of HSE Case assessment tools and education packages
Jan De Nul	Direct	Belgium	HSE Case and MHRA	Development of a HSE Case for North Sea Non Hydrocarbon operations with full MHRA and support studies CDM project file for Wind Energy installation projects and Case of Safety Associated training packages
Transocean	Sub contract	Nigeria and Gabon	IADC HSE Cases and MHRA	HSE Case development for 2 Jack up drilling and 2 semi-submersible units with MHRA reports and bowtie analysis.

HSE Cases and Regulatory submissions – Onshore Seveso and Offshore HSE Case Regulations



Hughes Risk Management Example Projects

Sample HSE Case and Regulatory Submission Projects – Offshore Production and Onshore Seveso				
Client	Basis	Location	Project	Scope
ConocoPhillips	Staff Experience and Sub Contract	Teesside	COMAH report, QRA and Sensitivity Studies	Undertook a full COMAH HSE Case submission project working with Haden Freeman Engineering which included : Case development and submission document Risk assessment programme and QRA IR, PLL, IRPA and F and N Curve Sensitivities ERP integration, BATNEEC review and IPPC interaction
Belvidere Chemicals	Staff Experience and Sub Contract	London	COMAH report, QRA and Sensitivity Studies	Undertook a full COMAH HSE Case submission project working with Haden Freeman Engineering which included : Case development and submission document Risk assessment programme and QRA IR, PLL, IRPA and F and N Curve Sensitivities ERP integration, BATNEEC review and IPPC interaction
NOVA Chemicals	Staff Experience and Sub Contract	Carrington	COMAH report, QRA and Sensitivity Studies	Undertook a full COMAH HSE Case submission project working with Haden Freeman Engineering which included : Case development and submission document Risk assessment programme and QRA IR, PLL, IRPA and F and N Curve Sensitivities ERP integration, BATNEEC review and IPPC interaction
Mobil North Sea St Fergus Terminal	Staff Experience and Sub Contract	St Fergus Scotland	COMAH report, QRA and Sensitivity Studies	Undertook a full COMAH HSE Case submission project working with Haden Freeman Engineering which included : Case development and submission document Risk assessment programme and QRA IR, PLL, IRPA and F and N Curve Sensitivities ERP integration, BATNEEC review and IPPC interaction Interface HazOP for incoming gas pipeline and ESD functions
Elf Atochem	Staff Experience and Sub Contract	Runcorn	COMAH report, QRA and Sensitivity Studies	Undertook a full COMAH HSE Case submission project working with Haden Freeman Engineering which included : Case development and submission document Risk assessment programme and QRA IR, PLL, IRPA and F and N Curve Sensitivities ERP integration, BATNEEC review and IPPC interaction HSEMS updates from the COMAH review and assessment process

Hughes Risk Management Example Projects

Sample HSE Case and Regulatory Submission Projects – Offshore Production and Onshore Seveso				
Client	Basis	Location	Project	Scope
Hyder	Staff Experience and Sub Contract	Velindre	COMAH report and QRA MAPP programme for reservoir stations	Undertook a full COMAH HSE Case submission project working with Haden Freeman Engineering which included : Case development and submission document Risk assessment programme and QRA IR, PLL, IRPA and F and N Curve Sensitivities ERP integration, BATNEEC review and IPPC interaction MAPP for stations
INCO Refining	Staff Experience and Sub Contract	Swansea	COMAH report, QRA and Sensitivity Studies	Undertook a full COMAH HSE Case submission project working with Haden Freeman Engineering which included : Case development and submission document Risk assessment programme and QRA IR, PLL, IRPA and F and N Curve Sensitivities
BGTT	Direct	Trinidad	COMAH report, QRA and Sensitivity Studies	Undertook a full COMAH HSE Case submission project for the Onshore Beachfield and Evergreen processing and reception facilities. This was not a regulatory submission requirement but BGTT policy. Case development and submission document Risk assessment programme and QRA IR, PLL, IRPA and F and N Curve Sensitivities ERP integration, BATNEEC review and IPPC interaction
BGTT	Direct	Trinidad	HSE Case, QRA and Sensitivity Studies	Undertook an update of existing HSE Cases for the Dolphin, Poinsettia and Hibiscus platforms. This was not a regulatory submission requirement but BGTT policy Case development and submission document Risk assessment programme and QRA updates from FERM project
ELF	Staff Experience and Sub Contract	UK, Norway and France	HSE Case, QRA and Sensitivity Studies	Template and gap analysis for Offshore HSE Case to meet both UK HSE and Norwegian NPD Regulations. HSE Case development and support studies (Post Cullen) HSEMS overhaul from corporate through regions and assets
Dolphin Energy	Staff Experience and Sub Contract	UAE and Qatar	COMAH report, QRA and Sensitivity Studies	Undertook a full COMAH HSE Case submission project and Offshore Facilities working which included : Case development and submission documents (not regulatory required but passed to Qatar and UAE authorities) Risk assessment programme and QRAs IR, PLL, IRPA and F and N Curve sensitivities ERP integration

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Occupational Health Safety and Environment



Hughes Risk Management Example Projects

Sample Occupational Safety Health and Environment Projects				
Client	Basis	Location	Project	Scope
NPCC	Staff Experience and Sub Contract	UAE	Development of HSEMS and Training programmes	Development of full HSEMS and associated procedures for Onshore construction and offshore pipe lay, heavy lift and hook up activities.
ADCO	Sub Contract	UAE	Contractor HSEMS integration project and evaluation/acceptance system	Contractor selection and integration/acceptance assurance system was developed for ADCO for the screening of all contractors. This complied with the ADNOC d guidance for contractor selection and consisted of questionnaires, scoring systems and selection criterion
ADGAS	Staff Experience and Sub Contract	UAE	Audit and Gap Analysis	HSEMS GAP analysis for the Das Island production and loading operations linked back to the BP Golden rules and core values
BP	Staff Experience and Sub Contract	Sharjah	Audit and Gap Analysis	HSEMS GAP analysis for the Sharjah production and pipeline operations linked back to the BP Golden rules and core values
BGTT	Direct	Trinidad	Audit and Inspection protocols for Onshore and Offshore facilities linked to BG VAP programme	Developed audit and inspection protocols to support parallel work on a FERM project and HSE Case update for the 3 offshore and 2 onshore facilities. This was closely linked to the HSEQ requirements in the BG VAF system.
Dolphin Energy	Staff Experience and Sub Contract	UAE and Qatar	Development of HSEMS and Training programmes	Development of full HSEMS and associated procedures for Onshore and Offshore oil and gas operations for new ventures in Qatar and reception facilities in the UAE
Qatar Gas	Direct	Qatar	Audit and Inspection protocols for Onshore and Offshore facilities linked to Shell and ConocoPhillips guidance	Developed audit and inspection protocols to support parallel work on a HSE Case update for the Qatar Gas 3 and 4 project. This was closely linked to the HSEQ requirements in the Shell system.
Elf Atochem	Staff Experience and Sub Contract	Runcorn	HSEMS and procedural updates	Development of full HSEMS and associated procedures for all aspects of the operations.

Hughes Risk Management Example Projects

Sample Occupational Safety Health and Environment Projects				
Client	Basis	Location	Project	Scope
ELF	Staff Experience and Sub Contract	UK, Norway and France	HSEMS and procedural updates	Update of corporate, regional and asset based HSEMS and procedural controls.
ECI	Direct	Carlisle	HSEMS and procedural updates	HSEMS system with full risk assessments using bow tie analysis for canning operations and conveying systems
Graffix	Direct	Carlisle	HSEMS and COSHH	Development of HSEMS, Risk Assessment and COSHH system for major sign and screen printing facility
M and J fencing	Direct	London	HSEMS, COSHH and procedural updates	Development of HSEMS, Risk Assessment and COSHH system for major Fencing company
Seadrill	Direct	Ghana	Training programmes	HSE Case awareness, Hazard workshops and Bowtie XP training programmes supporting HSE Case understanding and education programmes
Seadrill	Sub Contract	London	Corporate HSE Case directive support	Supporting the development of corporate directives for: HSE Case development and management Barrier Management
Seadrill	Direct	Singapore	Training programmes	HSE Case awareness, Hazard workshops and Bowtie XP training programmes supporting HSE Case understanding and education programmes
Energy Drilling	Direct	China	Training programmes	HSE Case awareness, Hazard workshops and Bowtie XP training programmes supporting HSE Case understanding and education programmes
RMC	Direct	Carlisle	Training programmes	Delivery of training programmes covering: Risk Assessment COSHH PUWER/LOLER Managing Safely BowTie ANALYSIS HazId, EnvId and HazOp
Repsol	Direct	Trinidad	HazId and EnvId	Undertook full HazId and EnvId for Poui, Toucan and Salman

Hughes Risk Management Example Projects

Sample Occupational Safety Health and Environment Projects				
Client	Basis	Location	Project	Scope
Centrica	Staff Experience and Sub Contract	Yorkshire	HazId and EnvId	Undertook full HazId and EnvId for new compression facilities for the Essington reception facilities including workshop and Regulatory integration with the local authorities
ZADCO	Direct	UAE	PHSSER review	Chair for the Upper Zakum PHSSER review for gates 1 through 6 and compliance with the ADNOC HSEIA process
Wood Group	Direct	Aberdeen	PHSSER Review	Chair for the BP Andrew PHSSER review for gates 1 through 6 and compliance with the ADNOC HSEIA process
Wood Group	Direct	Glasgow	PHSSER Review	Chair for the BP Aurora PHSSER review for gates 1 through 6 and compliance with the ADNOC HSEIA process
Pertofac	Direct	Sharjah	HSEQ design review	Chair for the HSEQ review for the design phase of the tankage, flare and offsite Pressurised systems for onshore processing facilities in Azerbaijan.
Saipem	Direct	Azerbaijan	PHSSER Gate 1 and 2 and HSEQ design review	Chair for the HSEQ review for the design phase of pipeline network interfaces with the Client BP
Cumbria Newspapers	Direct with RMC	Carlisle	CDM	Role of planning supervisor for the removal of waste form contaminated site to allow further developments and building.
Jan De Nul	Direct	Carlisle and Belgium	CDM	Developed programme and guidance for CDM 2015 compliance linked to the Jan De Nul HSEMS and HSE Case process
Ling construction	Direct with RMC	Penrith	CDM	Undertook roles to support Ling develop all required documentation under the CDM regulations for construction related building and decommissioning and provided role as planning supervisor for the overall project duration.
ECM	Direct with RMC	Carlisle and South Wales	CDM	Undertook roles to support ECM develop all required documentation under the CDM regulations and provided role as planning supervisor for the overall project duration.
Hyder	Direct with RMC	Swansea	CDM	Undertook roles to support Hyder develop all required documentation under the CDM regulations and provided role as planning supervisor for the overall project duration.