

Category	Guide word	Expanders
Control Methods/Philosophy	Operations Concept	1 train, x-trains, simplification, tie-in to existing infrastructure
	Maintenance Philosophy	Plant/train/equipment item, heavy lifting, access, override, bypass, commonality of equipment, transport
	Control Philosophy	Appropriate technology, (DCS/local panels), Converter / transition stations, substations
	Communications	Ship to shore, vessel to vessel
	Emergency Response	Isolation, ESD philosophy,
	Concurrent Operations	Production, maintenance requirements
	Start-up Shutdown	Modular or plant wide
Effect on Surroundings	Geographical Infrastructure	Location to other equipment, pipe line routing, proximity to other uses
Hydrocarbons	Crude oil under pressure	Remote change to live route
	Hydrocarbon gas under pressure	
Fire and Explosion Hazards	Stored Flammables	Improper storage, operator error (release), defect, impact, fire (mitigation measures include: substitute non flammable, minimise and separate inventory)
	Sources of Ignition	Electricity, sparks, hot surfaces (mitigation measures include: identify, remove, separate)
	Equipment Layout	Confinement, escalation following release of explosive or flammable fluid (operator error, defect, impact process control failure, corrosion), module layout/proximity, orientation of equipment,
	Fire Protection and Response	Active/passive insulation, fire detection, fire-fighting facilities
	Operator Protection	Means of escape, PPE, communications, emergency response, plant evacuation
Differences in Height	Personnel at height	
	Overhead equipment	
	Personnel under water	
Objects under Induced Stress	Objects under tension	
	Objects under compression	
Pressure	Bottled gases under pressure	
	Water under pressure	
	Non hydrocarbon gas under pressure	
	Air under pressure	
	Decompression	
Dynamic Situation	On land transport	
	On water transport	
	Equipment with moving / rotating parts	
	Use of hazardous hand tools	
Process Hazards	Inventory	Excess hazardous material
	Release of inventory	Excessive process stress, penetration by foreign bodies, process control failure, structural failure, corrosion
Environmental	Weather	
	Sub sea currents	
	Sea state	

Category	Guide word	Expanders
Utility Systems	Fire-fighting Systems Diesel Fuel Power Supply Inert Gas Waste Storage and Treatment Chemical/fuel Storage Compressed Air	CO ₂ , Halon, asphyxiation Anode, cathode
Toxic Gases	Toxic gas release Toxic solids release	H ₂ S, sour gas Water based muds, oil based sludges, cement dusts etc
Lifting Hazards	Access / Egress Requirements Heavy Lifting Requirements Concurrent operations Mobilization / demobilization Transport	Engineered loads, swinging loads
Environmental Damage	Discharges to Air Discharges to Water Discharges to Soil Contaminated Ground Facility Impact Waste Disposal Options Disturbance to Flora and Fauna Inability to Rehabilitate following disturbance Timing of Construction Site Clearance Noise Light	Fugitive emissions, energy efficiency Target/legislative requirements, drainage facilities, oil/water separation, discharge of drilling muds Drainage, chemical storage, diesel Previous use or events, disposal of soils Area minimisation, pipeline routing, environmental impact assessment Disposal of debris from grapnel Marine benthic community, mammals, birds, Fish, etc Seasons, periods of environmental significance. Disturbance to breeding areas (fish spawning, bird colonies) Site clearance onshore for drilling and auxiliary equipment
Construction	Tie-ins (shutdown requirements) Concurrent Operations Shutdown Heavy lifts Excavation Mobilisation / de-mobilisation Cable pulling	Interface with existing network Transfer from land to boat, general heavy lifts Winch line breaks (including winch line pulling plough), cable damage
Emergency response	Utility failures	Implications of part and total utility failures and compound failures Emergency lighting of plant and instrument panels, power for alarms, computers, telecommunications, heating and ventilation systems
	Fire and explosion	Prevention systems Fire and gas detection systems/alarms, Fire protection systems

Category	Guide word	Expanders
		Emergency procedures, training, escape, contingency plans Emergency shutdown and isolation arrangements Location of neighbouring plant units/communities, hazards created by others
	Relief systems	Relief philosophy, type of relief devices and reliability, relief valve discharge location, effect of de-bottlenecking on relief capacity
	Controls safeguarding	'Fail safe' philosophy Does the control scheme escalate a hazardous situation or extinguish it? Time available for operator intervention.
	Physical damage	Impact, dropped objects, transportation collision, vibration, corrosion
	Firewater systems	Firewater supply, deluge system, fire detection/ fighting training, containment of runoff
	Security	Security arrangements
	Safety equipment	Availability, location, personnel protection, eye wash stations/ showers, first aid/ medical resources, gas monitors, breathing apparatus, barrier guards
Quality and consistency	Sampling Reliability Inspection and testing	Contractual requirements Frequency of testing/ sampling, facilities for testing/ sampling, sampling procedure, calibration of automatic samplers, analysis of samples Storage, availability and testing of spares Testing of emergency and critical plant items
Operations	Procedures and documentation	Procedures for operations, maintenance, inspection and testing, emergency, engineering drawings, modification control Compliance with state/federal regulations Safety studies
	Commissioning Start-up Shutdown (planned and emergency) Maintenance	Sequencing, procedures, training, supervision, facilities Follow through operations for entire plant
Design controls	Materials of construction	Temperature/pressure rating, material specification breaks, corrosion lagging, personnel protection, protective coatings, structures
	Corrosion/ erosion	Cathodic protection arrangements, internal/external corrosion protection, stress corrosion cracking
	Services/ utilities required	Electricity, water, cooling water nitrogen, air, steam, other
	Design codes/ practices	Compliance with state/federal regulations
	Natural hazards	Earthquake, lightning, thunderstorms, flooding, high winds
	Design capacity / Overcapacity	Potential bottlenecks
	Electrical safety	Area classification, earthing
Aggressive Release	Acidic /Corrosive High / Low Temperatures Toxic Materials Process Releases Chemical Release	
Mechanical	Mechanical Handling facilities	

General

Category	Guide word	Expanders
Failure	Rotating & Reciprocating equipment Construction equipment	
Electrical	High Voltage Low voltage DC Static	

Location Specific

Category	Guide word	Expanders
Natural and Environmental Hazards	Climate Extremes	Temperature, waves, wind, dust, flooding, sandstorms, ice, blizzards, tides, currents, impacts during loading of cable onto vessels etc
	Water Depth	
	Lightning	
	Earthquakes	
	Erosion	Ground slide, coastal
	Subsidence	Ground structure, foundations, reservoir depletion
Created (Man-made) Hazards	Security Hazards	Internal and external security threats
	Terrorist Activity	Riots, civil disturbance, strikes, military action, political unrest, protest groups
	3 rd Party Interference	Anchoring, excavation, Inadvertent 3 rd part damage, collisions
Effect of the Project on the Surroundings	Geographical - Infrastructure	Plant location, plant layout, pipeline routing, area minimisation
	Proximity to Population	Public outrage
	Adjacent Land Use	Residential, Crops , Airfields, ROW, marine extraction, fishing activities, other Industry
	Proximity to Transport Corridors - Navigation	Shipping lanes, air routes, roads, etc Impact on Navigation Aids (i.e., compass), Maintenance support from vessels, Supply Routes
	Environmental Issues	Previous land use, vulnerable fauna and flora, visual impact
	Beach line drilling Social Issues	Directional drilling, social issues, environmental issues Local population, local attitude, social/cultural areas of significance, visual impact, pollution, archaeological sites.
Infrastructure	Normal Communications	Road links, air links, water links, existing cables (telecommunications), pipelines and other utilities
	Communications for Contingency planning	
	Supply Support	Consumables/spares holding
Environmental Damage	Discharges to Air	Flares, Vents, Fugitive emissions, energy efficiency
	Discharges to Water	Target/legislative requirements, drainage facilities, oil/water separation, discharge of drilling muds
	Discharges to Soil	Drainage, chemical storage, diesel
	Contaminated Ground	Previous use or events, disposal of soils
	Facility Impact	Area minimisation, pipeline routing, environmental impact assessment
	Waste Disposal Options	
	Disturbance to Flora and Fauna Timing of Construction	Marine benthic community, mammals, birds, Fish, etc Seasons, periods of environmental significance. Disturbance to breeding areas (fish spawning, bird colonies)

Location Specific



Category	Guide word	Expanders
	Site Clearance	Site clearance onshore for drilling and auxiliary equipment

Category	Guide word	Expanders
Reservoir	Geology Reservoir Fluids	Faults Running Sands Shallow Gas Overpressure High Temperature Impurities, H ₂ S, CO ₂ , mercury Contaminants Sand Composition / Phase
Mud / Cement / Chemicals	Toxic Asphyxiants Bottled gas Acids / Caustics Slips and Trips	
Drilling activities / Occupational	Dropped and swinging Objects Excavations Well Control Hydrogen Sulphide Release Gas Release Blowout - Lost circulation Mobile Equipment Electrical Working at Height Rotating Equipment Noise Explosives Fluid migration Compressed Air Welding Confined space	Kicks, LOC Hydrogen sulphide release during workover Drill floor area, Shale shaker/degasser, Platform Due to swabbing, low fluid viscosity (well underbalanced), well fluid loss, Blowout with BOP off during final completion Blowout with BOP installed Loss of containment due to incorrect operation or human error Damage to wellhead equipment Failure of chocks during BOP pressure test Plugged or obstructed choke and kill lines
Testing	Radioactive sources	

Category	Guide word	Expanders
Control Methods/ Philosophy	Operations Concept	1 train, x-trains, simplification, tie-in to existing infrastructure
	Manning Levels	Manned / Unmanned, Emergency Response, travel, access to experience pool, Accommodation
	Maintenance Philosophy	See Below
	Control Philosophy	Appropriate technology, (DCS/local panels), hydraulics, telemetry, alarms, interface
	Communications	Ship to shore, vessel to vessel, intercompany interface
	Emergency Response	Isolation, ESD philosophy, fire fighting, intercompany interfaces
	Concurrent Operations Start-up Shutdown	Production, maintenance requirements Modular or plant wide, interactions with 3 rd parties
General	Dropped Objects	Dropped travelling block. Elevators, BOP Failure of air driven winches including man-rider (dropped load) Dropped objects during fishing Drill string parting during jarring in fishing operations, during left hand torque in fishing ops Drill string parting during casing retrieval in fishing ops Dropped loose objects from derrick during jarring Cranes/gantry cranes (dropped crane loads) Dropped casing / dropped tubulars Falling objects from mast/derrick Dropped Christmas tree
	Structural Failure / Rupture / Overpressurisation	Barite / cement storage tank rupture
	Mechanical Failure	Failure of tong makeup/breakout chains Stabbing board failure Lifting/hoisting equipment failure
	High pressure hose and associated fittings failure / high pressure lines / chocks	
	fall from heights	
	iron roughneck collision with personnel	
	stuck pipe	
	crane colliding with derrick/mast	
	evacuation / escape routing	
	severe weather	
	failure of emergency power/generators to drilling facilities	
	man riding drill floor	

Category	Guide word	Expanders
	simultaneous operations	
General	Rigging Down Drilling Facilities	<p>Derrick structure falls whilst lifting A-Frame</p> <p>Rig packages drop onto wellhead/platform facilities</p> <p>Vessel engine failure during heavy lift operations</p> <p>Uncontrolled load/crane movements during heavy lifts</p> <p>Lifting equipment failures (sling, shackle, pad eye etc)</p> <p>Crane failure whilst transporting load</p> <p>Dropped objects</p> <p>Working at heights</p> <p>Hydrocarbon ignition due to hot work</p> <p>Heavy lift operations</p> <p>While working on scaffolding, person slips and falls into sea</p> <p>Escape routes during rigging down on the platform</p> <p>Chemical spills to sea</p> <p>Equipment on vessel shifts and strikes personnel</p> <p>Tank toppling</p> <p>Declamping</p>
	Lifting Rig And Supporting Equipment In Place	<p>Sub structure tanks/vessel falling off if not secured</p> <p>Lifting derrick A-Frame on rig floor during rigging up</p> <p>Escape routes during rigging up</p> <p>Dropped BOP stack</p> <p>Working at heights/scaffolding</p> <p>Hot work-ignition source fire</p> <p>Simultaneous operations hook-up, commissioning, testing etc.</p> <p>Lifting operations</p> <p>Crane collision during simultaneous operations</p> <p>Crane operations</p> <p>Strong winds</p> <p>collision of vessel with platform whilst offloading cargo</p> <p>Derrick structure collapses</p> <p>Loose packages on vessel</p> <p>Dropped crown section</p> <p>Diesel line failure</p> <p>Radiated heat from flare</p>
Hazardous Substances	Fire/Explosion	<p>Failure of fire water system to rig facilities</p> <p>Well fluid fires during drilling</p> <p>Fire/explosion in mud room from returns</p> <p>Vapour cloud explosion on the sea</p> <p>Vapour cloud explosion in mud pump room</p> <p>Vapour cloud explosion on drill floor area</p> <p>Fire in shale-shaker house, mud pit/pump room, sack store</p> <p>Electrical fire</p>

Category	Guide word	Expanders
Platform Functions / Activities	Subsurface Facilities	Wells Wellheads Gas Lift / Injection
	Surface Facilities	Flowlines Oil Processing Gas Compression
	Utilities	Fuel Gas Flare, Vent and Drain Electricity Generation + Distribution Diesel Storage and Circulation Chemical Injection
	Accommodation	
	Pipeline Operations	
	Inst / Elec Maintenance	
	Mechanical Maintenance	
	Water Handling	
	Crane Operations	
	Construction	
Utility Systems	Fire-fighting Systems Fuel Power Supply Drains Inert Gas Waste Storage and Treatment Chemical Storage Instrument System Potable Water Sewerage	Availability, CO ₂ , Halon, asphyxiation Diesel, Fuel Gas, Heating Mediums, Storage Sufficient, Reliability, Exposure Environmental Bottled Gas, Toxic Storage, Compressed Air, Instrument Gas, Power Gas

Personnel Hazards

Category	Guide word	Expanders
Health Hazards	Disease Hazards	Personal and/or catering, contaminated water or foodstuff
	Asphyxiation hazards	Asphyxiating atmospheres, failure to use appropriate PPE, working in confined spaces, smoke, exhaust, Halon / CO ₂ fire protection
	Carcinogenic	Chemicals in use
	Toxic	Hazardous atmosphere, asphyxiating atmosphere, chemicals in use – hydrogen sulphide, toxic fumes from fire, smoke / CO from fire
	Physical	Noise (continuous, intermittent), vibration, radiation (ionising, e.g. radioactive scale or non-ionising (e.g., UV, sunlight), ergonomics, material handling
	Mental	Shift patterns
	Transport	Excessive journeys, extreme weather, quality of roads, boat transfers
	Electrocution	
	Machinery	Rotating machinery, hand tools, heavy machines
	Access	Access limitations to machinery
	Drowning	
	Slips / Trips and Falls	Falls from height, Dropped Objects
	Divers	Divers working offshore sinking cable up to lower water mark, general diver assistance
	Steam	
	Asbestos	
	Radioactive sources	Scale deposits, well logging sources
Human Error		
Poisoning		

Operability / Maintainability

Category	Guideword	Expanders
Operability / Maintainability	Operations	Regular operator duties Relative locations of equipment Weather protection Access to DCS and other controls Equipment isolations (process, electrical) Environmental impact (spills, emissions, WOB) Fire and Gas detection
Operability / Maintainability	Maintenance	Pressure Vessel inspection Equipment preparation for maintenance Machinery servicing Critical Function Testing Instrumentation servicing Storage and laydown areas Crane access and lifting equipment Communications

Category	Guideword	Expanders
General	Shutdown requirements	Tie-ins to existing systems Working over live equipment,
	Timing of construction	What Production windows are available (GMS etc.) What are the weather window requirements (seasons) What are the periods of environmental significance whale season, -disturbance to breeding areas (Fish spawning, bird colonies)
	Concurrent operations	Construction impacts, Safety management, Diving, Heavy lifts
	Construction sequence	What are the key construction sequence issues – What flexibility is there in the sequence
	Mobilisation/demobilisation	Working over live pipelines Proximity to the MLA structure
	Simplification for design	Are there any unusual materials Are there any items that can be standardized Has the number of components been minimized Connection details Ability for site adjustments
	Transportation and Installation	Methods of transport Equipment size limitations Module to module connections Working at heights / scaffold requirements Pre assembly vs. Onsite assembly Methods to minimize construction rework
	Layouts	Late placement of equipment Ease of future brown fields work
	Materials	Long lead / difficult to obtain materials Jointing of dissimilar materials Heat treating on Site
	Tension	Projectiles, cables under stress, vessels, mechanical equipment
	Material handling	Crane activities, Dropped objects, supply vessels, lay down areas
	Load / Force	Insufficient support / redundancy, additional loads during construction / commissioning

Fire / Explosion

Category	Guideword	Expanders
General	Process hydrocarbon inventories (isolatable between ESDVs)	
	Risers (rigid and flexible)	
	Pipelines and flowlines (subsea)	
	Main reservoir hydrocarbons	
	Shallow gas reservoirs	
	Well conductors (SSSV to Xmas tree)	
	Fuel gas	
	Heating medium oil	
	Diesel/fuel oil storage	
	Helifuel	
	Flammable gas cylinders (e.g. acetylene, hydrogen, oxygen etc)	
	Paints and thinners	
	Furnishings and fittings	
	Cellulosic materials (e.g. wood, paper, etc)	
	Explosives (e.g. for well penetration)	
	Flammable chemicals	
	Potential Causes of Loss of Containment	
	Corrosion	
	Erosion	
	Fatigue/vibration/vortex shedding	
	Brittle fracture (low temps or hydrogen embrittlement)	
	Impact (dropped object, projectile, ship, helicopter, etc)	
	Subsidence/scour	
	Creep	
	Natural causes (storm, earthquake, cyclone, tidal wave, etc)	
	Operation beyond design envelope	
	Inappropriate choice of materials	
	Inadequate design	
Potential Ignition Sources		

Fire / Explosion

Category	Guideword	Expanders
	Flames/direct heat	
	Hot surfaces	
	Hot work (welding, flame cutting, grinding)	
	Mechanical sparks	
	Electrical equipment not classified for hazardous areas	
	Faulty electrical equipment	
	Lightning	
	Helicopters/boats	
	Distressed equipment (e.g. overheated bearings)	
	Impact energy (e.g. tools, dropped objects, projectiles)	
	Chemical energy	
	Pyrophoric deposits	
	Static electricity	
	Illicit smoking	
	Hot soot particles	
	Potential Consequences of Loss of Containment Plus Ignition	
	Jet fire (gas, atomised liquid or 2-phase)	
	Pool fire due to liquid rain-out from jet fire or low pressure liquid release	
	Pool fire on sea surface from subsea, cargo or offloading hose release or run-off from Facility	
	Gas fire on sea surface due to ignited subsea release	
	Flash fire preceding jet/pool fire due to formation of a flammable vapour cloud prior to ignition	
	Explosion due to flash fire in a confined or congested area	
	Potential Escalation Mechanisms	
	Escalation to adjacent flammable inventories due to thermal radiation or explosion overpressure	
	BLEVE due to flame impingement onto a volatile	

Fire / Explosion

Category	Guideword	Expanders
	liquid inventory	
	Structural collapse due to thermal radiation or explosion overpressure	
	Potential Fatality Mechanisms	
	Flame impingement to local personnel	
	Excessive thermal radiation to local, escaping or trapped personnel	
	Explosion overpressure/projectiles	
	Prolonged exposure to smoke/CO	
	Heat exhaustion	
	Toxic fumes generated by decomposition due to heat	

Category	Guideword	Expanders
General	Shuttle tankers	
	Supply boats	
	Standby vessels/tugs	
	Diving support vessels (DSVs)	
	Drilling rigs (MODUs)	
	Floating Production Units (MOPU)	
	Multi Support Vessels	
	Flotels	
	Cargo barges	
	Work boats	
	Crew boats/ferries	
	Derrick barge	
	Pipelay / trench barge	
	Dredging vessel	
	Rock dumping vessel	
	Passing merchant vessel	
	Errant submarine/warship	
	Fishing vessel	
	Hovercraft	
	Helicopter/aircraft	
	Potential Causes of Incident	
	Human error (e.g. failure to keep watch)	
	Propulsion/steering failure	
	DP system failure	
	Adverse weather	
	Mooring system failure	
	Potential Consequence	
	Progressive collapse of fixed installation due to impact damage	
	Damage to risers due to impact	
	Loss of containment to process kit due to impact by helicopter	
	Potential Escalation Mechanisms	
	Potential fire or explosion due to ignition following loss of containment	
Helicopter fire after crashing into installation		

Category	Guideword	Expanders
	Potential Fatality Mechanisms	
	Impact injuries from initial impact	
	Drowning due to helicopter crashing into sea	
	Drowning due to collapse of installation	
	Shark attack.	

Category	Guideword	Expanders
General	Shuttle tankers	
	Fixed platform foundations	
	Fixed platform jacket	
	Fixed platform deck	
	Escape, TR and evacuation facilities support structure	
	Essential emergency systems support structure	
	TR structure and envelope	
	Items of elevated structure (these could become falling objects)	
	Potential Causes of Structural Failure	
	Corrosion	
	Erosion	
	Fatigue/vibration/vortex shedding	
	Brittle fracture (low temps or hydrogen embrittlement)	
	Impact (dropped object, projectile, ship, helicopter, etc)	
	Subsidence/scour	
	Creep	
	Natural causes (storm, earthquake, cyclone, tidal wave etc)	
	Operation beyond design envelope	
	Inappropriate choice of materials	
	Inadequate design	
	Potential Consequences of Structural Failure	
	Loss of installation	
	Impairment of escape or evacuation facilities	
	Loss of essential emergency systems	
	Falling objects (structure or equipment)	
	Potential Fatality Mechanisms	
	Impact	
	Drowning (due to loss of installation)	

Structural

Category	Guideword	Expanders
	Hypothermia/exposure	

Dropped Object

Category	Guideword	Expanders
General	Shuttle tankers	
	Cargo containers	
	Gas bottle quads	
	Equipment modules (e.g. small gen set, fire pump etc)	
	Small objects from overhead workers	
	Miscellaneous objects up to capacity of cranes	
	Typical Elevated Items That could Fall Due To Structural Failure	
	Crane load (see above)	
	Crane/crane boom	
	Flare/vent stack	
	Elevated steelwork	
	Elevated equipment items	
	Potential Causes	
	Human error	
	Structural (e.g. pad eye) failure (see causes of structural failure)	
	Lifting slings failure	
	Mechanical failure (e.g. crane, winch failure)	
	Inadequate rigging	
	Failure of maximum load or traverse limit alarm on cranes	
	Potential Consequences	
	High energy projectile	
	Potential Escalation Mechanisms	
	Loss of containment due to impact	
	Structural collapse due to impact	
	Potential Fatality Mechanisms	
	Immediate fatality due to direct impact	
Additional fatalities due to escalation		

Category	Guideword	Expanders
Atmospheric emissions	Greenhouse gases	(CO ₂ , CH ₄ , VOCs, etc)
	Other toxics	(SO _x , NO _x , CO, Hydrocarbons, Benzene, H ₂ S, etc)
	Metal fumes / particulates	
	Flare volume & location	
	Vent volumes & location	
	Nitrogen or other purges	
	Combustion volumes & location	
	Fugitive emissions	
	Well testing	
	Impacts of shutdowns	
Marine discharges	Hydrocarbons	
	Chemicals	
	Physiochemical	(Temperature, nutrients, BOD, COD, TSS, etc)
	Other potential toxics (Metals, scale, particulates etc)	
	Volume of discharge	
	Ballast water issues (exotic species)	
	Drilling discharges – fluids, cuttings, cement	
	Pipeline & hydrotest liquids	
	Impacts of shutdowns	
Spills & Leaks (Hydrocarbons & Chemicals)	Potential for spills/leaks	
	Spill volumes/leaks	
	Controls in place	
	Other	
Chemicals/Material Management	Ozone depleting potential of chemicals	
	Global warming potential	
	MSDS available [including ecotoxicology, toxicity, biodegradation (half life), bioaccumulation	
	Common with other chemicals specified for use on facility	
	Compressed gases (cylinders)	
	Radioactive	
	Transportation, storage and transfer issues	

Category	Guideword	Expanders
Waste Management	Source of waste and responsibility (Operations, Construction, Installation, Drilling, 3rd Party Contractor)	
	Annual production of non-hazardous waste (solid & liquid)	
	Annual production of hazardous waste (solid & liquid)	
	Recycling / Reuse opportunities	
	Vendor return systems	
	Any 'special' considerations	
	Decommissioning, issues	
Physical Presence	Sea bed impacts (anchoring, gravity base, drilling, etc)	
	Pipeline issues	
	Potential decommissioning issues	
	Biological impacts [Marine mammals, turtles, fish, plankton] resulting from activity / process	
	Noise / Light / Navigational / Refuge (human & ecological) issues	
	Sea bed impacts (anchoring, gravity base, drilling, etc)	
	Pipeline issues	
	Potential decommissioning issues	
	Biological impacts [Marine mammals, turtles, fish, plankton] resulting from activity / process	
	Noise / Light / Navigational / Refuge (human & ecological) issues	
Health Issues	Personnel exposure	
	Ionising & non-ionising radiation	
	Noise	
	Vibration	
	Thermal environment	
	Heat / cold exposures and personnel protection requirements	

Category	Guideword	Expanders
	Ambient air quality issues [Exhausts/ Vents / Fugitives]	
	Chemical and hazardous materials requirements [MSDS available [including exposure standards, first aid, storage etc data; acute and chronic]	
	Synthetic Mineral fibres (Ceramic, Glass fibre and Mineral Wools)	
	Unacceptable materials (such as asbestos)	
Ergonomic Issues	Environmental Factors including Noise; Lighting; Vibration; Air Temperature, Movement and Humidity.	
	Access	
	Manual handling of equipment or materials	
	Workplace design	
	Displays and controls orientation / readability / audibility	
	Operability & maintainability	
	Environmental Factors including Noise; Lighting; Vibration; Air Temperature, Movement and Humidity.	
	Access	
	Manual handling of equipment or materials	
	Workplace design	
	Displays and controls orientation / readability / audibility	
	Operability & maintainability	
Socio-Economic	Regulatory impacts – present & future	
	Regulator perception	
	Industry perceptions	
	General public perception	
	Social impacts [Shipping, fishing, oil & gas]	
	Technology / Resource & energy utilisation	