

Section 17

Glossary



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17. GLOSSARY

Term	Definition
$\mu\text{S.cm}$	MicroSiemens per centimetre – unit of measure for electrical conductivity.
AAPA	Aboriginal Areas Protection Authority.
ADWG	Australian Drinking Water Guidelines.
AFMA	Australian Fisheries Management Authority.
AFZ	Australian Fishing Zone.
AHD	Australian Height Datum.
ALARP	As Low As Reasonably Practical - a standard for risk reduction. Formal demonstration of ALARP is required within HSE Cases or in Environmental Plans required under the Petroleum (Submerged Lands) Management of Environment Regulations.
ALDD	Australian Land Disturbance Database.
Ancillary Equipment	Supporting structures.
ANSI	American National Standards Institute.
ANZECC	Australia and New Zealand Environment and Conservation Council.
API	American Petroleum Institute.
APIA	Australian Pipeline Industry Association.
APPEA	Australian Petroleum Production and Exploration Association.
AQIS	Australian Quarantine and Inspection Service.
Aquifer	Layer of rock that holds water and allows water to percolate through it.
Australian Standard (AS)	An Australian Standard which provides criteria and guidance on design, materials, fabrication, installation, testing, commissioning, operation, maintenance, re-qualification and abandonment.
A-Weighting	A response provided by an electronic circuit which modifies sound in such a way that the resulting level is similar to that perceived by the human ear.
Ballast	Extra weight taken on to increase a ship's stability to prevent rolling and pitching. Most ships use seawater as Ballast. Empty tank space is filled with inert (non-combustible) gas to prevent the possibility of fire or explosion.
Bara	Bar Absolute.
barg	Bar Gauge.
Bathymetry	Related to water depth – a bathymetry map shows the depth of water at a given location on the map.
bbl	Barrel.
Benthos / Benthic	Related to the seafloor, and includes organisms living in or on the sediment / rocks on the seafloor.
Benzene	A volatile organic compound (VOC) that occurs naturally in petroleum and is produced by the combustion of petroleum products.
BFV	Barmah Forest Virus.
Bio-accumulate	Bio-accumulation refers to the amount of substance taken up by an organism through all routes of exposure (water, diet, inhalation, epidermal).

Term	Definition
Bio-availability	The bio-availability of a chemical entity is its ability to gain entry into an organism by being transported through a membrane or the ability of a chemical entity to adversely affect the performance of an external membrane by being strongly absorbed to it.
Biodiversity	Relates to the level of biological diversity of an environment, or the variability among living organisms.
Biological effect concentrations	Contaminant concentrations which are known to cause either chronic or acute effects on organisms. Generally determined by eco-toxicity testing, cause effect studies or from field measurements. Where such data is available or where the opportunity supports acquisition of such data, its use is preferable to the application of standards.
Bioregion	An area where the groups of plants and animals and the physical features (such as depth, sediment type, and climatic regime) are distinct from the surroundings at a chosen scale.
Biota	Collective terms for all the flora and fauna of a region or area.
Bivalves	Molluscs that have two shells, including oysters, clams, and mussels.
Blow out	When well pressure exceeds the ability of the wellhead valves to control it.
Blow out preventers (BOP)	High pressured wellhead valves, designed to shut off the uncontrolled flow of hydrocarbons.
BOD	Biochemical Oxygen Demand.
bowpd	Barrels of water per day.
bpd	Barrels per day.
bscf	Billion standard cubic feet.
CALM	Western Australian Department of Conservation and Land Management.
Casing	Steel pipe used to support rock structures from collapsing once a hole has been drilled.
Cathodic Protection	A technique used for preventing corrosion in metal pipelines and tanks that uses weak electric currents to offset the current associated with metal corrosion.
CBA	Cost/Benefit Analysis - a comparison of options based on their assessed costs and benefits.
CCR	Central Control Room.
CCTV	Closed Circuit Television.
CDEP	Community Development Employment Projects Scheme.
CDU	Charles Darwin University.
Cetacean	Any aquatic (mainly marine) mammal belonging to the order Cetacean, which includes whales, dolphins, and porpoises.
Christmas Tree	The manifold or arrangement of pipework connections and valves which is installed on the wellhead platform prior to production.
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora.
CITHP	Closed In Tubing Head Pressure.
CCVT	Closed Circuit Vapour Turbines.
Codes and Standards	Codes are requirements promulgated by industry groups and enforced by law. Standards are practices recommended by industry groups or individual companies that are regularly followed and are controlled by a process for reviewing and approving exceptions.

Term	Definition
Compressor Station	Used to boost natural gas pressure to move it through pipelines or other facilities.
Condensate	Hydrocarbons that are gaseous in a reservoir, but condense to form a liquid as they rise to the surface where the pressure is much less.
Condensate Export Mooring	Mooring used to store the condensate prior to tankers collecting it.
Critical activities in the context of protected species	Includes feeding, mating, calving, resting, roosting, nesting, migrating, communicating etc.
Crustacean	Large and variable group of mostly aquatic invertebrates which have a hard external skeleton (shell), segmented bodies, which a pair of often very modified appendages on each segment, and two pairs of antennae (eg, crabs, crayfish, shrimp).
Cuttings	Inert pieces of rock, gravel and sand removed from the well during the drilling process.
DA	Designated Authority.
dB	Decibel – A measurement of noise/sound level.
dB (A)	This is a measure of the overall noise level of sound across the audible spectrum with a frequency weighting (ie 'A' weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.
dB (decibel))	This is the scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and the reference pressure (0.00002N/m ²).
DBIRD	Northern Territory Department of Business, Industry and Resource Development.
DD	Data Deficient.
Decommissioning	The processing of removing the facility from useful service.
Dew-point	The temperature at which dew begins to form. It varies with the humidity and temperature of the atmosphere.
DHCS	Department of Health and Community Services Northern Territory.
DIPE	Department of Infrastructure, Planning and Environment.
Directional	The ability to drill a hole and steel it through the layer of rocks to the desired location.
DNV – Det Norske Veritas	International organisation providing standards and accreditation services.
DoIR	Western Australian Department of Industries and Resources.
EBM	Ester-based drilling mud.
Ecological integrity in the context of ecological diversity	The maintenance of key ecosystem functions and structures for example: Trophic structures and productivity, nutrient cycling, habitat structural diversity and biological diversity. It is possible to maintain ecological integrity and lose some biological diversity and productivity.
Ecological processes	Key processes which influence the survival, vigour, growth, fecundity, reproduction, abundance and distribution of living organisms.
Ecosystem diversity	The variety of habitats, biotic communities and the ecological processes on which they depend.
Eco-toxicity	A measure of the effects (immediate or delayed) of substances or preparations on one or more sectors of the environment.

Term	Definition
EERA	Escape Evacuation and Rescue Analysis - a structured strategy and implementation review of how persons will escape from incidents, evacuate the facility, and be rescued.
EIA	Environmental Impact Assessment.
EIS	Environmental Impact Statement - an identification and assessment of the impact of proposed actions on the environment.
EMOBM	Enhanced mineral oil drilling mud.
EMP	Environmental Management Plan.
EN	Endangered.
Endemic	Native or restricted in distribution to a particular geographic region.
Environment	The surroundings of an organism including the other biota with which it interacts.
Environmental Management Plan	A procedure that identifies potential environmental impacts and methodologies necessary to mitigate them.
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999.</i>
Ephemeral	Lasting for a short period of time.
Epiphytic	A plant that grows on another plant but is not parasitic.
ESCP	Erosion and Sediment Control Plan.
ESD	Ecologically Sustainable Developments (for environmental aspects).
Ethnographic	Derived from scientific description and classification of the various cultural and racial groups of mankind.
Exploration well	A well that is drilled to test a potential but unproven hydrocarbon trap or structure where good reservoir rock and a seal or closure combine with a potential source of hydrocarbon.
Fauna	Collectively, the animal life of a particular region.
FEED	Front End Engineering Design Phase.
Flaring	The process by which gas is burnt in a safe and controlled manner.
Flora	Collectively the plant life of a particular region.
Flotsam and Jetsam	Any objects found floating or washed ashore.
Flowline	A pipe which allows flow to be contained between two places.
Fuel oils	Oil that is heavily distilled in the refining process. Frequently used for supplying energy to power stations and factories.
Geotechnical	Referring to the use of scientific methods and engineering principles to acquire, interpret, and apply knowledge of earth materials for solving engineering problems.
GHG	Greenhouse Gas – A wide variety of gases that trap heat near the earths surface preventing its escape into space.
GIL	Groundwater Investigation Level.
GIS	Geographical Information Systems – a computer based system used to integrate, manage and analyse data specially.
Good Engineering Practice	Commonly accepted practices, assumptions and methods regularly used throughout an industry but not yet captured in codes and standards.
GPS	Global Positioning System, which allows the user to identify their location with the aid of satellite.
Grey water	Water resulting from washing or cooking.
GWP	Global Warming Potential.
Gyre	A circular ocean current.

Term	Definition
ha	Hectares.
Habitat	The specific place where a particular organism lives.
HAZID	Hazard Identification - a hazard list based process for identifying and assessing HSE risks.
HAZOP	Hazard and Operability - a guideword based process for identifying and assessing HSE risks, operability issues, and the adequacy of their management.
HDPE	High Density Polyethylene.
HEMP	Hazards and Effects Management Process - the structured application of various processes for identifying hazards, assessing their risks, controlling the risks, and planning for recovery from incidents.
HIPPS	High Integrity Pressure Protection System (International Electrotechnical Commission Standards IEC 61511 and 61508).
HOA	Heads of Agreement - A non-binding document outlining the main issues relevant to a tentative partnership agreement.
HSE	Health, Safety and Environment.
HSE Case	A document demonstrating that the HSE risks for a particular product are ALARP and defining the operational actions needed to preserve the design integrity.
HSE Plan (Project)	An ad hoc project specific plan for the management of HSE risks, detailing activities and resources.
HWM	High Water Mark.
Hydrocarbons	A class of liquid, solids or gas organic compounds containing only carbon and hydrogen, the basis of almost all petroleum products.
IALA	International Association for Lighthouse Authorities.
ILUA	Indigenous Land Use Agreement.
IMO	International Maritime Organisation.
Impressed Current	Form of cathodic protection. Impressed current systems utilise an external power source that provides protective current to mitigate corrosion activity.
Infauna	Small invertebrate animals, living within the sediment of the seafloor (ie worms and crustaceans).
Invertebrate	Lacking a spinal column (ie, crabs, jellyfish).
IRPA	Individual Risk Per Annum.
Jack-up	Type of mobile drilling rig which jacks its legs down to the seabed and then hoists its deck and drill floor above the sea surface.
KCl	Potassium chloride.
Key primary producers	Includes – mangroves, corals, macroalgae, supratidal algal mats, stromatolites, seagrasses. Does not include phytoplankton, as these are assumed to be addressed under water quality parameters.
KGBF	Kimberley Gillnet and Barramundi Fishery.
km	Kilometre.
km ²	Kilometre squared.
kn	Knot – unit of wind speed
KUNV	Kunjin Virus.
L\s	Litres per second.
LA _{10, T}	This is the dB(A) level exceeded 10% of the time, T.
LA _{50, T}	This is the dB(A) level exceeded 50% of the time, T.

Term	Definition
L _{A90, T}	This is the dB(A) level exceeded 90% of the time, T.
L _{Aeq} Equivalent Continuous Sound Levels	This is the equivalent steady sound level in dB(A) containing the same acoustic energy as the actual fluctuating sound level over the given period. For a steady sound with small fluctuations, its value is close to the average sound pressure level.
Large scale	10–100 km ² .
LAT	Lowest Astronomical Tide
Laterite	An iron rich deep weathering profile.
LNG	Liquefied Natural Gas.
Localised	<1 km ² .
Long term	Decades.
LTOBM	Low-Toxicity, Mineral Oil Drilling Mud.
LWM	Low Water Mark.
m	Metres.
mAHD	Metres Australian Height Datum.
MM	Million.
Manuport	Stone material that is not found naturally in an area and must have been carried in by humans.
MAOP	Maximum Allowable Operation Pressure.
mbg	Metres Below Grade.
MDQ	Maximum Daily Quantity.
MEB	Medical Entomology Branch.
Medium scale	1–10 km ² .
Medium term	5–10 years.
Metering Stations	Meter stations are used to measure the volume of gas transferred along the pipeline and to adjust gas temperature and pressure.
Mitigation	Management measures minimise and manage undesirable consequences.
mL\annum	Millilitres per year.
mmbbl	Million barrels.
MMRF	Monash Multi Regional Forecasting.
MODU	Mobile Offshore Drilling Unit.
Mollusc	Animal phylum comprising a range of groups including snails, slugs, clams, oysters, barnacles, bivalves, squid and octopus.
MSDS	Material Safety Data Sheet.
MVEV	Murray Valley Encephalitis Virus.
National / International Standards	Published standards such as the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (includes sediment quality guidance) and the (Australian) National Environmental Protection Measures for Air Quality and Air Toxics.
NDE	Non-Destructive Examination.
NDSF	Northern Demersal Scalefish Fishery.
NLC	Northern Land Council.
NLWRA	National Land and Water Resources Audit.
Nm	Nautical mile.
NOI	Notice of Intent.

Term	Definition
NORMS	Naturally Occurring Radioactive Materials.
NPF	Northern Prawn Fishery.
NT	Northern Territory.
NT	Near-Threatened.
NTU	Nephelometric Turbidity Units – units of measure for turbidity in water quality assessment.
NWBMs	Non-water based muds.
OBM	Diesel oil drilling mud.
°C	Degrees Celsius.
Oceanographic	Data related to the physical aspect of the ocean including water temperatures, tides, currents, chemical characteristics.
OCIMF	Oil Companies International Marine Forum - is a voluntary association of oil companies having an interest in the shipment and terminalling of crude oil and oil products.
OCS	Offshore Constitutional Settlement.
OGP	Oil and Gas Producers.
Pa	Pascal a measure of pressure
PSLA	<i>Petroleum (Submerged Lands) Act.</i>
P90	90% probability of locating gas.
PEC	Predicted Environmental Concentration.
Pelagic	Living in the open sea (eg fish that swim and feed in the open ocean, near the surface or well above the seabed).
Perennial	Lasting or continuing throughout the year, as a stream.
Permanent	Irreversible and irrecoverable.
Pers. comm.	Personal communication.
Pers. obs.	Personal observation.
Petroleum Resource Rent Tax (PRRT)	<p>The Petroleum Resource Rent Tax (PRRT) is paid by producers of hydrocarbons (crude oil, condensate, LPG and natural gas) with projects located in offshore areas under Federal Government jurisdiction, except for the North West Shelf project which pays royalty and crude oil excise.</p> <p>The taxes are designed to compensate the community for allowing the private extraction of Australia's depletable resources.</p> <p>The PRRT is a project based tax and is levied at 40% of annual net positive cash flows from the project after recovery of all eligible exploration expenditure, including offshore exploration outside the project area, all projects operating costs and all capital expenditure.</p>
PFW	Produced Formation Water (refer to Produced Water).
PHPA	Partially Hydrolysed Polyacrylamide.
Phytoplankton	Small free floating plants, usually single celled, that form the basis of the food chain.
Pigging	The process of inserting pigs into a pipeline to remove deposits which could obstruct or retard flow through a pipeline. This process is during all phases in the life of a pipeline for many different reasons.
Pigs	Pipeline Integrity Gauge. A Cylindrical device inserted into a pipeline to inspect the pipe or to sweep the line clean of water, rust or other foreign matter.
PNEC	Predicted No Effect Concentration

Term	Definition
PJ	Petajoules.
Pollution	Degradation or impairment of the purity of the environment by causing a condition that is hazardous to the public, safety, aesthetics, or welfare or to the biota.
Protected Species	Species considered rare, endangered, vulnerable or of restricted distribution and protected by specific national or international legislation; other species protected by specific national or international instruments, eg migratory species, shore birds (JAMBA and CAMBA) etc.
PW (Produced Water)	Water component separated from reservoir fluids brought to the surface during the production process.
PWCNT	Parks and Wildlife Commission of the Northern Territory – now the NT Parks and Wildlife Service.
QRA	Quantitative Risk Assessment - a technique for estimating the magnitude of risks based on statistics.
RAAF	Royal Australian Airforce.
RAMSAR	The Convention on Wetlands of International Importance especially as Waterfowl Habitat.
RAN	Royal Australian Navy.
Regional Scale	> 100 km ²
Re-injection	The process by which gas or water is pumped back into the ground, either into the reservoir from where it came or into another similar zone.
RESDV	Riser Emergency Shut Down Valve.
Reservoir	A rock or formation which holds hydrocarbons within the pore spaces between individual grains.
RFSU	Ready For Start-Up.
Riparian	Edge of a river.
Riser (drilling)	A pipe between a seabed BOP and a floating drill rig.
Riser (production)	The section of pipework that joins the seabed to the Christmas tree.
Risk	The probability that a consequence will occur.
Risk Register	A location/project specific list of potential risks, the potential consequence associated with the risk, and how they are managed.
ROV	Remotely Operated Vehicles.
ROW	Right of Way.
RRV	Ross River Virus.
Safeguards	Preventative measures that reduce the likelihood of an event.
SBM	Synthetic-based drilling mud.
SCADA	Supervisory Control and Data Acquisition.
scf	Standard cubic feet.
Scouring	Where an erosion occurs under the pipeline resulting in a 'scour'.
Short term	Months - five years.
Slug catcher	A device that removes slugs of liquid from natural gas pipelines. "Slug Catchers" dissipate the energy of the liquid slugs that intermittently propagate through a gas pipeline.

Term	Definition
Slugs	Liquids that can interfere with the proper operation of the pipeline and related equipment such as compressors, regulators, filters, meters and valves. The liquids normally found include hydrocarbon condensations, lubrication oils, produced water, and chemicals used in production, treatment, compression or dehydration of the gas.
Spanning	The distance of a pipeline that is unsupported, or the distance between natural supports in the seabed.
Species Richness	The number of different species that are present in a given area.
SSTVD	True Vertical Depth Subsea.
TBT	Tri-n-butyltin used as an antifouling agent in ship bottom paints.
Tcf	Trillion cubic feet.
TJ	Tera Joule
Temporary	Minutes – weeks.
Terrestrial	The land as distinct from the water.
Top soil	The upper layer of soil.
Topsides	Structures above the waterline on the Wellhead platform.
Trenchless technique	Trenchless technology is the science of installing, repairing or renewing underground pipes, ducts and cable using techniques which minimise or eliminate the need for excavation.
TTP	Trans Territory Pipeline Project – pipeline extending from the Blacktip onshore gas processing plant to Gove.
Turbidity	Measure of the clarity of a water body.
TVDSS	Total Vertical Depth Subsea.
TVP	True Vapour Pressure.
UNCLOS	United Nations Convention on Law of the Sea 1982.
VOC	Volatile Organic Compound.
VUL	Vulnerable.
WBMs	Water based muds.
WEL	Woodside Energy Limited.
Well	A hole drilled into a hydrocarbon bearing reserve.
Working width	Temporary working area within which the pipeline installation takes place.
Zooplankton	Zooplankton are small often microscopic animals that generally follow the ocean currents, feeding on phytoplankton or other zooplankton. They are often the larval stages of larger marine animals, and typically include; krill, copepod, polychaete, amphipods, shrimp).

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