



Risk Management

ST10 – Chemical Management Procedure

Purpose

- + To manage the risks to environment, health and safety arising from the use, handling, generation or storage of chemicals.

Scope

- + This procedure applies to chemical substances, mixtures or articles associated with activities performed under Santos' influence and control, including chemicals generated by Santos' operations (i.e. hydrocarbon products).
- + This procedure does not cover:
 - Process safety risk management related to chemicals
 - Transportation requirements for Dangerous Goods – this must be undertaken in accordance with the *Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)*
- + Additional guidance is available in the SafeWork Australia Code of Practice *Managing risks of hazardous chemicals in the workplace*

KEY REQUIREMENTS

- + Prior to the introduction of a hazardous chemical, evaluate options to **eliminate** the need for the chemical or the use of a **less hazardous alternative**
- + Chemical containers must be **correctly labelled** to identify the contents
- + Maintain an accessible register of hazardous chemicals and associated **safety data sheets (SDSs)**. Refer to SDSs when:
 - Establishing **safe storage** arrangements
 - Identifying hazards and risk controls for **safe handling and use**

Document Control

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1 Requirements (Procedure)

1.1 Santos as a producer of chemicals

1. Hydrocarbons produced by Santos operations ('products' e.g. crude oil, condensate, LPG) must be assessed to determine if they are:
 - a. a hazardous chemical in accordance with the *Globally Harmonised System of Classification and Labelling of Chemicals* (GHS)
 - b. a dangerous good in accordance with the *Australian Code for the Transport of Dangerous Goods by Road and Rail* (ADG Code)
2. Where Santos products are classified as a hazardous chemical and/or dangerous good:
 - a. a Safety Data Sheet (SDS) must be prepared
 - b. the SDS must be amended where necessary (e.g. composition change) to ensure it contains correct, current information and must be reviewed at least once every 5 years
 - c. the SDS (including any amended versions) must be provided to customers, transport providers or any other workplaces receiving or handling the product when the product is first supplied or where otherwise requested by a person who is likely to be affected by the product

1.2 Introducing new chemicals to Santos workplaces

1. Prior to the introduction of a hazardous chemical, consideration must be given to options that eliminate the need for the chemical, or where this is not practicable, the use of less hazardous alternatives.
2. The process in *Appendix A Introduction of New Chemicals Process* must be applied prior to the introduction of:
 - a. A chemical to a Santos location(s) where it is not currently in use
 - b. A revised composition/SDS of an approved chemical that changes the hazard classification

1.3 Chemical registers and manifests

1. A register of hazardous chemicals (including Santos products) and associated SDSs must be maintained and be made available to workers:
 - a. for Santos operations *ChemAlert* is the register unless otherwise approved
 - b. field locations where hazardous chemicals are stored or used must maintain local SDS hard copies for commonly used hazardous chemicals where worker access to the *ChemAlert* system is impractical or a back-up to *ChemAlert* is deemed necessary
 - c. the register must contain the maximum expected storage quantity for hazardous chemicals
Note: In Australian states and territories other than Victoria and Western Australia, the register does not require entry of hazardous chemicals and SDS's for consumer products that will be used in the workplace in quantities and methods consistent with household use
2. Where a hazardous chemical is subject to placard, manifest or major hazard facility quantity thresholds in regulations¹:
 - a. if the quantity at a storage location exceeds a defined placard threshold quantity, placards that comply with the regulations must be displayed
 - b. if the quantity at a storage location exceeds a defined manifest threshold quantity:

¹ For Australian states and territories other than Victoria and Western Australia, refer to Schedules 11 (placard and manifest thresholds) and 15 (MHF thresholds) in the WHS Regulations.

In Victoria refer to Schedule 2 in the *Dangerous Goods (Storage and Handling) Regulations 2012* for placard and manifest thresholds and Schedule 14 in the *Occupational Health and Safety Regulations 2017* for MHF thresholds.

In Western Australia, refer to Schedule 1 in the *Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007* for placard and manifest thresholds and Schedule 1 in the *Dangerous Goods Safety (Major Hazard Facilities) Regulations 2007* for MHF thresholds.

- i. a manifest meeting the requirements of the regulations must be prepared and maintained
 - ii. the manifest must be kept at a location that is readily available and agreed to by the primary emergency services organisation (as defined in the applicable Emergency Response Plan) for that location
 - iii. where required legal obligation, the applicable regulator must be notified, storage licence obtained and/or an Emergency Plan for the site submitted to the relevant authority
- c. if the quantity at a storage location exceeds a defined or previously notified major hazard facility threshold quantity, the regulator must be notified in accordance with legal obligations.

Note: *ChemAlert* can be used to identify if a storage location has exceeded a threshold quantity

1.4 Safe storage and use of chemicals

1. Chemical containers must be correctly labelled to identify the contents:
 - a. labelling for hazardous chemical containers must comply with regulations (refer to SafeWork Australia Code of Practice *Labelling of Workplace Hazardous Chemicals*)
 - b. labels for dangerous goods being transported must comply with the *ADG Code*
 - c. containers used for chemicals decanted or transferred from the original container must be labelled to identify the contents (including a hazard pictogram or hazard statement if a hazardous chemical) unless it is being used immediately by the person decanting/transferring and cleaned or disposed of when finished
 - d. chemicals (including wastes) must not be decanted into food or beverage containers
 - e. chemical containers identified with missing, incorrect or illegible labelling or with unknown contents must be segregated (if practicable) and clearly marked to caution a potential user of incorrect or unknown contents until correct labelling is applied or the chemical is disposed of
2. Appropriate storage arrangements for chemicals must be assessed, implemented and maintained taking into consideration the recommendations in the SDS (if applicable) and:
 - a. Santos Engineering Standards for facilities design
 - b. provisions for spill containment (e.g. permanent or portable bunds) and clean-up (e.g. spill kit) for hazardous chemicals or environmentally hazardous substances
 - c. segregation of incompatible chemicals, including the potential for mixing in spill containment systems
 - d. stability/support, impact protection and maintenance of containers and associated piping and equipment containing hazardous chemicals
 - e. protection from temperatures, sunlight or other environmental conditions that may affect the stability of a hazardous chemical or the integrity of its container
 - f. provision of fire protection, firefighting and other necessary emergency equipment, safety showers and eye-wash stations, and access to personal protective equipment
 - g. placarding requirements (see Requirement 1.3(2)) and safety signage
3. Identification of hazards and risk controls for the handling and use of chemicals must be undertaken in accordance with the Santos *Work Activity Risk Management Procedure*, taking into consideration:
 - a. hazard and controls information from the SDS or labelling (Note: also consider any additional relevant hazard and controls information provided by the manufacturer or supplier)
 - b. precautions or controls identified during the "Introduction of New Chemical" process (see Requirement 1.2(2))
 - c. the properties and concentration of chemical
 - d. the routes of exposure or harm of the chemical in its physical forms (solid, liquid, gas), for example inhalation, ingestion, skin contact, splash in eyes, asphyxiation, ignition/fire
 - e. the potential for a hazardous physical or chemical reaction with another substance
 - f. the number of people at risk of exposure and the frequency and duration of exposure
 - g. published exposure standards for hazardous chemicals and risk controls, atmospheric or health monitoring requirements identified in the Santos Occupational Exposure Management Procedure

2 Key Terms

Term or acronym	Definition
Hazardous chemical ²	<p>A substance, mixture or article that satisfies the criteria for a hazard class in the <i>Globally Harmonised System of Classification and Labelling of Chemicals</i> (GHS).</p> <p>Hazardous chemicals may have the following hazards:</p> <ul style="list-style-type: none">• Health hazards: properties of the chemical that have the potential to cause adverse health effects, either acute (short term) or chronic (long term)• Physiochemical hazards: physical or chemical properties that pose risks other than health risks (i.e. not as a consequence of the biological interaction of the chemical with people) (e.g. flammable, corrosive, explosive, oxidising) <p>Note: Information from the manufacturer or supplier of a chemical will identify if it is classified as a hazardous chemical (e.g. product labelling, SDS). <i>ChemAlert</i> will also identify hazardous chemicals.</p>
Dangerous good	<p>A substance, mixture or article that meets the criteria of, or is listed in, the <i>Australian Code for the Transport of Dangerous Goods by Road and Rail</i> (ADG Code).</p> <p>Dangerous goods, because of their physical, chemical or acute toxicity properties, present an immediate hazard to people, property or the environment.</p> <p>Most dangerous goods are also classified as hazardous chemicals.</p> <p>Note: Information from the manufacturer or supplier of a chemical will identify if it is classified as a dangerous good (e.g. product labelling, SDS). <i>ChemAlert</i> will also identify dangerous goods.</p>
Safety Data Sheet (SDS)	<p>A document that describes the chemical and physical properties of a material and provides advice on its safe storage, handling and use. It includes details of health and physicochemical hazards, exposure controls, personal protective equipment, safe handling and storage instructions, emergency procedures and disposal advice.</p>

3 Appendices / References

Document number	Document Title
Appendix A	Introduction of New Chemical Process
T1	New Hazardous Chemical Request Form

² "Hazardous chemical" is a term from the Australian harmonised WHS Regulations that have been adopted by all Australian states and territories other than Victoria and Western Australia.

In Victorian and Western Australian regulations, the term used is "hazardous substances" with separate regulations containing WHS requirements for hazardous substances and dangerous goods. However the combination has essentially the same requirements as the harmonised WHS regulations for hazardous chemicals.

Appendix A Introduction of New Chemicals Process

