WHMIS/US OSHA Material Safety Data Sheet for:

Sour Natural Gas (Containing Hydrogen Sulphide)

Section 1: MANUFACTURER/PREPARER INFORMATION & HAZARD WARNINGS

	EMERGENCY PHONE	INFORMATION PHONE
Conoco Canada Limited. 205 5th Avenue SW Calgary, Alberta T2P 2V7	**(403) 228-3822**	(403) 260-2423
	DATE ISSUED/REVISED Nov 30, 1997	LAST VALIDATED ON Aug 21, 2010

WHMIS HAZARD SYMBOLS & DEFINITIONS

Class D-1: Poisonous & infectious material, immediate & serious toxic effects
Class A: Compressed gas
Class B: Combustible & flammable material

Section 2: HEALTH HAZARD DATA

ROUTES OF ENTRY/SIGNS & SYMPTOMS OF ACUTE EXPOSURE:

Primary Route of Entry: Inhalation. Liquefied gas may cause frostbite to exposed tissue. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness, and other nervous system effects. Greater overexposure may cause dizziness, slurred speech, flushed face, eye, skin and lung irritation, unconsciousness and convulsions and may lead to asphyxiation. Hydrogen sulphide can be irritating at low concentrations to the eyes, skin and respiratory tract. At higher concentrations, loss of ability to smell hydrogen sulphide, respiratory paralysis and death may occur.

Chronic Effects: N/R. **Carcinogens:** None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen. **Medical Conditions Aggravated by Exposure:** N/R.

EMERGENCY & FIRST AID PROCEDURES:

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. **SKIN:** Flush area with lukewarm water. Do not use hot water. If frostbite has occurred, call a physician. **INHALATION:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician. **INGESTION:** Not considered a potential route of exposure. **IF HYDROGEN SULPHIDE IS PRESENT:** Bec hydrogen sulphide can cause death, rescuers must wear positive-pressure, full facepiece, self-contained or supplied-air NIOSH approved respirators before attempting rescue.

Section 3: PREVENTATIVE MEASURES

Respiratory Protection: Type C respiatory protection such as an airline respirator with full facepiece should be used in atmospheres where concentration of hydrogen sulphide may exceed any of the exposure levels. It must be operated in pressure-demand, positive-pressure or continuous-flow mode. Use of air-purifying respirators should be avoided because of the possibility of olfactory fatigue which can be caused by hydrogen sulphide.

Ventilation: Whenever possible, engineering controls should be utilized to minimize possible contact with hydrogen sulphide. Properly designed local exhaust ventilation may be useful to remove hydrogen sulphide from a specific work area.

Gloves: Where liquid may be encountered, butyl rubber, neoprene or PVC gloves are recommended to avoid skin contact. **Eye Protection:** Since hydrogen sulphide is extremely irritating, eye protection is essential. **Other Protective Measures:** Under emergency or extreme conditions, full protective clothing and respiratory protection is essential. Wear safety shoes when handling cylinders.

Work/Hygienic Practices: N/R.

Handling: Do not breathe gas. Avoid contact with eyes and skin. Use of non sparking and explosion-proof equipment may be necessary depending on type of operation. Keep away from heat, sparks and flames. **Storage:** Store in a well-ventilated place in accordance with National Fire Protection Association recommendations. Do not store with oxidising materials. Store away from ignition sources.

KEEP OUT OF THE REACH OF CHILDREN AND ANIMALS.
N/A=Not Applicable. N/E=Not Evaluated/Established. N/R=Not Reported by Manufacturer.

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Section 4: HAZARDOUS COMPONENTS & EXPOSURE LIMITS

Hazardous Component Name	CAS #	OSHA PEL	ACGIH-TLV	Other Limit	% Wt
Hydrogen sulphide*	7783-06-4	N/R	10 ppm 14 mg/m3	15 ppm STEL 21 mg/m3 STEL	<10
Hydrocarbons, Gaseous Alkanes	74-82-8	N/R	Simple Asphyxiant	N/E	>90
* WARNING: Hydrogen sulphide (H2S) may accumulate in container head space.					

§ indicates a toxic chemical subject to the reporting requirements of SARA Title III, Section 313.
† indicates a chemical known to the State of California to cause cancer, birth defects or other reproductive harm per Proposition 65.

Section 5: PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point:	-157 to -107°C	**Specific Gravity:**	N/R
Vapor Pressure:	Gas	**Percent Volatile:**	100
Vapor Density (Air=1):	0.6	**Evaporation Rate:**	N/R
Solubility in Water:	Very slight	**pH:**	N/R
Appearance/Odor:	Colourless gas/Odourless to rotten egg.		

Section 6: FIRE & EXPLOSION HAZARD DATA

Flash Point (Method): **HIGHLY FLAMMABLE GAS** **Flammable Limits. LEL**5% **UEL:** 14%

Extinguishing Media: If gas has ignited, do not extinguish. Stop gas flow. Allow to burn out.

Special Firefighting Procedures: Stop flow of gas. Use water to keep fire-exposed containers cool and to protect personnel effecting the shutoff. If a leak or spill has not ignited, use water spray to disperse the gas or vapours and to protect personnel attempting to stop a leak. Inhalation of unburned gas or contact with skin must be prevented.

Unusual Fire and Explosion Hazards: Do not enter a vapour cloud due to potential for flash fire. Products of combustion may contain CO, CO2 and other toxic materials. Do not enter enclosed or confined space without proper protective equipment including respiratory protection. Vapour forms explosive mixture with air. Vapours or gases may travel considerable distances to ignition source and flash back. Unburned gas contains hydrogen sulphide; SCBA required for rescue operations.

Section 7: REACTIVITY DATA

Stability: Stable. **Hazardous Polymerisation:** Will not occur. **Conditions to Avoid:** Avoid heat, sparks, and flame. **Incompatibility:** Incompatible or can react with oxidisers. **Hazardous Decomposition Products:** CO, CO2, H2S.

Section 8: SPILLS, DISPOSAL & ADDITIONAL INFORMATION

Spill/Leak Procedures: NOTE: Review sections 3 & 6 before proceeding with cleanup. Use appropriate PPE during cleanup. Evacuate personnel. Thoroughly ventilate area. Use SCBA. Keep upwind of leak. Evacuate until gas has dispersed. Remove sources of heat, sparks, flame, impact, friction and electricity including internal combustion engines and power tools. If equipment is to be used for spill clean up, it must be explosion-proof and suitable for flammable liquid and vapours.

Waste Disposal: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Allow to evaporate or disperse leaks in air, making sure gas/vapour is dissipated below lower explosive limit.

Additional Information: N/R