

FARSHA



Farm and Ra











Confined Space in Agriculture

FARSHA



**Confined Space
Fatalities**



**2008 Mushroom
Fatalities**



**Uncharacterized and
Confined Space
Fatalities**



Mission Statement

To reduce the number of incidents on farms and ranches through an active program of education, training and consultation in all regions of the province.



Six Main Activities:

1. Consulting
2. Training
3. Reference and Resource Material
4. Promotion
5. Safety Programs
6. Safety Reviews

- Direct
- Coordinated
- Worksite specific
- Multiple worksites

Delivery of Services

- **Agricultural Health and Safety Specialists - English / Punjabi / Vietnamese**
- **Regional Safety Consultants - Eight Regions.**
- **Industry Specific Safety Consultants - Ranching, Vineyards / Orchards.**
- **Special Project Manager - Worker Training, MSI Program, Return-to-Work Program.**

FARSHA's History with Confined Spaces

1993 – 2006

Confined space requirements included in the “Regulations for Occupational Health and Safety in Agriculture”

2006

The agricultural sector is included in WorkSafeBC’s “Occupational Health and Safety Regulations” the same as all other industries

- BK-47 Dealing with Confined Spaces in Agriculture**
 - Provides general information on CS and describes requirements for due diligence.**
- BK-48 CS safety in BC Agriculture – A Resource Guide**
 - Explain hazard assessment and CS entry procedures.**

These two booklets discuss the need of specialized technical knowledge and CS must be done by a qualified person.

2008 BC Confined Space Fatalities



WorkSafeBC

Increases its presence on farms focusing on confined space.

FARSHA

Recognize the need for understanding, and education of confined spaces in the agricultural industry.

WorkSafeBC agrees with FARSHA's direction



FARSHA

WorkSafeBC

AGREE

Need an Expert on Confined Spaces.

The background is a high-contrast, yellow-on-black image of a building's interior. It shows architectural details like columns, beams, and a staircase. Two yellow arrows originate from the title 'FARSHA Gained Support' and point downwards to the text 'FARSHA Board of Directors' on the left and 'CASA' on the right.

FARSHA Gained Support

FARSHA Board of Directors

CASA

FARSHA Confined Space Framework

- 1. Contracted an expert in confined spaces**
- 2. Assessing agricultural confined space incidents through statistics from CAIR and WorkSafeBC**
- 3. Common locations identified within the definition of confined space in agriculture**
- 4. Develop a risk assessment template**
- 5. Instruct a group of FARSHA consultants in the theory, science, and application of confined space**
- 6. Conduct practical evaluations of consultants and further educate agricultural industry.**

1. Contracted an Expert in Confined Spaces

- **FARSHA contracted Neil McManus, CIH, ROH, CSP, Industrial Practice Hygienist to work with the FARSHA Special Program Manager in:**
 - **Identification of confined spaces**
 - **Determination of top confined spaces in agriculture**
 - **Categorization into like spaces**
 - **Develop of a risk assessment template for like spaces.**
 - **Develop a entry procedure template for like spaces**

2. Assessing Agricultural Confined Space Incidents Through Statistics from CAIR and WorkSafeBC

- **CAIR Representative**
- **WorkSafeBC**
 - **Health and Safety Industry Specialist**
 - **Industry Labour Services Department**

3. Common Locations Identified Within the Definition of Confined Space in Agriculture

<p>Mushroom Farms:</p> <ul style="list-style-type: none"> • Water Storage tanks • Waste water sumps • Below ground valve boxes • Gypsum storage bins. 	<p>Dairy farms:</p> <ul style="list-style-type: none"> • Manure pits, enclosed manure trenches, sumps, tank spreaders • Tower silos (either conventional or controlled atmosphere) • Grain or feed bins • Milk tanks 	<p>Greenhouses (hothouses):</p> <ul style="list-style-type: none"> • Water storage tanks, cisterns, well houses, wastewater sumps • Chemical mixing tanks • Boilers • Fertilizer tanks
	<p>Vineyards:</p> <ul style="list-style-type: none"> • Water cisterns, well houses, below-ground valve boxes • Fermentation tanks • Grape transport tank trucks 	<p>Orchards:</p> <ul style="list-style-type: none"> • Water cisterns, well houses, below-ground valve boxes • Some models of pesticide sprayers
	<p>Grain farms:</p> <ul style="list-style-type: none"> • Grain storage bins • Water cisterns, well houses, below-ground valve boxes 	<p>Ranches:</p> <ul style="list-style-type: none"> • Grain storage bins • Water cisterns, well houses, below-ground valve boxes

4. Develop a Risk Assessment Template

- **Each confined space on the farm must be assessed.**
 - **If a space does not require worker entry, all access points must be closed and sealed, to prevent any entry by workers, contractors, farm guests, children, or anyone else. A sign should explain dangers and remind people not to try to open / enter the space.**
 - **IF THE SPACE WILL at some point REQUIRE ENTRY, then a qualified person must assess the risk, and determine a control and document them in a written risk assessment.**
- **The hazard assessment must be kept on file.**

(Cont'd.)

4. Develop a Risk Assessment Template *(Cont'd.)*

- A risk assessment template lists the hazards of the space, evaluates the risk and recommends a method of control.
- For example, it outlines what PPE must be worn, and what other special precautions must be taken while working in the space.
- It will outline what air sampling must be performed and how often air monitoring must be performed.
- It will indicate what lock out or isolation must be performed
- A risk assessment must be conducted by a “qualified person.”

4. Develop a Risk Assessment Template *(Cont'd.)*

- **Definition of a Qualified Person in BC's OHSR:**
 - a) **Certified Industrial Hygienist (CIH), Registered Occupational Hygienist (ROH), Certified Safety Professional (CSP), Canadian Registered Safety Professional (CRSP) or Professional Engineer (P. Eng.), provided that the holders of these qualifications have experience in the recognition, evaluation and control of confined space hazards, or**
 - b) **other combination of education, training and experience acceptable to WorkSafeBC.**

Develop Confined Space Entry Procedure Template

- **Entry procedures are based on the hazards identified in the risk assessment, the associated level of risk, and the recommended control.**
- **The procedure will provide a step by step way to conduct an entry with little or no risk.**

Develop Confined Space Entry Procedure Template

- **The procedures will include requirements such as:**
 - **Atmospheric testing**
 - **Lock-out and isolation**
 - **Ventilation**
 - **PPE**
 - **Stand-by persons**
 - **Emergency / Rescue plan**
 - **Completing an entry permit**
 - **Others.**

Develop Confined Space Entry Procedure Template

- **All people involved in a confined space entry must be trained for their responsibility**
- **The development of an entry procedure must be completed by a “qualified person.”**

Develop Training Program for All Persons Involved in a Confined Space Entry.

- **The training program will be in modules for:**
 - **Supervisor**
 - **Preparation prior to entry**
 - **Atmospheric testing**
 - **Persons doing the entry**
 - **Standby Persons**
 - **Emergency plan**
 - **Filling out an entry permit**

A draft training framework has been completed.

5. Instruct a Group of FARSHA Consultants in the Theory, Science, and Application of Confined Space.

- **Extend reach across British Columbia through a**
 - **Professional Development Course in Confined Spaces to FARSHA Regional Safety Consultants by Neil McManus.**

6. Conduct Practical Evaluations and Further Educate Agricultural Industry

- **Conduct practical risk assessments under the guidance of the expert Neil McManus.**
- **Continue ongoing research and education within the industry on confined spaces.**

Note: This will be until FARSHA Regional Safety Consultants are qualified to carry on risk assessments themselves.



The background features a complex, abstract geometric pattern. It consists of several sharp, intersecting lines that create a series of triangular and polygonal shapes. The colors are primarily black and white, with smooth gradients that transition between the two, giving the impression of light reflecting off a polished, metallic surface. The overall effect is one of depth and three-dimensionality.

THANK YOU



Confined Space Fatalities CANADA 1990 - 2009

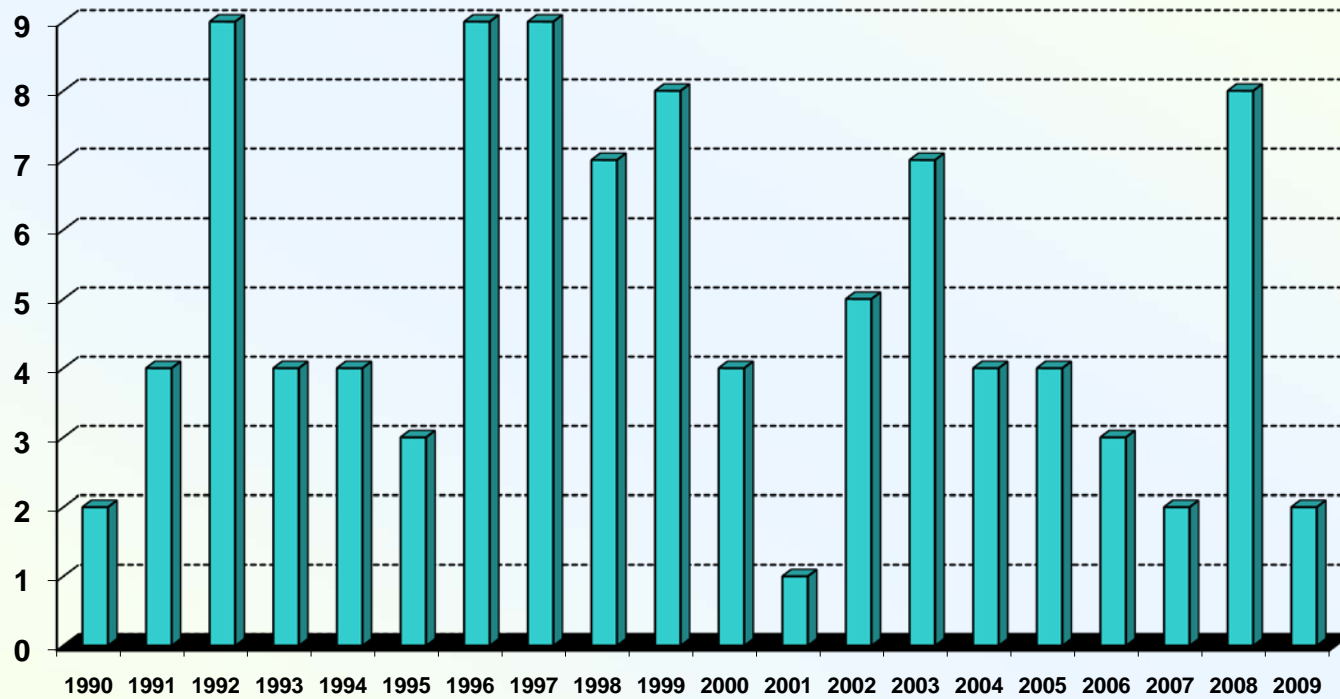


Canadian Total Fatalities 1990 - 2009



Source of Information: CAIR

Canada - Total Confined Space Fatalities by Year

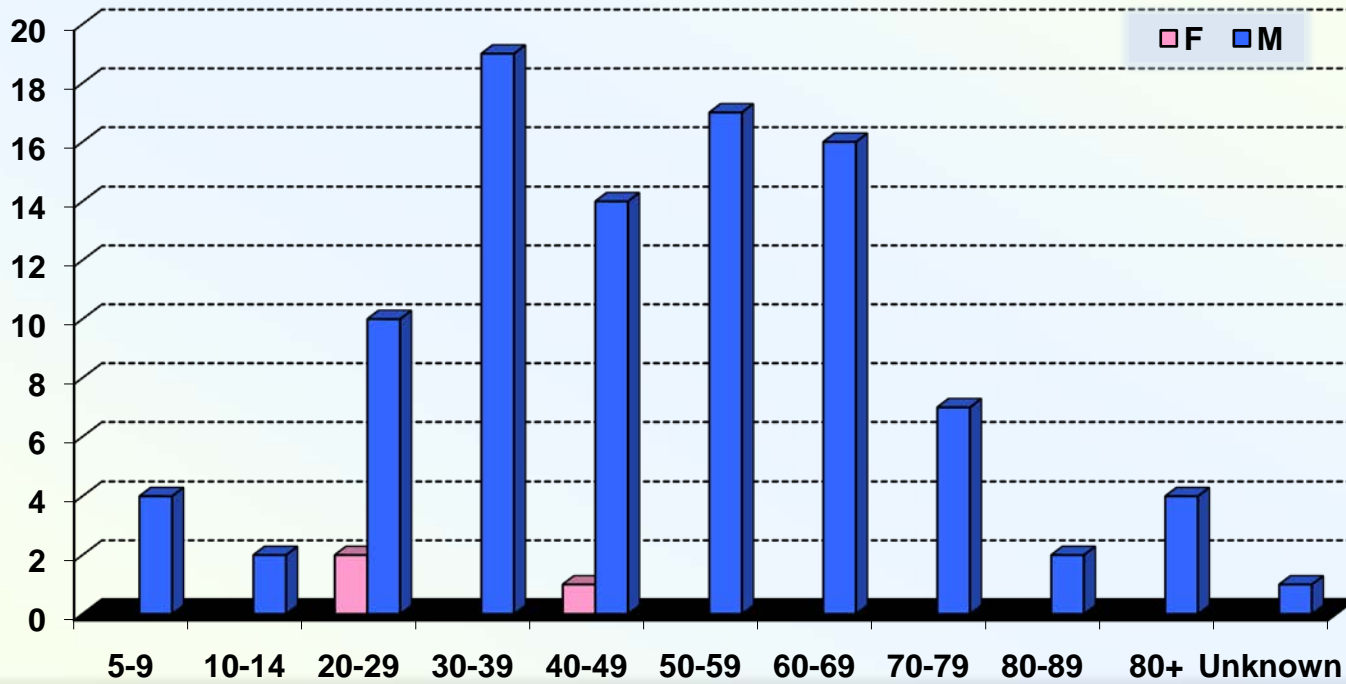


Canada - Total Confined Space Fatalities by Age

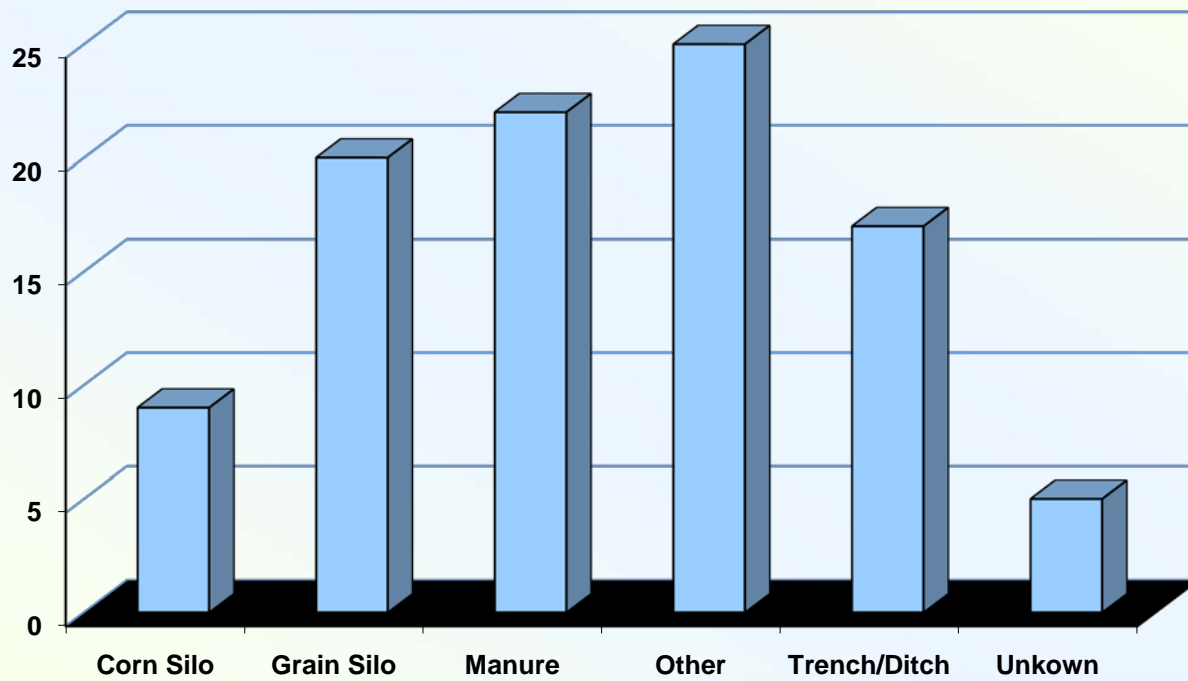


Source of Information: CAIR

Canada - Total Confined Space Fatalities by Age - Group



Canada - Total Confined Space Fatalities by Location




Source of Information: CAIR



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THANK YOU



2008
BC Confined Space
Fatalities







FARSHA
Point
of
view.

- **Water reservoir containing brown water**
- **Problem with pipe system**
 - ran through the catchment area around the containment tank

Case information, in terms of the exact cause of death, has not be made public by WorkSafeBC.



FARSHA
Point
of
view.

- **Employees think they can fix it**
 - **one employee repairing pipe in pump house suspended over a containment pit**
 - **pipe release the nutrient water which may have contained toxic fumes**
 - **employee dies immediately**
 - **other employees' tried to rescue him resulting in succumbing to toxic fumes in the atmosphere.**

Case information, in terms of the exact cause of death, has not be made public by WorkSafeBC.

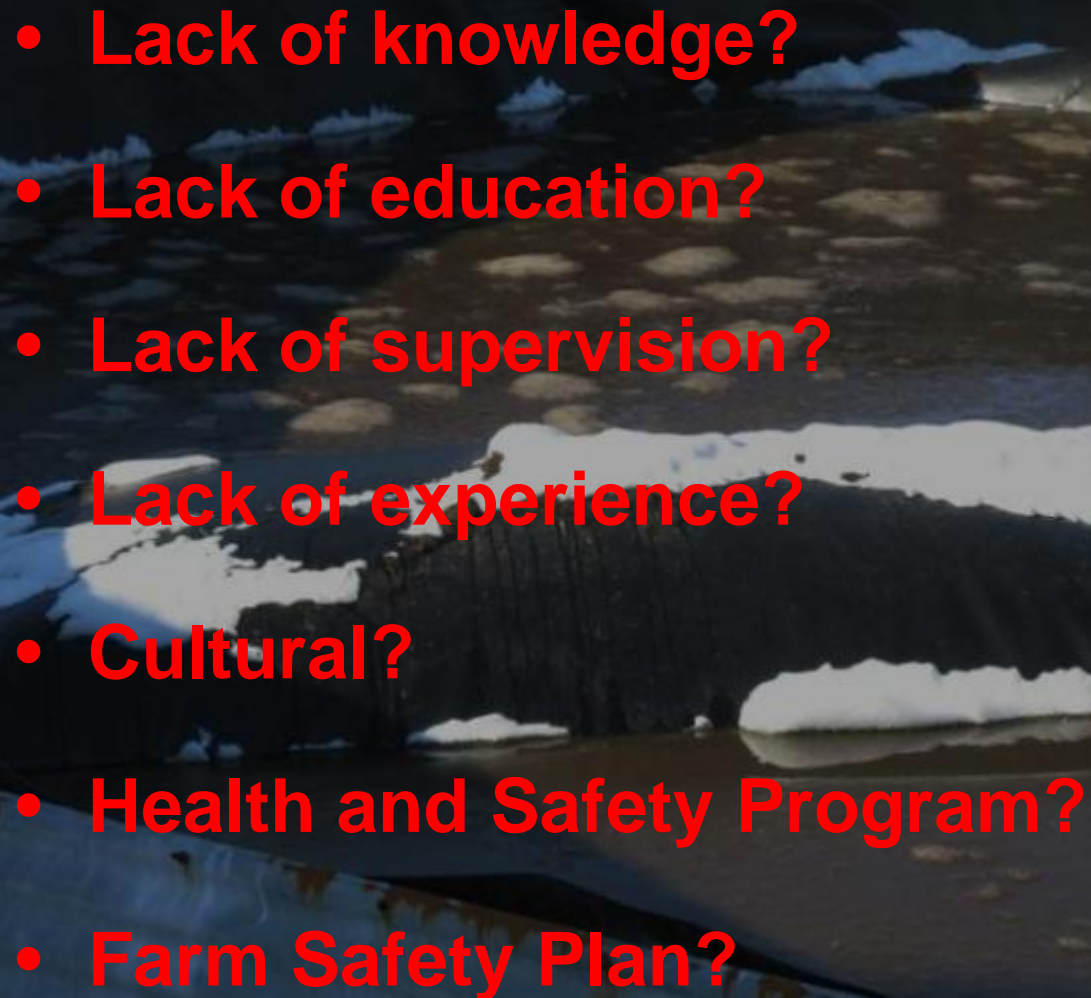


FARSHA
Point
of
view.

- **Result**
 - 3 deaths
 - 1 severe brain injury
 - 1 remains in a coma

Case information, in terms of the exact cause of death, has not be made public by WorkSafeBC.



- 
- Lack of knowledge?
 - Lack of education?
 - Lack of supervision?
 - Lack of experience?
 - Cultural?
 - Health and Safety Program?
 - Farm Safety Plan?



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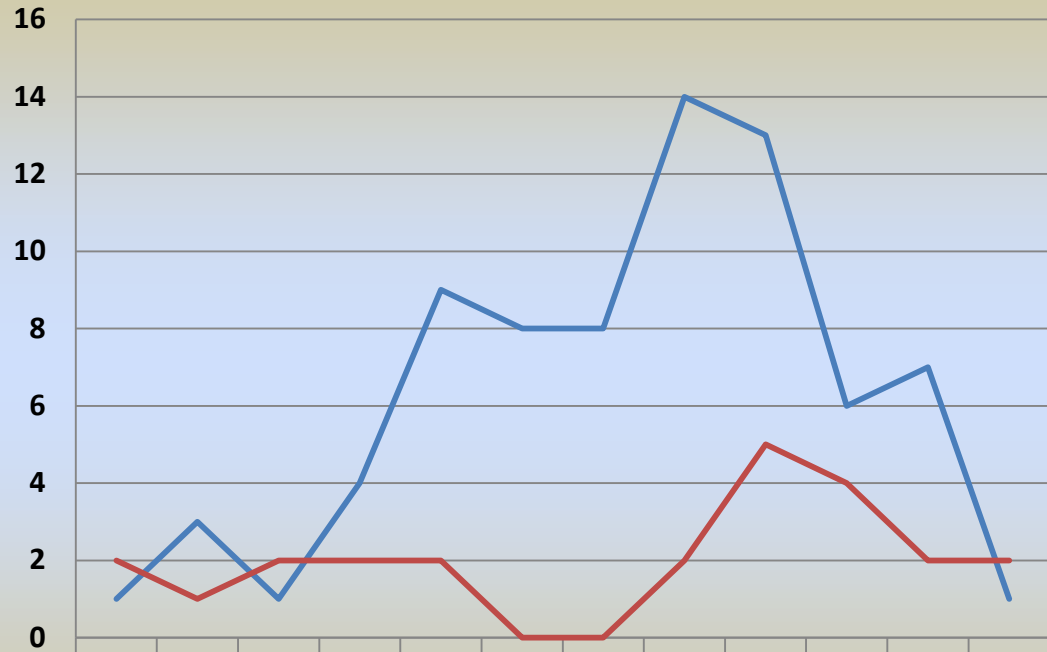
Uncharacterized and Confined Space Fatalities 1990 - 2009



Original - Scott Fraser

Confined Spaces Fatalities per Month (1990 - 2009)

Fatalities

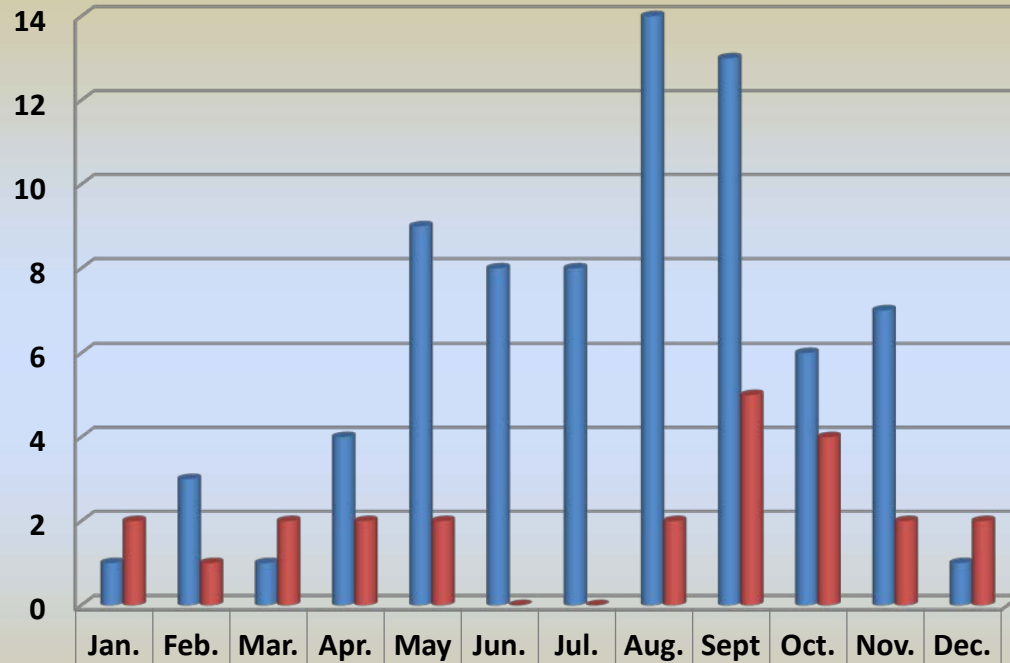


— Confined Space by Definition	1	3	1	4	9	8	8	14	13	6	7	1
— Uncharacterized Worspace	2	1	2	2	2	0	0	2	5	4	2	2

Original - Scott Fraser

Confined Spaces Fatalities per Month (1990 - 2009)

Fatalities



■ Confined Space by Definition

■ Uncharacterized Worspace

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept	Oct.	Nov.	Dec.
Confined Space by Definition	1	3	1	4	9	8	8	14	13	6	7	1
Uncharacterized Worspace	2	1	2	2	2	0	0	2	5	4	2	2

Original - Scott Fraser

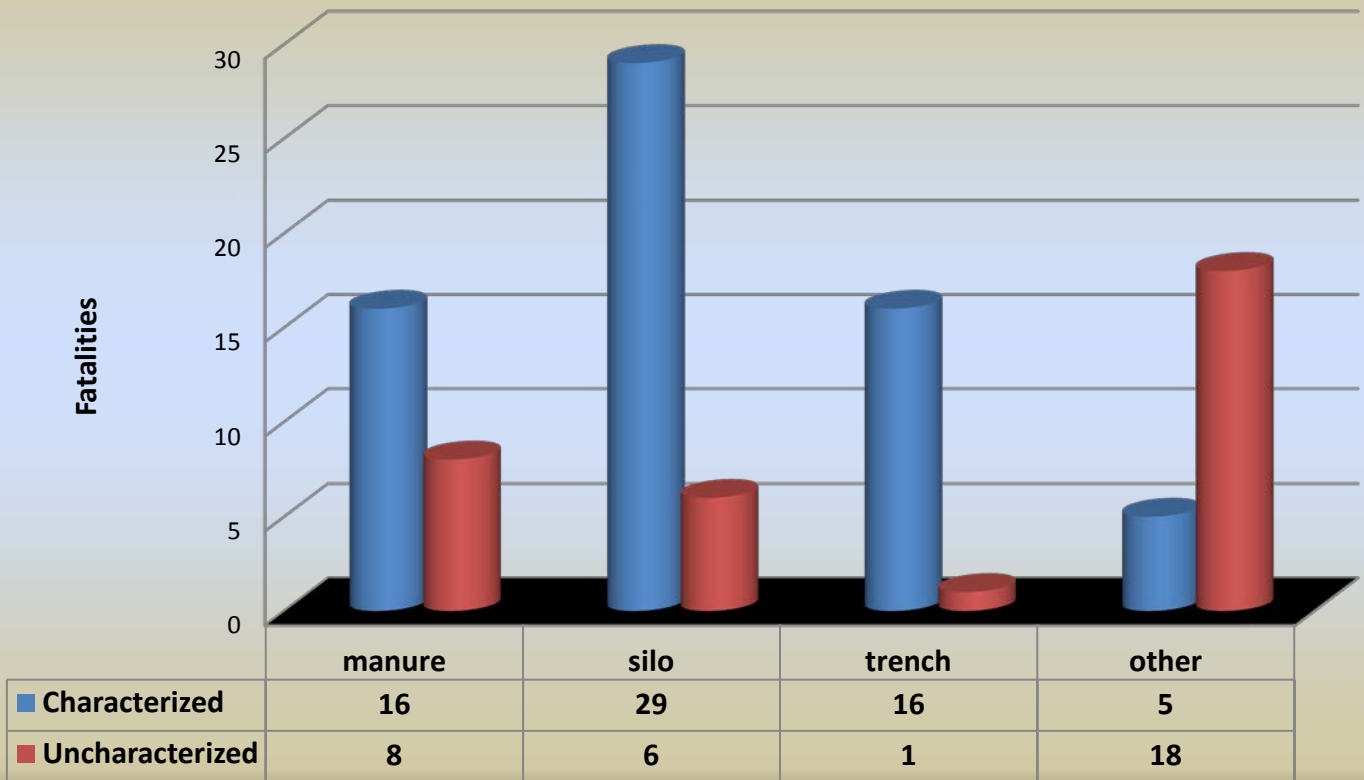
Confined Space Fatalities by Location (1990 - 2009)



	manure	silo	trench	other
Characterized	16	29	16	5
Uncharacterized	8	6	1	18

Original - Scott Fraser

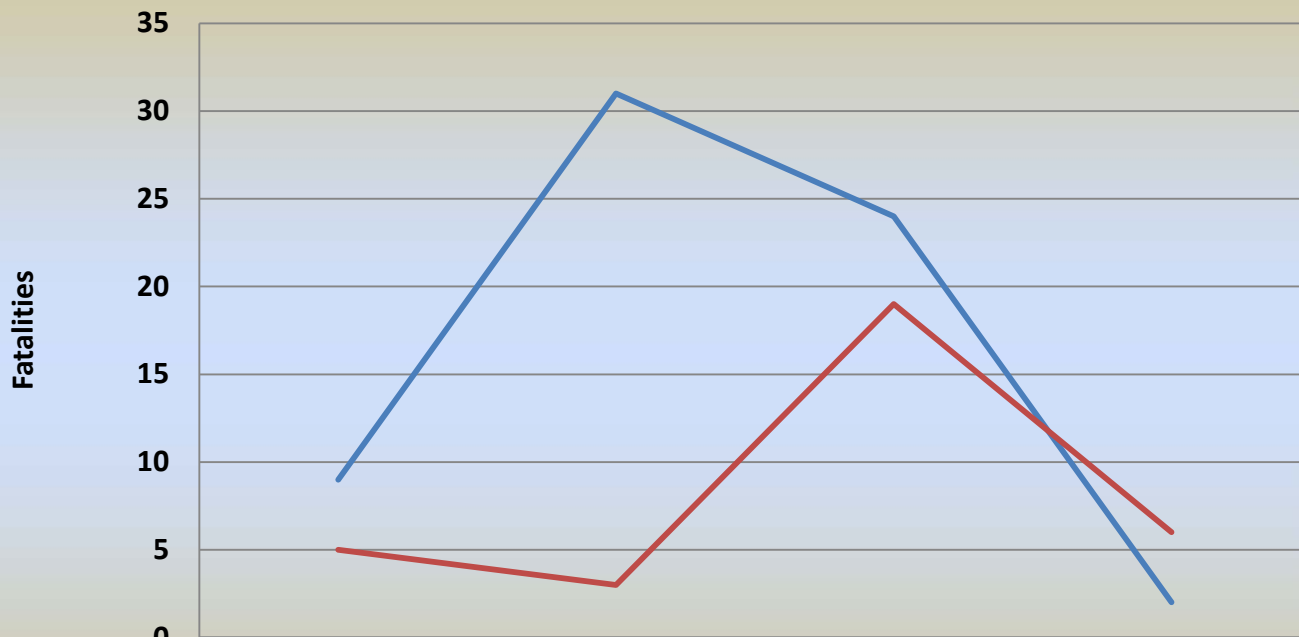
Confined Space Fatalities by Location (1990 - 2009)



Source of Information: CAIR

Original - Scott Fraser

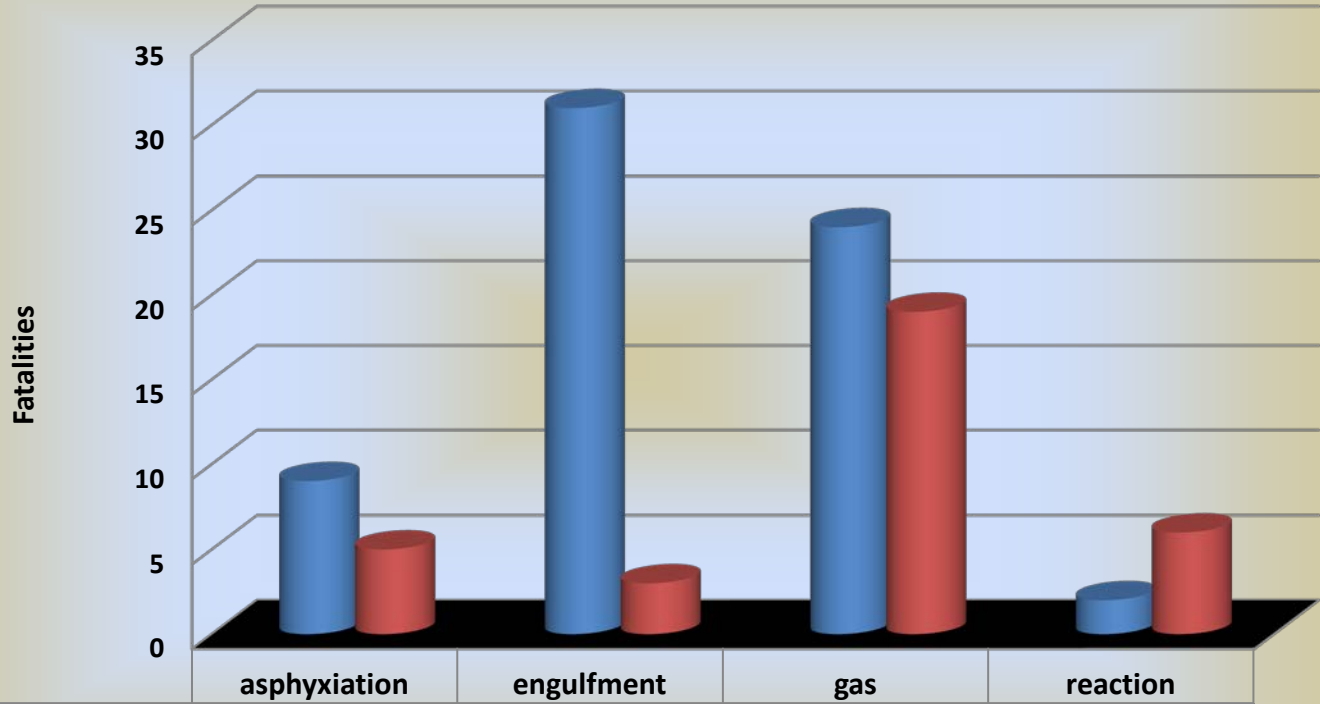
Confined Space Fatalities by Type of Death (1990-2009)



	asphyxiation	engulfment	gas	reaction
— Characterized	9	31	24	2
— Uncharacterized	5	3	19	6

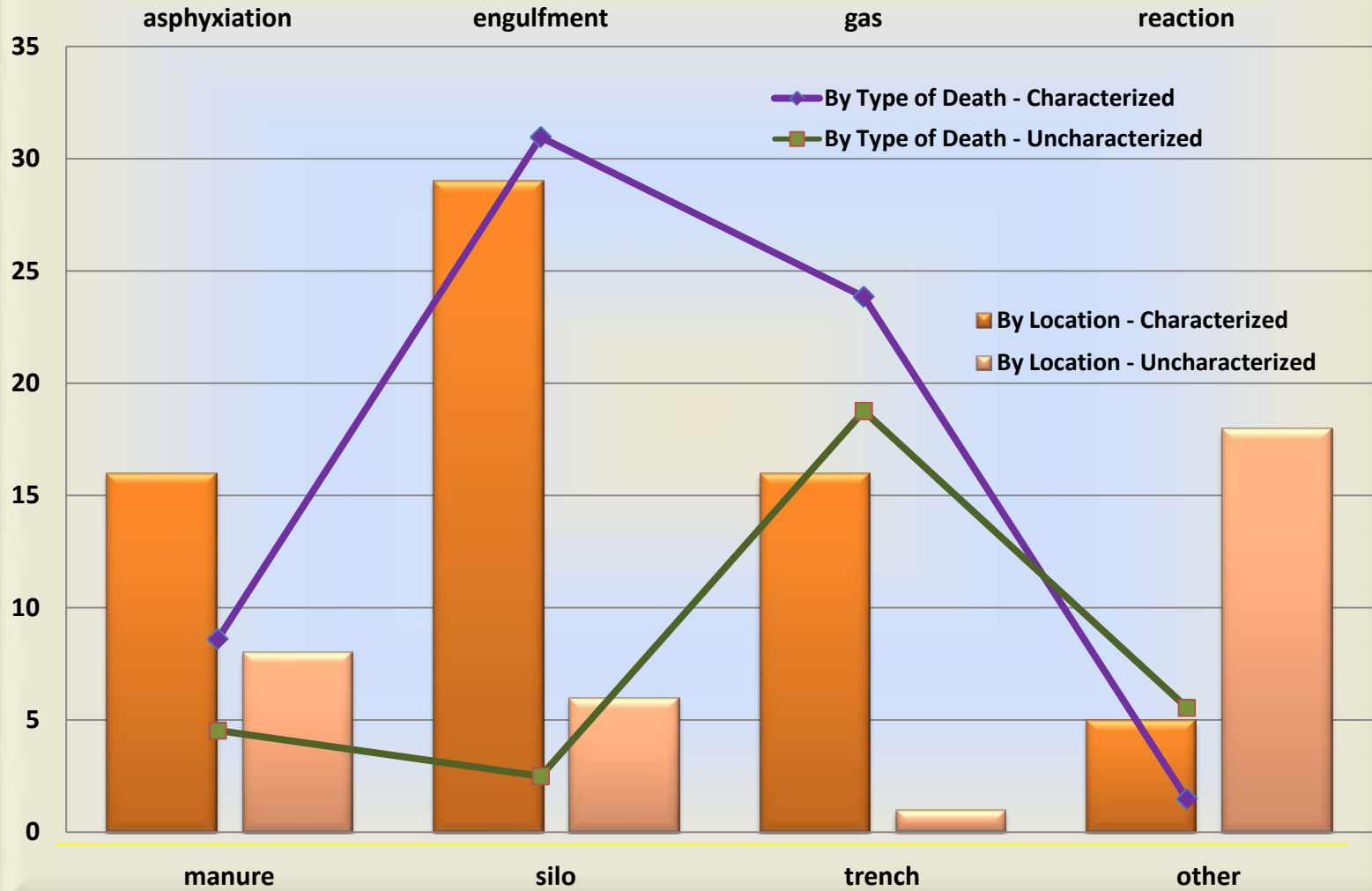
Original - Scott Fraser

Confined Space Fatalities by Type of Death (1990-2009)



■ Characterized	9	31	24	2
■ Uncharacterized	5	3	19	6

Original - Scott Fraser



Source of Information: CAIR

Contact Information

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