

2022
**CHEMICAL
SECURITY
SUMMIT**

August 23-25, 2022

#ChemicalSecurity



Explosives Regulatory Division

Safety and Security of Explosive Precursor Chemicals in Canada

Chemical Security Summit
August 2022, Washington



Natural Resources
Canada

Ressources naturelles
Canada

Canada

ERD

Explosives Precursor Chemicals Program

Licensing, inspections and outreach activities with sellers of
explosives precursors.

Explosives precursor chemicals are chemicals with that are easily accessible with many legitimate uses but in the wrong hands can be used to make homemade explosives.

mirror.co.uk **DAILY Mirror** Friday, August 18, 2017 TOP

Terror in Barcelona

MASSACRE

Evening Standard LONDON, THURSDAY, 7 JULY 2012

TERROR BOMBS EXPLODE ACROSS LONDON

- Many dead and injured
- Blasts on Tubes and bus
- Al Qaeda prime suspect
- Soldiers patrol the streets
- Entire city in gridlock

WHO WOULD DO THIS? Pressure cookers

THE WALL STREET JOURNAL

Deadly Blasts Rock D

LE FIGARO

L'Europe frappée au cœur

Le Monde

BRUXELLES FRAPPÉE PAR LE TERRORISME

The Sydney Morning Herald

TERROR IN BRUSSELS

At least 3

"All the News That's Fit to Print"

The New York Times

VOL. CLXV . . . No. 57,050 SATURDAY, NOVEMBER 14, 2015

PARIS TERRORIST ATTACKS KILL OVER 100; FRANCE DECLARES STATE OF EMERGENCY

"All the News That's Fit to Print"

The New York Times

VOL. CLXLIV . . . No. 56,917 NEW YORK, THURSDAY, APRIL 20, 1995

AT LEAST 31 ARE DEAD, SCORES ARE MISSING AFTER CAR BOMB ATTACK IN OKLAHOMA CITY WRECKS 9-STORY FEDERAL OFFICE BUILDING

Writing the detectives Crime authors pick their favourite characters

Tony Cragg's Edinburgh show

Roberto Mancini 'We are not ready to play for the IRL'

the guardian

newspaper of the year

Terror strikes Norway in attacks on island and Oslo city centre

Bursts of Chaos and Horror, Once Again

By LIZ ALDERMAN and JIM YARDLEY

PARIS — The night was chilly but thick with excitement as the big match between France's national soccer team and archrival Germany was underway at the national stadium in a northern suburb of Paris. President François Hollande watched with the crowd as the French players pushed the ball across midfield.

Then came the sharp, unmistakable crack of an explosion, overwhelming the roar of the crowd. A stunned moment passed. Players and spectators seemed confused and eventually

Series of Shootings and Blasts, Apparently Coordinated

By ADAM NISSITER and RICK GLADSTONE

PARIS — The Paris area reeled Friday night from a shooting rampage, explosions and mass hostage-taking that President François Hollande called an unprecedented terrorist attack on France. His government announced shrewdly increased border controls and heightened police powers as it mobilized the military in a national emergency.

French television and news services quoted the police as saying that around 300 people had been killed at a concert site where hostages had been held during a two-hour standoff with

Those attacks traumatized France and other countries in Europe, which grappled with fears of religious extremism and violence in the Middle East and North Africa.

An explosion near the sports stadium, the Stade de France, which French news services said was an apparent suicide bombing, occurred as Germany and France were playing a soccer match, forcing a hasty evacuation of Mr. Hollande. As the security of the grounds overtook the

CLUES ARE LACKING

U.S. Officials Scurry for Answers — Reno to Ask Death Penalty

By DAVID JOHNSTON

WASHINGTON, April 19 — The authorities opened an intensive hunt today for whoever bombed a Federal office building in Oklahoma City, and proceeded on the theory that the bombing was a terrorist attack.

12 Victims Were Children in 2d-Floor Day-Care Center

By JOHN KIFNER

OKLAHOMA CITY, April 19 — A car bomb went off with a thunderous explosion here this morning, ripping through a Federal office building, collapsing walls and floors, and killing at least 31 people. Many others were hurt in the wreckage, and the death toll seemed certain to rise.

At least 12 children whose parents had just dropped them off at a second-floor day-care center, were among those immediately known dead in the deadliest bombing in the United States in 75 years.

Primary Focus

Security of Canadians with regard to the threat posed by the misuse of chemicals by criminals and terrorists.

Chemical Security

This is achieved through licensing, inspections and outreach activities with sellers of restricted components.



Why did Canada Choose to Regulate ?

A group of 18 individuals were accused of planning to detonate truck bombs, open fire in crowded areas, storm important Canadian buildings and take political hostages.

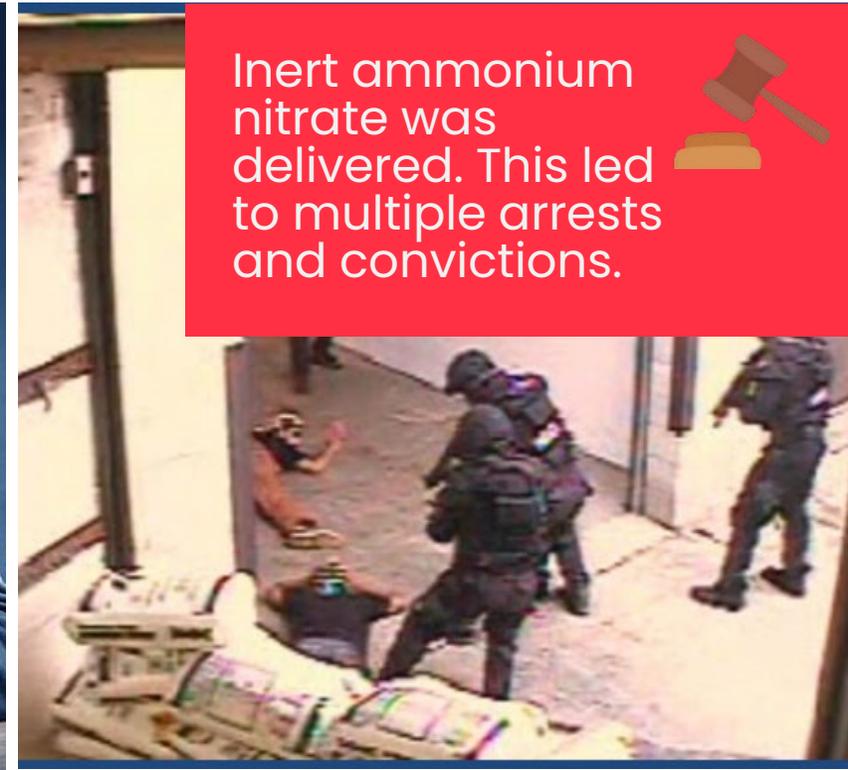
Toronto 18 Terrorism Plot - June 2006



Suspects attempted to acquire 6000 pounds of ammonium nitrate. This suspicious sale was luckily reported by the seller.



The group was infiltrated by an undercover RCMP officer.



Inert ammonium nitrate was delivered. This led to multiple arrests and convictions.





Balancing Economy and Security

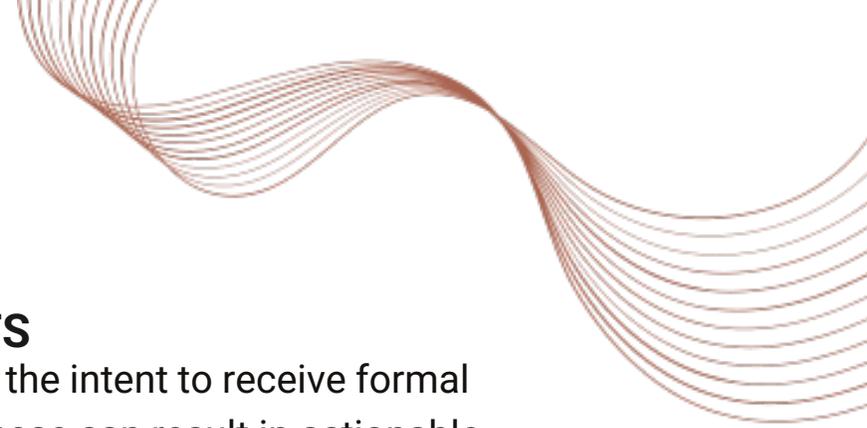
- When implementing any program or regulations, you want to consider the impacts on the economy. The impacts of a regulation on individual businesses must be measured.
- A balance must be struck between the regulatory burden on industry versus the appropriate safety and security controls.
- Before any regulatory changes are made in Canada, extensive consultations with all affected parties are conducted.



It is very important to consult with industry and companies that will be affected.



Different Ways to Engage



WORKSHOPS/FOCUS GROUPS

Explore issues, opinions, priorities and concerns from stakeholder groups.

ROUNDTABLES

Smaller group discussions with key people. A more specific focus.

ONLINE FORUM OR FEEDBACK EMAIL INBOX

For a large audience and is a platform for questions and concerns. This forum can exist over a long period and information can be filtered.

CALLS FOR COMMENTS

A document published with the intent to receive formal responses to a proposal. These can result in actionable input to incorporate into proposed regulations.

NEWSLETTERS/BULLETINS

Try to send material about upcoming changes or workshop dates to as many affected parties as possible. It is beneficial to hear from smaller companies as well.

SURVEYS/PUBLIC OPINION RESEARCH

Tools that can gauge how your consultations efforts are being received. Surveys can also be used after implementation of regulations.

External Consultations are Important



Learn about possible impacts

Industry and affected parties will be able to identify impacts to their operations and if there are any economic burdens.

Get industry support for the regulations

By providing different platforms to share information and listen to concerns, you can help ensure an easier implementation of regulations. Ensure to always explain why the proposed regulations are needed. Discuss the benefits to society.

Give this step the time it needs

This step takes a lot of time. Do not rush it. The time you spend working with the industry beforehand will be helpful further along the process.

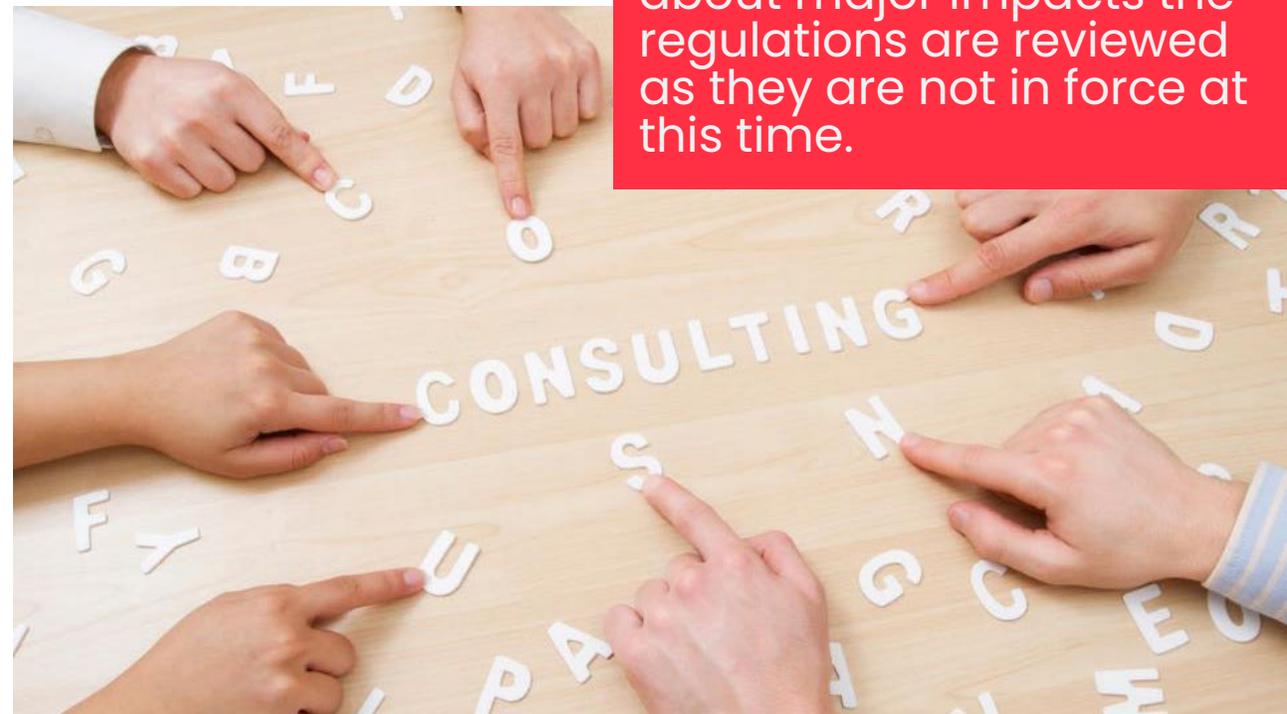


Regulatory Impact Analysis Statement

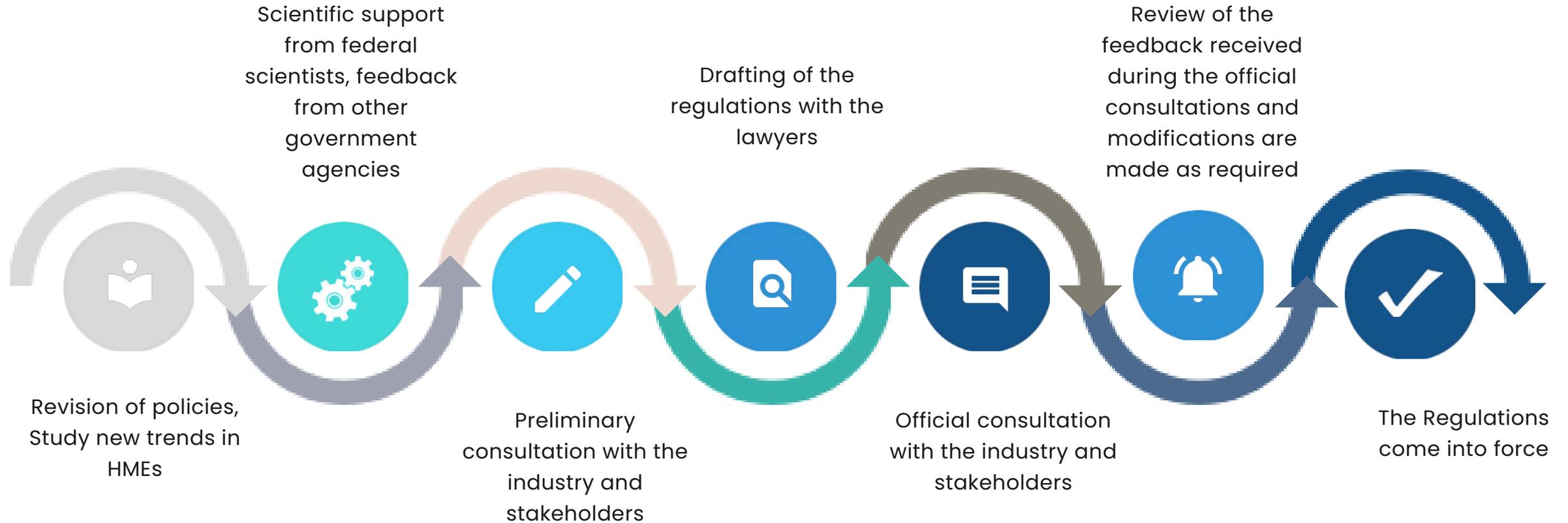
- After preliminary discussions with the affected parties, Canada publishes a Regulatory Impact Analysis Statement. All Canadians can provide comments on this document. We will answer the questions received publicly.
- This document is very comprehensive and contains information such as background information, rationale, the proposed regulations, the benefits and costs to industry (cost per year to a business) and the list of whom was consulted.



If there are any concerning comments about major impacts the regulations are reviewed as they are not in force at this time.



SUMMARY: THE STAGES OF REGULATORY DEVELOPMENT



Regulated Explosives Precursor Chemicals

In Canada, there are 14 regulated explosives precursor chemicals.



Ammonium Nitrate



**Hydrogen Peroxide
30% or higher**



Nitromethane



Potassium Chlorate



Potassium Perchlorate



Sodium Chlorate



**Nitric Acid
75% or higher**



Potassium Nitrate



Sodium Nitrate



**Potassium Nitrate
and Sodium Nitrate
Mixture**

Regulated Explosives Precursor Chemicals



**Calcium Ammonium
Nitrate**



Aluminum Powder



Hexamine



Acetone



**AN or CAN in Cold
Packs**

Explosives Precursor Chemicals

Most stringent

Tier 1

- Ammonium nitrate, 28% nitrogen
- Calcium ammonium nitrate, 28% nitrogen

Less stringent than Tier 1

Tier 2

- Hydrogen peroxide ($\geq 30\%$)
- Potassium nitrate, 90%
- Sodium nitrate, solid, 90%
- Potassium nitrate and sodium nitrate mixture, 90%
- Nitric acid ($\geq 75\%$)
- Potassium chlorate, 90%
- Sodium chlorate, 90%
- Potassium perchlorate, 90%
- Nitromethane, 90%
- Aluminum powder, particle < 200 microns
- Hexamine, 90%

Least stringent - only reporting requirements

Tier 3

- Acetone, 90%
- Ammonium nitrate in cold packs, 28% nitrogen
- Calcium ammonium nitrate in cold packs, 28% nitrogen

Regulations for Precursor Chemicals

Anyone who **sells** any of the regulated precursor chemicals in Tier 1 or 2 must enrol with ERD and follow the regulatory requirements. Final use of the chemical is not regulated.



**Mitigate risks at
the point of sale.**

Chemical security is
everyone's business.

Regulatory Requirements, Point of Sale

Control the
access to these
chemicals.

Control the
inventory of
these chemicals.

Control the
sales of these
chemicals.

Examples



Access

- lock the chemicals
- lock the structure where the chemicals are stored
- post signs to limit access
- restrict access to only those who need access



Inventory

- conduct weekly inspections on their stock
- implement a stock management system



Sales

- verify ID before selling
- take sales records
- lock sales records
- keep sales records for 2 years

Requirements	Tier 1	Tier 2	Tier 3
Enrol with NRCAN	Y	Y	N
Control access to the components	Y	Y	N
<u>Implement security and key control plans</u>	Y	N	N
Control inventory	Y	Y	N
<u>Submit an annual inventory to NRCAN</u>	Y	N	N
Verify ID and record sales	Y	Y	N
Refuse a suspicious transaction	Y	Y	Y
Report incidents	Y	Y	Y



RATING GUIDELINES

Identifies Major and Minor non compliance issues that can be encountered during an inspection.

◦ Major:

- Access to chemicals not controlled
- Chemicals not kept locked
- No ID verified or recorded
- The seller is not enrolled with NRCan
- No records of sale

◦ Minor: (some examples)

- Stock Management Spreadsheet not current
 - Their enrollment details are not current
 - Weekly inspections are not complete
-

DEFINES A RATING

- This allows us to measure compliance across the country
- It helps determine the inspection cycle. Sites with rating from 0-2 will receive a follow up visit within the same year.

Rating	Number of Deficiencies
5	Fully satisfactory. No minors or majors
4	1 to 2 minors
3	3+ minors
2	1 major
1	2 majors
0	3 + majors



NRCCan is developing new training material to help sellers comply with the regulations.

Tips for Sellers

After we explain why we are there for a discussion we try to educate the shopkeeper of what some suspicious behaviors could be.

We give examples of behaviors or situations that could give someone reasonable grounds to suspect that the chemical will be used for a criminal purpose.

The customer...



appears either nervous, evasive or argumentative



wants to purchase an unusual amount of product or products out of season



has an unusual preoccupation with certain products and their concentration



returns frequently to purchase the same products or buys a combination of products that is concerning



pays usually with cash, even when the sum is large



has burns and/or discoloration of hands, fingers, and/or arms

Useful Reference

Sell Explosives Precursor Chemicals Resp

Precautions to Take at the Point of Sale

REMEMBER chemicals of concern that are sold from your establishment. You can check off which ones on the back of this card.

RECOGNIZE suspicious behaviours of individuals trying to purchase these chemicals. Is the customer:

- nervous, aggressive, not communicating or trying to hide their face?
- unable to provide a legitimate description of why the chemical is needed?
- having an unusual preoccupation with the concentration of the product?
- returning with an unusual frequency to buy the same chemicals?
- attempting to buy an unusual quantity or combination of chemicals?
- insisting on paying cash and requesting unusual delivery methods?

REFUSE a sale if there are reasonable grounds to suspect that the chemical will be used for criminal purposes.

RECORD all important details of the incident such as date, time, product involved and physical description of individual.

REPORT the suspicious incident to your local police or the RCMP National Security Line 1-800-420-5805 and Natural Resources Canada 1-855-912-0012.

Canada is counting on your eyes, your instincts and your cool
Your effort makes a difference.

We have created a small card that can be kept behind the sales counter. It lists useful tips, the phone numbers to report and the list of chemicals they should remain vigilant about.

Inspectors also use this during the introduction so they have a visual to show when discussing the different chemicals.

Restricted Components (Regulated)	Watchlist (Unregulated)
Tier 1	<ul style="list-style-type: none">■ Urea■ Hydrogen peroxide (< 30%)■ Hydrochloric acid (Muriatic acid)■ Calcium nitrate (trihydrate)■ Magnesium powder■ Sulphuric acid■ Nitric acid (< 75%)■ Calcium ammonium nitrate double salt■ Magnesium nitrate hexahydrate■ Potassium permanganate
Tier 2	NOTES:
<ul style="list-style-type: none">■ Ammonium nitrate ($\geq 28\%$ nitrogen)■ Calcium ammonium nitrate■ Hydrogen peroxide ($\geq 30\%$)■ Potassium nitrate (e.g. solid stump remover) ($\geq 90\%$)■ Hexamine (e.g. camping fuel tablets) ($\geq 90\%$)■ Aluminum powder (less than 200 μm, $\geq 70\%$)■ Nitromethane ($\geq 90\%$)■ Potassium chlorate ($\geq 90\%$)■ Potassium perchlorate ($\geq 90\%$)■ Sodium chlorate ($\geq 90\%$)■ Nitric acid ($\geq 75\%$)■ Sodium nitrate and potassium nitrate mixture ($\geq 90\%$)■ Sodium nitrate ($\geq 90\%$)	
Tier 3	
<ul style="list-style-type: none">■ Acetone (e.g. nail polish remover or paint thinner) ($\geq 90\%$)■ Ammonium nitrate and calcium ammonium nitrate contained in instant cold packs	

Other Tools

To help raise awareness, ERD has(is) creating many different formats of training. It is beneficial to leave some information behind when you leave so it can be shared with more employees and used for training.



Pamphlets and Posters



Comprehensive Guidelines



Self Guided Tier 1/Tier 2 Training



Updated Website



Chemical Security Video for retailers to identify suspicious behaviours



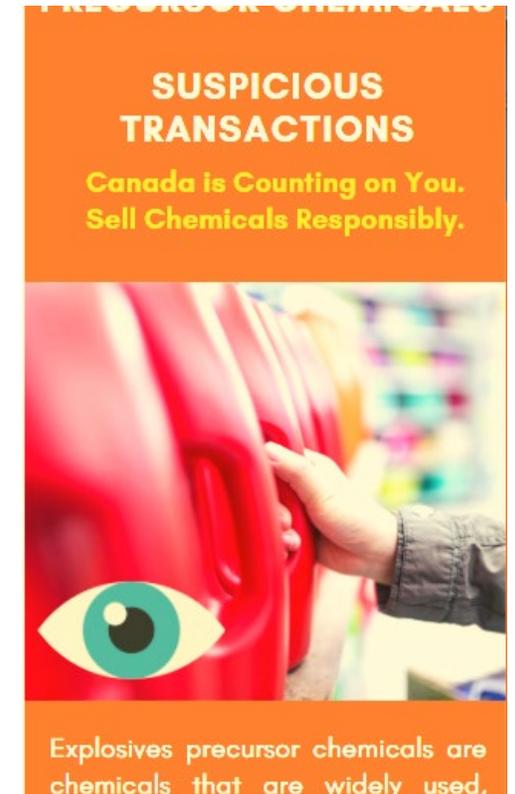
Canada

Guidelines for Recognizing and Reporting Suspicious Transactions of Explosives Precursor Chemicals



G20-06 May 2022

Canada



Restricted Components (Regulated)	Watchlist (Unregulated)
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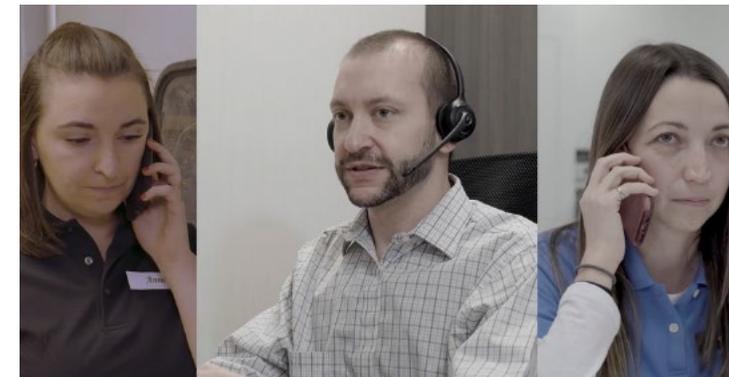


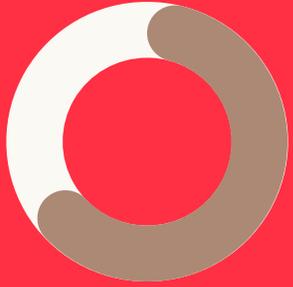
Chemical Awareness Video

We also share a link to a video we have just completed. The video follows an individual acquiring chemicals to make an explosive. It shows different scenarios in a retail setting and describes what to look for and what to do.

<https://youtu.be/Vm9f5sk0pSc> FULL VIDEO ENGLISH

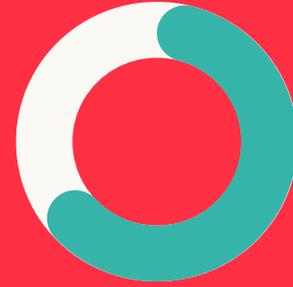
<https://youtu.be/Nq0Xvn7P35s> FULL VIDEO FRENCH





Incident Reporting

If reports are being made about suspicious activities, then there is success in your program. Individuals are aware of their duty to report incidents.



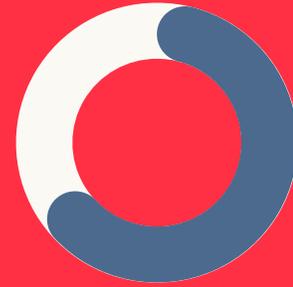
Compliance

Compliance can be monitored via a rating system given during inspections. The rating should improve over the years and can demonstrate the participation of the industry.



No Incidents

However, no incidents can also mean that implemented measures could be working. Much of the intent of regulating precursors is to be proactive.



Process Evaluation

Continue to collect feedback from the program and study the regulatory quality. As processes or trends are changing in the industry, adapt with them.

Measuring Success

Measuring the success of regulations can be difficult at times.



Do you have any questions ?

Feel free to reach out!



Ken Faulkner

Senior Program Manager
Law Enforcement Liaison

kenneth.faulkner@nrcan-rncan.gc.ca



Meagan Martin

Manager, Senior Inspector
Explosives Precursor
Chemicals Unit

meagan.martin@nrcan-rncan.gc.ca