



**FERTILIZER CANADA**

**FERTILISANTS CANADA**

# **IMPLEMENTATION GUIDE**

## **Agricultural Ammonium Nitrate and Calcium Ammonium Nitrate Code of Practice**

**January 2023**

A circular graphic with a green gradient background, overlaid on a faded industrial facility image. The text 'Where Stewardship Grows' is written in white, bold, sans-serif font.

**Where  
Stewardship  
Grows**

# AGRICULTURAL AMMONIUM NITRATE AND CALCIUM AMMONIUM NITRATE CODE OF PRACTICE IMPLEMENTATION GUIDE

## 1.0 GENERAL COMMENTS

### 1.1 PURPOSE AND SCOPE

This guide is intended to provide assistance in complying with the Agricultural Ammonium Nitrate (AN) and Calcium Ammonium Nitrate (CAN) Code of Practice by offering additional details and resources. Applicable Regulations, Codes and Acts have been referenced for easy access.

The Appendices provide templates of protocols that can be used by each facility when preparing their documents for the auditing process.

Fertilizer Canada created the Agricultural AN and CAN Code of Practice to provide uniform safety and security practices for the handling and storage of AN and CAN used in Canada. In this revision, the AN and CAN Codes have been combined into a single amalgamated AN and CAN Code of Practice. Some of the Code requirements are only applicable to facilities handling and storing AN fertilizer. This Code was drafted by fertilizer manufacturers, distributors and agri-retailers, with input from relevant government agencies and industry stakeholders.

The intent of the AN and CAN Code is to assist shippers, sellers, handlers, customers and end-users of AN and CAN fertilizers to become aware of and to assist in their compliance with the regulatory requirements for AN and CAN, and to implement industry best practices. These include the *Explosives Regulations* of the *Explosives Act*, the *Transportation of Dangerous Goods Act and Regulations*, the *Ammonium Nitrate Storage Facilities Regulations* under the *Railway Safety Act*, and the *Environmental Emergency (E2) Regulations* of the *Canadian Environmental Protection Act*.

However, the AN and CAN Code is not designed to be a complete compilation of all relevant regulations. The AN and CAN Code refers to certain regulations where they have been identified as a suitable means for managing an identified safety or security risk. The owner/operator of each facility is ultimately responsible for compliance with all applicable regulatory requirements.

## 1.2 DEFINITIONS AND PRODUCT DESCRIPTIONS

The AN and CAN Code applies only to products which meet the industry-accepted definitions for AN and CAN which are described below, and defined in Section 1.2.1. These product descriptions are essential to differentiate AN and CAN from other fertilizer products that may have similar product names, but have their own unique product compositions and properties. Product descriptions for other fertilizers with similar names are provided for references in Section 1.2.2 and are not subject to this Code.

The AN and CAN Code applies to all AN and CAN products meeting the following criteria.

Ammonium nitrate (AN) fertilizers that are:

- AN fertilizer with a concentration of at least 28 percent N;
- AN mixed fertilizer containing 60 percent or more of AN by weight; or
- AN mixed fertilizer containing less than 60 percent of AN by weight if they contain iron oxide, chromic acid, inorganic salts of chromium, copper or manganese, powdered metals, sulphur potassium chloride or any other ingredients in quantities which will appreciably sensitize or otherwise increase the hazard of AN.

Calcium ammonium nitrate (CAN) fertilizer contains as its essential ingredients only AN and calcium carbonate (for instance limestone) and/or magnesium carbonate and calcium carbonate (for instance dolomite), prepared as a homogenous prill or granule, which:

- Has a maximum combustible material content, expressed as carbon, of 0.4% by weight; and
- Has a minimum content of carbonates of 20% by weight with a purity level of 90% by weight.

CAN fertilizers covered by the Code are:

- Designated as CAN per the definition above and have a total AN content greater than 70% but less than 80% by weight; or
- Mixtures/blends containing CAN as defined above and where the total AN content of the mixture/blend contains greater than 70% but less than 80% AN; or
- Physical mixtures of AN and carbonates giving the same average chemical composition as the definition above where the total AN content of the mixture contains greater than 70% but less than 80% AN<sup>1</sup>.

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<sup>1</sup>While physical mixtures have an equivalent level of security sensitivity due to their same average chemical composition as CAN, it must be noted that physical mixtures (e.g. AN and limestone

The AN and CAN Code does **not** apply to other products including ammonium calcium nitrate double salt and calcium nitrate. A list of relevant product definitions and descriptions is included in the Appendices (Section 1.0 and 2.0) for reference.

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chips) do not meet the definition of CAN as stated here and will not have the same chemical properties as a product which meets the definition of CAN above.

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## 2.0 SAMPLE APPLICATION FOR AUDIT FORM

A separate application must be completed for each facility. Compliance Certificate No: \_\_\_\_\_

### Agricultural Ammonium Nitrate and Calcium Ammonium Nitrate Code of Practice Application for Compliance Certificate

Name of Applicant: \_\_\_\_\_ (“Operator”)

Address of Facility: \_\_\_\_\_ (“Site”)

The Operator hereby applies to the Fertilizer Canada for a Compliance Certificate in respect of the Site. In making this application, the Operator acknowledges and agrees to the following:

- (a) The Operator accepts the Agricultural Ammonium Nitrate and Calcium Ammonium Nitrate Code of Practice (AN and CAN Code) established by Fertilizer Canada from time to time and agrees to the appeal process established by Fertilizer Canada for the resolution of disputes arising with respect to the Site’s compliance with the AN and CAN Code;
- (b) The Operator understands and agrees that in order to obtain a Compliance Certificate for the Site, the Operator must obtain independent certification by an independent auditor (Auditor) on the list approved by Fertilizer Canada, confirming that the Site is in compliance with the AN and CAN Code. The Operator is solely responsible for compliance with the AN and CAN Code;
- (c) The Operator will permit access to the Site at all reasonable times for the purposes of the audit of the Site in connection with this application, and for any re-inspection of the Site in accordance with Fertilizer Canada’s quality control, compliance, and any other policies then in effect. The Operator agrees that the results of any audit may be disclosed to Fertilizer Canada, the Agrichemical Warehousing Standards Association (AWSA), Funnel Communications Inc., or to such other project manager as Fertilizer Canada may designate from time to time;
- (d) Subject to the appeal process established by Fertilizer Canada from time to time, the Operator agrees to be bound by the Auditor’s findings with respect to the Site;
- (e) The Operator agrees that any costs or expenses arising in connection with the certification of the Site shall be the responsibility of the Operator;
- (f) The Operator agrees to pay the fees and expenses of the Auditor as determined prior to the audit;
- (g) The Operator releases any and all claims it has or may in future have against Fertilizer Canada, the AWSA, CropLife Canada, Funnel Communications or such other project manager as Fertilizer Canada may designate from time to time and their respective members, directors, officers and employees and any auditor or senior auditor in connection with this application, any audits conducted at the Site and any failure by the Operator to obtain a Compliance Certificate;
- (h) If the Operator obtains a Compliance Certificate in respect of the Site, the Operator understands that the obligation to maintain the Site according to the AN and CAN Code is mandatory and the Operator must continue to comply with the AN Code in order to maintain its Compliance Certificate.
- (i) The Operator understands and agrees that the AN and CAN Code requirements stem from current regulations and that non-compliance(s) with the AN Code that are not corrected within a reasonable timeframe, may result in the reporting of those non-compliances to the respective regulatory authorities.

By signing below, the Operator hereby releases any and all claims (including without limitation claims resulting from any damage, injury, loss or other claims) it has or may in future have against Fertilizer Canada or such other project manager as Fertilizer Canada may designate from time to time or their directors, officers, employees, committee members, members or agents including any auditor or senior auditor, arising from or in relation to this application, any audits conducted at the Site, any failure by the Operator to obtain a Compliance Certificate, or the acts or omissions of any person or entity with respect to the handling, storage, use or misuse of ammonium nitrate. Without limitation to the foregoing, the Operator hereby agrees to the terms of the “Disclaimer” set out in the Agricultural Ammonium Nitrate and Calcium Ammonium Nitrate Code of Practice.

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Title (if Corporation)

\_\_\_\_\_  
Date

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## SECTION A – INBOUND SHIPMENTS

### A1 SAFETY AND SECURITY OF INBOUND AMMONIUM NITRATE AND CALCIUM AMMONIUM NITRATE CARGO

Good transportation and handling practices for inbound shipments are an important part of mitigating potential safety and security risks through the receiving process. The security of inbound shipments of AN is critical due to the typically large size of the shipment and the potential security risks through the receiving process. In addition, proper handling and transportation procedures, including provisions applicable to dangerous goods, must be adhered to ensure a high standard of safety is achieved. AN is also a regulated product under the *Transportation of Dangerous Goods Act and Regulations* and must be transported in accordance with the applicable requirements. In line with the goal to minimize these safety and security risks, the applicable sections of the following acts and regulations must be reviewed to ensure compliance.

#### A1.1 SHIPMENTS BY MARINE

##### SPECIFIC REQUIREMENTS:

**Responsible Person** – A responsible representative designated by the importer should be available during discharge of the product to oversee handling and to verify any load quantity discrepancies upon commencement of discharge. For example, this could be a qualified surveyor.

**Record Keeping** – Maintenance of good records is a best practice for the security of ammonium nitrate. Importers/receivers should maintain records of their shipments for a minimum two years. The records can be the Bill of Lading, Certificate of Analysis or other combination of documents containing, at a minimum, the following information:

- Product Shipped
- Date of Shipment
- Load Quantity
- Point of Origin of Shipped Product
- Load Discharge Port
- Discharge Verification Quantity
- Applicable Signatures of Shipper, Transport and Receiver



## RELEVANT ACTS AND REGULATIONS:

### A) International Maritime Dangerous Goods Code

The International Maritime Organization (IMO) administers the International Maritime Dangerous Goods (IMDG) Code which was developed as a uniform international Code for the transport of dangerous goods in packaged form by sea. The provisions of the IMDG Code are mandatory as of 2004 for all marine shipments of packaged dangerous goods under the International Convention for the Safety of Life at Sea (SOLAS Convention). The intent of this Code is to provide standards for the safe carriage of dangerous goods and for the prevention of pollution to the environment. Shipments of packaged ammonium nitrate must conform to the applicable sections of the code. The major sections of the IMDG Code are:

#### Volume 1:

- General Provisions, Definitions and Training
- Classification
- Packing and Tank Provisions
- Consignment Procedures
- Construction and testing of packaging, IBC's, large packaging, portable tanks and road tank vehicles.
- Transport Operations

#### Volume 2:

- The Dangerous Goods List
- Limited Quantity and Excepted Quantities Exceptions
- Index of Dangerous Goods Classifications
- Appendices

#### Supplement:

- EMS Guide
- Medical First Aid Guide
- Reporting Procedures
- Packing Cargo Transport Units
- Safe Use of Pesticides
- INF Code

The *International Maritime Dangerous Goods Code* can be accessed through the following link: [IMDG Code](#)

## **B) International Solid Bulk Cargoes Code**

The International Solid Bulk Cargoes (IMSBC) Code, which replaced the Code of Safe Practice for Solid Bulk Cargoes (BC Code), is administered by the International Maritime Organization and was adopted in 2011 as mandatory under the International Convention for the Safety of Life at Sea (SOLAS Convention). The IMSBC Code aims to provide hazard information and safe handling, loading, carriage and discharge procedures to be adopted for certain solid bulk cargoes to facilitate safe stowage and shipment by marine vessel. Shipments of bulk ammonium nitrate must conform to the applicable sections of the Code. The major sections of the IMSBC Code include:

- General provisions
- General loading, carriage and unloading precautions
- Safety of personnel and ship
- Assessment of acceptability of consignments for safe shipment
- Trimming procedures
- Methods of determining the angle of repose
- Cargoes that may liquefy
- Test procedures for cargoes that may liquefy
- Materials possessing chemical hazards
- Carriage of solid wastes in bulk
- Security provisions
- Stowage factor conversion tables
- References for related information and recommendations
- Individual schedules of solid bulk cargoes
- Laboratory test procedures, associated apparatus and standards
- Properties of bulk cargoes

The *International Solid Bulk Cargoes Code* can be accessed through the following link: [IMSBC Code](#)

## **C) Canada Shipping Act – 2001**

The objectives of this Act are to:

- a. Protect the health and well-being of individuals, including the crews of vessels, who participate in marine transportation and commerce;
- b. Promote safety in marine transportation and recreational boating;
- c. Protect the marine environment from damage due to navigation and shipping activities;

- d. Develop a regulatory scheme that encourages viable, effective and economical marine transportation and commerce;
- e. Promote an efficient marine transportation system;
- f. Develop a regulatory scheme that encourages the viable, effective and economical use of Canadian waters by recreational boaters;
- g. Ensure that Canada can meet its international obligations under bilateral and multilateral agreements with respect to navigation and shipping;
- h. Encourage the harmonization of marine practices; and
- i. Establish an effective inspection and enforcement program.

The *Canada Shipping Act 2001* can be accessed through the following link: [Canada Shipping Act 2001](#)

#### **D) Marine Transportation Security Act and Regulations**

The *Marine Transportation Security Act* (MTSA) and *Regulations* are administered by Transport Canada and provides the legislative framework for the security of the Canadian marine transportation system.

This Act applies to:

- Vessels and marine facilities in Canada;
- Canadian ships outside Canada; and
- Marine installations and structures,

The MTSA and Regulations can be accessed through the following link: [MTSA](#)

Under the authority of Section 5 of the MTSA, the *Marine Transportation Security Regulations* (MTSR) came into force on July 1, 2004.

The regulations set out operator and personnel roles and responsibilities for developing security plans and putting them into action; provides a way to conduct security assessments, to establish adequate security protocols, and to properly document and report; and provides Transport Canada with a means of overseeing compliance of the marine transportation security system; security system; and, addresses Canada's obligations to implement the [International Ship and Port Facility Security Code](#) and align our regulatory approach with that of our major trading partners.

The Regulations take a risk-based approach to enhancing the security of the Canadian marine transportation system by ensuring that marine facility and vessel security plans address risks identified within their security assessments. The risk approach may be different, depending on issues such as the size of the facility, volume or type of traffic or geographic location.

The MTSR applies to any vessel in Canada, and to any Canadian vessels operating outside of Canada on a voyage between a port in one country and a port in another country, that meet the following criteria:

- Is more than 100 tons gross tonnage, other than a towing vessel;
- Carries more than 12 passengers; or
- Is a towing vessel towing a barge astern or alongside or pushing ahead, if the barge is carrying certain dangerous cargoes.

The MTSR also applies to:

- Canadian and foreign flagged vessels (Part 2);
- Marine facilities and port authorities (Part 3); and,
- Marine facilities that receive vessels described in Part 2.

The MTSR can be accessed through the following link: [MTSR](#)

## **E) Canada Marine Act**

The Canada Marine Act was established as a framework to allow for a competitive and efficient system for Canadian ports and enabled the divesting of certain ports and formation of port authorities.

In recognition of the significance of marine transportation to Canada and its contribution to the Canadian economy, the purpose of this Act is to:

- Implement marine policies that provide Canada with the marine infrastructure that it needs and that offer effective support for the achievement of national, regional and local, social and economic objectives and will promote and safeguard Canada's competitiveness and trade objectives;
  - Promote the success of ports for the purpose of contributing to the competitiveness, growth and prosperity of the Canadian economy;
- Base the marine infrastructure and services on international practices and approaches that are consistent with those of Canada's major trading partners in order to foster harmonization of standards among jurisdictions;

- Ensure that marine transportation services are organized to satisfy the needs of users and are available at a reasonable cost to the users;
- Provide for a high level of safety and environmental protection;
- Provide a high degree of autonomy for local or regional management of components of the system of services and facilities and be responsive to local needs and priorities;
- Manage the marine infrastructure and services in a commercial manner that encourages, and takes into account, input from users and the community in which a port or harbour is located;
- Provide for the disposition, by transfer or otherwise, of certain ports and port facilities; and
- Promote coordination and integration of marine activities with surface and air transportation systems.

The *Canada Marine Act* can be accessed through the following link: [CMA](#)

## **F) Port Authorities Operations Regulations**

(Under the *Canada Marine Act*)

The *Canada Marine Act* gives Canadian port authorities the general duty to take appropriate measures for the maintenance of order and the safety of persons and property at their ports, and powers to control ship traffic for the purposes of promoting safe and efficient navigation and environmental protection. The *Port Authorities Operations Regulations* (the Regulations) provide a framework within which these duties and powers are to be carried out. Namely, they set up a scheme that enables the port authorities to authorize certain activities in respect of the navigable waters and the works and activities on properties managed, held, or occupied by the port.

The *Port Authorities Operations Regulations* can be [accessed](#) through the following link: [PAOR](#)

## **G) Practices and Procedures for Public Ports**

(Under the *Canada Marine Act*)

These practices and procedures have been developed for the purpose of promoting safe and efficient navigation and environmental protection within the limits of public ports and may be amended from time to time. If circumstance dictates (emergency), an amendment may be made to these practices and procedures without notice. Under normal conditions, advance notice will be given as far in advance as possible but will not be less than 30 days.

The Practices and Procedures for Public Ports can be [accessed](#) through the following link: [Practices and procedures for public ports](#)

## **H) Public Ports and Public Ports Facilities Regulations**

(Under the *Canada Marine Act*)

The *Public Ports and Public Ports Facilities Regulations* establishes provisions for and number of items including port design, safety and order, operation of vehicles and traffic control, fire protection and dangerous situations, emergencies, ships and cargoes, designation of public ports and authorization requirements including those for activities involving dangerous goods.

The *Public Ports and Public Ports Facilities Regulations* can be [accessed](#) through the following link: [Public Ports and Public Port Facilities Regulations](#)

## **I) Cargo, Fumigation and Tackle Regulations**

(Under the *Canada Shipping Act*)

When loading and unloading shipments of bulk ammonium nitrate or ammonium nitrate based fertilizer, the following provisions must be followed:

- 114.** (1) *No person shall load or unload*
- a. *Ammonium nitrate; or*
  - b. *More than 10 000 tonnes of ammonium nitrate based fertilizer.*
- (2) *At least 24 hours before 150 tonnes or more of ammonium nitrate based fertilizer are to be loaded onto or unloaded from a vessel, its master shall notify the following of the intention to load or unload and the location where it will take place:*
- a. *The Department of Transport Marine Safety Office nearest to that location; and*
  - b. *The harbour master at the port or, if there is no harbour master, the person responsible for the port.*
- (3) *The notification shall confirm that the fertilizer is considered to be free from the hazard of self-sustaining decomposition when tested in accordance with Section 4 of Appendix 2 to the BC Code.*
- (4) *The harbour master at the port or, if there is no harbour master, the person responsible for the port at the location where loading or unloading ammonium nitrate based fertilizer will take place shall ensure that information in respect of fire prevention, emergency procedures, storage, cleanliness and separation from contaminants and other dangerous goods is available at the location.*

Transport Canada has a temporary policy and procedure in place that will allow for a bypass of the 10,000 tonne limit, however, these policies come with requirements for an attached emergency response plan. This requirement is expected to be removed once the regulations are changed and the temporary policy and procedure is no longer in place. Transport Canada Marine Safety (TCMSS), on a case-by case basis, will review the applications by ports authorities to load onto/unload from vessels more than 10,000 tonnes of AN Based Fertilizer based on the provisions of the temporary policy and procedure.

The interim policy and procedure documents can be found below:

- Policy: [Loading or unloading of ammonium nitrate based fertilizer in a Canadian port](#)
- Procedure: [Loading or unloading ammonium nitrate based fertilizer in a Canadian port](#)

The *Cargo, Fumigation and Tackle Regulations* can be [accessed](#) through the following link: [CFTR](#)

## **J) Transportation of Dangerous Goods Act and Regulations**

The *Transportation of Dangerous Goods Act and Regulations* (TDGA/R) oversee the transportation of dangerous goods in Canada. The TDGR were designed to promote public safety (people, property and the environment) and security during the transportation of dangerous goods. Transport Canada is the federal government department for administering the TDGA/R.

There are nine classes of dangerous goods classified under the TDGR. Ammonium nitrate with not more than 0.2 percent combustible or organic material (UN1942), and Ammonium nitrate based fertilizer with a concentration of AN that is greater or equal to 70 percent (UN2067) are included in Class 5, oxidizing substances. AN based fertilizers that have a concentration of AN that is less than 70 percent are classified in Class 9, miscellaneous dangerous goods. If AN is mixed with more than 0.2 percent of combustible or organic substances, it is classified in Class 1, explosives.

CAN is not regulated under the TDGR.

Part 3 of the TDGR includes requirements for Documentation. Section 3.1 outlines consignor responsibilities:

3.1(1) Before allowing a carrier to take possession of dangerous goods for transport, the consignor must prepare and give to that carrier a shipping

document or, if the carrier agrees, an electronic copy of the shipping document.

(2) When dangerous goods are imported into Canada, the consignor must, before the dangerous goods are transported in Canada, ensure that the carrier has a shipping document or, with the agreement of the carrier, an electronic copy of the shipping document that contains the information required by these Regulations.

The *Transportation of Dangerous Goods Act* (TDGA) and *Regulations* (TDGR) can be accessed through the following links: [TDGA](#) and [TDGR](#)

## **A1.2 SAFETY AND SECURITY OF AMMONIUM NITRATE CARGO ARRIVING BY RAIL/ROADS**

### **SPECIFIC REQUIREMENTS:**

Good security practices for inbound shipments are an important part of mitigating any potential security risks through the receiving process. In order to minimize these risks, rail and road carriers must agree to notify the importer or receiver of any theft or tampering during import.

**Responsible Representative** – A responsible person designated by the importer/receiver should be available during unloading of the product to oversee its discharge. For example, this could be a bonded or pre-approved driver as part of their security responsibilities during transport.

**Records** – Maintenance of good records is a best practice for the security of ammonium nitrate. Shipment records should be retained for a minimum two years. The records can be the Bill of Lading, Certificate of Analysis or other combination of documents containing, at a minimum, the following information:

- Product Shipped
- Date of Shipment
- Load Quantity
- Point of Origin of Shipped Product
- Location of Destination
- Applicable Signatures of Shipper, Transport and Receiver

**Reporting** – Any evidence of tampering or product loss brought to the receiver's attention must be reported immediately to local police as well as to the shipper by the receiver.



## RELEVANT ACTS AND REGULATIONS:

### A) Transportation of Dangerous Goods Act & Regulations

The *Transportation of Dangerous Goods Act and Regulations* is administered by Transport Canada and applies to all shipments of dangerous goods within Canada. The major sections of the regulations are:

- Part 1 – General Provisions
- Part 2 – Classification
- Part 3 - Documentation
- Part 4 - Dangerous Goods Safety Marks
- Part 5 – Means of Containment
- Part 6 – Training
- Part 7 – Emergency Response Assistance Plan
- Part 8 – Accidental Release and Imminent Accidental Release Reporting Requirements
- Part 9 – Road Transportation
- Part 10 – Rail Transportation
- Part 11 – Marine Transportation
- Part 12 - Air Transportation
- Part 13 – Protective Directive
- Part 14 – Permit for Equivalent Level of Safety
- Part 15 – Court Order
- Part 16 – Inspectors

The *Transportation of Dangerous Goods Act* (TDGA) and *Regulations* (TDGR) can be accessed through the following links: [TDGA](#) and [TDGR](#)

### B) U.S. Department of Transport

The following links will provide additional insight into the US regulatory requirements:

- [How to Comply with Federal Hazardous Materials Regulations](#)

- [Federal Motor Carrier Safety Administration – Registration and Licencing requirements for US shippers](#)

The receiver must keep records of shipments per Part 3 of the TDGR.

## A2 PROVIDING TRANSPORT FROM SOURCE VIA RAIL/TRUCK

### SPECIFIC REQUIREMENTS:

In order to minimize security risks, companies responsible for transporting ammonium nitrate must be properly vetted from a security perspective. The following requirements are the basic elements that must be assessed to validate a transportation company:

**Bonding or Pre-approval** – The transportation firm has either been bonded or has been pre-approved through internal review intending to validate the driver(s) and services to be provided and minimize the security risks to the retail site when shipping a security-sensitive product. A record must be available from the company responsible for the shipment indicating that the transportation firm has been bonded or pre-approved. The pre-approval process must include a review of past references, licensing and certifications.

**Proof of Insurance Coverage** – The company responsible for the shipment must have written proof of valid insurance coverage for all transportation firms used for transporting AN and/or CAN within the last two years.

**Training** – The company responsible for the shipment must have written confirmation from all transportation firms used for transporting ammonium nitrate within the last two years indicating that employees have been provided the applicable training required for compliance to the *Transportation of Dangerous Goods Regulations* for shipments of AN. .

**Security/ERP Plan** – The company responsible for the shipment must have written confirmation from all transportation firms used for transporting AN and/or CAN the last two years indicating that the transportation firm has developed an emergency response plan (ERP), including security related issues.

**Records** - It is a mandatory requirement that records of AN shipments be kept for a period of two (2) years from the date of shipment per Part 3 – Documentation of the *Transportation of Dangerous Goods Regulations*. As CAN is not regulated under the *TDGR*, it is not subject to the documentation requirements in the *TDGR*; however, maintaining a record trail is an essential part of any security plan. The carrier must maintain records of shipment for a minimum of two (2) years. The records can be the Bill of Lading, or other combination of documents containing, at minimum, the following information:

- Product shipped
- Date of shipment
- Load quantity
- Point of origin of shipped product
- Location of destination

- Applicable signatures of shipper, transporter and receiver

## **A3 ACCESS TO PRODUCT DURING SHIPMENT**

### **SPECIFIC REQUIREMENTS:**

**Security of AN and CAN in Transit** – All truck shipments of AN and/or CAN cannot be left unattended by the driver at any time unless the load is parked in a secured area or the unit/load is properly locked down (i.e. padlocks, fifth wheel locks, etc.). A secured area refers to an area surrounded by two meter high chain link fence with the three strand barb wire at the top. The area must also have lockable gates that are secured when the site is unattended. If storage is not possible in this type of secured area, the access hatches and gates to the load must be secured and locked. It is a recommended best practice that shipments of AN and CAN be non-stop to avoid increased security risks.

**Securing of Hatches on Trucks and Railcars** – All access hatches and gates on trucks and railcars transporting AN or CAN must be secured with a lock or sealed regardless of distance travelled. The recommended best practice for seals is a cable type seal.

**Inspection of Locks/Seals** – All locks/seals installed on the access hatches and gates are to be inspected and validated after each stop and upon arrival at destination. The inspection at destination must be documented and attached to the bill of lading for the shipment. It is a recommended best practice to have a check off sheet for the transport operator in order that they can document an inspection of seals at each stop.

## A4 LOSS OR TAMPERING OF PRODUCT DURING SHIPMENT

### SPECIFIC REQUIREMENTS:

The receiving facility has a written procedure that describes the inspection process for shipments of AN and/or CAN. The procedure must contain the following elements:

**Verification of Quantities** – If possible, it is highly recommended that the actual weight of AN and/or CAN be determined against shipped quantities to determine if there are any shortages. If determining an actual weight is not possible, a visual inspection will suffice to look for empty or short compartments in the load. All shortages must be documented if in excess of historical norms and reported to the seller.

**Tampering of Locks/Seals** – Upon arrival at destination, all tampering of locks/seals noticed during shipment or upon arrival must be documented and reported to the seller.

**Records** – Records of theft, tampering or any loss not attributed to normal operations must be kept for a period of two (2) years.

**Note:** *The nature of the manufacturing and handling process for AN and CAN predicates that there will be a minor loss of product mass through the supply chain due to moisture loss, mechanical abrasion, settling and residues. Some industry members have reported the typical expected loss will range from 0.5% – 1.0% of the total weight of product. However, normal expected losses for a site may vary depending on the operation or conditions.*

### RELEVANT ACTS AND REGULATIONS:

These requirements are outlined in the *Explosives Regulations* Part 20 (*Restricted Components*) Section 485, available through the following links:

- [Explosives Regulations Part 20 \(Restricted Components\):  
https://laws.justice.gc.ca/eng/regulations/SOR-2013-211/page-33.html#h-799529](https://laws.justice.gc.ca/eng/regulations/SOR-2013-211/page-33.html#h-799529)
- [Explosives Regulations: https://laws.justice.gc.ca/eng/regulations/SOR-2013-211/index.html](https://laws.justice.gc.ca/eng/regulations/SOR-2013-211/index.html)

## A5 PRODUCT SPILLS DURING TRANSPORT AND UNLOADING

### SPECIFIC REQUIREMENTS:

The receiving facility has a written procedure that describes the proper process for containing and cleaning up spills of AN and/or CAN. The procedure must contain the following:

**Containment** – The procedure must contain instructions on how to effectively contain a spill to limit contamination of the spilled product and segregate it from nearby water sources. One method to achieve this is to erect a simple wood barricade around the spill until it is cleaned up.

**Clean-up** – The procedure must contain instructions to employees involved in the clean-up of the proper personal protective equipment to wear during the clean-up and the proper equipment to use for the safely and effectively cleaning up the spill. The procedure must also designate an area where any contaminated product can be segregated and stored until it is disposed of.

**Disposal** – The procedure must describe the proper method of disposal of contaminated ammonium nitrate. The preferred method is to use the contaminated product as a fertilizer on agricultural land. However, if the contaminant in the ammonium nitrate makes this not agronomically possible, the product will have to be disposed of in accordance with the regulatory requirements.

**Reporting** – Provincial Environmental Regulations typically require that ammonium nitrate spills that produce more than 50 kgs of contaminated product must be reported to regulatory authorities. It is recommended that specific regulations be consulted to determine individual provincial requirements.

**Environmental Emergency Plan (E2 Plan)** - Environmental Emergency Plans (E2 Plans) are required for facilities that meet the regulatory thresholds under the *Environmental Emergency Regulations, 2019*. In the event of an incident involving accidental release of AN or CAN, the E2 Plan and spill reporting requirements must be followed. Schedule 8 of the E2 Regulations define the information required in written reports when required in relation to an environmental emergency.

### RELEVANT ACTS AND REGULATIONS:

#### A) Environmental Emergency Regulations (Enabling Act: *CEPA*)

The Environmental Emergency Regulations, 2019 aim to reduce the frequency and severity of accidental releases of hazardous substances into the environment,

and improve industry's capacity to manage environmental emergencies at fixed facilities in Canada.

Facilities that meet the concentrations and thresholds for listed substances are required to comply with the E2 Regulations.

Reporting of spill or release of substances under the E2 Regulations requires verbal notification and written reports per subsection 18(2).

In some circumstances, the facility may be required to enact the facility's Environmental Emergency Plan as required by the Environmental Emergency Regulations. Please refer to the E2 Regulations and related Technical guidance document for more details. In the event of accidental release of AN, Environmental emergencies must be reported to appropriate provincial and federal authorities:

- a. a verbal notification as soon as possible under the circumstances to the authorities identified in the schedule of the Release and Environmental Emergency Notification Regulations (Notification Regulations) under CEPA 1999 or on the Report an environmental emergency webpage, which provide the regulated community and the public with the telephone number of the 24-hour authorities operating for the respective province or territory to which notifications are to be made; and
- b. written report as soon as possible under the circumstances to the relevant authorities designated pursuant to subsection 18(2) of the E2 Regulations.

If you need to report a written report for an environmental emergency regarding a registered facility, please login to the Environmental emergencies reporting system using your GCKey credential and submit a Schedule 8. If you need to report an environmental emergency for an unregistered facility, you can submit your written report on an environmental emergency.

Further information is available in the [Technical Guidelines for the Environmental Emergency Regulations, 2019 Version 2.0](#).

The full E2 Regulations can be access through the following link: [Environmental Emergency Regulations, 2019](#)

## **B) Transportation of Dangerous Goods Regulations – Part 8**

Note that CAN fertilizer is not regulated under the TDGR.



Part 8 of the *Transportation of Dangerous Goods Regulations* requires immediate reporting to provincial authorities and outlines the information required to report:  
<http://www.tc.gc.ca/eng/tdg/clear-part8-379.htm>

## **A6 DELIVERY OF AMMONIUM NITRATE AND/OR CALCIUM AMMONIUM NITRATE**

### **SPECIFIC REQUIREMENTS:**

**Authorization for Unloading a Shipment** – Verbal or written authorization must be provided to the operator of the transport vehicle/vessel prior to a load of AN and/or CAN being unloaded at destination. This is a sound inventory management practice as well as a good security risk management practice. Authorization must include confirmation of the location of the delivery, the shipper and the exact storage area where the ammonium nitrate is to be deposited at the storage facility. It is a recommended best practice to always have a representative of the receiving organization at the storage site to ensure the ammonium nitrate is placed in the proper location.

**Documentation Review Prior to Unload** – All documentation related to a shipment of AN and/or CAN must be reviewed prior to authorizing unload by a representative from the receiving company. The receiver must review and verify that the name of the shipper, the quantity of AN and/or CAN, the name of the receiving company and the date of shipment are all accurate and listed on the shipping documentation prior to authorizing unload.

**Verification of Arrival of Shipment at Destination** – The shipping company must have a process in place to verify that a shipment of AN and/or CAN has arrived at destination within the estimated arrival time. For longer delivery routes (four hours or greater), it is recommended that check in times be established between the dispatch for the shipping organization and the transport vehicle/vessel.

## SECTION B – STORAGE OF AMMONIUM NITRATE AND CALCIUM AMMONIUM NITRATE

Safe and secure storage of AN and CAN is critical due to the amount of product stored and the numerous safety and security risks that may be presented. The following guide provides additional explanation and resources to assist in compliance with the Code of Practice.

### B1 PRODUCT STORAGE

Facilities storing more than 20 tonnes of ammonium nitrate above 60 percent (by weight) must prepare an Environmental Emergency (E2) Plan as required by the *Environmental Emergency Regulations, 2019* under *CEPA*.

CAN fertilizer and other AN-based fertilizers that are over 60 percent AN (by weight) are captured under the *E2 Regulations* if the total quantity / capacity volume threshold of AN are met.

If the AN concentration falls to below 60 percent by weight of the mixture, then it is no longer considered captured under the *E2 Regulations*. AN mixtures must have 60 percent (by weight) or greater, to meet the concentration criteria. If the concentration criteria is met or exceeded, but the total quantity on site is not met or exceeded, and the maximum capacity of the largest container system is not met or exceeded, then the facility is only subject to Schedule 8 of the *E2 Regulations* for reporting of spills.

For example, to reach threshold of 20 tonnes of AN in a mixture:

- In a mixture with 60 percent AN by weight, then the entire mixture with AN must be at least 33.33 tonnes to meet the threshold.
- In a mixture with 80 percent AN by weight, then the entire mixture with AN must be at least 25 tonnes to meet the threshold.

It is up to the facility to determine if the concentration, total quantity on site and maximum capacity of the largest container system, is met or exceeded.

Resources for preparing this plan can be found:

#### **Environmental Emergency Plan (E2 Plan)**

The Environmental Emergency (E2) Regulations, 2019 can be accessed through the following link: [E2 Regulations](#)

The Technical Guidelines for preparing an E2 Plan can be found at the following web address: [Technical Guidelines for the Environmental Emergency Regulations, 2019 Version 2.0](#)

## B1.1 STORAGE SECURITY

### SPECIFIC REQUIREMENTS:

When reviewing the security at a storage facility, it is always best to start with an assessment of the security risks present. Once these risks are assessed, it is recommended that a facility develop a multilevel security response plan for the facility. This multilevel plan will feature several “layers” of security that must be breached in order to gain access to the AN and/or CAN storage area. An example of a multilevel plan would be the installation of security lighting that is motion activated as the first level and locks on all doors/bin gates as a second level. Best practices in security have always shown a multi-level approach to be very effective in deterring theft. Remember, that the key issue is to put enough security measures in place that provide notification of potential theft (i.e. lighting, alarms, etc.) or barriers to entry (i.e. fences, locks, etc.) that increase the risk of detection for criminals.

Given enough time and resources, criminals can gain access to most buildings. However, thefts of AN and/or CAN usually occur very opportunistically in short periods of time to avoid detection. Putting measures in place that increase the effort required to take AN and/or CAN will usually deter most criminals.

As a minimum, the following security measures must be employed at all locations certified under the Code:

**Access Points on Buildings** – All doors and other points of access to buildings storing bagged or bulk AN or CAN are secured with a high quality lock. Windows must also be secured using a high quality lock, internal locking mechanism, bars on the window or other mechanism designed to prevent unauthorized access. It is recommended that the locking device be designed to be resistant to bolt cutters.f

**Securing of Bin Gates** – If present, any bin gates providing access to storage bins containing AN or CAN must be locked and secured. It is recommended that the locking device be designed to be resistant to bolt cutters.

***NOTE*** – *It is a recommended best practice to provide perimeter security. This may include fencing with lockable gates or other means of perimeter security around bins and/or buildings storing AN or CAN. The recommended standard for perimeter security is a two-meter chain link fence complete with lockable gates and three-strand barb wire barricade at the top of the fence.*

**Key Control System** – A key control system for all locks is employed at the facility. The key control system must have the following features:

- All duplication of keys that provide access to the AN or CAN storage areas is done under the strict consent of the facility manager.
- All duplication of keys is to be done by a certified, licensed locksmith who has received permission from the facility manager.
- All keys must be marked as “Do Not Duplicate” and have been stamped with an identification number.
- Assignment of keys is documented and includes, the date of assignment, the ID number of key being assigned, the name of person to whom the key is assigned, the signature of the manager and the signature of the person receiving the key.
- The facility must also have a process in place to retrieve an assigned key once the person leaves the employ of the facility.

The key control system must be kept up to date. A facility’s system should be updated whenever there is a change in personnel or any other change at the facility which impacts the key control plan contents or the security of the product. Assigning a dedicated person to review the plan on a regular basis and update it with any new changes can be an easy way to ensure this.

Natural Resources Canada (NRCAN) provides guidance on how a key control system can be integrated into a facility’s security plan (See **Error! Reference source not found.**) to help keep all implemented security procedures in the same place for easy reference. Guidance on creating security and key control plans from NRCAN is linked below. f

NRCAN Guidance on Security Plans and Key Controls ([Tier 1 Restricted Components Security and key Control Plan Guideline, June 2022](https://www.nrcan.gc.ca/sites/nrcan/files/ERD/20220510%20-%20G20-01%20Tier%201%20Security%20and%20Key%20Control%20-%20E.pdf)) can be found at the following link: <https://www.nrcan.gc.ca/sites/nrcan/files/ERD/20220510%20-%20G20-01%20Tier%201%20Security%20and%20Key%20Control%20-%20E.pdf>

**Security Lighting** – After hours security lighting must be provided to illuminate main points of access to storage buildings or bins. The security lighting must be active from dusk to dawn and can be motion activated.

**Signage** – The AN and/or CAN storage facility is equipped with signage indicating no unauthorized access per the *Explosives Regulations Part 20 (Restricted Components)* Section 483. The signage must be placed in close proximity to the storage area to prevent unauthorized access by customers.

**Inspection of Security Measures** – Inspections should be conducted weekly to ensure the product is stored securely. Records (checklist) should be kept on file for auditor inspection. See Appendices for sample checklists.

Security Plans are mandated by the [Explosives Regulations Part 20 \(Restricted Components\) Section 460 \(2\) and Section 461 \(2\)](#)

Declaration of the security plans must also be included in the application of inclusion on the product sellers list or component sellers list, provided to the Chief Inspector of Explosives. The application form is provided by the Department of Natural Resources Canada, available through the hyperlink [here](#).

**Monitored Security System** – Sites must have a security system where monitoring is “active” or able to detect changes on a continuous basis. Acceptable systems could include, but are not limited to:

- Passive camera systems monitored by personnel or connected to a recording system;
- Breach- or motion-based alarm systems;
- Active roving guard; or
- Combinations of the above options to form a 24/7 monitoring system.

**Visitor Reporting** – A process must be in place to ensure management and/or security personnel have an awareness of all on-site persons who are not regular staff for that location (e.g. guests, contractors, etc.) and are given authorization before gaining access to the facility grounds. This could include measures such as signs directing visitors to sign in at the main office structure or other location and guest sign-in/sign-out sheets.

**List of Employees** – The storage facility must have a list of all employees who work at each location where AN and/or CAN is stored or sold. This is a regulatory requirement under *Explosives Regulations* Part 20, Section 484.

Additional Resources:

For more information on compliance obligations for product and component sellers:

- G20-05 – [Guidelines for Tier 1 Restricted Component Sellers](https://www.nrcan.gc.ca/sites/nrcan/files/ERD/20220510%20-%20G20-05-%20Guidelines%20for%20Tier%201%20Sellers1%20-%20E%20.pdf) (https://www.nrcan.gc.ca/sites/nrcan/files/ERD/20220510%20-%20G20-05-%20Guidelines%20for%20Tier%201%20Sellers1%20-%20E%20.pdf )
- G20-04 – [Guidelines for Recognizing and Reporting Suspicious Transactions of Explosives Precursor Chemicals](https://www.nrcan.gc.ca/sites/nrcan/files/ERD/20220510%20-%20G20-04%20-%20Guidelines%20for%20Suspicious%20Transactions%20-%20E%20.pdf) (https://www.nrcan.gc.ca/sites/nrcan/files/ERD/20220510%20-%20G20-04%20-%20Guidelines%20for%20Suspicious%20Transactions%20-%20E%20.pdf)
- *Explosives Regulations* – [Full pdf version](https://laws.justice.gc.ca/PDF/SOR-2013-211.pdf) https://laws.justice.gc.ca/PDF/SOR-2013-211.pdf

## B1.2 STORAGE SAFETY

### SPECIFIC REQUIREMENTS:

The storage of ammonium nitrate requires the utmost care and must comply with the storage requirements set out in the [Ammonium Nitrate Storage Facilities Regulations](#) as well as the National and Provincial Fire and Building Codes.

Note that the storage requirements set out in the *Ammonium Nitrate Storage Facilities (ANSF) Regulations* include specific separation distances that are only applicable for rail facilities subject to the *ANSF Regulations*. All other recommendations are applicable by local Building / Fire Codes.

This section of the Code is only required for facilities that store AN fertilizer. However, many of the practices for product management and site management could be followed for sites that store CAN fertilizer to ensure good product stewardship, product safety, and reduce risk.

#### B1.2.1 PHYSICAL STORAGE FACILITY REQUIREMENTS

**NOTE:** *Compliance with this section is only required for facilities that store AN fertilizer. However, many of the best practices for product management and site management could be followed for sites that store CAN fertilizer to ensure good product stewardship, product safety, and reduce risk.*

**Facility and Storage Design** – For additional information regarding the design and construction of the storage facility and storage bins, please refer to Sections 15-18 of the [Ammonium Nitrate Storage Facilities Regulations](#). The prescribed distances of the facility location from other structures/buildings can be found in Section 12.

Proper ventilation can be defined in the National Building Code, Section 3.3.6.6.

**Signage** – Section 22 of the *Ammonium Nitrate Storage Facility Regulations* clarifies the signage requirements. The *Ammonium Nitrate Storage Facilities Regulations* requires a sign with the words “Ammonium Nitrate” and “No Smoking or Open Flames” located at the entrance way of the storage facility. The intent of the signage is to identify the presence of ammonium nitrate to first responders in the event of an incident. The signage is intended to identify the storage area only and should not be placed in customer-only areas that do not provide access to the storage area. For questions or concerns relating to this requirement, please direct them to Transport Canada.

## **B1.2.2 STORAGE AND HOUSEKEEPING REQUIREMENTS**

**NOTE:** *Compliance with this section is only applicable to facilities that store AN fertilizer. However, many of the best practices for product management and site management could be followed for sites that store CAN fertilizer to ensure good product stewardship, product safety, and reduce risk.*

Proper clearances of stored ammonium nitrate from bin walls, facility ceiling, incompatible products etc. are referred to in Section 25 of the *Ammonium Nitrate Storage Facilities Regulations*.

**Internal Combustion Vehicles** – Restrictions on the use and storage of internal combustion engine vehicles are defined in Section 23 of the *Ammonium Nitrate Storage Facilities Regulations*.

**Ambient Storage Temperature** – The National Fire Code requires that ammonium nitrate not be stored in ambient temperatures exceeding 52°C (125°F). Please also refer to the applicable provincial fire code for specific provincial requirements.

**Fire Suppression** – A fire suppression system must be available in all storage facilities and must conform to Part 2 of the National Fire Code. The fire suppression system must adhere to good engineering practice and will be specific to the individual storage facility design and quantity stored. Only water should be used to suppress fires involving ammonium nitrate.

Additional guidance can be found in Section 24 of the *Ammonium Nitrate Storage Facilities Regulations*.

**Housekeeping** – Housekeeping requirements are defined in Section 28 of the *Ammonium Nitrate Storage Facilities Regulations*.

**Weekly Inspections** – Weekly inspections of the storage facility should be conducted to ensure that all safe storage requirements are complied with. A sample checklist can be found in the Appendices to facilitate the record keeping for these inspections. Any non-conformances found during the weekly inspection should be corrected immediately or as soon as practically possible and should be recorded and available for inspection. Inspection sheets should be available for verification at the time of audit.

Bear in mind that the safe storage of ammonium nitrate ensures the safety of employees, customers and surrounding communities.



## B2 EMERGENCY RESPONSE AND SECURITY PLAN

### SPECIFIC REQUIREMENTS:

An Emergency Response Plan (ERP) and Security Plan, are effective tools for planning for a response to emergency situations relating to both the safety and security of the stored product. In order to ensure that major risk events are planned for, including security related incidents, the following requirements must be key features of the ERP:

**Written ERP and Security Plan** – Every facility that stores AN and/or CAN must have a written ERP and Security Plan. These plans must address all of the major risk events at the facility such as fire, environmental and security related incidents. This would include contact numbers for responsible persons and relevant regulatory agencies, contact numbers for local law enforcement and reporting procedures. These plans can be separate documents or can be combined into one central comprehensive document.

**Updating of ERP and Security Plan** – The ERP and Security Plan has been reviewed and updated within the previous 12 months. Issues to be reviewed may include:

- Updating of names on the contact list
- Updating of contact numbers on the emergency contact list
- Updating of changes at the storage facility
- Communication of updated plan to local law enforcement and emergency responders. Documentation of such communication should be kept on file for auditor inspection.

**Notification of Storage of AN and/or CAN** – A letter must be sent to local law enforcement informing them of the presence of AN and/or CAN at the storage facility. It is a strongly recommended best practice to invite local law enforcement officials to the storage site in order to review the storage location of the AN and/or CAN and gain their input to safety and security measures being employed at the facility.

Documentation of such communication with local authorities should be kept on file and presented at the time of auditing.

These practices are derived from the requirements of the *Explosives Regulations*. Sections 460 (2) and 461 (2) outline the requirements of the Security Plan. Please refer to NRCAN's [Tier 1 Restricted Components Security and Key Control Plan Guideline](https://www.nrcan.gc.ca/sites/nrcan/files/ERD/20220510%20-%20G20-01%20Tier%201%20Security%20and%20Key%20Control%20-%20E.pdf) for additional information:  
<https://www.nrcan.gc.ca/sites/nrcan/files/ERD/20220510%20-%20G20-01%20Tier%201%20Security%20and%20Key%20Control%20-%20E.pdf>

## **Environmental Emergency Plan (E2 Plan)**

Facilities that meet the thresholds under the [Environmental Emergencies \(E2\) Regulations](#), 2019 are required to meet the requirements for an Environmental Emergency Plan (E2 Plan).

Here are some of the high level requirements of the E2 Regulations with relation to E2 Plans:

- a. The E2 Regulations require facilities storing AN, meeting or exceeding thresholds, to develop and implement an Environmental Emergency Plan (E2 Plan) for the following circumstances.
  - i. For contained substances, meet or exceed maximum container system capacity and quantity thresholds, and
  - ii. For uncontained substances, meet or exceed total quantity.
- b. During an environmental emergency, facility must take proper actions based on the E2 Plan.
- c. The plan must be exercised on an annual basis and a full scale exercise is required every 5 years starting on the date the plan was brought into effect.
- d. Public notification is required if transboundary (outside property boundaries) impacts are possible based on scenarios identified in the plan.
- e. Plan must be reviewed and updated, when necessary, once every year.

Additional requirements can be found in the E2 Regulations and further explained in the [Technical Guidelines to the Environmental Emergencies Regulations](#) which area good resource for facilities to determine the regulatory and reporting requirements. [Section 5](#) of the Technical Guidelines provides an overview of E2 Plan development and content. A preparation checklist can also be found in Appendix 8 of the Technical Guidelines document.

## **B3 ACCESS BY ON-SITE PERSONNEL**

### **SPECIFIC REQUIREMENTS:**

One element of a well planned and executed Security Plan is a process to ensure that all employees and contractors at the storage facility have been screened to prevent possible security risks. It is critical that this screening process not infringe on an individual's personal rights and freedoms. Therefore, it is good practice to ensure authorization is received from an individual prior to any review of their past references.

The screening process must include:

**Past Work References for Existing Employees** – All employees working at the AN and/or CAN storage facility must provide valid past work references. This is not required if the employee has been working at the facility for a period greater than five years.

**Past Work References on New Hires** – As a condition of employment, a potential new hire must disclose any previous criminal charges and provide valid past work references. As a matter of due diligence, it is critical that all past work references be contacted to verify the work history of the new hire and any potential security related risks.

**Past Work References for Contractors** – All contractors must provide documentation indicating past work history. If possible, work history for the past five years should be obtained; however, this may not exist for all contractors. This is not required if the contractor has established work history with the facility for a period equal to or greater than five years.

**Written Authorization for Contractors** – All contractors at the AN and/or CAN storage facility have written authorization from the manager of the facility including the date of authorization, the names of the contractors and a description of the work to be performed.

**CAUTION:** Refusal to hire a person based on a disclosure of pardoned or provincial offences may constitute illegal discrimination. Employers are cautioned to ensure that their hiring practices comply with their obligations under human rights and employment law in their region.

## **B4 LOSS OF PRODUCT DURING STORAGE**

### **SPECIFIC REQUIREMENTS:**

It is good inventory management practice, as well as good security risk management, to regularly reconcile inventories of AN and CAN. This will quickly identify any loss of product above historical norms in order that the potential cause(s) can be investigated. In addition, it is good practice to make regular visual inspections at the facility to identify potential issues of tampering.

The facility must have a written policy and procedure that contains the following elements:

**Inventory Audit Reconciliation** – The facility must have a written process describing the annual inventory audit reconciliation for all bagged and bulk AN and CAN storage facilities. For bulk storage, the recommended best practice is a weighed audit executed at periods of low inventory levels. Where this is not possible, an estimate of inventory levels will suffice.

Audit reconciliations must note:

- a. The starting inventory
- b. The quantity of AN or CAN that was acquired, and manner of acquisition
- c. The quantity of AN or CAN that was used, sold, exported, destroyed, stolen, or lost (as applicable)
- d. The year-end inventory
- e. The historical normal range of loss due to loss of waste

The inventory audit reconciliation process will assist a site in meeting their annual reporting obligations under the *Explosives Regulations* to Natural Resources Canada (See Section D). Annual reporting must be submitted using Natural Resources Canada's Form F20-02 which can be found on their website: <https://www.nrcan.gc.ca/explosives/restricted-components/9987>

**Reconciliation and Reporting** – There must be a reporting process for any shortages in excess of historical norms. The reporting process must indicate the amount of the shortage and an investigation into the potential cause.

**Weekly Inspection** – A documented, weekly inspection must be conducted for all AN and/or CAN storage areas to identify any tampering or loss of product. If any tampering and/or product loss is noted, it must be reported immediately to company officials. Tampering or product loss must also be immediately reported to the local police and within 24 hours to the Chief Inspector of Explosives per Section 488 of the [\*Explosives Regulations Part 20 \(Restricted Components\)\*](#).

## SECTION C – OUTBOUND SHIPMENTS/PRODUCT SALES

This section provides more detailed description of compliance requirements for Section C of the AN and CAN Code. This section of the guide will also apply to inbound shipments to retail.

At the end of the guidance for SECTION C you can find information on the Suspicious Information Reporting (SIR) framework.

### C1 SECURITY AROUND INDIVIDUALS OR COMPANIES RESPONSIBLE FOR PROVIDING TRANSPORTATION

#### C1.1 TRANSPORTATION COMPANY SECURITY

##### SPECIFIC REQUIREMENTS:

In order to minimize security risks, companies responsible for transporting AN and/or CAN must be properly scrutinized from a security perspective. The following requirements are the basic elements that must be assessed to validate a transportation company:

**Bonding or Pre-approval** – The transportation firm has either been bonded or has been pre-approved through internal review intending to validate the driver(s) and services to be provided and minimize the security risks to the retail site when shipping a security-sensitive product. Records must be available from the manufacturer or distributor indicating that the transportation firm has been bonded or pre-approved. The pre-approval process must include a review of past references, licensing and certifications.

**Proof of Insurance Coverage** – The seller must have written proof of valid insurance coverage for all transportation firms used for transporting AN and CAN within the last two (2) years.

**Training** – The seller must have written confirmation from all transportation firms used for transporting AN within the last two years indicating that employees have been provided the applicable training required for compliance with the *Transportation of Dangerous Goods Regulations* (TDGR). Training requirements under the TDGR are outlined in Part 6 – Training.

**Photo Identification** – All transport operators will have valid photo identification.

**Security/Emergency Response Plan** – The seller must have written confirmation from all transportation firms used for transporting AN or CAN within the last two years indicating that the transportation firm has developed an emergency response plan, including for security related issues. Further, the seller must obtain

agreement from transportation firms (in writing) that they will operate under the security provisions listed in the AN and CAN Code when transporting AN and CAN. These provisions include:

- a. A process must be in place to verify arrival of a shipment at the intended destination.
- b. Truck shipments of AN and CAN will not be left unattended by the driver at any time unless the load is parked in a secured area or the unit/load is properly locked down (e.g. high security padlocks, fifth wheel locks).
- c. Hatches on trucks and railcars will be secured with locks or sealed with security cables.
- d. Locks, and/or seals if they are present, will be inspected and validated after each stop and upon arrival at the destination.
- e. All tampering of locks and/or seals will be investigated and documented, and any losses reported to the appropriate authorities.
- f. If the vehicle used to transport AN or CAN from the retail facility to the end-use point includes dispensing equipment (e.g. spreader with auger), all dispensing parts will be secured in the closed position to ensure total product containment during transport.
- g. The driver will notify the seller in the event of a spill or other incident which could impact the total quantity delivered to the receiver.
- h. If a driver discovers that any CAN has been stolen or tampered with, or that there has been an attempt to steal or tamper with it, the driver will immediately notify the seller, who in turn must immediately inform the local police.

**Record Keeping** – It is a mandatory requirement that records of ammonium nitrate shipments be kept for a period of two (2) years from the date of shipment, per the requirements under the *Transportation of Dangerous Goods Regulations* Part 3 – Documentation. CAN is not regulated under the *TDGR*, however, maintaining a record trail of documentation is an essential part of any security plan for CAN facilities. The carriers of CAN must maintain records of shipments for a minimum of two (2) years, which can be the Bill of Lading, or other combination of documents containing, at minimum, the following information:

- a. Product shipped
- b. Date of shipment
- c. Load quantity
- d. Point or origin of shipped product
- e. Location of destination
- f. Applicable signatures of shipper, transporter, and receiver

## **C1.2 DELIVERY RECEIPT ACKNOWLEDGEMENT**

The seller must obtain written acknowledgement (**manually or electronically**) from the buyer that the shipment has been delivered to its intended destination per the agreed upon terms. Per industry best practice, the preferred option for this is a

dated and signed delivery invoice by the customer (grower) upon delivery of the product to its intended destination. This documentation can be either electronic or hard copy. However, it is understood that on some occasions, particularly during the busy planting season, that the grower may be unavailable to sign for delivery. In this case, the delivery driver may sign to confirm delivery if the customer provides written acknowledgement of the following:

- a. The customer provides explicit delivery instructions (for each delivery) to the retailer at sale or prior to delivery;
- b. The customer provides permission to the delivery driver to sign on their behalf to confirm delivery per the provided delivery instructions which is renewed at least annually;
- c. The customer acknowledges their responsibility for the security of the product; and
- d. The customer confirms that they have reviewed and understood provided documentation on the safety and security of the product (per Section C5)

Documentation of driver delivery signing permission, delivery instructions (for each applicable delivery), and receipt should be kept on file along with sales records and available for verification during the audit.

An example acknowledgement form can be found in the associated section for C1.2 of the Appendices for the AN and CAN Code.

## C2 ACCESS TO PRODUCT DURING SHIPMENT

### SPECIFIC REQUIREMENTS:

**Security of AN and CAN in Transit** – Truck shipments of AN and/or CAN must not be left unattended by the driver at any time unless the load is parked in a secured area or the unit/load is properly locked down (i.e. padlocks, fifth wheel locks, etc.). A secured area refers to an area surrounded by two-meter high chain link fence with the three-strand barbed wire at the top. The area must also have lockable gates that are secured when the site is unattended. If storage is not possible in this type of secured area, the access hatches and gates to the load must be secured and locked. It is a recommended best practice that shipments of AN and CAN be non-stop to avoid increased security risks.

**Securing of Hatches on Trucks, Railcars or other transport equipment** – All access hatches and gates on trucks and railcars transporting AN or CAN must be secured with a lock or sealed regardless of distance travelled. The recommended best practice for seals is the cable type seal.

**Inspection of Locks/Seals** – Locks and/or seals installed on the access hatches and gates are to be inspected and validated after each stop and upon arrival at destination. The inspection at destination must be documented and attached to the bill of lading for the shipment. It is a recommended best practice to have a check off sheet for the transport operator in order that they can document an inspection of seals at each stop.

**Reporting** – Any evidence of tampering or product loss must be reported immediately to the local police or the RCMP National Security Information Networks (1-800-420-5805), and to the Chief Inspector of Explosives within 24 hours of the discovery. This is a requirement of Section 488 of the *Explosives Regulations* (Part 20 – *Restricted Components*).

Chief Inspector of Explosives  
Explosives Regulatory Division  
Natural Resources Canada  
580 Booth Street, 10<sup>th</sup> floor  
Ottawa, ON, K1A 0G1  
Tel 1-855-912-0012  
Email [ERDmms@nrcan.gc.ca](mailto:ERDmms@nrcan.gc.ca)  
Web [www.nrcan.gc.ca/explosives](http://www.nrcan.gc.ca/explosives)

More information on reporting incidents can be found on NRCAN's website [here](http://www.nrcan.gc.ca/explosives/authorization-classification/16586):  
<http://www.nrcan.gc.ca/explosives/authorization-classification/16586>



Forms used for reporting under the *Explosives Regulations* can be found on NRCan's website [here](#):

[https://www.nrcan.gc.ca/sites/nrcan/files/mineralsmetals/pdf/mms-smm/expl-expl/pdf/F07-01\\_Incident\\_Report\\_EN.pdf](https://www.nrcan.gc.ca/sites/nrcan/files/mineralsmetals/pdf/mms-smm/expl-expl/pdf/F07-01_Incident_Report_EN.pdf)

**End-user vehicles** – If the transport distance is short enough to allow for a non-stop trip, it is possible that the product will be transported from the retail facility by the end-user themselves in a specialized vehicle such as a spreader with an auger. In this case, all dispensing parts should be double checked to ensure they are in a closed position to prevent the accidental release of product during transport.

## C3 PRODUCT SPILLS DURING TRANSPORT AND UNLOADING

**NOTE:** Parts of Section C3 PRODUCT SPILLS DURING TRANSPORT AND UNLOADING are only applicable to AN fertilizer. Regulatory obligations in this section fall under the *Transportation of Dangerous Goods Regulations (Transportation of Dangerous Goods Act)* for AN, and the *Environmental Emergency Regulations (Canadian Environmental Protection Act 1999 section 200)* for AN and CAN if regulatory thresholds are met.

### SPECIFIC REQUIREMENTS:

The selling facility has a written procedure that describes the proper process for containing and cleaning up spills of AN and/or CAN, as applicable. The procedure must contain:

**Containment** – The procedure must contain instructions on how to effectively contain a spill to limit contamination of the spilled product and segregate it from nearby water sources. One method to achieve this is to erect a simple wood barricade around the spill until it is cleaned up.

**Clean-up** – The procedure must contain instructions to employees involved in the clean-up of the proper personal protective equipment to wear during the clean-up and the proper equipment to use for the safe and effective cleaning up the spill. The procedure must also designate an area where any contaminated product can be segregated and stored until it is disposed of.

**Disposal** – The procedure must describe the proper method of disposal of contaminated AN and/or CAN. The preferred method is to use the contaminated product as a fertilizer on an agricultural operation. However, if the contaminant in the ammonium nitrate makes this not agronomically possible or otherwise unsafe, the product will have to be disposed of in accordance with the regulatory requirements.

**Reporting** – Provincial Environmental Regulations typically require that ammonium nitrate spills that produce more than 50 kgs of contaminated product must be reported to regulatory authorities. It is recommended that specific regulations be consulted to determine individual provincial requirements.

Part 8 of the *Transportation of Dangerous Goods Regulations* requires immediate reporting to provincial authorities for accidental releases of AN, and outlines the information required to report [here](http://www.tc.gc.ca/eng/tdg/clear-part8-379.htm):  
<http://www.tc.gc.ca/eng/tdg/clear-part8-379.htm>

## **Environmental Emergency Plan (E2 Plan)**

Facilities are required to comply with the *Environmental Emergency Regulations* for AN and CAN if regulatory thresholds are met, including developing an E2 Plan.

In some circumstances, the facility may be required to enact the facility's Environmental Emergency Plan as required by the Environmental Emergency Regulations. Please refer to the E2 Regulations and related Technical guidance document for more details. In the event of accidental release of AN, Environmental emergencies must be reported to appropriate provincial and federal authorities:

- a. a verbal notification as soon as possible under the circumstances to the authorities identified in the schedule of the Release and Environmental Emergency Notification Regulations (Notification Regulations) under CEPA 1999 or on the Report an environmental emergency webpage, which provide the regulated community and the public with the telephone number of the 24-hour authorities operating for the respective province or territory to which notifications are to be made; and
- b. written report as soon as possible under the circumstances to the relevant authorities designated pursuant to subsection 18(2) of the E2 Regulations.

If you need to report a written report for an environmental emergency regarding a registered facility, please login to the Environmental emergencies reporting system using your GCKey credential and submit a Schedule 8. If you need to report an environmental emergency for an unregistered facility, you can submit your written report on an environmental emergency.

The Technical Guidance for Environmental Emergency Regulations, 2019 Version 2.0 provides guidance to facilities on preparing an E2 Plan (Section 5.0), and notifying authorities in the event of an environmental emergency (Section 8.0). The Technical Guidance can be found [here: https://publications.gc.ca/collections/collection\\_2020/eccc/En4-386-2020-eng.pdf](https://publications.gc.ca/collections/collection_2020/eccc/En4-386-2020-eng.pdf)

## C4 VALIDATION OF CUSTOMERS

### SPECIFIC REQUIREMENTS:

For larger customers, direct to end use shipments are a frequent occurrence. These shipments are higher risk from a security perspective since they are often coordinated by retailers and the manufacturer/distributor has limited knowledge of the customer from a security perspective. In order to ensure that AN and CAN are being sold to end users with a legitimate agronomic need, the facility must have a policy that enables a customer to be validated.

The AN and CAN Safety and Security Information brochure provided by Fertilizer Canada must be reviewed prior to purchase by customers that purchase less than 500kg of product within one growing season. Customers that require less than 500kg in one transaction but have purchased a minimum of 500kg of product within the same growing season do not fall under this requirement.

**Coordination/Authorization from Retail** – The responsibility for coordinating the sale and delivery of the shipment resides with the retail facility operator. They have a greater knowledge of the local customers and can more easily validate the customer. Prior to issuing an authorization for shipment to the manufacturer or distributor, the retailer must implement practices to:

- 1. Validate customer identification.** This could be done using a number of methods such as by reconciling the identity of the person accepting a delivery as the person who made the purchase order for online sales or through the provision of one piece of proper identification (e.g. pesticide licence, producteur agricole number, valid photo identification, etc.) for in-person sales.
- 2. Validate that the size of the order of AN or CAN is in accordance with the size of the end user's agronomic needs.** It is important to ensure that a customer is a farmer with a legitimate agronomic need. This could be done a number of ways, such as comparing the size of the order to the acreage it will be applied to at a given application rate.
- 3. Ensure that customer is a farmer and is known in the community.** This could be based on retailer knowledge of the local area (e.g. the customer is a known farmer in the community).
- 4. Ensure that there is a defined delivery location and end-user contact information for the delivery of the AN or CAN.** This could be an address and/or legal land description.

Valid identification requirements are listed in the *Explosives Regulations – Part 20 (Restricted Components)* Section 490, available [here: http://laws.justice.gc.ca/eng/regulations/SOR-2013-211/page-56.html#h-176](http://laws.justice.gc.ca/eng/regulations/SOR-2013-211/page-56.html#h-176)

Any suspicious purchase attempts must be reported to the local police detachment.

**NOTE:** Any refusal of sale must be reported within 24-hours after the refusal to the local police force and the Chief Inspector of Explosives:

Chief Inspector of Explosives  
Explosives Regulatory Division  
Natural Resources Canada  
580 Booth Street, 10<sup>th</sup> floor  
Ottawa, ON, K1A 0G1  
Tel 1-855-912-0012  
Email [ERDmms@nrcan.gc.ca](mailto:ERDmms@nrcan.gc.ca)  
Web [www.nrcan.gc.ca/explosives](http://www.nrcan.gc.ca/explosives)

**Authorization for Delivery** – Once the customer has been validated by the retail facility operator, a written authorization must be provided to the seller for the shipment that provides:

- The name of end user
- The quantity of the shipment
- The defined location for the delivery
- The date of the order
- Contact number for the retail location and the end user

Additional Resources:

Incident Reporting under the Explosives Regulations:

[https://www.nrcan.gc.ca/sites/nrcan/files/mineralsmetals/pdf/mms-smm/expl-expl/pdf/F07-01\\_Incident\\_Report\\_EN.pdf](https://www.nrcan.gc.ca/sites/nrcan/files/mineralsmetals/pdf/mms-smm/expl-expl/pdf/F07-01_Incident_Report_EN.pdf)

Forms for reporting under the *Explosives Regulations*:

<https://www.nrcan.gc.ca/explosives/reporting-incident/16586>

## C5 TRACEABILITY OF SALES

### SPECIFIC REQUIREMENTS:

Tracking past sales of AN and/or CAN is important in order to provide an audit trail for investigations into criminal misuse of the product. At a minimum, the following information must be contained on each sales receipt:

- a. Customer's name
- b. Address or legal land description
- c. Customer's phone number
- d. Identification – type and number of document verified
- e. Carrier details – operator information
- f. Dates and location of delivery
- g. Quantity of AN or CAN, and format of delivery (bagged or bulk product)
- h. Description of use
- i. If delivery is made at time of purchase, a receipt signed by purchaser containing the information listed above

All sales records for AN and CAN must be kept for period of two (2) years. The records can be kept in a paper or electronic form.

***NOTE:*** All information collected respecting the sale of AN and CAN must be kept under lock and key or password protection in the case of electronic records, and may be accessed only by persons who require such access in the course of their employment. The collection, use and protection of the information above must also comply with the obligations under the Personal Information Protection and Electronic Documents Act (PIPEDA).

PIPEDA legal information:

[http://www.priv.gc.ca/leg\\_c/leg\\_c\\_p\\_e.asp](http://www.priv.gc.ca/leg_c/leg_c_p_e.asp)

Substantially Similar Provincial Legislation:

[http://www.priv.gc.ca/leg\\_c/legislation/ss\\_index\\_e.asp](http://www.priv.gc.ca/leg_c/legislation/ss_index_e.asp)

## **C6 CRITERIA SPECIFIC TO END-USERS**

### **SPECIFIC REQUIREMENTS:**

It is recommended that post-season storage of AN and CAN be avoided if possible. Retail facilities should work with their customers to provide product in quantities that fulfil the agronomic need and avoid excess, thereby also evading the need for post-season storage by the end-user. If the company is able to do so, customers should be encouraged to return any unused or unopened product back to the retailer.

However if it is not possible to avoid on-farm storage, it is imperative that all end-users have the right information to ensure the safe and secure use and storage of AN and CAN. Therefore, it is essential that customers be educated on safe and secure storage and handling practices for AN and CAN at the time of sale by the agri-retailer.

Customers purchasing large quantities of AN or CAN should be provided with the Fertilizer Canada Safety and Security Information Brochure or an equivalent information document. This can be provided physically or electronically. Due to the increased security risk of small quantity sales, in addition to receiving the information, these customers must acknowledge (in a written format) that they have reviewed and understand the information.

Please see the Appendices for sample hand-out information materials and small quantity purchase acknowledgments.

### **SUSPICIOUS INCIDENT REPORTING (SIR) SYSTEM**

As part of its national security mandate, the Royal Canadian Mounted Police (RCMP) is working with Canadian critical infrastructure (CI) owners and operators to prevent, detect, investigate and deter criminal threats to CI. The RCMP has launched the Suspicious Incident Reporting (SIR) system which is designed to collect information on suspicious incidents that may be related to criminality associated to critical infrastructure. SIR allows the private sector stakeholder to report suspicious incidents online by submitting a SIR report from their own work terminal. Suspicious incidents within SIR includes behavior and activities which, when viewed in context of the totality of available circumstances/intelligence, may have a possible nexus to national security. As such, these incidents may be indicators of terrorist pre-incident planning or other serious criminal activity.

What makes the SIR program unique? The RCMP recognizes that the sharing of criminal intelligence with sector owners and operators is a must. If there is a threat to critical infrastructure, it is imperative that sector stakeholders be briefed accordingly so they can implement appropriate contingency and business continuity plans. Providing intelligence up front or well in advance provides the private sector the opportunity to develop contingency and emergency response plans in accordance with the appropriate threat intelligence. The SIR system is among the first RCMP applications designed to engage non-law enforcement users and access may be given to a secure RCMP critical infrastructure library.

The SIR system is more than a reporting system—it is a mechanism that allows the RCMP to develop operational contacts within the private sector enhancing the resiliency of Canada’s CI, support criminal investigations, and maintain continuous dialogue with internal and external stakeholders.

SIR does not replace calls for criminal activity or emergencies to local police of jurisdiction. Neither does SIR replace the mandatory reporting to the Chief of Explosives in the cases of loss, tampering or suspicious attempts to acquire AN.

The Program Hotline: 1-800-387-0020



## SECTION D – REGULATORY REPORTING

### D1 ANNUAL INVENTORY REPORTING

The *Explosives Regulations Part 20 (Restricted Components)* requires an annual inventory report, due March 31 for the previous calendar year (Section 487). A copy of this report should be made available for verification during the facility audit.

The annual inventory report form (Form F20-02) can be found on the NRCan website at the following [link](#):

<http://www.nrcan.gc.ca/explosives/publications/forms/9939>

The annual inventory report is submitted to:

Chief Inspector of Explosives  
Explosives Regulatory Division  
Natural Resources Canada  
580 Booth Street, 10<sup>th</sup> floor  
Ottawa, ON, K1A 0G1  
Tel 1-855-912-0012

Email [ERDmms@nrcan.gc.ca](mailto:ERDmms@nrcan.gc.ca)

Web [www.nrcan.gc.ca/explosives](http://www.nrcan.gc.ca/explosives)

Additional resources:

*Explosives Regulations* – [NRCan website](#):

<https://www.nrcan.gc.ca/explosives/19367>

[Full pdf version](#):

<https://laws.justice.gc.ca/PDF/SOR-2013-211.pdf>

Additional information on compliance with [Part 20 \(Restricted Components\)](#) of the *Explosives Regulations*:

<https://www.nrcan.gc.ca/explosives/restricted-components/9981>

### D2 ENVIRONMENTAL EMERGENCIES REPORTING

This section applies to all sellers of AN and/or CAN subject to the *Environmental Emergencies (E2) Regulations*. AN-based fertilizers that are over 60 percent AN (by weight) are partially or fully subjected to E2 Regulations requirements which include submission of notices to ECCC through an online reporting application.

These regulatory requirements include, but are not limited to:

- a. Any listed substance meeting the minimal concentration, the regulations require facilities to provide a notification through the online reporting system

if the quantity or maximum container system capacities is equal or above thresholds for any given substance.

- b. Require facilities, for contained substances, that meet or exceed established container system capacity and quantity thresholds for E2 substances to submit a notice through an online reporting system when an E2 Plan has been developed and again when it has been implemented.
- c. Require facilities, for uncontained substances, that meet or exceed established quantity thresholds for E2 substances, to submit a notice through an online reporting system when an E2 Plan has been developed and again when it has been implemented.
- d. Submit a notice through the online reporting system to the effect that a full-scale exercise has taken place every 5 years beginning on the date that the plan was brought into effect.

Additional requirements can be found in the E2 Regulations and further explained in the technical guidance document located on ECCC website.

## SECTION E – TRAINING

### E1 E-LEARNING

Fertilizer Canada has developed an online course to help employers train their employees on the safe and secure storage and handling of AN and CAN. The e-Learning course offered addresses safe and secure transportation, storage and handling of AN and CAN. The goal of the e-Learning course is to provide formal training, and to be seen as a guide, an information source and a reference. The courses are free.

Upon completion of the training modules, a short quiz will assess comprehension of the learning objectives prior to a training certificate being issued that can be saved in employer training records. The course can be accessed for free on the Fertilizer Canada eLearning website at the link here:

<http://fertilizercanada.ca/safety-security/elearning/ammonium-nitrate-training/>

Employers should train their employees on this course annually.

### E2 TRANSPORTATION OF DANGEROUS GOODS TRAINING

***NOTE:*** Section E2 TRANSPORTATION OF DANGEROUS GOODS TRAINING is only applicable to facilities handling AN fertilizer. CAN fertilizer is not regulated under the TDGR.

#### SPECIFIC REQUIREMENTS:

It is mandatory for all employees handling dangerous goods, including AN fertilizer, to be trained per the requirements of the *Transportation of Dangerous Goods Regulations (TDGR)* – Part 6 (Training).

Transport Canada TDG Directorate has prepared guidelines on the requirements for training. These guidelines are intended to help employers determine which employees should be trained, and what should be included in the training and assessment. The guidelines are not all-encompassing.

An employer must not direct or allow an employee to handle, offer for transport or transport dangerous goods unless the employee is:

- a. Adequately trained and holds a valid training certificate / competency certificate in accordance to Part 6 of the *TDG Regulations*; or

- b. Performing those activities in the presence and under the direct supervision of a person who is adequately trained and who holds a training certificate in accordance with the *TDG Regulations*.

### **E3 WHMIS TRAINING**

The Workplace Hazardous Materials Information System (WHMIS) is Canada's national hazard communication standard. The key elements of the system are cautionary labelling of containers of WHMIS "controlled products", the provision of (material) safety data sheets ((M)SDSs) and worker education and training programs.

Federal and provincial labour codes require WHMIS training for all employees handling controlled products. Please verify with local government on the specific requirements.

## SECTION F – INSURANCE

### F1 INSURANCE REQUIREMENTS

Each operation that stores and/or handles AN or CAN requires insurance documentation that indicates current liability protection covering owned automobile (vehicle) liability, non-owned automobile (vehicle) liability and comprehensive general liability (CGL), and product liability, with each of these policies being written with minimum policy limits of:

Coverage Type	Minimum Policy Coverage (per loss occurrence)	Maximum Deductible	Minimum Policy Aggregate
Owned Automobile	\$5,000,000	\$50,000	\$5,000,000
Non-owned automobile	\$5,000,000	\$50,000	\$5,000,000
CGL	\$5,000,000	\$50,000	\$5,000,000
Product Liability	\$5,000,000	\$50,000	\$5,000,000

The operation also requires insurance documents that indicate environmental impairment liability (EIL) protection meeting one of the following:

(A)

EIL Insurance	Minimum Policy Coverage (per loss occurrence)	Maximum Deductible	Minimum Policy Aggregate
On-site	\$2,000,000	\$50,000	\$2,000,000
Off-site	\$2,000,000	\$50,000	\$2,000,000

OR

(B)

EIL Insurance	Minimum Policy Coverage (per loss occurrence)	Maximum Deductible	Minimum Policy Aggregate
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Combined on-site and off-site coverage inclusively	\$2,000,000	\$50,000	\$2,000,000
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**NOTE:** Any endorsement or other policy wording that directly or indirectly selects fertilizers as specifically excluded from coverage, or that selects fertilizers for diminished coverage, is NOT acceptable.

Auditors will confirm compliance through examination of the Confirmation of Coverage Form. A Confirmation of Coverage Form must be fully completed for each operation. No changes are permitted to the form. The form must be signed by either the insurance broker or insurer.

**NOTE:** If both AN and CAN are present, insurance coverage for sites handling both products may appear under the same insurance policy. In these cases a single Confirmation of Coverage Form can be used.

## **F2 ENVIRONMENTAL IMPAIRMENT LIABILITY (EIL) INSURANCE**

Insurance coverage can be obtained through a variety of different policies whose framework will be shaped by the particular risks present at a given operation. For instance, it is a common practice for EIL insurance coverage to be obtained through an “all-encompassing” policy which is applicable to multiple fertilizer products stored at a given site. This type of coverage is acceptable so long as it is inclusive of AN and/or CAN without exception and meets the minimum policy limits **specifically for AN and/or CAN** as outlined in Section F of the AN and CAN Code. When an operation stores AN or CAN along with other agricultural chemicals, it is likely that higher coverage limits will be required.

## **F3 DEDUCTIBLE LIMITS GREATER THAN \$50,000**

Deductible limits in excess of \$50,000 must be of a reimbursable type and a Reimbursable Deductible Acknowledgement must be completed in addition to Page 1 of the Confirmation of Coverage Form. This can be found on Page 2 of the Confirmation of Coverage Form.

## **F4 ALTERNATIVE INSURANCE ARRANGEMENTS**

Fertilizer Canada recognizes that some large and established operators maintain sophisticated insurance programs that are not traditional insurance arrangements and may fall under the spectrum of self-insurance. These programs may still provide equivalent or superior coverage to the Code insurance requirements for certain AN and/or CAN operations and qualify as equivalent under the Code. To clarify, in this case “self-insurance” does not equate to “no insurance”, but refers to structured and appropriately-funded risk retention programs or other similar robust

self-insurance alternatives. In order to meet the requirements for certification under the AN and CAN Code, an operator's alternative insurance arrangements must meet the following threshold criteria:

- a. Any alternative insurance arrangement over \$50,000 must meet the coverage minimums as specified above and in the AN and CAN Code. If an insurance arrangement contains both insured and alternative components, the sum of coverage must meet or exceed the prescribed coverage minimums; and
- b. The insurance arrangements must NOT contain any endorsement or other policy wording that directly or indirectly selects fertilizers as specifically excluded from coverage, or that selects fertilizers for diminished coverage.

As a further compliance obligation, large organizations that choose to pursue alternative insurance arrangements must arrange for a licenced insurer or underwriter to review the applicant's insurance arrangements and alternative insurance program against the required limits under the AN and CAN Code and execute a Statement of Equivalent Coverage attached as Page 3 of the Confirmation of Coverage Form. The reviewing insurer or underwriter must certify that in its opinion the operator's alternative insurance program provides equivalent coverage to the minimum insurance requirements as set out herein.

Finally, any operator who deploys an alternative insurance scheme in accordance with this Section F must agree to indemnify, defend and hold harmless Fertilizer Canada and its employees, officers, directors, agents and affiliates for any claims, costs (including legal costs), damages, losses and expenses arising out of or resulting from any deficiency in the operator's self-insurance scheme.

For greater clarity, the Statement of Equivalent Coverage must be completed in addition to Page 1 of the Confirmation of Coverage Form.

**IMPORTANT NOTES:**

*Fertilizer Canada expects that any insurance policy or program entered into by an operator shall meet the requirements under Protocol F of the AN and CAN Code regardless of any agreements allowing self-insurance elements. Fertilizer Canada reserves the right to request additional information and/or documentation regarding an operator's insurance policy or program.*

*Operators who deploy alternative insurance programs pursuant to this Section F acknowledge and agree that Fertilizer Canada's decision to allow alternative insurance arrangements is provisional and can be revoked at any time without notice and without recourse.*

## AN AND CAN CODE OF PRACTICE CONFIRMATION OF COVERAGE FORM-PROTOCOL F

To be provided to Authorized Auditor as part of compliance documentation and a copy forwarded with the audit to the program office.

1. Insurer A		Insurer B		Insurer C	
Name of Insurer:		Name of Insurer:		Name of Insurer:	
Address of Insurer:		Address of Insurer:		Address of Insurer:	
Postal Code:		Postal Code:		Postal Code:	
Tel:		Tel:		Tel:	
2. Company			3. Agent/Broker		
Name of Insured:			Name of Agent/Broker:		
Address of Insured:		Postal Code:	Address of Agent/Broker:		
Covered Location:			Postal Code:		
Policy Number:	Certificate Number:	Policy Period:		Tel:	
<b>AN and CAN Code Compliance #:</b>					

Coverage type	Insurer	\$ Coverage	\$ Deductible	\$ Policy Aggregate
Environmental Impairment Liability (on site) <small>(Note: a combined on-site/off-site EIL policy with a minimum \$2 million combined coverage, \$50,000 max deductible and minimum \$2 million policy aggregate is also permitted)</small>	(A, B or C)	Minimum \$2,000,000	Max \$50,000	Minimum \$2,000,000/occurrence
Environmental Impairment Liability (off site) <small>(to include third party injury and property damage and off premises clean up)</small>	(A, B or C)	Minimum \$2,000,000	Max \$50,000	Minimum \$2,000,000/occurrence
Owned Automobile Liability <small>(applicable to any and all vehicles that are owned, or leased or operated by the facility in connection with the facility's business)</small>	(A, B or C)	Minimum \$5,000,000	Max \$50,000	Minimum \$5,000,000/ occurrence
Product Liability	(A, B or C)	Minimum \$5,000,000	Max \$50,000	Minimum \$5,000,000/ occurrence
Non-Owned Automobile Liability	(A, B or C)	Minimum \$5,000,000	Max \$50,000	Minimum \$5,000,000/ occurrence
Comprehensive General Liability	(A, B or C)	Minimum \$5,000,000	Max \$50,000	Minimum \$5,000,000/ occurrence

The undersigned warrants that he or she has reviewed the Ammonium Nitrate Code of Practice insurance protocol; that the coverage represented above is in conformity with the required coverage limits and permitted deductibles.

It is further understood and agreed that the undersigned undertakes to give fifteen (15) "days" notice to the Ammonium Nitrate Code Program Manager if the policy should be cancelled or otherwise terminated prior to the specified policy expiration date; or if the policy should fail to be renewed on a basis that ensures continued compliance with the insurance protocol; or if any other circumstance should occur which prejudices or invalidates a representation of compliance previously given.

Name of Authorized Representative of Insurer:	
Signature of Authorized Representative of	Date:



## AN AND CAN CODE OF PRACTICE CONFIRMATION OF COVERAGE FORM-PROTOCOL F

AN and CAN facilities require insurance coverage as outlined in Protocol F of the Implementation Guide. The Standard Confirmation of Coverage Form is designed for use by operators that have insurance meeting the required levels of coverage, limits and deductibles.

This form must be completed fully and executed by an authorized insurance representative. A separate form is required for each insured location. Any endorsement or other policy wording that directly or indirectly selects fertilizers as specifically excluded from coverage, or that selects fertilizers for reduced coverage, is NOT acceptable.

### Reimbursable Deductible Acknowledgement

Deductible amounts in excess of \$50,000 must be of a reimbursable nature. With a reimbursable deductible, the insurer shall be responsible for paying all losses and loss expenses. The insured shall promptly reimburse the insurer for advancing any element of loss falling within the deductible.

For reimbursable deductibles:	
<ul style="list-style-type: none"><li>(a) Insurance representative must complete the Confirmation of Coverage Form, recording the insurance arrangement amounts.</li><li>(b) Insurance representative must complete the reimbursable deductible section immediately below.</li><li>(c) Dealer must sign acknowledging reporting of all incidents.</li></ul>	
The undersigned warrants that the deductibles recorded on page one of the Confirmation of Coverage Form are of a reimbursable nature (as described above).	
Name of Authorized Representative of Insurer:	
Signature of Authorized Representative of Insurer:	Date:
The insured agrees to report all pollution events promptly to the insurer(s) without regard for the size of the deductible.	
Name of Authorized Representative of Insured Premises:	
Signature of Authorized Representative Insured Premises:	Date:

**Alternative Insurance – Statement of Equivalent Coverage**

Any alternative insurance arrangement by an operator which incorporates agreements such as self-insured risk retentions or other similar insurance program alternatives which may fall under the umbrella of self-insurance must still adhere to the principal requirements of Fertilizer Canada’s AN and CAN Code of Practice.

For alternative insurance arrangements:
(a) Insurance representative must complete the Confirmation of Coverage Form, recording the insurance arrangement amounts.
(b) Insurance representative must review any alternative insurance arrangements and complete the section below.
(c) Operator must sign acknowledging reporting of all incidents.

<p><u>Certification of Alternative Insurance Program</u></p> <p>The undersigned warrants that the alternative insurance arrangements recorded on page one of the Confirmation of Coverage Form meet the following criteria:</p> <ul style="list-style-type: none"><li>a) Any alternative insurance arrangements over \$50,000 has been reviewed by the undersigned Insurer and is confirmed to meet the minimum coverage limits as specified in the AN and CAN Code of Practice. If the insurance arrangement contains both insured and alternative components, the sum of coverage meets the specified limits.</li><li>b) The insurance arrangements do NOT contain any endorsement or other policy wording that directly or indirectly selects fertilizers as specifically excluded from coverage, or that selects fertilizers for reduced coverage; and</li><li>c) The review of the insured and alternative components was conducted by a licensed insurer.</li></ul> <p>I have reviewed the insurance program of _____. In my opinion, this program provides at least equivalent coverage to the minimum insurance requirements as set out in the Agricultural Ammonium Nitrate and Calcium Ammonium Nitrate Code of Practice.</p> <p>Name of Authorized Representative of Insurer: _____</p> <p>Signature of Authorized Representative of Insurer: _____</p> <p>Date: _____</p>
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The insured agrees to report all pollution losses promptly to the insurer(s) without regard for the insurance arrangement.
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<p><b>Indemnity</b></p> <p>I, _____ agree to indemnify, defend and hold harmless Fertilizer Canada and its employees, officers, directors, agents and affiliates for any claims, costs (including legal costs), damages, losses and expenses arising out of or resulting from any deficiency in the self-insurance program described herein.</p>
Name of Authorized Representative of Insured Premises: _____
Signature of Authorized Representative of Insured Premises: _____
Date: _____

