



**FERTILIZER CANADA**

**FERTILISANTS CANADA**

## **APPENDICES**

# **Agricultural Ammonium Nitrate Code of Practice**

**MARCH 2014  
REVISED APRIL 2016**

A circular graphic with a green gradient background, overlaid on a grayscale image of an industrial facility with complex piping and structures. The text 'Where Stewardship Grows' is written in white, bold, sans-serif font.

**Where  
Stewardship  
Grows**

# **Section A**

## **Inbound Shipments**

## SECTIONS A1 & A2 – EXAMPLE COMPLIANCE LETTER

### TO BE PRINTED ON COMPANY LETTERHEAD

April 29, 2016

#### COMPLIANCE VERIFICATION LETTER

To be placed in Ammonium Nitrate Audit Verification File

In accordance with Protocols A1 & A2 of the Ammonium Nitrate Code of Practice (2015), our facility located at:

Street Address: \_\_\_\_\_

City/Town: \_\_\_\_\_

Province: \_\_\_\_\_

has undertaken a review and is in compliance with the following requirements:

#### PLEASE CHECK THE BOX IN FRONT OF THE SECTIONS THAT ARE APPLICABLE:

**For Facilities Who Import Ammonium Nitrate by Vessel**

The following requirements have been reviewed and our operation is in compliance based upon our internal audit.

##### **Protocol A1.1 – by Marine:**

- *Canada Marine Act*
- *International Maritime Dangerous Goods Code*
- *Marine Transportation Security Act and Regulations*
- *Coast Guard Regulatory Requirements*
- *Transportation of Dangerous Goods Act and Regulations*

##### **Protocol A1.2 – by Rail/Road:**

- *Transportation of Dangerous Goods Act and Regulations*

**For Facilities Who Import Ammonium Nitrate by Rail/Road**

The following requirement has been reviewed and our operation is in compliance based upon our internal audit:

**Protocol A2:**

All Companies providing transportation services have provided written verification that:

- a. They are bonded or pre-approved by an internal review.
- b. They have adequate insurance coverage before shipment.
- c. They have provided training in order to meet regulatory requirements.
- d. They have developed a security/ERP plan for shipments.
- e. They have kept all records of ammonium nitrate shipments for a minimum of two years, in accordance with *Transportation of Dangerous Goods Regulations*.

The signature below signifies that the ammonium nitrate operation listed above is in compliance with the requirements as indicated.

**Name (print):** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Position:** \_\_\_\_\_ **Title:** \_\_\_\_\_

## SECTION A3 – EXAMPLE ACCESS DURING SHIPMENT POLICY/PROCEDURE

**POLICY NAME:** Access to Product during Shipment

### **OBJECTIVES:**

1. To ensure measures are taken to minimize the exposure of ammonium nitrate to theft or tampering during shipment.
2. To ensure measures are taken to restrict access to ammonium nitrate during shipment by securing access points on the transport vehicle.
3. To ensure processes are in place to regularly inspect for and report any signs of tampering or theft on vehicles transporting ammonium nitrate.

### **CRITICAL TASK PROCEDURES:**

- 1. Stops in Transit** – In order to ensure the security of all shipments of ammonium nitrate, the following measures must be followed:
  - a. If possible, all road shipments of ammonium nitrate will be delivered from the loading facility to the receiving facility with no stops to minimize risks of tampering.
  - b. If short stops are required (less than 1 hour), the driver must be in constant visual contact with the delivery vehicle at all times.
  - c. If the driver cannot be in constant visual contact with the load during a short stop, all access slides/gates and trailer disconnect points (i.e. fifth wheel or trailer disconnect) on the delivery vehicle must be locked OR the delivery vehicle parked in a secured compound (i.e. 2 meter chain link fenced compound with locked gates)
- 2. Sealing of Access Points** – All gates and hatches on any railcars and trucks delivering ammonium nitrate must be sealed with a cable type seal once they have been loaded.
- 3. Inspection of Seals** – The seals on the gates and hatches on railcars and trucks delivering ammonium nitrate will be inspected as follows:
  - a. All seals on gates and hatches on railcars and trucks must be initially inspected by the transport operator or the shipper once the railcar/truck is loaded. The bill of lading for the shipment will be initialed by the transport operator or the shipper indicating the seals are in place.
  - b. All seals of trucks are to be inspected at each stop by the transport operator.
  - c. All seals on trucks/railcars will be inspected once they have arrived at destination.

### **REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.

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## **SECTION A4 – EXAMPLE LOSS/TAMPERING POLICY/PROCEDURE**

**POLICY NAME:** Loss or Tampering of Product during Shipment

### **OBJECTIVES:**

1. To identify loss of ammonium nitrate during shipment.
2. To identify potential tampering of the transport vehicle while in transit.

### **CRITICAL TASK PROCEDURES:**

- 1. Tampering of Seals** – All seals on the gates and hatches on the truck/railcar will be inspected prior to unloading to ensure they are not missing or they have not been tampered with. Any missing or tampered seals will be documented and reported to management immediately.
- 2. Verification of Quantities** – In order to verify the actual quantities of the load at destination versus the shipped weights, the following steps must be taken:
  - a. If the receiving facility is equipped with a scale system large enough to weigh the transport vehicle, the net weight of the load will be determined and compared to the shipped weights.
  - b. If the receiving facility is not equipped with a scale system large enough to weigh the transport vehicle, the load will be visually inspected for any short compartments.
  - c. Railcar shipments will be visually inspected for any short compartments prior to unload at destination.
  - d. Any shortages beyond historical norms of 1% of the shipped weight will be documented and reported to management.

### **REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.

### **Reporting Requirements – Management Responsibilities:**

The company must report any loss, tampering, theft or attempted theft immediately to local authorities and to the Chief Inspector of Explosives within 24 hours of the discovery. Management may choose to report the incident separately to the SIR Program.

## SECTION A5 – EXAMPLE SPILL DURING SHIPMENT POLICY/PROCEDURE

**POLICY NAME:** Ammonium Nitrate Spill during Shipment and Unloading

### OBJECTIVES:

1. To ensure proper containment and clean-up of spills of ammonium nitrate during shipment.
2. To ensure protection of environmentally sensitive areas from spills of ammonium nitrate.
3. To ensure proper reporting of spills of ammonium nitrate to regulatory authorities.

### CRITICAL TASK PROCEDURES:

#### Small Spills (less than 50 kgs)

1. **Containment** – Spills of ammonium nitrate must be contained to prevent contamination, contact with water sources and other environmentally sensitive areas. For small spills, the following steps are to be taken:
  - a. The source of the spill must first be controlled to prevent the spill from getting larger.
  - b. The spilled product will then be contained by sweeping it into a pile.
2. **Clean-up** – The spilled ammonium nitrate will be salvaged and placed back into storage. Any contaminated ammonium nitrate will be placed in the area designated for storage of contaminated fertilizer.
3. **Disposal** – The contaminated ammonium nitrate will be disposed of as damaged product to be distributed onto agricultural land as fertilizer.

#### Large Spills (Greater than 50 kgs)

1. **Containment** – Spills of ammonium nitrate must be contained to prevent contamination, contact with water sources and other environmentally sensitive areas. For large spills, the following steps are to be taken:
  - a. The source of the spill must first be controlled to prevent the spill from getting larger.
  - b. An assessment will be conducted of the potentially environmentally vulnerable areas in proximity to the spill such as streams, marshes or other bodies of water.
  - c. If environmentally vulnerable areas are identified, precautions such as constructing an earth berm to prevent the product from contaminating the sensitive area will be taken.
  - d. The spilled product will then be contained by shoveling the product into a pile.

2. **Clean-up** – The spilled ammonium nitrate will be salvaged and placed back into a truck or directly into storage. Any contaminated ammonium nitrate will be placed in the area designated for storage of contaminated fertilizer. Any contaminated soil may have to be removed as required by regulatory authorities.
3. **Disposal** – The contaminated soil and ammonium nitrate will be disposed of as damaged product to be distributed onto agricultural land as fertilizer in accordance with instructions from regulatory authorities.
4. **Reporting** – Management will be notified immediately of all spills of ammonium nitrate in excess of 50 kgs. Management will then ensure that the spill is properly documented and reported in accordance with Provincial regulatory requirements.

**REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.



## SECTION A6 – EXAMPLE DELIVERY AUTHORIZATION POLICY/PROCEDURE

**POLICY NAME:** Ammonium Nitrate Delivery Authorization

### **OBJECTIVES:**

1. To ensure proper authorization and clearance for delivery of ammonium nitrate to avoid delivery errors.
2. To ensure accurate and complete documentation for all loads of ammonium nitrate prior to authorization for unload.
3. To ensure all deliveries of ammonium nitrate arrive as scheduled at their designated destination and to identify loads that have been delayed or lost.

### **CRITICAL TASK PROCEDURES:**

- 1. Documentation Review Prior to Unloading** – Prior to authorizing a shipment/unload at an ammonium nitrate storage site, the receiver must:
  - a. Verify the name and physical address of the company supplying the ammonium nitrate (i.e. importer, manufacturer or distributor).
  - b. Verify the quantity of ammonium nitrate being ordered.
  - c. Verify the name and address of the receiving company.
  - d. Verify the storage location identified on the shipping documents.
  - e. Verify the projected date of delivery.
- 2. Authorization for Unloading of Shipment** – Prior to unloading the ammonium nitrate shipment, the transport operator must:
  - a. Have written or verbal authorization for unload from the receiving company.
  - b. Confirm the address for the delivery.
  - c. Have a written or verbal indication of the exact storage location for the load to be deposited on the storage site.
  - d. Have a representative from the receiving company sign the bill of lading.
- 3. Verification of Arrival at Destination** – In order to verify the arrival of a shipment of ammonium nitrate:
  - a. The shipping company will determine an estimated time of arrival for the shipment based upon the distance to the receiving location.
  - b. The transport operator will notify dispatch upon arrival at the storage location. Alternatively, dispatch can call the receiving location after estimated time of arrival.
  - c. The transport operator will notify dispatch of any delays or mechanical problems that may delay the delivery time.
  - d. The dispatcher will monitor the delivery time in order to determine if the estimated time of arrival has been exceeded. If it has, the dispatcher will attempt to contact the transport operator/receiver. If any issues are

identified, the management of the shipping company will be notified immediately.

**REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.

## **Section B**

# **Storage of Ammonium Nitrate**

## **SECTION B1.1C – EXAMPLE KEY CONTROL SYSTEM POLICY/PROCEDURE**

**POLICY NAME:** Key Control System for Ammonium Nitrate Storage

### **OBJECTIVES:**

To control and track access to all keys to ammonium nitrate storage.

### **CRITICAL TASK PROCEDURES:**

In order to control the assignment and tracking of keys that provide access to ammonium nitrate storage, a key control system has been implemented. The critical requirements for this system are:

- 1. Duplication of Keys** – All duplication of keys that provide access to the ammonium nitrate storage areas is done under the strict consent of the facility manager. NO duplication is allowed without the written consent of the facility manager.
- 2. Assignment of Locksmith** – A designated licensed locksmith has been chosen to manage all duplication of keys providing access to ammonium nitrate. The locksmith has been instructed in writing to not duplicate any keys for the facility without written consent from the facility manager.
- 3. Marking of Keys** – The locksmith has been instructed to mark all keys as “Do Not Duplicate” (DND) and keys have been stamped with an identification number.
- 4. Approval for Assignment of Keys** – Assignment of keys is to be done with the approval of the facility manager.
- 5. Documentation for Assignment of Keys** – Assignment of keys must be documented utilizing the “Key Control Tracking Sheet”.
- 6. Retrieval of Keys** – All assigned keys will be retrieved from employees once they are re-assigned to a new area of responsibility or leave the company.
- 7. Lending of Keys** – Employees who have been assigned ammonium nitrate storage keys must not lend the keys to other employees or individuals. They are solely responsible for the care and custody of the keys in their possession.

### **REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.

**SECTION B1.1C – EXAMPLE KEY CONTROL LOG**

**AMMONIUM NITRATE KEY CONTROL SYSTEM**

<b>Date of Assignment of Key</b>	<b>Key ID #</b>	<b>Employee Name</b>	<b>Employee Signature</b>	<b>Manager Signature Of Approval</b>	<b>Date of Return of Key</b>	<b>Employee Signature on Return</b>	<b>Manager Signature Verifying Return</b>

## SECTION B1.1 – EXAMPLE WEEKLY SECURITY CHECKLIST

Section B1.1 - Weekly Security Inspection Checklist			
Date: _____		Time: _____	
Inspector: _____			
		<b>Yes</b>	<b>No</b> <b>Notes:</b>
<b>Perimeter Security</b>			
	Fencing in good condition	<input type="checkbox"/>	<input type="checkbox"/>
	Padlocks present and secure	<input type="checkbox"/>	<input type="checkbox"/>
	Ground around fencing in good condition	<input type="checkbox"/>	<input type="checkbox"/>
	Lighting	<input type="checkbox"/>	<input type="checkbox"/>
<b>Facility Security</b>			
	Condition of Doors and Entrance ways	<input type="checkbox"/>	<input type="checkbox"/>
	Locks on Doors and Entrance ways	<input type="checkbox"/>	<input type="checkbox"/>
	Windows in good condition	<input type="checkbox"/>	<input type="checkbox"/>
	Locks on windows present and secure	<input type="checkbox"/>	<input type="checkbox"/>
	Signage - intact and visible	<input type="checkbox"/>	<input type="checkbox"/>
	Lighting	<input type="checkbox"/>	<input type="checkbox"/>
<b>Access to Facility</b>			
	Documentation is complete for visitors	<input type="checkbox"/>	<input type="checkbox"/>
	Documentation of authorized personnel is complete	<input type="checkbox"/>	<input type="checkbox"/>
		_____	
		Inspector's Signature	

## SECTION B1.2 – EXAMPLE WEEKLY SAFTEY INSPECTION CHECKLIST

Section B1.2 - Weekly Safety Inspection Checklist				
Date: _____		Time: _____		
Inspector: _____				
		<b>Yes</b>	<b>No</b>	<b>Notes:</b>
<b>Storage Bins</b>				
	Proper clearances of bagged product from bin walls	<input type="checkbox"/>	<input type="checkbox"/>	
	Proper clearances of bagged product from ceiling	<input type="checkbox"/>	<input type="checkbox"/>	
	Proper clearance from incompatible activities	<input type="checkbox"/>	<input type="checkbox"/>	
	Proper clearance from incompatible products	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Facility Safety</b>				
	Fire suppression system in working order	<input type="checkbox"/>	<input type="checkbox"/>	
	Signage - intact and visible	<input type="checkbox"/>	<input type="checkbox"/>	
	No internal combustion vehicles stored in designated area	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Housekeeping</b>				
	Property is kept clean within 25 feet of the facility	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	
		_____		
		Inspector's Signature		

## SECTION B2 – EXAMPLE EMERGENCY RESPONSE PLAN

Verify that all requirements of the Emergency Response Plan are met.

### **EMERGENCY RESPONSE PLAN (ERP)**

#### **1.0 FACILITY INFORMATION:**

##### **1.1. FACILITY NAME**


##### **1.2. ADDRESS**

<b>Longitude / Latitude:</b>
<b>Land Location:</b>
<b>P.O. Box and Town/City:</b>
<b>Postal Code:</b>

##### **1.3. FACILITY CONTACT PERSON**

<b>NAME:</b>
<b>PHONE:</b>
<b>FACSIMILE:</b>

##### **1.4. EMERGENCY TELEPHONE NUMBERS**

<b>POSITION</b>	<b>NAME</b>	<b>DAY/NIGHT</b>
<b>Facility Manager</b>		
<b>Alternate Contact</b>		
<b>Fire Department</b>		
<b>Police</b>		
<b>Ambulance</b>		
<b>Poison Control Centre</b>		
<b>Hospital</b>		
<b>Environment</b>		
<b>Transport Canada</b>		

**CANUTEC 24 HOUR SERVICE: CALL COLLECT (613) 996-6666**

#### **NOTE:**

**CANUTEC** provides information and communications assistance in case of transport emergencies involving dangerous goods. Its product information bank has been prepared primarily for transport emergencies, but it can also provide response information for non-transport emergencies involving dangerous goods.

#### **REPORTING:**

Reporting of emergencies to regulatory agencies must be done in accordance with regulatory requirements.



## 2.0 EMERGENCY RESPONSE PLAN PRACTICES AND TESTS:

Emergency Response Plans must be tested yearly. When plans are tested they must be updated to reflect the deficiencies found in the testing process or changes made to the site Emergency Response Plan practices. A copy of all updated Emergency Response Plans must be distributed to:

- Responding Fire Departments
- The location where the Facility Manager is located
- The storage site
- Police

**Implementation Date:** \_\_\_\_\_

**FACILITY MANAGER:** \_\_\_\_\_ (signature) \_\_\_\_\_ (date)

**FIRE DEPT. OFFICIAL:** \_\_\_\_\_ (signature) \_\_\_\_\_ (date)

### ERP PRACTICE DATES

Facility Manager	Fire Chief	Date

The Facility Manager must sign and date the above table confirming that a practice has been completed at the facility and the changes have been updated in the plan. It is a recommended best practice that the Fire Chief also sign as well indicating their participation and review of the plan.

**AGENCY NOTIFICATION:** (List the names and the telephone numbers of agencies and contact persons that need to be notified should a spill or emergency situation occur at the facility. This could include railroads, roads and highways (if they may have to be blocked).

NAME	PHONE NUMBER

### **3.0 LOCATION OF EMERGENCY EQUIPMENT & SUPPLIES:**

(Available 24 hours a day. Include phone numbers).

#### **3.1. EARTH MOVING EQUIPMENT**

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#### **3.2. PORTABLE WATER PUMPS**

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#### **3.3. STREET BARRIERS**

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#### **3.4. SAND BAGS**

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#### **3.5. OTHER**

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**LOCATION AND TYPES OF WATER SUPPLIES:** (hydrant, ponds, irrigation canals, fresh or salt water, etc.).

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### **4.0 EMERGENCY RESPONSE GUIDELINES**

**In the case of a fire or major spill, the Facility Manager or Designate will:**

- Take the action necessary to protect life and property
- Notify proper authorities (Police, Fire and/or Ambulance) and implement the facility Emergency Response Plan
- Report the crisis in accordance with regulatory requirements
- Secure and prevent disturbance of the crisis area as required
- Notify immediate Supervisor or Company Management
- Ensure actions in place to protect the safety of employees
- Ensure first responders have been contacted as required by the situation

**In the case of a suspected theft, the Facility Manager or Designate will:**

- Take necessary action to secure the area to prevent disturbance of evidence
- Notify proper authorities (i.e. police)
- Notify immediate Supervisor or Company Management
- Document the quantity of product(s) missing

## 5.0 EMERGENCY RESPONSE COMPLETION CHECKLIST

ALL ITEMS LISTED BELOW MUST BE CHECKED IN ORDER TO FULLY COMPLETE THIS ERP

- |    |  |                          |
|----|--|--------------------------|
| 1  | Emergency telephone number list (on plan)<br>(24 hour numbers included) posted beside each phone | <input type="checkbox"/> |
| 2  | Emergency telephone list (posted at site)  | <input type="checkbox"/> |
| 3  | 24-hour phone identified on ER sign (nearest location to site)                                   | <input type="checkbox"/> |
| 4  | Water supplies identified  | <input type="checkbox"/> |
| 5  | Fire Chief has visited site and has received a copy of the plan                                  | <input type="checkbox"/> |
| 6  | Complete list of industries and others that could be affected by an occurrence                   | <input type="checkbox"/> |
| 7  | List of available and alternate communication equipment  | <input type="checkbox"/> |
| 8  | Designated and posted emergency exits in all facilities  | <input type="checkbox"/> |
| 9  | Have set up meeting location for after evacuation  | <input type="checkbox"/> |
| 10 | Annual review of plan  | <input type="checkbox"/> |
| 11 | Annual emergency response drill or practice  | <input type="checkbox"/> |
| 12 | Monthly maintenance check completed on protection equipment and first aid supplies               | <input type="checkbox"/> |
| 13 | Monthly check of alarms, fire extinguishers, first aid kits, and eyewash stations                | <input type="checkbox"/> |
| 14 | A plan is to be kept off site for alternate access. The plan is located at:                      | <input type="checkbox"/> |

## 6.0 FACILITY SITE DIAGRAMS

The storage facility diagram is designed to provide information to emergency responders on the location of materials/resources on site and the location of products that may be involved in an incident. In particular, hazardous substance storage locations must be clearly identified.

### Items featured on the facility site diagram must include:

- Fire hydrant locations
- Gas shut off valves
- Location of First Aid Supplies
- Location of product storage areas and identification of what is stored in those areas
- Location of Emergency Response Plan
- Building exits
- Containment dykes (if equipped)
- Bulk fuel storage
- Propane storage
- Expected direction of runoff
- Location of vulnerable water sources/environmentally sensitive areas
- Main electrical shutoff
- Furnace room location
- Exits and entrances to site
- Rail roads
- Roads and highways
- On-site water wells, cisterns, and other water supplies etc.
- High occupancy locations in close distances (e.g. schools, hospitals, etc.)

## SECTION B2 – EXAMPLE NOTIFICATION LETTER TO LOCAL AUTHORITIES

April 29, 2016

Mr. John Smith  
Anytown Police Chief  
1234 Main Street  
Anytown, ON, T6T 7T9

Dear Chief Smith:

As part of our annual review and update of our emergency response plan at our fertilizer storage facility, we would like to inform you of the presence of agricultural ammonium nitrate at the storage facility located at:

6456 Storm Road  
Anytown, ON

We typically store ammonium nitrate in quantities of XX tonnes. This inventory can fluctuate up and down throughout the year depending on the season. We have implemented security precautions to ensure the security of this product.

We invite you for a site visit to familiarize your department with our facility layout as well as to review our emergency response plan.

If you have any questions, please do not hesitate to call me at (613) 777-8000.

Sincerely,

Joe Barnes  
Facility Manager  
A1 Fertilizer Services Ltd.

## SECTION B3 – EXAMPLE PERSONNEL SECURITY POLICY/PROCEDURE

**POLICY NAME:** Personnel Security

### **OBJECTIVES:**

1. To ensure adequate review of employee past work references.
2. To ensure adequate review of contractor past work references.

### **CRITICAL TASK PROCEDURES:**

In order to ensure adequate review of employees and non-employees working at the storage facility, the following requirements are to be followed:

1. **Existing Employees** – All employees who have worked less than five years at the storage facility must provide at least two past work references. If this is not possible, the employee may elect to provide personal references from two persons in the community who cannot be a relative of the employee.
2. **Past Work References for New Hires** – As a condition of employment, all new hires must consent to disclose any previous criminal charges. In addition, they must provide a minimum of two past work references that can be validated by the hiring manager.
3. **Contractors** – All contractors must provide documentation indicating past work references that can be validated by the hiring manager prior to authorization to proceed with work. This requirement is waived if the contractor has an established work history with the facility that satisfies the facility manager that there is not security risk.
4. **Written Authorization for Contractors** – All contractors providing services at the ammonium nitrate storage facility must have documentation from the facility manager, or designate, authorizing them to perform the work. The documentation must include the date of authorization, the name of the contractor, a description of the work to be performed and the signature of the facility manager.

### **REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.

## SECTION B4 – EXAMPLE INVENTORY MANAGEMENT POLICY/PROCEDURE

**POLICY NAME:** Ammonium Nitrate Inventory Management

### **OBJECTIVES:**

1. To identify shortages of ammonium nitrate inventory above historical levels.
2. To investigate shortages in order to determine cause.

### **CRITICAL TASK PROCEDURES:**

In order to ensure adequate reconciliation of actual inventory levels against stated inventory levels, the following actions are required:

- 1. Inventory Audit Reconciliation** – The storage facility will conduct an annual reconciliation of inventory levels at the storage facility. A weighed audit at points of low inventory is the preferred approach. However, if a weighed audit is not possible, an estimate can be conducted. The procedure for both of these processes, including the process for counting bagged product, is as follows:
  - a. Bulk Weighed Audit**
    - i. All remaining inventory in the storage facility must be unloaded and the product weighed.
    - ii. The actual weight of the weighed product will be compared to the stated inventory level in order to determine the discrepancy in inventory.
  - b. Estimated Inventory Audit**
    - i. The approximate volume of the product remaining in storage will be determined by measuring the size of the pile remaining in storage.
    - ii. The dimensions of the pile will then be used to determine the volume of the pile.
    - iii. Utilizing the density of the product by volume, the weight of the product will be determined and compared to the stated inventory level to determine the discrepancy in inventory.
  - c. Bagged Product**
    - i. The number of bags of ammonium nitrate will be counted including any damaged bags that may have been repackaged.
    - ii. The actual of bags will be compared to the stated inventory level in order to determine the discrepancy in inventory.
- 2. Reporting** – Any discrepancy in amount of product will be documented, investigated for potential cause and reported to management. A discrepancy greater than 1% of the product sold between actual/estimated weight of the product and the stated value will be documented, investigated for potential cause and reported to management.

- 3. Monthly Inspection** – A monthly inspection will be conducted on all ammonium nitrate storage areas to identify any tampering or loss of product. If any tampering or product loss is noted, it must be reported immediately to management.

**REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.



## SECTION B4 – EXAMPLE WEEKLY INVENTORY INSPECTION CHECKLIST

Section B4 - Weekly Inventory Inspection Checklist			
Date: _____		Time: _____	
Inspector: _____			
		<b>Yes</b>	<b>No</b> <b>Notes:</b>
Storage Area A	Evidence of Loss?	<input type="checkbox"/>	<input type="checkbox"/>
	Signs of Tampering?	<input type="checkbox"/>	<input type="checkbox"/>
Storage Area B	Evidence of Loss?	<input type="checkbox"/>	<input type="checkbox"/>
	Signs of Tampering?	<input type="checkbox"/>	<input type="checkbox"/>
		_____	
		Inspector's Signature	

## **Section C**

### **Outbound Shipments/Sales**

## SECTION C1.1 – EXAMPLE TRANSPORT CERTIFICATION POLICY/PROCEDURE

**POLICY NAME:** Transport Company Certification

### OBJECTIVES:

1. To ensure proper review of companies providing transportation services for ammonium nitrate.
2. To ensure transport companies have proper insurance coverage.
3. To ensure transport companies have developed a security plan for shipments.
4. To ensure transport companies retain records of ammonium nitrate shipments in accordance with regulatory requirements.

### CRITICAL TASK PROCEDURES:

Prior to issuing clearance to the transportation company to transport a load of ammonium nitrate, the following requirements must be completed and verified in writing by the transport company:

1. **Bonding or Pre-Approval** – The transport company must be able to provide written proof of bonding or be pre-approved.
2. **Insurance** – The transport company must be able to provide a certificate of insurance that will cover the shipment of ammonium nitrate. Amount of coverage to be set at a minimum \$5,000,000 per shipment in aggregate.
3. **Training** – The transport company must provide written verification that all employees involved in the transport of ammonium nitrate have been trained in accordance with regulatory requirements (e.g. TDG)
4. **Security Emergency Response Plan** – The transport company must provide written verification that they have developed an emergency response plan for ammonium nitrate shipments that includes the security measures defined in Section C5 of the Ammonium Nitrate Code of Practice. The written verification also indicates that all transport operators have been trained on the emergency response plan.
5. **Records of Shipments** – The transport company has provided written verification that records of ammonium nitrate shipments will be kept for a minimum of two years, in accordance with the *Transportation of Dangerous Goods Act and Regulations*.

### REVIEW:

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.

## **SECTION C1.2 – EXAMPLE POLICY FOR OBTAINING A DELIVERY RECEIPT ACKNOWLEDGEMENT FROM BUYER**

**POLICY NAME:** Delivery Receipt Acknowledgement

### **OBJECTIVES:**

1. To ensure the customer receives the shipment as per the product order.
2. To ensure customer is prepared to receive the shipment and to acknowledge ownership.

### **CRITICAL TASK PROCEDURES:**

1. Carrier must obtain a signature from the customer prior to offloading.
2. Customer to confirm quantity received.

### **REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.

## SECTION C2 – EXAMPLE OF IN TRANSIT SECURITY POLICY/PROCEDURE

**POLICY NAME:** Security of Ammonium Nitrate in Transit

### OBJECTIVES:

1. To ensure measures are taken to minimize the exposure of ammonium nitrate to theft or tampering during shipment.
2. To ensure measures are taken to restrict access to ammonium nitrate during shipment by securing access points on the transport vehicle.
3. To ensure processes are in place to regularly inspect for and report any signs of tampering or theft on vehicles transporting ammonium nitrate.

### CRITICAL TASK PROCEDURES:

- 1. Stops in Transit** – In order to ensure the security of all shipments of ammonium nitrate, the following measures must be followed:
  - a. If possible, all road shipments of ammonium nitrate will be delivered from the loading facility to the receiving facility with no stops to minimize risks of tampering.
  - b. If short stops are required (less than 1 hour), the driver must be in constant visual contact with the delivery vehicle at all times.
  - c. If the driver cannot be in constant visual contact with the load during a short stop, all access slides/gates and trailer disconnect points (i.e. fifth wheel or trailer disconnect) on the delivery vehicle will have to be locked OR the delivery vehicle parked in a secured compound (i.e. 2 meter chain link fenced compound with locked gates).
- 2. Sealing of Access Points** – All gates and hatches on any railcars and trucks delivering ammonium nitrate must be sealed with a cable type seal once they have been loaded.
- 3. Inspection of Seals** – The seals on the gates and hatches on railcars and trucks delivering ammonium nitrate will be inspected as follows:
  - a. All seals on gates and hatches on railcars and trucks must be initially inspected by the transport operator or the shipper once the railcar/truck is loaded. The bill of lading for the shipment will be initialed by the transport operator or the shipper indicating the seals are in place.
  - b. All seals of trucks are to be inspected at each stop by the transport operator.
  - c. All seals on trucks/railcars will be inspected once they have arrived at destination.

### REVIEW:

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.

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## SECTION C3 – EXAMPLE OF PRODUCT SPILL POLICY/PROCEDURE

**POLICY NAME:** Ammonium Nitrate Spill during Shipment and Unloading

### OBJECTIVES:

1. To ensure proper containment and clean-up of spills of ammonium nitrate during shipment.
2. To ensure protection of environmentally sensitive areas from spills of ammonium nitrate.
3. To ensure proper reporting of spills of ammonium nitrate to regulatory authorities.

### CRITICAL TASK PROCEDURES:

#### Small Spills (less than 50 kgs)

1. **Containment** – Spills of ammonium nitrate must be contained to prevent contamination, contact with water sources and other environmentally sensitive areas. For small spills, the following steps are to be taken:
  - a. The source of the spill must first be controlled to prevent the spill from getting larger.
  - b. The spilled product will then be contained by sweeping it into a pile.
2. **Clean-up** – The spilled ammonium nitrate will be salvaged and placed back into storage. Any contaminated ammonium nitrate will be placed in the area designated for storage of contaminated fertilizer.
3. **Disposal** – The contaminated ammonium nitrate will be disposed of as damaged product to be distributed onto agricultural land as fertilizer.

#### Large Spills (greater than 50 kgs)

1. **Containment** – Spills of ammonium nitrate must be contained to prevent contamination, contact with water sources and other environmentally sensitive areas. For large spills, the following steps are to be taken:
  - a. The source of the spill must first be controlled to prevent the spill from getting larger.
  - b. An assessment will be conducted to determine the potentially environmentally vulnerable areas in proximity to the spill such as streams, marshes or other bodies of water.
  - c. If environmentally vulnerable areas are identified, precautions such as constructing an earth berm to prevent the product from contaminating the sensitive area will be taken.
  - d. The spilled product will then be contained by shoveling the product into a pile.
2. **Clean-up** – The spilled ammonium nitrate will be salvaged and placed back into a truck or directly into storage. Any contaminated ammonium nitrate will be

placed in the area designated for storage of contaminated fertilizer. Any contaminated soil may have to be removed as required by regulatory authorities.

- 3. Disposal** – The contaminated soil and ammonium nitrate will be disposed of as damaged product to be distributed onto agricultural land as fertilizer in accordance with instructions from regulatory authorities.
- 4. Reporting** – Management will be notified immediately of all spills of ammonium nitrate in excess of 50 kgs. Management will then ensure that the spill is properly documented and reported in accordance with Provincial regulatory requirements.

**REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.

## SECTION C4 – EXAMPLE CUSTOMER VALIDATION POLICY/PROCEDURE

**POLICY NAME:** Validation of Customers

### **OBJECTIVES:**

1. To ensure proper review of all direct to end use shipments of ammonium nitrate from a manufacturer/distributor to an end user.

### **CRITICAL TASK PROCEDURES:**

Prior to issuing clearance for a direct to end use shipment, the retailer coordinating the shipment must provide written verification of the following requirements:

- 1. Customer Validation** – The retail has validated the customer through the provision of identification such as one of the following:
  - Pesticide License
  - Canadian Wheat Board Number
  - Valid credit application with the company
  - Government-issued photo identification
  - Producteur Agricole number
  - Ontario Federation of Agriculture number
  - If the purchaser is a reseller, proof of the purchaser's enrolment on the component sellers list
- 2. Validation of Size of Order** – The retail has validated the size of the order of ammonium nitrate against the size of area to be applied and the application rate.
- 3. Knowledge of End User** – The retail will verify that they have knowledge of the end user and the need for ammonium nitrate is legitimate.
- 4. Delivery Authorization** – Once the retail has completed their review, they will issue written authorization to the manufacturer/distributor for the shipment that includes:
  - a. The defined location for the delivery
  - b. The date of the order
  - c. Contact numbers for the retail location and the end user

### **REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.



## **SECTION C5 – EXAMPLE OF RECORD RETENTION POLICY/PROCEDURE**

**POLICY NAME:** Record Retention for Shipments of Ammonium Nitrate

### **OBJECTIVES:**

1. To ensure proper and accurate record retention for ammonium nitrate shipments.

### **CRITICAL TASK PROCEDURES:**

All ammonium nitrate records of shipments must be kept for a minimum of two years and must provide the following information:

- Customers name
- Address or legal land description
- Carrier
- Dates of delivery
- Quantity of ammonium nitrate
- Bagged or bulk product

The records will be kept in either paper or electronic form.

### **REVIEW:**

This policy/procedure is to be reviewed with all existing personnel, reviewed with all new hires and updated at least annually at employee meetings.

**NOTE:** All information collected respecting the sale of ammonium nitrate 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).

## SECTION C6 – EXAMPLE HANDOUT MATERIAL TO END-USERS/CUSTOMERS

### Some Important Points to Remember when Storing Ammonium Nitrate:

#### 1. Segregation from non-compatible products

- **Fuels** – When combined with a source of fuel (i.e. gasoline, diesel fuel, fuel oil, etc.) ammonium nitrate can become a powerful explosive. Therefore, it is critical that the area used for ammonium nitrate storage be segregated from all fuel storage areas. Fuel powered vehicles must not be stored in the same area as ammonium nitrate.
- **Wood or other Organic Material** – Like fuel, ammonium nitrate combined with wood or other organic material can become a powerful explosive. It is critical that the storage area for ammonium nitrate be free from any organic material.

#### 2. Site Security – It is recommended that basic security measures be taken for the ammonium nitrate storage area. These measures could include:

- **Securing of Bin Gates** – It is recommended that all bin gates providing access to storage bins containing ammonium nitrate be locked and secured. It is recommended that the locking device be designed to be resistant to bolt cutters.
- **Perimeter Security** – If it is not practical to secure the bins gates, 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 ammonium nitrate. The recommended standard for perimeter security is a 2 meter chain link fence complete with lockable gates and 3 strand barb wire barricade at the top of the fence.
- **Access Points on Buildings** – It is recommended that all doors, windows and other points of access to buildings storing bagged or bulk ammonium nitrate are secured with a high quality lock. It is recommended that the locking device be designed to be resistant to bolt cutters.
- **Security System** – It is a recommended best practice to equip all buildings storing ammonium nitrate with a monitored security system.
- **Security Lighting** – It is recommended that after-hours security lighting 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.

#### 3. Fire Suppression – It is recommended that a fire suppression system containing sufficient amounts of water be available in the case of a fire involving or occurring near the storage facility. Speak with your local fire services for a detailed guide.

4. **Records of Application** – End use customers should keep records of all ammonium nitrate purchases, in-season usage and post season storage for two years.
5. **Reporting** – Under Part 20 (Restricted Components) of the *Explosives Regulations*, specific measures are outlined to prevent the theft of ammonium nitrate. Any sign of theft, attempted theft, or tampering and any loss that is not attributable to normal operations must be immediately reported to the local police force.
6. **Small Quantities** – Smaller bags of ammonium nitrate are a particular target for theft. Extra care needs to be taken to ensure access is controlled and inventory is reconciled on a frequent basis.
7. **Re-sale of Ammonium Nitrate** – It is illegal to resell ammonium nitrate. If possible, excess ammonium nitrate must be stored or returned to the retailer.

### SECTION 6.3 – EXAMPLE OF SMALL QUANTITIES ACKNOWLEDGEMENT FORM

“I, customer name, confirm that I have read and understand the information provided in the name of information package and affirm that I will abide by all applicable laws and requirements regard the safe and secure handling and use of ammonium nitrate. Without limitation to my other legal obligations, I affirm that I will:

- (a) NOT sell, give or make available ammonium nitrate to another person;
- (b) Secure the ammonium nitrate to prevent theft or inappropriate use, and;
- (c) Report any theft, attempted theft, tampering or loss to the police.

I have read and understand the name of information package.

Customer Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Witness Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
(Retailer)

## **Section D**

### **Regulatory Reporting**

See specific regulatory reporting requirements for details.

# **Section E**

## **Training Records**

## SECTION E – EXAMPLE TRAINING RECORD RETENTION POLICY/PROCEDURE

### Fertilizer Canada e-Learning

- Certificate of completion is sufficient to demonstrate successful completion of the online ammonium nitrate training course.
- All employees should complete the course annually.

### Transportation of Dangerous Goods

- Certification of training provided by a certified trainer.
- Training should be completed at a frequency required by the *Transportation of Dangerous Goods Act and Regulations*.

### WHMIS/(M)SDS Training

- Certificate of training completion for all employees.
- Training should be completed at a frequency required by provincial and federal labour regulations.