Detailed Summary of Amendments to Fertilizer Canada's Agricultural Ammonia Code of Practice 2017 Version (from previous 2012 Version)

The 2017 version of the Anhydrous Ammonia Code of Practice (Code) has been released and replaces the 2012 version. The 2017 version will be in force as of January 1, 2017 and all protocols must be complied with. A summary of the substantive changes are found in the following table:

Section	Description	Issues	2012 Code Language	2017 Code Language
Disclaimer	Technical Questions	Contact Info update	Technical questions or questions about interpretation of the Code may be addressed to the Ammonia Code Administrator via the 1-866-311-0444 number or by e-mail at ammoniacode@funnel.ca. The Code's Technical Committee will review any questions as necessary. Previous interpretations will be made available on the FSSC website at www.fssc.ca. For general questions about the Code, please contact the FSSC at 1-613-786-3035 or by email at kstephens@cfi.ca.	Technical questions or questions about interpretation of the Code may be addressed to the Code project manager via the 1-866-311-0444 number or by e-mail at ammoniacode@funnel.ca. The Code's Technical Committee will review any questions as necessary. Previous interpretations will be made available on the Fertilizer Canada website at www.fertilizercanada.ca. For general questions about the Code, please contact Fertilizer Canada at 1-613-230-2600 or by email at codes@fertilizercanada.ca.
Title Page		Contact info update	**Fertilizer Safety and Security Council** **Kristian Stephens** 350 Sparks Street, Suite 907 Ottawa, ON. K1R 7S8 Tel: 1-613-230-2600 Fax: 1-613-230-5142 e-mail: kstephens@cfi.ca	**Fertilizer Canada Office** 350 Sparks Street, Suite 907 Ottawa, ON. K1R 7S8 Tel: 1-613-230-2600 Fax: 1-613-230-5142 E-mail: codes@fertilizercanada.ca
Preface	Ag Retails and Transloads – Code application	To capture distribution from manufacturer to end-user through a third party contractor.	**Ag Retails And Transloads:** The ag retails that receive NH_3 by transport into a storage vessel or by rail into a storage vessel or by truck or rail and transfer directly into a nurse wagon or field delivery unit are required to complete and pass the Ammonia Code of Practice Audit. **End User Storage:** If end users receive product into a	**Ag Retails and Transloads:** The Ag retails that receive NH_3 by transport into a storage vessel or by rail into a storage vessel or by truck or rail and transfer directly into a nurse wagon or field delivery unit are required to complete and pass the Ammonia Code of Practice Audit. Ag retailers that contract third parties for the transport of

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
			storage vessel on the farm, they must complete and pass the Ammonia Code of Practice.	anhydrous ammonia are responsible for ensuring that their contractors will comply with all requirements of the Ammonia Code of Practice. **End User Storage:** If end users receive product into a fixed storage vessel on the farm, they must be certified under the Ammonia Code of Practice.
Preface	Ammonia Code Compliance and Enforcement Process	Clarifying the Quality assurance/Quality Control program and administrative items.	As of January 1, 2011 only facilities certified as compliant with the CFI's Fertilizer Safety & Security Council (FSSC) Ammonia Code of Practice (Ammonia Code) are eligible to receive shipments of anhydrous ammonia. Certified facilities under the Ammonia Code are required to maintain their operations in compliance with the Ammonia Code at all time. If situations exist where uncertified facilities are receiving product or facilities are not in compliance with the Code, a third party complaint process exists to report, investigate and take remedial action. **1. Complaint Procedure** Written or faxed complaints are to be sent to the Ammonia Code Administrator at fax 1-416-968-6818 or via e-mail at ammoniacode@funnel.ca. The complainant is to outline details of the alleged non-compliance with the Ammonia Code. The Ammonia Code Administrator will respect the confidentiality of the complainant. **2. Qualification Process:** • Ammonia Code Administrator to send auditor	Only facilities certified as compliant with Fertilizer Canada's Ammonia Code of Practice (Code) are eligible to receive shipments of anhydrous ammonia. Certified facilities under the Code are required to maintain their operations in compliance with the Code at all time. If situations exist where uncertified facilities are receiving product or facilities are not in compliance with the Code, a third party complaint process exists to report, investigate and take remedial action. Compliance with the Code may also be randomly verified by Fertilizer Canada through the Quality Assurance/Quality Control program where an auditor may be sent to a certified site to verify compliance at any point during the certification period. **1. Complaint Procedure:** Written or faxed complaints are to be sent to the Ammonia Code Project Manager at fax 1-416-968-6818 or via e-mail at ammoniacode@funnel.ca. The complainant is to outline details of the alleged non-compliance with the Code. The Ammonia Code Project Manager will respect the confidentiality of the complainant. Within three (3) business days of receiving a complaint (as a working goal) the Ammonia Code

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
			to site to check all details. • As a working goal, the complaint is to be addressed within three working days. • Ammonia Code Administrator makes immediate initial report to Ammonia Code management. • Ammonia Code management review the Administrator's report, in conjunction with FSSC Executive as appropriate, and directs Ammonia Code Administrator on an appropriate response. • Ammonia Code Administrator to notify the location or company as a working goal on or before the fourth working day as to status. **3. Resolution Process:** **First Instance of Non-Compliance** • Facility is advised in writing and is given a prescribed number of working days to undertake and complete corrective action dependent upon the type of non-compliance. • Facility operator to confirm in writing that the non-compliant situation has been corrected. • Report on non-compliance remains on file for two years from date of the report. • If situation is not corrected within prescribed timeframe, Ammonia Code certification is withdrawn and manufacturers/distributors are notified. To then obtain re-certification, a complete re-audit is required at the facility operators' expense. Recertification is issued following a successful audit. Report on non-compliance remains on file for two years from date of in the report.	Project Manager will carry out the following procedure: • Ammonia Code Project Manager to send auditor to site to check all details. • Ammonia Code Project Manager makes immediate initial report to Fertilizer Canada. • Fertilizer Canada reviews the Project Manager's reports, and directs the Project Manager on an appropriate response. • On or before the fourth business day (as a working goal) following receipt of the complaint the Ammonia Code Project Manager notifies the location or company to the status of the complaint. **2. Enforcement Procedure** **First Instance of Non-Compliance** • Facility is advised in writing and is given a prescribed number of working days to undertake and complete corrective action dependent upon the type of non-compliance. • Facility operator to confirm in writing that the non-compliant situation has been corrected. • Report on non-compliance remains on file for two years from date of the report. • If situation is not corrected within prescribed timeframe, Ammonia Code certification is withdrawn and manufacturers/distributors are notified. To then obtain re-certification, a complete re-audit is required at the facility operators' expense. Recertification is issued following a successful audit. Report on non-

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
			• FSSC Management has option for second auditor visit to confirm compliance. • Unannounced audits may be performed at FSSC Management's expense the following year. **Subsequent Instances of Non-Compliance** Second and following instance(s) of non-compliance (same facility, same area of non-compliance as a previous instance, within a two-year period (730 days) from previous instance). • Upon validation, facility to be notified in writing that it has three working days to undertake and complete corrective action. • Facility operator to confirm issue corrected in writing. • Report on non-compliance remains on file for two years from date of second infraction. • If situation is not corrected within prescribed timeframe, certification is withdrawn and manufacturers/distributors are notified. A complete re-audit is required at the facility operators' expense. Recertification is issued following a successful audit. Infraction record remains on file for two years from date of second infraction. • Manufacturers & distributors advised of second or further instance of non-compliance. • Management has the option of 2nd visit to confirm compliance. Follow up visits will be unannounced. • Unannounced audits may be performed at the election FSSC Management but at facilities' expense the following year.	compliance remains on file for two years from date of in the report. • Fertilizer Canada has the option for second auditor visit to confirm compliance. • Unannounced audits may be performed at Fertilizer Canada's expense the following year. **Subsequent Instances of Non-Compliance** This refers to second and following instance(s) of non-compliance (same facility, same area of non-compliance as a previous instance, within a two-year period (730 days) from previous instance). • Upon validation, facility to be notified in writing that it has three working days to undertake and complete corrective action. • Facility operator to confirm in writing that the non-compliance situation has been corrected. • Report on non-compliance remains on file for two years from date of subsequent infraction. • If situation is not corrected within prescribed timeframe, certification is withdrawn and manufacturers/distributors are notified of the suspension. A complete re-audit is required at the facility operators' expense. • Manufacturers & distributors advised of second or further instance of non-compliance. • Fertilizer Canada has the option to require a second visit by an auditor to confirm compliance. Follow up visits will be unannounced. • Unannounced audits may be performed at the election of Fertilizer Canada but at the facilities' expense the following year.

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
Preface	Audits Appeal Process	Allow additional time for the Appeals Committee to provide a report on the decision.	9. The Hearing Panel of the Ammonia Code Appeals Committee: a. shall provide a copy of the report of the Senior Ammonia Code Auditor to the Appellant; b. shall invite the Senior Ammonia Code Auditor and the Appellant to submit any further information within five (5) days of receiving the invitation; c. may review any relevant matter with the Ammonia Code Senior Auditor and the Appellant either in person, via telephone or in writing; d. shall render a written decision on the appeal as expeditiously as possible while respecting the principles of procedural fairness and public safety; and e. shall report back in writing no later than ten (10) days following receipt of the appeal, providing a copy of its decision, to the Ammonia Code Appeals Committee, the Audited Facility, the Senior Ammonia Code Auditor and to the FSSC Executive Director.	9. The Hearing Panel of the Ammonia Code Appeals Committee: a. shall provide a copy of the report of the Senior Ammonia Code Auditor to the Appellant; b. shall invite the Senior Ammonia Code Auditor and the Appellant to submit any further information within five (5) days of receiving the invitation; c. may review any relevant matter with the Ammonia Code Senior Auditor and the Appellant either in person, via telephone or in writing; d. shall render a written decision on the appeal as expeditiously as possible while respecting the principles of procedural fairness and public safety; and e. shall report back in writing no later than fifteen (15) days following receipt of the appeal, providing a copy of its decision, to the Ammonia Code Appeals Committee, the Audited Facility, the Senior Ammonia Code Auditor and to the Executive Director.
Preface	Lapsed Certification	Sites with siting exemptions should not be allowed a continued exemption if certification has lapsed for the prescribed period. Provided as a technical bulletin in June 2014 Additional clarification		*Added Text:* Notwithstanding the foregoing or any other provision of the Code, for any site certified prior to January 1, 2011 and "grandfathered" under Section A1.1 of the Code (as being closer than 1.5 km from a border of a city, town, village or hamlet, or from evacuation sensitive facilities such as hospitals, schools, residential developments or senior citizens homes and 500 meters from any occupancy and 50m from an environmentally sensitive area), where such certification has lapsed for any reason for a period of greater than 12 consecutive months, the grandfather exemption will be withdrawn and such site

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
		added on the eligibility and conditions for extending site certification as required.		will be ineligible for future recertification or must demonstrate compliance with the current version of the Code. **Certification Extensions** Certified facilities that are challenged with scheduling a re-audit before the expiry of their current certification due to unforeseen issues or renovation plans may be eligible to extend their certification for a determined period of time not to exceed 6 months following the formal date of audit. Certification extension allows a facility to avoid a lapse in certification however; the facility during this extended period will be considered 'in suspension' and will be ineligible to receive any product during this time. The facility must successfully complete a full audit prior to the end of the extended period. Failure to successfully complete an audit will result in a lapse in certification (see Policy on Lapsed Certification). The decision to grant a certification extension is at the sole discretion of Fertilizer Canada and shall be considered based on a demonstration of reasonable conditions. Examples of reasonable conditions may include-and are not limited to: • Planned site renovations, • Emergency repairs, • Staff turnover and training. Extensions requests must be submitted in writing to the Ammonia Code Project Management Office at no later

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
				than 30 days **before** the site's re-audit due date. Rationale for the extension must be clearly stated and include a date by when the site will be re-audited*. *-Note that the original certification cycle will not change as a result of the certification extension. Please see the Re-Audit Process and Cycle section for details.
Preface	Renovations of Certified Facilities	Sites with siting exemptions should not be allowed an increase capacity of the operations through replacement, expansion or addition of fixed storage vessels, or renovations. Provided as a technical bulletin in June 2014	Periodically is it expected that sites certified under the Ammonia Code of Practice will make changes to their sites. Any renovations made to a site must comply with the Code and sites should be compliant with the Code at all times. If significant renovations or replacement are performed, such as movement or addition of a fixed storage vessel, the significant renovations or replacement must be re-audited for compliance with Section B of the Ammonia Code of Practice before use. The full site will still be subject to a complete re-audit by their next scheduled re-audit date.	Periodically is it expected that sites certified under the Ammonia Code of Practice will make changes to their sites. Any renovation made to a site must comply with the Code and sites must be compliant with the Code at all times. If significant renovations or replacement are performed, such as movement, replacement, expansion or addition of fixed storage vessels, such renovations must be audited for compliance with Section A, B and G of the Ammonia Code of Practice before being brought into service. The full site will be subject to a full re-audit by their next scheduled re-audit date. *Notwithstanding the foregoing or any other provision of the Code, for sites certified under the Code prior to January 1, 2011 and "grandfathered" under Section A1.1 of the Code (as being closer than 1.5 km from a border of a city, town, village or hamlet, or from evacuation sensitive facilities such as hospitals, schools, residential developments or senior citizens homes and 500 meters from any occupancy and 50m from an environmentally sensitive area) the following restrictions apply:* • *any renovations to fixed storage vessels may not increase the capacity for product storage*

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
				• *additional fixed storage vessels are not permitted* • *while replacement or renewal of aging or obsolete fixed storage vessels is encouraged, any replacement vessels shall not have a larger storage capacity than the equipment being replaced.* Renovations that exceed the above mentioned restrictions are subject to the siting requirements of the current Code version.
Preface	Policy Statement-Change in Ownership	Clarification on impact of ownership change on grandfather siting status and requirements.	If a storage facility changes ownership: • Facility operator is to notify program management of ownership change upon closing of purchase agreement. The facility operator to forward confirmation of insurance coverage as outlined in Protocol I1. • Upon receipt of ownership change notification, the program manager will forward an "Application to Audit" form to be signed and returned within 30 days of transfer to new ownership. • The facility must be re-audited within 90 days of transfer to new ownership, regardless of the date of the last audit. The new audit date would set the audit frequency thereafter. • If the ownership change does not involve a change of personnel, the facility owner or manager may apply for a waiver from these changes of ownership requirements.	If a storage facility changes ownership: • Facility operator is to notify program management of ownership change upon closing of purchase agreement. The facility operator to forward confirmation of insurance coverage as outlined in Protocol I1. • Upon receipt of ownership change notification, the program manager will forward an "Application to Audit" form to be signed and returned within 30 days of transfer to new ownership. • The facility must be re-audited within 90 days of transfer to new ownership, regardless of the date of the last audit. The new audit date would set the audit timelines thereafter. If the ownership change does not involve a change of personnel, the facility owner or manager may apply for a waiver from these changes of ownership requirements. *Sites originally certified prior to January 1, 2011 and grandfathered under Section A1.1 will maintain their grandfathered status provided that the site is in continued use. Please refer to Policy on Lapsed Certification and Policy on Renovation of Certified Facilities*

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
A1.1	Siting and Exterior Requirements: Distance from People: New Anhydrous Ammonia Equipment Storage and Handling Operations	The definition of new storage and handling operations requires alignment to the coming into force date of the Code. Provided as a technical bulletin in June 2014	The minimum distances from occupancies for siting an anhydrous ammonia storage and handling operation commissioned after January 1, 2009 are: 1.5 kilometres from the border of a city, town, village or hamlet, or from evacuation sensitive facilities such as hospitals, schools, residential developments or senior citizens homes; and 500 metres from <u>any</u> occupancy. (e.g. a rural residence or a small business); <u>and</u> 50 metres from an environmentally sensitive area (lake, stream, wetland etc.); <u>and</u> Approval from the local authority having jurisdiction is also required. Compliance will be indicated by documentation such as dated plans demonstrating the required distances, and local authority approval documentation. The recommended best practice is to locate new anhydrous ammonia storage and handling operations a minimum of 3.0 kilometres from the boundary of a city, town, village, hamlet or evacuation sensitive facilities.	*The minimum distances from occupancies for siting an anhydrous ammonia storage and handling operation certified under the Ammonia Code of Practice on or after January 1, 2011 are:* 1.5 kilometres from the border of a City, Town, Village or Hamlet, or from evacuation sensitive facilities such as hospitals, schools, residential developments or senior citizens homes; and 500 metres from <u>any</u> occupancy. (e.g. a rural residence or a small business); <u>and</u> 50 metres from an environmentally sensitive area (lake, stream, wetland etc.); <u>and</u> Approval from the local authority having jurisdiction is also required. Compliance will be indicated by documentation such as dated plans demonstrating the required distances, and local authority approval documentation. The recommended best practice is to locate new anhydrous ammonia storage and handling operations a minimum of 3.0 kilometres from the boundary of a city, town, village, hamlet or evacuation sensitive facilities.
I-A	Implementation Guide – Siting and Exterior Requirements	Aligning definition of applicable equipment with the Code's coming into force date. Provided as a technical	***Environmentally Sensitive Area*** *is a lake, stream, wetland etc. that contains some wildlife. Ammonia storage tanks commissioned since January 2009 certified on or after January 1, 2011 must be at least 50 metres from an environmentally sensitive area. A ditch that tends to run wet or a dugout is not considered an*	***Environmentally Sensitive Area*** *is a lake, stream, wetland etc. that contains some wildlife. Ammonia storage tanks certified on or after January 1, 2011 must be at least 50 metres from an environmentally sensitive area. A ditch that tends to run wet or a dugout is not considered an environmentally sensitive area.*

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
		bulletin in June 2014.	*environmentally sensitive area.*	
I-A1	Implementation Guide - Siting and Exterior Requirements: Definitions - Measurement of Distances	Clarification of measurement references	**Measurement of Distances**–Distance is to be measured from the ammonia vessel(s) to the official boundary of a city, town, village or hamlet, or when applicable to the nearest residential, commercial, institutional or industrial building. In the case where municipal areas abut (e.g. "townships"), distance should be measured to a point equivalent to a conventional boundary of a city, town, village or hamlet.	***Measurement of Distances***– Distance is to be measured from: a) the ammonia vessel(s) to the official boundary of a city, town, village or hamlet, or b) when applicable, the ammonia vessel to the nearest residential, commercial, institutional or industrial building. In the case where municipal areas abut (e.g. "townships"), distance should be measured to a point equivalent to a conventional boundary of a city, town, village or hamlet.
I-A1.1	Implementation Guide – Siting Requirements for New Facilities	Aligning definition of applicable equipment with the Code's coming into force date. Provided as a technical bulletin in June 2014 Clarification of this section's application to sites grandfathered from meeting the siting requirements.	*A1.1 Siting Requirements for New Facilities* *"New" is defined as coming into operation on or after January 1, 2009.* Both distances apply. A new ammonia operation must be 1.5 kilometres from population concentrations as well as 500 metres from a farmhouse or other small (non-evacuation sensitive) occupancy. While permissions from local authorities is a requirement for this section, local authority permission or an operating permit from a regulatory authority by itself does not constitute compliance with this section.	*A1.1 Siting Requirements for New Facilities "New" is defined as being certified under the Ammonia Code of Practice on or after January 1, 2011.** Both distances apply. A new ammonia operation must be 1.5 kilometres from population concentrations as well as 500 metres from a farmhouse or other small (non-evacuation sensitive) occupancy. Measurements are to be taken from the nearest point of the storage vessel to nearest point of the occupancy. While permissions from local authorities is a requirement for this section, local authority permission or an operating permit from a regulatory authority by itself does not constitute compliance with this section. ***Grandfathered Siting Distances*** *Facilities certified to previous versions of this code (2012 or earlier) are exempted from meeting this criterion unless the site has undergoes a significant renovation/expansion or the facility has lapsed certification (see Renovation of Certified Facilities and Lapsed Certification policies). All new ammonia operations, including adding new tanks to, or expanding*

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
				capacity of an existing facility must meet the siting requirements stated above.
A1.2	All Operations Less than 500 meters from Population Concentration or less than 100 metres from any Occupancy	Adjusting language to reflect the completion of phase-in period.	In order to minimize the risk to people from an accidental release of anhydrous ammonia, the following measures are required: (a) Where loading and unloading is conducted at the operation, pull away protection shall be installed on liquid hose connections (both in load and out load). Effective January 1, 2017 all sites are required to have pull away protection installed on <u>both</u> liquid and vapour hose connections (both in load and out load). *Compliance will be indicated by inspection of the equipment.*	In order to minimize the risk to people from an accidental release of anhydrous ammonia, the following measures are required: (a) Where loading and unloading is conducted at the operation, pull away protection shall be installed on liquid hose connections (both in load and out load). *All sites are required to have pull away protection installed on <u>both</u> liquid and vapour hose connections (both in load and out load).* *Compliance will be indicated by inspection of the equipment and demonstration of functionality.*
I-A1.2 (a)	Implementation Guide - All Operations Less than 500 meters from Population Concentration or less than 100 metres from any Occupancy	Adjusting language to reflect the completion of the phase-in period and to provide examples of pull away protection.	Pullaway protection is defined as emergency shutoff capability in the event of a pullaway. Examples include tripod couplers and wire actuated emergency shutoff devices. Excess flow valves alone are not regarded as adequate for compliance with this section. Most provincial regulations require check value in load in lines. The best practice is to include both liquid and vapour lines. Note – Effective January 1, 2017 all sites will be required to have pull away protection installed on both liquid and vapour hose connections for both in load and out load.	Pull away protection is defined as emergency shutoff capability in the event of a pull away. Examples include, but are not limited to tripod couplers, wire actuated emergency shutoff devices, air actuated shutoff, electronic/wireless actuated shutoff, etc. Excess flow valves alone are not regarded as adequate for compliance with this section. Most provincial regulations require check value in load in lines. All sites are required to have pull away protection installed on both liquid and vapour hose connection (both in load and out load).
I-B1.3	Implementation Guide - Storage Vessel Design and	Minor language adjustment	Stationary vessels must be maintained, inspected and tested regularly in accordance with regulatory requirements. Tests may include:	Stationary vessels must be maintained, inspected and tested regularly as per regulatory requirements. Tests may include:

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
	Construction - Maintenance		• Visual inspection • Internal Testing and Inspection (Non Destructive Testing) (Appendix B1.4) • Leak testing • Pressure testing	• Visual inspection • Internal Testing and Inspection (Non Destructive Testing) (Appendix B1.4) • Leak testing • Pressure testing
B2.4	Storage Vessel Valves, Piping and Gauges: Hose-end valve guards – bullets	Audit process change: Currently 20 points, but will be made mandatory	Hose-end valves have been constructed and/or guarded to prevent accidental opening. This may include the configuration of the valve opening mechanism or the installation of a guard.	Hose-end valves have been constructed and/or guarded to prevent accidental opening. This may include the configuration of the valve opening mechanism or the installation of a guard. **Mandatory**
B2.6	Storage Vessel Valves, Piping and Gauges: Safety release valves	Including statement on structural support for longer pipes.	Safety relief valves shall also be equipped with standpipes (typically 36 inches in length) and raincaps.	Safety relief values shall be equipped with standpipes (typically 36 inches in length) and rain caps. Pipe should be adequately supported to prevent damage due to wind.
IB2.6	Implementation Guide - Safety Relief Valves	Providing additional guidance on standpipe material and support for longer pipes		Longer standpipes may be damaged by wind and should be adequately supported. Pipe material should be made of lightweight material such as aluminium or PVC.
B3.4	Storage Vessel Hoses	Remove best practice of using bolt-on couplings as both methods of coupling are sufficient.	All hoses have been equipped with crimp-on or bolt-on hose couplings designed for anhydrous ammonia service. Best practice is to use bolt-on couplings.	All hoses have been equipped with crimp-on or bolt-on hose couplings designed for anhydrous ammonia service.
B6	Bleed-off vapour containment	This section required containment of vapour bleed off only. It now includes requirements for containing liquid	**B6 BLEED-OFF VAPOUR CONTAINMENT** **A system for containing anhydrous ammonia vapour produced during uncoupling and bleed-off operations**	**B6 BLEED-OFF CONTAINMENT** **A system for containing anhydrous ammonia (vapour and liquid) produced during uncoupling and bleed-off operations has been installed on the anhydrous**

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
		bleed-off as well.	**has been installed on the anhydrous ammonia storage vessel.**	**ammonia storage vessel.**
B6.1	Bleed-off vapour containment	This section required containment of vapour bleed off only. It now includes requirements for containing liquid bleed-off as well.	A containment tank for bleed-off vapour is required.	A containment tank for bleed-off vapour/liquid is required. *Compliance will be indicated through a visual inspection of the required equipment.*
I-B6	Implementation Guide - Bleed-off vapour containment	This section required containment of vapour bleed off only. It now includes requirements for containing liquid bleed-off as well.	B6 Bleed-off Vapour Containment **A system for containing anhydrous ammonia vapour produced during uncoupling and bleed-off operations has been installed on the anhydrous ammonia storage vessel.**	B6 Bleed-off Containment **A system for containing anhydrous ammonia vapour and liquid produced during uncoupling and bleed-off operations has been installed on the anhydrous ammonia storage vessel.**
B6.2	Bleed-off vapour containment	This section required containment of vapour bleed off only. It now includes requirements for containing liquid bleed-off as well.	The containment tank for the bleed-off vapour containment system has been labelled as bleed off water or tank in a contrasting colour and a minimum of 2 inches in height. *Compliance will be indicated through a visual inspection of the vessel to ensure the proper design and construction of the bleed-off vapour containment system.*	The containment tank for the bleed-off vapour/liquid containment system has been labelled as bleed off water or tank in a contrasting colour and a minimum of 2 inches in height. *Compliance will be indicated through a visual inspection of the vessel to ensure the proper design and construction of the bleed-off containment system.*
I-B6.1/6.2	Implementation Guide - Bleed-off Vapour Containment – Design and Construction Requirements	This section required containment of vapour bleed off only. It now includes requirements for containing liquid bleed-off as well. Best practice becomes a mandatory requirement.	Anhydrous ammonia is considered an atmospheric pollutant and must be contained. Venting anhydrous ammonia into the atmosphere presents hazards to personnel and the environment and should be avoided. Some jurisdictions have environmental reporting requirements for emissions. The use of a bleed-off water tank is an effective method for capturing vented anhydrous ammonia. The design of	Anhydrous ammonia is considered an atmospheric pollutant and must be contained. Venting anhydrous ammonia into the atmosphere presents hazards to personnel and the environment and should be avoided. Some jurisdictions have environmental reporting requirements for emissions. The use of a bleed-off water tank is an effective method for capturing vented anhydrous ammonia. The design of a bleed-off water system must follow these requirements:

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
			a bleed-off water system must follow these requirements: • The tank is at least 25 gallons in size. • The tank is constructed of material compatible for use with anhydrous ammonia. Preference is given to poly tanks. • Lines from all liquid and vapour bleed-off locations are routed and plumbed into the tank in order to ensure contact with water. Best practice is to have both liquid and vapour lines routed and plumbed into the tank. • The tank must be clearly labelled as bleed-off water etc. to distinguish it from emergency water. Note: Any equipment removed from service during the off-season must be available for inspection during an audit.	• The tank is at least 25 gallons in size. • The tank is constructed of material compatible for use with anhydrous ammonia. Preference is given to poly tanks. • Lines from all liquid and vapour bleed-off locations are routed and plumbed into the tank in order to ensure contact with water. • The tank must be clearly labelled as bleed-off water etc. to distinguish it from emergency water. Note: Any equipment removed from service during the off-season must be available for inspection during an audit.
B8.8	Emergency Equipment - Secondary Wind Indicator	To enhance safety, the additional wind indicator requirement will be made mandatory. It will be required to have two wind indicators located at the storage site.	a) One wind indicator must be located at the anhydrous ammonia storage operation in order to determine the wind direction for emergency response purposes. (b) An additional wind indicator is located at the anhydrous ammonia storage operation.	Two wind indicators must be located at the anhydrous ammonia storage operation in order to determine the wind direction for emergency response purposes.
I-B8.8	Implementation Guide - Wind Indicators	Clarification on the wind indicator requirement reflecting the mandatory requirement for a second wind indicator.	A very important part of responding to an emergency at an anhydrous ammonia storage operation is knowing the wind direction. An anhydrous ammonia vapour cloud will follow the wind. Therefore, realizing the wind direction will ensure that employees know the proper direction to take in order to stay clear of the vapour cloud in the event of a	A very important part of responding to an emergency at an anhydrous ammonia storage operation is knowing the wind direction. An anhydrous ammonia vapour cloud will follow the wind. Therefore, realizing the wind direction will ensure that employees know the proper direction to take in order to stay clear of the vapour cloud in the event of a

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
			release. The best approach for indicating the wind direction is with a flag or windsock. Since an anhydrous ammonia cloud may obscure one wind indicator, at least two flags and/or windsocks located in different areas of the operation should be provided. The locations of these wind indicators should be chosen considering the prevailing wind direction.	release. The best approach for indicating the wind direction is with a flag or windsock. Since an anhydrous ammonia cloud may obscure one wind indicator, at least two flags and/or windsocks located in different areas of the operation shall be provided. The locations of these wind indicators should be chosen considering the prevailing wind direction.
I-C1.3	Implementation Guide - Transport Equipment - Maintenance	1) Minor language amendment. 2) Clarification that all vessels should be tested by a Registered Facility under the B620 standard.	Transport vessels must be maintained, inspected and tested regularly in accordance with regulatory requirements. These tests include: • Pressure test • Visual inspection • Leakage test • Non-destructive testing Requirements vary by type of vessel. Refer to CSA B620 and other applicable regulations for specific requirements.	Transport vessels must be maintained, inspected and tested regularly as per regulatory requirements. These tests include: • Pressure test • Visual inspection • Leakage test • Non-destructive testing Requirements vary by type of vessel. Refer to CSA B620, National Board of Boiler and Pressure Vessel Inspectors National Board Inspection Code and other applicable regulations for specific requirements. All vessels must only be tested at Highway Tank and TC Portable Testing Registered Facilities. The registration status of a facility can be verified at http://wwwapps.tc.gc.ca/saf-sec-sur/3/fdr-rici/highway/tanks.aspx
C2.1	Transport Vessel Valves, Piping and Gauges - Emergency Shut off Valves	Existing requirements may not provide the best protection or allow for the best available technology.	All liquid and vapour lines must be equipped with an emergency shutoff valve to stop the flow of product in an emergency. One exception is allowed: Inlet lines may have a double seat check valve instead of an emergency shutoff	All liquid and vapour lines must be equipped with an emergency shutoff valve to stop the flow of product in an emergency. Emergency shutoff valves must be operable automatically or remotely

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
			valve. Emergency shutoff valves must be operable remotely.	
I-C2.1	Implementation Guide - Transport Vessel Valves, Piping and Gauges - Emergency Shut off valves.	Exception for inlet lines removed. Standard B620 provides sufficient guidance. .	All liquid and vapour lines must be equipped with an emergency shutoff value to stop the flow of product in an emergency. One exception is allowed – inlet lines may have a double seat check value instead of an emergency shutoff value. Remote control means that the valve can be actuated from a location on the truck other than right at the shutoff valve (e.g. cable operated systems). CSA B620 and B622 have requirements for emergency shutoff systems for transport vessels. Requirements may be different for transport trucks and metered delivery units, and can include requirements for off-truck emergency shutoff devices. Refer to those Codes for details. Emergency shutdown actuation devices must be colour coded blue. If it is not apparent from the markings on the vessel that these features are installed, documentation of compliance with CSA B620 and B622 will be required for audit.	All liquid and vapour lines must be equipped with an emergency shutoff value to stop the flow of product in an emergency. Remote control means that the valve can be actuated from a location on the truck other than right at the shutoff valve (e.g. cable operated systems, air-actuated system, wireless actuation system, etc.). CSA B620 and B622 have requirements for emergency shutoff systems for transport vessels. Requirements may be different for transport trucks and metered delivery units, and can include requirements for off-truck emergency shutoff devices. Refer to those Codes for details. Emergency shutdown actuation devices must be colour coded blue. If it is not apparent from the markings on the vessel that these features are installed, documentation of compliance with CSA B620 and B622 will be required for audit.
C2.4	Transport Vessel Valves, Piping and Gauges: Hose-end valve guards – delivery units tanks	Audit Process Change: Was valued at 20 points, and is now mandatory	Hose-end valves have been constructed to prevent accidental opening. This may include the configuration of the valve opening mechanism or the installation of a guard to prevent accidental opening.	Hose-end valves have been constructed to prevent accidental opening. This may include the configuration of the valve opening mechanism or the installation of a guard to prevent accidental opening. **Mandatory**
I-C2.4	Implementation	Including the use of	Some of the most serious injuries to workers have	Some of the most serious injuries to workers have

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
	Guide - Transport Vessel Valves, Piping and Gauges: Hose-end Valve Guards – delivery units tanks	Snap valves as an option for preventing accidental openings.	occurred due to accidental opening of hose-end valves while handling. Therefore, it is critical that all hose-end valves be equipped with a device that prevents accidental operation of the valve while handling the hose. Several approaches are available to prevent accidental opening. This can include devices that lock the hand wheel on the valve or hand wheel guards to prevent inadvertent contact with the hand wheel.	occurred due to accidental opening of hose-end valves while handling. Therefore, it is critical that all hose-end valves be equipped with a device that prevents accidental operation of the valve while handling the hose. Several approaches are available to prevent accidental opening. This can include devices that lock the hand wheel on the valve, hand wheel guards to prevent inadvertent contact with the hand wheel, or the use of snap valves
C3.4	Transport Vessel Hoses	Best practice of using bolt-on couplings removed as both methods of coupling are sufficient.	All hoses have been equipped with crimp-on or bolt-on hose couplings designed for anhydrous ammonia service. Best practice is to use bolt on couplings.	All hoses have been equipped with crimp-on or bolt-on hose couplings designed for anhydrous ammonia service.
C6.2	Transport emergency and PPE - Fire Extinguisher	Changing minimum requirement	At minimum, a 10 lb. ABC fire extinguisher or greater if required by regulations.	At minimum, a 3A 10BC (5lb) Fire Extinguisher with nozzle
I-C6.2	Implementation Guide - Transport emergency and PPE – Fire Extinguisher	Changing minimum requirement	The transport unit must be equipped with at minimum a 10 ABC Fire Extinguisher or greater is required by regulations.	The transport unit must be equipped with at minimum a 5 lb 3A 10BC Fire Extinguisher with nozzle or greater as required by regulations.
I-C9.3	Implementation Guide - Nurse and applicator tanks maintenance	Additional guidance provided on mandatory maintenance and testing Clarification that all vessels should be tested by a Registered Facility under the B620 standard.	Vessels must be tested regularly in accordance with regulatory requirements. These tests include pressure tests & visual inspections. Requirements vary by type of vessel. Consult CSA B620 and other applicable regulations for specific requirements.	Transport vessels must be maintained, inspected and tested regularly as per regulatory requirements. These tests include: • Pressure test • Visual inspection • Leakage test • Non-destructive testing . Requirements vary by type of vessel. Consult CSA B620,

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
				National Board of Boiler and Pressure Vessel Inspectors' National Board Inspection Code and other applicable regulations for specific requirements. All vessels must only be tested at Highway Tank and TC Portable Testing Registered Facilities. The registration status of facility can be verified at http://wwwapps.tc.gc.ca/saf-sec-sur/3/fdr-rici/highway/tanks.aspx
C (new C10.5)	Nurse and Applicator Tanks Valves, Piping and Gauges: Valves on Nurse and Applicator Tanks	Remote Emergency shut-off requirement - amending to make mandatory (phased-in process) Typical releases on farm fields can be attributed to tears or breakages in the applicator hoses (connected to the applicator) as a result of the failure of trailer hitch carrying the ammonia tanks. This is what occurred in the incident in Westlock, AB in October 2015. Two other incidents occurred in November of 2015 in the USA; one trapped the farmer in his tractor cab as the ammonia plume surrounded the famer's tractor (Windsor, IL), while the other incident	New Section	All new single nurse tanks with a capacity 10,000 Litres (2642 USWG) or more, or any multiple nurse tank configuration purchased or coming into service on or after January 1, 2017 must be equipped with pull away protection. Effective January 1, 2022, all existing nurse tanks (single with capacity of 10,000 Litres (2642 USWG) or more, or any multiple nurse tank configuration purchased before January 1, 2017) must be equipped with pull away protection; unless regulations require them sooner. *Compliance will be indicated by inspection of the equipment and demonstration of functionality.*

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
		shut down an interstate highway for several hours and required nearby residents to be evacuated (Elkton, MN). Transport Canada also has on record, a number of similar incidents that have occurred prior to Westlock (those that are reported). The technical committee acknowledges that excess flow valves located in the tanks of multiple-tank arrangements may not function as designed and recommends that a secondary shutoff mechanism be made mandatory on nurse tanks to mitigate the extent of the release. The focus on single tanks with capacity of 10,000L or greater, or twinned or tripled tanks relates to the larger associated risk, it can serve as a better focus on investment and aligns with the ERAP exemption threshold.		

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
I-C10.5 (New)	Implementation Guide - Nurse and Applicator Tanks Valves, Piping and Gauges: Valves on Nurse and Applicator Tanks	Remote Emergency shut-off requirement - amending to make mandatory (phased in process)	New Section	Pull-away protection is defined as emergency shutoff capability in the event of a pull away. Examples include, but are not limited to tripod couplers, wire actuated emergency shutoff devices, air actuated shutoff, electronic/wireless actuated shutoff, etc. Excess flow valves alone are not regarded as adequate for compliance with this section. In order to manage the risk of releases during field operation, nurse tanks must be equipped with pull-away protection that is able to stop the flow of product due to a hose break or other equipment malfunction.
C11.4	Nurse and Applicator Tank Hoses: Hose-end Valve Guards	Audit Process Change: Was valued at 20 points, and is now mandatory.	Hose-end valves have been constructed and/or guarded to prevent accidental opening. This may include the configuration of the valve opening mechanism or the installation of a guard.	Hose-end valves have been constructed and/or guarded to prevent accidental opening. This may include the configuration of the valve opening mechanism or the installation of a guard. **Mandatory**
C11.5	Nurse and Applicator Tank Hoses: Couplings	Best practice of using bolt-on couplings removed as both methods of coupling are sufficient.	All hoses have been equipped with crimp-on or bolt-on hose couplings designed for anhydrous ammonia service. Best practice is to use bolt-on couplings.	All hoses have been equipped with crimp-on or bolt-on hose couplings designed for anhydrous ammonia service.
C12.3	Vessel Labels and Markings	Minor language amendment.	Nurse and applicator tanks must be placarded in accordance with Transport Canada TDG Regulations	Nurse and applicator tanks must display proper placards as per Transport Canada's *Transportation of Dangerous Goods Regulations*.
I-C12.3	Implementation Guide - Vessel Labels and Markings	Provides reference to Part 4 of the *TDG Regulations* for additional information, and clarification on the use of the Equivalency certificate which expires May 31, 2017.	In order to provide an effective and universal communication tool for emergency responders, vessels must be placarded in accordance with Transport Canada Regulations. The requirement in the Regulations is for placards on all four sides of the tank, however two placards may be permissible under a special permit.	In order to provide an effective and universal communication tool for emergency responders, vessels must be placarded in accordance with Transport Canada Regulations. The requirement in the Regulations is for placards on all four sides of the tank*. Please review Part 4 of the *Transportation of Dangerous Goods Regulations* for additional details on placarding requirements

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
				*Note - two placards may be permissible under the Fertilizer Canada's or Canadian Association of Agri-Retailer's Equivalency Certificate issued by Transport Canada however the Certificate expires May 31, 2017.
C17.1	Nurse and Applicator Tanks Inspection and Maintenance Protocol: Maintenance and testing regime	Simplifying section language	Nurse tank and applicator tank running gear shall be visually inspected daily during operational periods. Inspections should cover all facets of the running gear including hitches, kingpins, tires, wheel bearings and frames.	Nurse tank and applicator tank running gear shall be visually inspected daily during operational periods.
C17.2	Nurse and Applicator Tanks Inspection and Maintenance Protocol: Preventative maintenance program for nurse tanks and applicator tank running gear	This is to covers two maintenance regimes, the annual (or seasonal detailed visual inspection, and the 5 year physical inspection (to be introduced as Section C17.3). This provides a distinction between the visual inspection and the complete teardown detailed inspection.	A preventive maintenance program shall be in place for nurse tank and applicator tank running gear. Preventive maintenance programs shall include physical inspection including disassembly if necessary of tires, wheel bearings, kingpins, frames, reaches, hitches, tank mountings and piping assemblies. Inspections shall be completed annually and records kept.	A preventive maintenance program shall be in place for nurse tank and applicator tank running gear. Preventive maintenance programs shall include detailed visual inspection of tires, wheel bearings, frames, reaches, hitches, tank mountings and piping assemblies. Inspections shall be completed seasonally and records kept.
C17.3 (New)	Nurse and Applicator Tanks Inspection and Maintenance Protocol: Preventative maintenance	Provide clarity on the physical inspection requirement. Frequency changes from an annual basis to every 5 years.	New section - Mandatory	Preventive maintenance programs shall include physical inspection including disassembly of wheel bearings, kingpins, frames, reaches, hitches, tank mountings and piping assemblies. Inspections shall be completed every 5 years and records kept. **Mandatory**

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
	program for nurse tanks and applicator tank running gear			
I-C17	Implementation Guide - Nurse And Applicator Tank Inspection and Maintenance	Provide reference to inspection procedures in appendices	Failure of nurse and applicator tank running gear presents a serious risk of damage to the pressure vessel, and a potential release of ammonia. All nurse and applicator tanks shall be inspected and maintained with the goal of preventing running gear failures.	Failure of nurse and applicator tank running gear presents a serious risk of damage to the pressure vessel, and a potential release of ammonia. All nurse and applicator tanks shall be inspected and maintained with the goal of preventing running gear failures. *-Seasonal is defined as any active period – typically twice a year (fall and spring) Please refer to the appendices for inspection procedure guidance.
I-D5	Implementation Guide - WHMIS Training	Section updated to provide reference to the new 2015 version of WHMIS	**WHMIS TRAINING** **All employees at the anhydrous ammonia operation have been trained on the Workplace Hazardous Materials Information System (WHMIS).** It is a requirement that all employees involved in the storage of anhydrous ammonia be trained and certified in accordance with the requirements of the Workplace Hazardous Materials Information System (WHMIS). The required course curriculum for certification under the WHMIS Regulations is 1. Introduction a. WHMIS Act & Regulations b. Enforcement of legislation 2. Responsibilities a. Employer's responsibility b. Employee's responsibility 3. Exemptions from WHMIS c. Exemptions 4. Labelling a. The supplier label	**WHMIS 1998/2015 TRAINING** **All employees at the anhydrous ammonia operation have been trained on the Workplace Hazardous Materials Information System 1998 version (WHMIS) or the 2015 version (WHMIS 2015).** It is a requirement that all employees involved in the storage of anhydrous ammonia be trained and certified in accordance with the requirements of the WHMIS/WHMIS 2015. The required course curriculum for certification under the WHMIS/WHMIS 2015 Regulations is 1. Introduction a. WHMIS Act & Regulations b. Enforcement of legislation 2. Responsibilities a. Employer's responsibility b. Employee's responsibility 3. Exemptions from WHMIS c. Exemptions 4. Labelling a. The supplier label

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
			b. The workplace label c. Products which require labelling 5. WHMIS Controlled Product Symbols a. Product symbols 6. Material Safety Data Sheets (MSDS) a. MSDS sections 7. Glossary of Terms a. Glossary	b. The workplace label c. Products which require labelling 5. WHMIS Controlled Product Symbols a. Product symbols 6. Material /Safety Data Sheets ((M)SDS) a. (M)SDS sections 7. Glossary of Terms a. Glossary
I-E2	Implementation Guide - Documentation	Reference to the Safe Operating Procedures guidance in the Appendices		Please refer to the Appendices for Safe Operating Procedures development guidance
E3.3	Documentation: Maintenance Records	Clarification to the frequency of visual and physical inspections pertaining to Nurse Tank running gear inspection and associated maintenance records	Records indicate an annual inspection of all running gear on nurse wagons. Compliance will be indicated through an examination of the maintenance records that indicate that all nurse wagons have had an annual safety inspection within the last 12 months.	Records indicate seasonal visual inspection and a 5-year physical inspection of all running gear on nurse wagons. Compliance will be indicated through an examination of the maintenance records that indicate that all nurse wagons have had an seasonal visual safety inspection within the last 12 months and a physical safety inspection completed in the last 60 months (as applicable).
I-E3.3	Implementation Guide - Maintenance Records	Clarify timeline definition of 'seasonal'	Annual inspection of all running gear on nurse wagons.	Seasonal* visual inspection and 5-year physical inspection of all running gear on nurse wagons. *-Seasonal is defined as any active period – typically twice a year (fall and spring)
I-F3.4	Implementation Guide - Employee Knowledge: Knowledge of Emergency Response Plan	In order for requirements to continue to reflect current knowledge, the employee should be able to demonstrate how to obtain the up-to-date information on the (M)SDS provided by the manufacturer.	F3.4 Employees at the anhydrous ammonia operation are knowledgeable of the correct procedures for treating skin or eye contact with anhydrous ammonia. In the event of an anhydrous ammonia contact injury to a worker and/or customer, the worker can describe: • The proper procedure for responding to an exposure to anhydrous ammonia: * Eye exposure = flush for 15 minutes with water, seek immediate medical attention. * Skin exposure = immerse in water for at least 15	Question: Employees at the anhydrous ammonia operation are knowledgeable of the correct procedures for treating skin or eye contact with anhydrous ammonia. In the event of an anhydrous ammonia contact injury to a worker and/or customer, the worker can describe: • How to locate the (M)SDS's and identify the section pertaining to responding to skin or eye contact of anhydrous ammonia.

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
			minutes, seek immediate medical attention.	
I-F3.5	Implementation Guide - Employee Knowledge: Knowledge of Emergency Response Plan	In order for requirements to continue to reflect current knowledge, the employee should be able to demonstrate how to obtain the up-to-date information on the (M)SDS provided by the manufacturer.	Employees at the anhydrous ammonia operation are knowledgeable of the procedures for treating inhalation of anhydrous ammonia. In the event of an anhydrous ammonia inhalation injury to a worker and/or customer, the worker can describe: • The proper procedure for responding to an inhalation exposure to anhydrous ammonia: * Minor Inhalation (conscious) = drink plenty of fluids. If necessary, seek medical attention. * Major inhalation (conscious) = drink plenty of fluids and apply oxygen therapy (must be applied by a trained professional). Seek immediate medical attention. * Inhalation (unconscious) = seek immediate medical attention.	Question: Employees at the anhydrous ammonia operation are knowledgeable of the procedures for treating inhalation of anhydrous ammonia. In the event of an anhydrous ammonia inhalation injury to a worker and/or customer, the worker can describe: • How to locate the (M)SDS's and identify the section pertaining to responding to anhydrous ammonia inhalation.
I-F5	Implementation Guide - Knowledge of WHMIS	Section updated to provide reference to the new WHMIS 2015 which incorporates the new Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	**The employees at the anhydrous ammonia operation are knowledgeable of the Workplace Hazardous Materials Information System (WHMIS)** The Workplace Hazardous Materials Information System (WHMIS) system provides several critical sources of information for identifying hazards in the handling of anhydrous ammonia. From various information sources contained in WHMIS, employees must be able to identify: 1. Supplier Label a. Utilizing the information on the supplier label, the worker can identify the hazards of the product by the symbols and the required safety precautions for working with the product. 2. Material Safety Data Sheets	**The employees at the anhydrous ammonia operation are knowledgeable of the Workplace Hazardous Materials Information System 1998 Version (WHMIS) and/or the 2015 version (WHMIS 2015)** The WHMIS/WHMIS 2015 system provides several critical sources of information for identifying hazards in the handling of anhydrous ammonia. From various information sources contained in WHMIS 2015, employees must be able to identify: 1. Supplier Label a. Utilizing the information on the supplier label, the worker can identify the hazards of the product by the symbols and the required safety precautions for working

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
			b. Referring to the Material Safety Data Sheet for anhydrous ammonia, the worker can identify: i. The hazards of the product ii. The required personal protective equipment to be worn during handling. iii. The first aid procedures for treating exposure to anhydrous ammonia.	with the product. 2. Material /Safety Data Sheets ((M)SDS) b. referring to the Material Safety Data Sheet for anhydrous ammonia, the worker can identify: i. The hazards of the product ii. The required personal protective equipment to be worn during handling. iii. The first aid procedures for treating exposure to anhydrous ammonia. Please refer to Appendix F1-F7 for more information and resources.
G9.1	Incident Reporting- Minimum requirements for the incident reporting procedure.	Audit process change: Protocol was 30 points, but will be changed to Mandatory	The operation has an active incident reporting program including a written procedure and record keeping.	The operation has an active incident reporting program including a written procedure and record keeping. **Mandatory**
I-G9	Implementation Guide - Incident Reporting	Consolidating general requirements for incident reporting.		Minimum requirements for the incident reporting procedures
I-I	Implementation Guide - Insurance	Provide clarity that additional evidence of financial abilities during the assessment for self-insurance may be required	Self Insurance Large organizations that choose to self-insure may be eligible for this option by providing the Ammonia Code of Practice Administrator with one of the following: a. Arrange for a licenced insurer to issue the insurance to the required limits, subsequently executing a reimbursement agreement with that insurer in an amount which is equal to that limit. A copy of the reimbursement agreement can be found on side two of the Confirmation of Coverage Form, or b. If a company's net worth is $3,000.000 or greater in	Self-Insurance Large organizations that choose to self-insure may be eligible for this option by providing the Ammonia Code of Practice Administrator with either one of the following: a. Arrange for a licenced insurer to issue the insurance to the required limits, subsequently executing a reimbursement agreement with that insurer in an amount which is equal to that limit. A copy of the reimbursement agreement can be found on side two of the Confirmation of Coverage Form, or b. If a company's net worth is $3,000,000 or greater in

Section	Description	Issue(s)	2012 Code Language	2017 Code Language
			the most recent fiscal year as evidenced by audited financial statements, and a confirming letter is issued by a Director, CFO or CEO supporting coverage, the site may be eligible for self insurance status. The organization is permitted to make specific application to the Code Administrator in order to provide other means of proof of coverage to the minimum limits.	the most recent fiscal year as evidenced by audited financial statements, and a confirming letter is issued by a Director, CFO or CEO supporting coverage, the site may be eligible for self-insurance status. The Ammonia Code Project Manager reserves the right to request additional documentation that provides evidence of liquidity of financial reserves. The organization is permitted to make specific application to the Code Project Manager in order to provide other means of proof of coverage to the minimum limits