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Updates to the Renovation Policy for Protocol A.1 – Expansion of Fixed Ammonia Storage Capacity at Operations Certified Under the Ammonia Code of Practice – Effective Immediately

This Bulletin addresses amendments to the Renovation of Certified Facilities Policy.

Specifically, this Bulletin addresses replacement of, or addition of, fixed ammonia storage vessels at sites certified under the Ammonia Code of Practice for sites that do not meet minimum distances in Protocol A.1.1.

The updated Renovation of Certified Facilities Policy (Renovation Policy) is included on pg. 3-4. The first part of the Policy (*3.6.1 Renovation*) remains as published in 2017, this being:

3.6.1 Periodically it is expected that facilities certified under the Ammonia Code of Practice (Code) may make changes to their sites. Any renovations made to the site must comply with the Code and sites must be compliant with the Code at all times. If significant renovations or replacements are performed, such as movement, replacement, expansion or addition of fixed storage vessels, such renovations must be re-audited for compliance with Section A, B and G of the Code before using brought into service. The full site will still be subject to a full re-audit by their next scheduled re-audit date.

The second part of the Policy has been amended to allow for additional storage capacity at “Encroached Sites” subject to conditions listed herein in *3.6.2 Expanded Storage Capacity at Encroached Sites*.

Background and Rationale:

Protocol A.1 sets out minimum distances from occupancies for new anhydrous ammonia operations (hereafter referred to as “sites”) as follows:

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:

- (a) *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*



June 22, 2021

- (b) 500 metres from any occupancy (e.g. a rural residence or a small business); and
- (c) 50 metres from an environmentally sensitive area (lake, stream, wetland etc.); and

Approval from the local authority having jurisdiction is also required.

Over time the distances between existing sites and other occupancies may change as communities enlarge or neighbouring property owners choose to develop land. These expansions are beyond the control of the ag-retailer. The Policy on Renovation of Certified Facilities, stated that sites that historically were less than the minimum distance requirements under Protocol A.1 were subject to the following restrictions:

- any renovations to fixed storage vessels could not increase the capacity for product storage; and
- additional fixed storage vessels were not permitted.

These changes to the Renovation Policy can reduce the risk of accidental exposure to the public by:

- Consolidation of individual and in some cases remote locations into larger purpose-built anhydrous ammonia locations.
- Improved safety & security by increasing physical presence of personnel and resources at one-location vs multiple locations.
- Reduced number of transfer locations and piping systems in operation at a site.
- Providing enhanced layers of protection against accidental anhydrous ammonia releases.

Updated Renovation Policy – Effective Immediately

Effective immediately these restrictions have been modified in accordance with the updated **Renovation of Certified Facilities (Renovation) Policy** included on pgs 3-4 of this Bulletin.

This Bulletin replaces the Renovation of Certified Facilities Policy published in the 2017 Edition of the Ammonia Code of Practice.

The updated Renovation Policy has also been incorporated into the next version of the Ammonia Code, which is scheduled to come into force January 1, 2022.

Sincerely,

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June 22, 2021

3.6 Renovation of Certified Facilities Policy

3.6.1 Renovations:

Periodically it is expected that facilities certified under the Ammonia Code of Practice (Code) may make changes to their sites. Any renovations made to the site must comply with the Code and sites must be compliant with the Code at all times. If significant renovations or replacements are performed, such as movement, replacement, expansion or addition of fixed storage vessels, such renovations must be re-audited for compliance with Section A, B and G of the Code before being brought into service. The full site will still be subject to a full re-audit by their next scheduled re-audit date.

Prior to a renovation of a fixed storage vessel, pre-approval from Fertilizer Canada should be obtained. Please contact the Ammonia Code Manager at manager@awsa.ca for a copy of the pre-approval package.

3.6.2 Expanded Storage Capacity at Encroached Sites:

Notwithstanding the foregoing or any other provision of the Ammonia Code, for sites

- a) certified under the Ammonia 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); or,
- b) that originally met the requirements of Section A1.1 of the Code but were subsequently encroached upon by municipal development within the setback distances;

any renovations to fixed storage at these “Encroached sites” **may not** increase the capacity for product storage, or install additional fixed storage vessels, **unless the following conditions (1-3) are satisfied:**

1. Each fixed ammonia storage vessel at the site is equipped as follows:
 - a. Engineered break-away devices, that are designed to separate and provide positive closure to both sides of the separation, are installed at each bulkhead liquid and vapour line between a mechanically secure point and the transfer hose connection. The mechanically secure point shall be designed to withstand at a minimum two times the maximum shear force required to separate the breakaway.
 - b. Internal Self Closing (ISC) Valves are installed on all liquid and vapour tank openings except when product flow is only into the tank, when a back-check valve may be used.



June 22, 2021

- c. Emergency Shutoff Valves (ESV) or ISC valves are installed on each liquid and vapour line as close as practical to each transfer bulkhead on the vessel side prior to the last manual valve.
- d. An Emergency Shutdown System is installed that incorporates all of the following:
 - I. A pull-away event at any bulkhead point will activate a full system shutdown without human intervention;
 - II. Closure of all ISC's installed on the storage vessel(s) when a shutdown event is triggered;
 - III. Closure of all ESV's installed in the piping system when a shutdown event is triggered;
 - IV. A monitoring feature that will trigger a shutdown event if no input is received from the operator every five (5) minutes when the system is active;
 - V. Wireless transmitter (with a minimum workable distance of 46 metres (150 feet)) capable of triggering a shut down of the system remotely; and
 - VI. Pump power/energy source "kill switch", that is triggered by a shutdown event.
2. Damage protection is installed around all storage vessel(s) and piping systems to prevent contact from motorized vehicles.
3. A documented visual inspection and leakage test is performed on all storage vessel(s) annually.

Sites must meet all of the above conditions (1-3) to be approved under the Renovation Policy. Sites must undergo a pre-approval application, as outlined in the Ammonia Code of Practice, prior to the renovation(s).

Pre-approval will require submission of design drawings and equipment specifications to meet the conditions of the Policy, and an indication of approval from the authorities having jurisdiction. The pre-approval package will be reviewed by an appointed technical working group to assess if the plans meet the conditions stated in the Renovation Policy. After renovations have been completed, site compliance will be audited by the Senior Auditor or designate prior to the vessel bring brought into service.

Please contact the Ammonia Code Manager at manager@awsa.ca for a copy of the Renovation at Encroached Sites Submission Requirements Package.