

947-2019 ADDENDUM 3

CLEANING AND INSPECTION OF SULPHURIC ACID TANK TK-S210A

URGENT

**PLEASE FORWARD THIS DOCUMENT TO
WHOEVER IS IN POSSESSION OF THE
TENDER**

ISSUED: 2019/11/06
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**THIS ADDENDUM SHALL BE INCORPORATED
INTO THE TENDER AND SHALL FORM A PART
OF THE CONTRACT DOCUMENTS**

Template Version: A20190115

Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Tender, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 8 of Form A: Bid may render your Bid non-responsive.

PART D – SUPPLEMENTAL CONDITIONS

- Revise D10.1 to read The Contractor shall achieve Total Performance within two (2) consecutive Working Days from the opening of the tank hatches as specified in D9.
- Revise D10.2 to read Total Performance does not include the External Inspection as per D2.2(c) or Addendum 3 E3.2(a) and submission of the Report as per D2.2 (d) or E3.3.

PART E – SPECIFICATIONS

- Revise: E3.1(i) to read: After inspection, Contractor is to replace and seal all hatches so the tank can be put back in service by the City. The City will supply the required gasket material to the Contractor to install on the hatches prior to closing. Supply and install all new hatch bolts, washers and nuts as specified on drawings 20284-MHR and 20284-MHS. All bolts shall be coated with a compatible anti-seize compound prior to installation.
- Revise E3.2 to read: The Contractor shall perform an inspection of sulphuric acid storage tank TK-S210A located in the Bulk Chemical Building of the City of Winnipeg, Water Treatment Plant in accordance with the requirements of API 653 and hereinafter specified.
- (a) An external inspection is to be completed while the tank is in-service; either prior to the opening of the tank hatches as per E3.1 or after the tank is put back in-service. The scope of the external tank inspection ends at the first valve from the tank. External Inspection shall include but not be limited to:
- (i) Visual inspection of the external floor to shell weld for defects or signs of leaks.
 - (ii) Visual signs of leaks from under the floor edge.
 - (iii) Visual inspection of external floor extension lip for signs of corrosion.
 - (iv) Visual inspection of external shell welds for defects or signs of leaks.
 - (v) Visual inspection of external shell plate material for corrosion or damage. Measure and record corrosion depth measurements, if applicable.
 - (vi) Ultrasonic thickness testing at various elevations on the external shell and at suspected thin areas. Access is available from the ground, ladder, stairs, and catwalk. If additional locations are identified which are not accessible from the available access points, scaffolding will be required.
 - (vii) Visual inspection of hatch for defects or signs of leaks.
 - (viii) Visual inspection of external nozzle welds for defects or signs of leaks.
 - (ix) Visual inspection of external nozzle material for corrosion or damage. Measure and record corrosion depth measurements, if applicable.

- (x) Inspect to confirm that the piping is not binding or placing stress on the tank nozzles.
 - (xi) Inspect that the adjacent piping up to the first valve is properly supported.
 - (xii) Ultrasonic thickness testing and record readings at 3, 6, 9 & 12 o'clock on each nozzle and at suspected thin areas.
 - (xiii) Visual inspection of external roof welds for defects.
 - (xiv) Visual inspection of external roof plate material for corrosion or damage. Measure and record corrosion depth measurements, if applicable.
 - (xv) Ultrasonic thickness testing at random accessible locations on the roof and at suspected thin areas.
 - (xvi) Exterior condition assessment of vent-to-atmosphere (VTA) piping from the tank to the roof.
 - (xvii) Liquid penetrant non-destructive tests (NDT) on suspect defective welds to verify integrity of floor, shell, nozzles and roof.
- (b) Internal inspection shall include but not be limited to
- (i) Visual inspection of floor to shell weld for defects or signs of leaks.
 - (ii) Visual inspection of internal floor plate material for signs of corrosion. Measure and record corrosion depth measurements, if applicable.
 - (iii) Vacuum box leak testing of floor to shell weld and all internal floor plate welds to verify that no leaks are present.
 - (iv) Ultrasonic thickness testing every 24" around the perimeter of the floor.
 - (v) Ultrasonic thickness scan around the perimeter of the floor and record the thickness every 24".
 - (vi) Ultrasonic thickness scan a 12" x 12" area at the corner of each floor plate and in the center of each plate and record the minimum thickness.
 - (vii) Ultrasonic thickness testing at suspected thin areas.
 - (viii) Elevation survey to verify compliance to API 653.
 - (ix) Visual inspection of internal shell welds for defects or signs of leaks.
 - (x) Visual inspection of internal shell plate material for corrosion or damage. Measure and record corrosion depth measurements, if applicable.
 - (xi) Ultrasonic thickness testing at various accessible elevations on the shell and at suspected thin areas.
 - (xii) Record north, east, south, west shell thicknesses at various accessible elevations.
 - (xiii) Visual inspection of internal nozzle welds for defects or signs of leaks.
 - (xiv) Visual inspection of internal nozzle material for corrosion or damage.
 - (xv) Visual inspection of internal roof plate material for signs of corrosion or damage from the ground level. If suspect areas are identified on the roof interior, provide a recommendation for future inspections when additional access can be provided via scaffolding.
 - (xvi) Liquid penetrant non-destructive tests (NDT) on suspect defective welds to verify integrity of floor, shell, and nozzles.

Revise E3.3(b) to read: Inspection report shall include at minimum the requirements in API 653 Section 6.9.2 and in addition:

- (i) Summary of tanks existing condition.
- (ii) Evaluation of tanks condition.
- (iii) Results of non-destructive testing and ultrasonic thickness scans.
- (iv) Recommendation for additional inspections, tank repairs or upgrades, as required.
- (v) Labeled and dated photographs from the inspection, including photos of all areas of defect or concern to be highlighted.