

Part 1 General

1.1 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by the City or other Contractors.
- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Contract Administrator.
- .3 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .4 Provide on-site containers for collection of waste materials and debris.
- .5 Dispose of waste materials and debris off site.
- .6 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .7 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

1.2 FINAL CLEANING

- .1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review remove surplus products, tools, construction machinery, and equipment.
- .4 Remove waste products and debris other than that caused by the City or their employees.
- .5 Remove waste materials from site at regularly scheduled times or dispose of as directed by Contract Administrator.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .8 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .9 Remove dirt and other disfiguration from exterior surfaces.
- .10 Clean and sweep roofs, gutters, areaways, and sunken wells.
- .11 Sweep and wash clean paved areas.
- .12 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.
- .13 Clean roofs, downspouts, and drainage systems.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 DESCRIPTION

- .1 Impacted material may be present surround.

1.2 REGULATORY REQUIREMENTS

- .1 Comply with all applicable legislation and by-laws, including, but not limited to:

1.3 WORK INCLUDED BUT NOT LIMITED TO:

- .1 Excavation, transport and disposal at a Manitoba Sustainable Development approved facility of contaminated soil, debris, concrete, and stone, containing gasoline, fuel oil, and lube oil range hydrocarbons as confirmed by on-site inspection and testing.
- .2 Set aside clean overburden material to be used as backfill.
- .3 Containment, transport and disposal by a licensed disposal contractor of any free phase petroleum product, as directed by the Contract Administrator.
- .4 Containment, treatment and disposal of all groundwater in excavations, all run-off entering the excavations and wash water generated during the excavation of soils as agreed to by the Contract Administrator and regulatory authorities.
- .5 Coordination with all regulatory agencies having authority and scheduling for delivery of materials to the Provincial approved treatment/disposal facility.

1.4 PROTECTION

- .1 Prevent debris from blocking roads, ditches, and drains.
- .2 Ensure safe passage of persons around the excavation area.
- .3 Suppress dust and odours during excavation activities.

1.5 NOTIFICATION

- .1 The Contractor shall notify the Contract Administrator within two (2) hours upon discovery of any petroleum contaminated materials.
- .2 The Contractor shall provide at least two (2) working days' notice to the Project Administrator prior to the removal of any contaminated soil.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 Removal

- .1 The Contract Administrator or his representative will oversee contaminated material removal activities and will make decisions as to the extent of contaminated material removed.
- .2 The Contract Administrator will provide instructions as to the method and type of record keeping required for documenting quantities of contaminated soil for disposal.
- .3 Locate and protect adjacent structures and foundations, trees, lawns, fencing, service poles, wires, utilities, paving, survey bench marks, monitor wells, and monuments not intended for removal which may be affected by the Work.
- .4 Notify all regulatory agencies having authority, as required.
- .5 All excavations are to remain within the established site property boundaries.
- .6 The vertical and horizontal limits of excavation are unknown and will be determined by the Contract Administrator or his representative during the commencement of the work based on field testing of petroleum hydrocarbon concentration, combined with collection of confirmatory soil samples for laboratory analysis. The laboratory results should be available within five (5) days of sampling.
- .7 The lateral limits of all excavations will be based on post-excavation testing results.

3.2 Containment of Material on Site

- .1 All groundwater in excavations, all run-off entering the excavations and wash water generated during the excavation of soils, will be temporarily stored on-site in spill-proof and leak-proof containers, as approved by the Contract Administrator, prior to their disposal. All waters will be disposed based upon the Contractor's method, as approved by the Contract Administrator, following receipt of analytical results. The Contractor shall be prepared to demonstrate that the treatment method is the most cost efficient. In addition, the Contract Administrator shall demonstrate that the methodology chosen has minimized the amount of impacted materials on the site.
- .2 Contractor shall cover contaminated soil stockpiles on the site at all times with PVC plastic or equivalent to prevent loss or erosion.
- .3 All petroleum free phase products will be contained in spill and leak proof containers, as approved by the Contract Administrator, prior to their removal off-site for disposal.
- .4 All storage vessels for soils, product or groundwater must be readily accessible for sampling by the Contract Administrator. These vessels must have a means of securing access to prevent unauthorized and/ or accidental entry into the vessels by trespassers.
- .5 All storage vessels for soils, product and groundwater must be readily accessible for clean-out prior to their removal from the site.

3.3 Testing

- .1 All contaminant sampling and testing of soils and water will be carried out by the Contract Administrator. All other sampling and testing will be conducted by the Contractor at his expense.

- .2 When the final soil testing confirms contaminant levels are at or below the established remediation objective, documentation shall be prepared by the Contract Administrator including reference to confirmatory results. Samples may require up to five (5) working days to receive analytical results; Contractor to schedule work to conform to this timing.
- .3 The Contract Administrator shall contact Regulatory Agency for agreement that contamination has been cleaned up.

3.4 Submittals

- .1 Provide Manitoba Sustainable Development and the Contract Administrator with completed forms required for decommissioning fuel storage tanks.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 Canadian Council of Ministers of the Environment (CCME)
 - .1 CCME PN 1326, Environmental Code of Practice for Underground Storage Tank Systems Containing Petroleum Products and Allied Petroleum Products.
 - .2 CCME PN 1299, Canadian Environmental Quality Guidelines.
 - .1 Canadian Soil Quality Guidelines for the Protection of Environmental and Human Health.
 - .3 CCME Canada Wide Standards for Petroleum Hydrocarbons in Soil.
- .2 Canadian Federal Legislation
 - .1 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
 - .2 Canadian Environmental Assessment Act (CEAA), 1995, c. 37.
 - .3 Canada Labour Code (R.S. 1985, c. L-2).
 - .1 Part II (September 2000) - Occupational Health and Safety.
 - .4 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34.
- .3 Underwriters' Laboratories of Canada (ULC)
 - .1 ULC-S603-14, Standard for Steel Underground Tanks for Flammable and Combustible Liquids.
 - .2 ULC-S615-14, Standard for Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids.
- .4 Manitoba Regulation (MR)
 - .1 Storage and Handling of Petroleum Products and Allied Products, MR 188/2001.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide the following information on storage tank:
 - .1 Former contents.
 - .2 Location.
 - .3 Reason for removal.
- .2 The Contract Administrator will provide the Contractor with a copy of vapour removal test results (conducted by others).
- .3 Forward affidavit of destruction of underground storage tank to authority having jurisdiction and Contract Administrator.

1.3 QUALITY ASSURANCE

- .1 Contractor must be licensed/certified by Provincial authorities having jurisdiction for removal of underground storage tanks.
 - .1 License/certificate, title and number must accompany tender document.

- .2 Regulatory Requirements: ensure Work is performed in compliance with applicable Provincial regulations.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Segregate and deliver non-salvageable or non-recyclable materials, including waste liquids and sludges and impacted soil to Provincially licensed waste facility.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 PREPARATION SAFETY AND SECURITY

- .1 Conform to or exceed Federal and Provincial codes, local municipal by-laws, by-laws, and codes and regulations of utility authorities having jurisdiction.
- .2 Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Protection:
 - .1 Meet safety requirements of Occupational Safety and Health, Canada Labour Code Part II and Regulations for Construction Projects.
 - .2 Disconnect or remove source of ignition from vicinity of tank.
 - .3 Provide temporary protection for safe movement of personnel and vehicle traffic.
 - .4 Cut, braze or weld metal only in monitored areas established to be free of ignitable vapour concentrations.
 - .5 Ground and bond metal equipment, including tanks and transfer pipes, before operating equipment or transferring flammable materials.
 - .6 Use non-sparking tools and intrinsically safe electrical equipment.
 - .7 Smoking is not permitted.

3.2 EXCAVATION TRENCHING AND BACKFILL

- .1 Do work in accordance with Section 31 23 33 - Excavation, Backfilling, and Restoration.
- .2 Provide protective material around excavation.
- .3 Provide constant supervision during excavation and backfilling.
- .4 Excavation:
 - .1 Excavate until top of tank and connections and openings are exposed.
 - .2 Disconnect piping:
 - .1 Remove fill tube.
 - .2 Disconnect fill gauge, product and vent lines.

- .3 Cap or plug open ends of lines that are not to be used further.
- .4 Remove vent piping from ground.
- .3 Temporarily plug tank openings.
- .4 Continue excavation until tank is completely exposed.
- .5 Temporarily stockpile on-site soil in vicinity of tank, until waste classification can be established prior to final disposal.
- .5 Prevent movement, settlement or damage of adjacent services, walks, paving, and adjacent grades. Provide bracing and shoring as required.
- .6 Remove two (2) monitoring wells located within the tank nest footprint.
- .7 Remove two (2) vent pipes in their entirety.

3.3 TANK REMOVAL

- .1 Remove tank in accordance with CCME Code of Practice PN 1326 and/or applicable provincial standards and regulations, and place in secure location.
- .2 Block tank to prevent movement.
- .3 Contact Contract Administrator immediately if there is evidence of contamination in tank excavation, stop Work until further notice.
- .4 Remove and replace contaminated soil and accumulated flammable or combustible liquid with clean fill common to local area in accordance with Section 31 23 33 - Excavating, Backfilling, and Restoration.

3.4 VAPOUR REMOVAL

- .1 Purging:
 - .1 The tank has been purged of vapours by the City. Contractor to confirm vapour is purged to their satisfaction prior to conducting the removal. Payment for additional purging, if required, is to be borne by the Contractor.

3.5 CAPPING

- .1 Cap holes before tank is moved from site.
 - .1 Leave vents open.
- .2 Plug corrosion leak holes using screwed (boiler) plugs.
- .3 Leave 3 mm vent hole in one plug to prevent tank from being subjected to excessive pressure differential caused by extreme temperature change.

3.6 SECURING AND REMOVAL FROM SITE

- .1 Check vapour levels prior to transport:
 - .1 Remove vapour if required.
- .2 Dispose of tank in accordance with local, Provincial and Federal regulations.
- .3 Truck removal:
 - .1 Secure tank on truck for transport to disposal site.

- .2 Cut suitable openings in tank sides to render tank unusable.
- .3 Ensure 3 mm vent hole located at uppermost point on tank.

3.7 SITE REMEDIATION

- .1 To CCME PN 1299.
- .2 Repair/replace finish grade to match surrounding area, as specified in Section 31 23 33 – Excavation, Backfilling, and Restoration.
- .3 In event of required site remediation, consult with the Contract Administrator

3.8 WORKMANSHIP AND DISPOSAL

- .1 Tanks destined for disposal:
 - .1 Dismantle, cut sufficient openings or otherwise render unusable.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2 Province of Manitoba
 - .1 The Workers Compensation Act RSM 1987 - Updated 2016.
 - .2 The Workplace Safety and Health Act RSM 1987, c.W210 – Updated 2015.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit site-specific Health and Safety Plan: Within seven (7) days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
 - .1 Results of site specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation.
- .2 Submit two (2) copies of Contractor's work site health and safety inspection reports to the Contract Administrator.
- .3 Submit copies of reports or directions issued by Federal and Provincial health and safety inspectors.
- .4 Submit copies of incident and accident reports.
- .5 Submit WHMIS MSDS - Material Safety Data Sheets.
- .6 Contract Administrator will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within seven (7) days after receipt of plan. Revise plan as appropriate and resubmit plan to Contract Administrator within three (3) days after receipt of comments.
- .7 Contract Administrator's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .8 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Contract Administrator.

1.3 FILING OF NOTICE

- .1 File Notice of Project with Provincial authorities prior to beginning of Work.
- .2 Contractor shall be responsible and assume the Principal Contractor role for the work zone location. Contractor shall provide a written acknowledgement of this responsibility.
- .3 Work zone locations include:
 - .1 Storage tank location north of building.

1.4 SAFETY ASSESSMENT

- .1 Perform site specific safety hazard assessment related to project. Provide copy of documentation to the Contract Administrator.

1.5 GENERAL REQUIREMENTS

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Contract Administrator may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.6 RESPONSIBILITY

- .1 Be responsible for health and safety of all persons on site, safety of property on-site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.7 COMPLIANCE REQUIREMENTS

- .1 Comply with the Workers Compensation Act, Workplace Safety Regulation, Manitoba RSM 1987 - Updated 2016.
- .2 Comply with Occupational Health and Safety Regulations, 1996.
- .3 Comply with Occupational Health and Safety Act, General Safety Regulations.
- .4 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

1.8 UNFORSEEN HAZARDS

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Contract Administrator verbally and in writing.
- .2 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, and follow procedures in accordance with Acts and Regulations of Province having jurisdiction and advise Contract Administrator verbally and in writing.

1.9 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction.

1.10 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Contract Administrator.

- .2 Provide Contract Administrator with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Contract Administrator may stop Work if non-compliance of health and safety regulations is not corrected.

1.11 WORK STOPPAGE

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 NOT USED

- .1 Not used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 02 65 00 – Underground Storage Tank Removal.

1.2 REFERENCES

- .1 City of Winnipeg Standard Construction Specifications, May 13, 2016 revision. Specifications can be access at the City’s website at the following location:
<http://www.winnipeg.ca/matmgt/spec/default.stm>

1.3 GOVERNING SPECIFICATION

- .1 All work, equipment, materials and labour relating to the excavation, backfilling and restoration required for the removal of the tank and the areas disturbed by the construction activities are to be in accordance with the City of Winnipeg Standard Construction Specifications.

1.4 WASTE MANAGEMENT AND DISPOSAL

- .1 All waste material to be disposed of by the Contractor in a responsible and legal manner, and in accordance with City of Winnipeg Standard Construction Specifications.

1.5 EXISTING CONDITIONS

- .1 Buried services:
 - .1 Before commencing work establish location of buried services on and adjacent to site.
 - .2 Any information provided as to the size, depth and location of existing utilities and structures as indicated are for guidance only. Completeness and accuracy are not guaranteed.
 - .3 Prior to beginning excavation Work, notify applicable authorities having jurisdiction to establish location, state of use of buried utilities and structures, and to clearly mark such locations to prevent disturbance during Work.
 - .4 Maintain and protect from damage, water, sewer, gas, electric, telephone, and other utilities and structures encountered.
 - .5 Where utility lines or structures exist in area of excavation, obtain direction of Contract Administrator if work cannot be accomplished without impact the utility lines or structures.
- .2 Existing buildings and surface features:
 - .1 Conduct, with Contract Administrator, condition survey of existing buildings, trees and other plants, lawns, fencing, service poles, wires, rail tracks, pavement, survey bench marks, and monuments which may be affected by Work.
 - .2 Protect existing buildings and surface features from damage while Work is in progress. In event of damage, immediately make repair as directed by Contract Administrator. Cost of correction of damage will be the Contractor’s responsibility.

Part 2 Products

2.1 MATERIALS

- .1 All materials used for the excavation, backfilling and restoration required for the removal of the tank and the areas disturbed by the construction activities are to be in accordance with the City of Winnipeg Standard Construction Specifications.
- .2 Backfill material shall be Class 2, compacted Type 1 Fill.
- .3 Restoration to be in kind, thickness and grading with the existing condition prior to the tank removal and be restored to equal or better condition.

Part 3 Execution

3.1 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- .1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of authorities having jurisdiction.
- .2 Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent restoration has been completed.
- .3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.2 PREPARATION/PROTECTION

- .1 Protect existing features in accordance with applicable local regulations.
- .2 Keep excavations clean, free of standing water, and loose soil.
- .3 Protect natural and man-made features required to remain undisturbed. Unless otherwise indicated or located in an area to be occupied by new construction, protect existing trees from damage.
- .4 Protect buried services that are required to remain undisturbed.

3.3 STOCKPILING

- .1 Stockpile fill materials in areas designated by Contract Administrator.
 - .1 Stockpile granular materials in manner to prevent segregation.
- .2 Protect fill materials from contamination.
- .3 Implement sufficient erosion and sediment control measures to prevent sediment release off construction boundaries and into water bodies.

3.4 DEWATERING AND HEAVE PREVENTION

- .1 Keep excavations free of water while Work is in progress.
- .2 If required, provide for Contract Administrator's review details of proposed dewatering or heave prevention methods, including dikes, well points, and sheet pile cut-offs.
- .3 Protect open excavations against flooding and damage due to surface run-off.

- .4 Dispose of water in in manner not detrimental to public and private property, or portion of Work completed or under construction.

3.5 EXCAVATION

- .1 Excavate to depth and slope as necessary for the removal of the tank.
- .2 Excavation must not interfere with bearing capacity of adjacent foundations.
- .3 Do not disturb soil within branch spread of trees or shrubs that are to remain.
 - .1 If excavating through roots, excavate by hand and cut roots with sharp axe or saw.
- .4 Dispose of surplus and unsuitable excavated material.
- .5 Do not obstruct flow of surface drainage or natural watercourses.
- .6 Earth bottoms of excavations to be undisturbed soil, level, free from loose, soft or organic matter.
- .7 Notify when bottom of excavation is reached.
- .8 Obtain Contract Administrator approval of completed excavation.

3.6 FILL TYPES AND COMPACTION

- .1 Backfill material shall be Class 2, compacted Type 1 Fill.
- .2 All backfill material to be placed successive layers not exceeding 150 mm in compacted thickness, unless otherwise directed by the Contract Administrator. Each layer, including the existing sub-grade, shall be compacted to a minimum of ninety-five (95%) percent of Standard Proctor Density.

3.7 BACKFILLING

- .1 Place backfill material in uniform layers not exceeding 150 mm compacted thickness up to require grade for surface restoration. Compact each layer before placing succeeding layer.

3.8 RESTORATION

- .1 Upon completion of Work, remove waste materials and debris, trim slopes, and correct defects as directed by Contract Administrator.
- .2 Replace topsoil in vegetated areas.
- .3 Reinstate lawns to elevation which existed before excavation.
- .4 Reinstate pavements and sidewalks disturbed by excavation to thickness, structure, and elevation which existed before excavation.
- .5 Clean and reinstate areas affected by Work as directed by Contract Administrator.
- .6 Protect newly graded areas from traffic and erosion and maintain free of trash or debris.

3.9 QUALITY ASSURANCE

- .1 If the Contractor plans to use temporary structure or supports for the Work, submit design and supporting data at least two (2) weeks prior to beginning Work.

- .2 Design and supporting data submitted to bear stamp and signature of qualified professional engineer registered or licensed in Province of Manitoba, Canada.
- .3 Keep design and supporting data on-site.
- .4 Engage services of qualified professional engineer who is registered or licensed in Province of Manitoba, Canada in which Work is to be carried out to design and inspect cofferdams, shoring, bracing and underpinning required for Work.
- .5 All work and materials including but not limited to compaction, sub-base, base and paving material to be tested in accordance with City of Winnipeg Standard Construction Specifications. Where no testing amount is specified or specification is for a larger area than the tank removal area, the minimum acceptable number of compaction tests will be one test per lift at the location designated by the Contract Administrator.

Part 4 Payment

4.1 MEASUREMENT AND PAYMENT

- .1 All Work related to the excavation, backfilling and restoration of the Work is considered incidental to the tank removal and is to be included in the price for the tank removal. This includes but is not limited to all costs associated with the work, equipment, labour, rental, materials, temporary structures, safety and traffic control, water supply, sampling, testing and testing analysis, and correction of deficiencies.

END OF SECTION