

PART 1 - GENERAL

1.1 INTRODUCTION

- .1 Section includes demolition, and disposal of some, but not all, features at the PGWMF, as well as removal of some newly-constructed elements of the PGWMF and LTWMF once they are no longer required. The timing for removal will be detailed in the Contractor's Decommissioning Plan subject to review and approval by the Departmental Representative and will be sequenced as required to execute Work and not impede construction activities.
 - .2 Existing PGWMF features which are to be removed/decommissioned when no longer required include:
 - .1 Chemical and process tanks (3 interior and 1 exterior), process piping and all process related equipment located at the existing Port Granby Water Treatment Plant (WTP). A Designated Substance Survey Report completed for the Water Treatment Building (WTP) is included Appendix W.
 - .2 WTP Sedimentation and Treatment Lagoons, associated electrical components and appurtenances not including work covered under Section 02 61 00.
 - .3 150 mm treated effluent discharge pipe from the Sedimentation Lagoon and associated discharge piping from Sedimentation and Treatment lagoons.
 - .4 Associated Sedimentation Lagoon, Treatment Pond and Water Treatment Plant interconnecting Piping.
 - .5 Existing East Reservoir and associated electrical components and appurtenances not including work covered under Section 02 61 00.
 - .6 Existing West Reservoir and associated electrical components and appurtenances not including work covered under Section 02 61 00.
 - .7 Existing 19 mm HCL drip line from the WTP to the East Gorge, as well as abandoned, historic 19 mm HCl acid drip lines.
 - .8 50 mm forcemain from the East Reservoir to the Treatment Lagoon.
 - .9 50 mm forcemain from the West Reservoir to the Treatment Lagoon.
 - .10 50 mm pipeline connecting the East and West Reservoirs.
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1.1 INTRODUCTION
(Cont'd)

- .2 (Cont'd)
 - .11 100 mm subdrain located east of the Treatment Lagoon, catch basin at connection of 100 mm subdrain and 150 mm downstream effluent discharge pipe.
 - .12 Subdrains at PGWMF site not associated with the East Gorge Groundwater Collector.
 - .13 Half-pipe collector for the East Reservoir.
 - .14 Perimeter fencing not included in the final site plan.
 - .15 Select hydro poles and associated wiring per the direction of the Departmental Representative. Poles may require either complete removal or relocation. Direction to be provided in the field by the Departmental Representative.
 - .16 Additional features required to be decommissioned if not otherwise specified in the Contract Documents.

 - .3 Existing PGWMF features that shall not be decommissioned include:
 - .1 The Existing WTP structure and associated components (excluding chemical and process tanks (3 interior and 1 exterior), process piping and all process related equipment.
 - .2 Metering chamber near the existing west reservoir, and the discharge pipe leading from this chamber to Lake Ontario.
 - .3 Perimeter fencing designated to be maintained as part of the final site plan.
 - .4 Hydro poles and associated wiring as designated by the Departmental Representative.
 - .5 Existing weather station located at the PGWMF.
 - .6 Existing non-potable groundwater well located at the PGWMF.

 - .4 PGWMF features that will be installed under this contract and which shall be removed/decommissioned when no longer required include:
 - .1 New West Reservoir pumping station and associated piping.
 - .2 Components of the New East Reservoir pumping station not required as part of the East Gorge Groundwater Collection system final configuration.
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1.1 INTRODUCTION
(Cont'd)

- .4 (Cont'd)
 - .3 Constructed Storm Water Management Ponds and associated appurtenances, drainage ditches and berms if not a part of the final site plan or designated as to remain elsewhere in the Contract Documents.
 - .4 Applicable facilities (stockpile areas, laydown areas, construction facilities, decontamination facilities, parking areas etc.) and site services if not designated as to remain elsewhere in the Contract Documents and not indicated as to remain in the final site plan.
 - .5 Clean PGWMF haul roads (excluding removal of asphalt) and associated berms and ditches.
 - .6 Non-potable water well installed to service PGWMF facilities.
 - .7 Perimeter fencing not included in the final site plan.
 - .8 Hydro poles and associated wiring as designated by the Departmental Representative.
 - .5 LTWMF features that will be installed under this contract and which shall be removed/decommissioned once they are no longer required include:
 - .1 Haul Road, East Mound Road pavement structures to subgrade elevation, curbs, signals, signs, illumination infrastructure, barriers, culverts, sewers, maintenance holes, subdrains and dewatering infrastructure.
 - .2 Lakeshore Road detour road to 0.25 m below final grade for topsoil placement.
 - .3 Clean LTWMF haul roads (excluding removal of asphalt) and associated berms and ditches.
 - .4 Constructed Storm Water Management Pond and associated appurtenances, drainage ditches and berms if not a part of the final site plan or covered elsewhere in the Contract Documents.
 - .5 Applicable facilities (stockpile areas, laydown areas, decontamination facilities, parking areas etc.) and site services if not covered elsewhere in the Contract Documents and not indicated as to remain in the final site plan.
 - .6 Perimeter fencing not included in the final site plan.
 - .7 Hydro poles and associated wiring as designated by the Departmental Representative.
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<u>1.1 INTRODUCTION (Cont'd)</u>	.5	(Cont'd)
	.8	Lakeshore Road underpass structure to a minimum of 1.2 m below final finished grade of Lakeshore Road pavement and ditches. All illumination and traffic signal infrastructure at the underpass shall be removed prior to structure demolition. The haul roads and road subdrains and associated infrastructure are to be removed in their entirety. Drainage pipes, once verified as non-contaminated, and immediately adjacent to the concrete structure foundations may be filled with grout, cut and capped and left in place should their removal necessitate the demolition of the underpass structure foundations and walls extending below 1.2 m.
<u>1.2 MEASUREMENT AND PAYMENT</u>	.1	Payment for Selective Site Demolition and associated decommissioning work as outlined in the Departmental Representative approved Contractor's Decommissioning Plan or otherwise described herein (excluding excavation of waste material, removal of asphalt and grading) shall be on a Lot Price basis. Lot Price shall all labour, equipment and materials for completion of the Work including but not limited to permitting, preparation, demolition, removal, disposal, decommissioning and associated reporting activities.
<u>1.3 RELATED SECTIONS</u>	.1	Section 02 41 13.14: Asphalt Paving Removal.
	.2	Section 02 61 00: Excavation and Transportation of Waste Material.
	.3	Section 02 61 10: Placement of Waste Material.
	.4	Section 31 11 00: Clearing and Grubbing.
	.5	Section 31 22 13: General Earthwork and Rough Grading.
<u>1.4 REFERENCES</u>	.1	Ontario Provincial Standard Specifications (OPSS)180 (Nov 2011) - General Specifications for the Management of Excess materials.
	.2	Designated Substances Survey (DSS), Appendix W.

1.5 DEFINITIONS

- .1 Demolition: rapid destruction of building following removal of hazardous materials.
- .2 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, may include but not limited to: asbestos PCB's, CFC's, HCFC's poisons, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or other material that can endanger human health or well-being or environment if handled improperly.
- .3 Waste Audit (WA): detailed inventory of materials existing at the PGWMF in building. Indicates quantities of reuse, recycling and landfill.
 - .1 Involves quantifying by volume/weight amounts of materials and wastes generated during construction, demolition, deconstruction, or renovation project.
 - .2 Indicates quantities of reuse, recycling and landfill.
 - .3 Include a category for materials to be placed in the LTWMF in addition to the off-site licensed landfill.

1.6 SUBMITTALS

- .1 Decommissioning Plan: Contractor to submit a Decommissioning Plan within 90 working days after Notice of Award that shall contain the following, at a minimum:
 - .1 Waste Audit.
 - .2 Schedule of Activities.
 - .3 Method of removal and equipment to be used.
 - .4 Decommissioning Sequencing Plan.
 - .5 Procedures for specified utility decommissioning, protection and/or relocation.
 - .6 Means and methods to be employed for removal of both non-contaminated and contaminated materials.
 - .7 Means and methods for handing and management of Designates Substances.
 - .8 Procedures to be followed to drain, vent, inert, clean and demolish structures, concrete slabs, pipes drains and associated appurtenances.
 - .9 Preliminary RPP Zone limits and extents in accordance with Sections 01 35 30 and 01 56 00.
 - .10 Applicable environmental procedures to be employed in accordance with Section 01 35 43.
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1.6 SUBMITTALS
(Cont'd)

- .1 (Cont'd)
 - .11 Removal/Disposal of Designated Substances.
 - .12 Excavation Support and Protection Plan
 - .13 Water Management Plan.
 - .14 Storage methods and locations for liquid and solid waste material.
 - .15 Proposed temporary haul routes to be utilized.
 - .16 Identification of additional structures, utilities, or other site features which will require removal or demolition in order to accomplish the Work identified in the Contract Documents.
 - .2 It is the Contractor's responsibility to review the Designated Substances Survey and include the removal and disposal of these compounds in the demolition plan.
 - .3 At least two months prior to the demolition and removal of the Lakeshore Road underpass structure, and other infrastructure at the crossing of Lakeshore Road, the Contractor shall submit a Demolition Plan for review and approval by the Departmental Representative prior to commencement of the Work. The Demolition Plan shall be prepared and sealed by a Professional Engineer licensed in the Province of Ontario and is to provide a detailed description of the methodology for the demolition and removal of the underpass structure. The Demolition Plan shall include details of any temporary structural supports required to complete the work as well as the proposed sequencing of demolition work. The underpass structure shall be entirely demolished and removed to at least 1.2 m below final proposed surface elevations. Structural elements deeper than 1.2 m below final proposed surface elevations are permitted to remain in place providing the elements are entirely buried and fully decontaminated. As noted on the Contract drawings, the following infrastructure shall be removed in their entirety:
 - .1 Haul Road pavement to subgrade elevation.
 - .2 East Mound Road pavement to subgrade elevation.
 - .3 Concrete curbs.
 - .4 Asphalt Boulevards.
 - .5 Traffic Signals and all associated infrastructure.
 - .6 Traffic signage.
 - .7 Illumination infrastructure.
 - .8 Subdrainage piping.
 - .9 Culverts.
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1.6 SUBMITTALS
(Cont'd)

- .3 (Cont'd)
- .10 Sewers, Catchbasins and Maintenance Holes.
- .11 Dewatering infrastructure.
- .12 Traffic barriers.
- .13 Fencing.
- .14 Ditching, including any surface treatments and/or liners.

1.7 WASTE
MANAGEMENT AND
DISPOSAL

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 20.
- .2 Non-impacted materials that cannot be salvaged for reuse or recycling shall be disposed of in accordance with applicable codes at licensed facilities.
- .3 Contaminated waste materials must be disposed of at the Containment Mound at the LTWMF.
- .4 Designated substances shall be disposed of in accordance with applicable codes and regulations as directed by the Departmental Representative.
- .5 Clean granular materials that are excavated from beneath site roadways during removal operations may be permitted to be re-used on-site as non-engineered fill material.

1.8 SITE CONDITIONS

- .1 Perform work in accordance with Section 01 35 43.
- .2 Ensure that selective demolition/decommissioning work does not adversely affect adjacent watercourses, groundwater, vegetation and wildlife.

1.9 SCHEDULING

- .1 Demolition schedule shall be in accordance with the Schedule of Activities and Decommissioning Sequencing Plan outlined in the Contractor's Decommissioning Plan approved by the Departmental Representative.
 - .2 Employ necessary means to meet project time lines without compromising specified minimum rates of material diversion.
 - .3 Notify Departmental Representative in writing when unforeseen delays occur.
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PART 2 - PRODUCTS

- 2.1 EQUIPMENT
- .1 Contractor is required to provide all relevant equipment to complete required demolition/decommissioning activities.
 - .2 Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

PART 3 - EXECUTION

- 3.1 PREPARATION
- .1 Inspect site with Departmental Representative and verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage and items to remain.
 - .2 Complete associated investigative work i.e. utility surveys, day-lighting, hand digging etc. to confirm accurately delineate the required limits and extents of demolition and removal.
 - .3 Confirm timing of removals with Departmental Representative prior to commencement of removals.
 - .4 Locate, protect and relocate utilities not designated for removal as required. Preserve active utilities traversing site in operating condition until service is no longer required and demolition/decommissioning can be undertaken.
- 3.2 REMOVAL OPERATIONS
- .1 Remove items as indicated.
 - .2 Do not disturb items designated to remain in place.
 - .3 Excavate at least 300 mm below pipe invert, when removing pipes under existing or future pavement area.
 - .4 For buildings, demolition of exterior walls and floor construction shall begin at the top of the structure and proceed downward.
 - .5 Disposal of Material.
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3.2 REMOVAL
OPERATIONS
(Cont'd)

- .5 (Cont'd)
- .1 Dispose of materials not designated for salvage as applicable and in accordance with regulatory requirements.
 - .2 Material that comes into contact with contaminated waste material will be transported to the LTWMF and placed within the Containment Mound.

3.3 REMOVAL FROM
SITE

- .1 Relocate/remove stockpiled material as directed by Departmental Representative, when it interferes with operations of project.
- .2 Remove stockpiles of non-impacted like materials by approved alternate disposal option once collection of materials is complete. Cost associated with the sizing, sorting, pre-processing, relocation loading and transportation of the stockpile material is the responsibility of the Contractor.
- .3 Dispose of materials not designated for alternate disposal in accordance with applicable regulations.
- .4 Oversized items and waste material as defined in Section 02 61 00 and that are designated for placement in the Containment Mound shall be managed in accordance with Section 02 61 00.
- .5 Decommissioning (abandoning) of groundwater monitoring and/or supply wells to be completed in accordance with Section 01 35 43.

3.4 RESTORATION

- .1 Restore areas and existing works outside areas of demolition to conditions that existed prior to beginning of Work unless otherwise stipulated in the Contract Documents.
- .2 Employ procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.

3.5 CLEANING

- .1 Remove debris, trim surfaces and leave work site clean, upon completion of Work.
 - .2 Undertake cleaning as specified herein and in accordance Specification Section 01 74 11.
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3.5 CLEANING
(Cont'd)

- .3 Use MOE approved cleaning solutions and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.