

## Submitting a Complete Application Package:

A complete application package should include (but is not limited to) the following:

- ☐ Cover Page to Include Detailed Contact Information and Project Scope
- ☐ Signed and Dated Minor Works Application Form (this form for internal work)
- ☐ Design Drawing of Proposed Work (1:250 scale)
- ☐ Certificate of Insurance (COI)
- ☐ Traffic Control Permit (if applicable)
- ☐ Other Information (as requested by the City of Burnaby)

When all documents are ready, please submit complete application packages by [applying online](#) for review.  
This form is only to be filled and signed for internal City contracted projects.



1. Allow a minimum of ten working days in order to process a complete submission. Processing time will begin upon receipt of a complete submission. Submissions lacking applicable security deposits, fees and commencement and completion dates will be deemed incomplete. *No work shall commence until the Minor Work Permit and Agreement has been issued.*
2. **Fees and Costs.** A non-refundable application fee is required. This fee encompasses only administration and inspection costs (Engineering fees are outlined in the Burnaby Engineering Fees Bylaw). For permit extension fees and annual renewal fees, see Paragraph 10 below.
3. **Security.** A refundable cash deposit, or damage, maintenance & reinstatement security is required. The security must be paid directly by the owner of the work or his agent. The security amount is dependent upon the number of installations proposed:

Up to 3 boreholes	\$6,000
More boreholes	\$2,500 for each additional borehole

The security will be held until such time as all installations have been decommissioned or completed to the satisfaction of the City, and after the Final Restoration Report is accepted by the City. The security amount will be drawn upon should repair of damage, maintenance (i.e. pavement rehabilitation/lifting), and/or removal be necessary by the City.

4. **Restoration and Final Restoration Report.** Upon completion of the Works, the Permittee shall restore the City Lands to their pre-existing or better condition and in accordance with City standards as to filling, compaction, resurfacing, and otherwise in relation to construction and excavation of public lanes. The Permittee shall while carrying out the Works keep the City lands properly secured for public safety in accordance with City standards for works of a similar nature. A Final Restoration Report shall be submitted to the City with photographic evidence of the completed final restoration at each location, description of restoration completed, date of completion, reference of each location on a map or drawing provided, and sign-off by a registered professional engineer.
5. **Minimum Insurance Requirement.** The Permittee shall ensure that not less than the liability insurance outlined on the latest City of Burnaby prefilled COI (Certificate of Insurance) standard form online for Minor Work Permit Application - Basic or Sensitive works. Reviewed and approved COI is to be in place and maintained at all times while this Permit is in force with all of the coverage and limits specified and shall require and ensure that its contractors and/or consultants are insured in at least the same manner. Along with the permit application the Permittee and Contractor (if applicable) shall provide a suitable certificate of insurance as evidence that it has compliant insurance. Thereafter the Permittee and Contractor shall provide suitable certificates as evidence that the insurance coverage has been maintained. Insurance policies shall be endorsed to provide that the City will receive not less than thirty (30) days written notice before cancellation of coverage.
6. **Workers' Compensation.** The Permittee hereby agrees that it is responsible to ensure compliance with all applicable Workers' Compensation regulations at the site and that if at any time there shall be more than one contractor working at the site then the Permittee is and shall be the **Prime Contractor** pursuant to the Workers' Compensation Act.
7. **Specifications.** All work performed under the Permit must be done in accordance with plans, specifications, maps, detailed accounting (dates) of all utility locate calls made, (i.e. BC One Call, BC Hydro, Shaw, etc.) and statements filed with and approved by the City. Note: The City is not responsible for the accuracy of any information related to the location of foreign utilities.
8. **Requirements.**
  - a) The application package must include a 1:250 scale drawing and must include the following items as a minimum: location of the proposed minor works with respect to property lines, civic addresses, directional North, utility (foreign and municipal) locations beyond the property lines, service connections to the site, traffic lanes, as well as the location of all pre-existing off-site wells (active and decommissioned). Incomplete or not-to-scale drawings will not be accepted.
  - b) A Traffic Control Permit application number should be included as part of the overall submission, if necessary. Application should conform to the Ministry of Transportation and Highways Traffic Control Manual for Work on Roadways. A WCB approved traffic control agency should be retained to ensure traffic safety from the utility locate stage to the project's conclusion. Deviation from stipulated hours or safety practices will result in permit annulment.
  - c) All installations within municipal rights-of-ways are to be constructed according to the specifications outlined in the latest Master Municipal Construction Document (MMCD), and the most current version of the City of Burnaby Pavement Restoration Policy, Supplemental Specifications and Standard Detailed Drawings. Only hot-mix asphalt is allowed for road repairs. Cold-mix asphalt and concrete will not be accepted.
  - d) Top of well casing shall be flush-mounted and equipped with a water-tight cover. Each monitoring well must be permanently labelled in the field so that it is readily identifiable, and coincide with the scaled map referenced in Section 8(f) below. Monitoring well(s) shall be constructed in accordance with generally accepted industry standards.
  - e) The Permittee must maintain and repair the works, as necessary.

- f) Upon completion of the use of the monitoring well(s), all wells shall be properly abandoned in accordance with the current Provincial standards and City requirements to the satisfaction of the City of Burnaby. The City's Wells/boreholes and Vacuum Holes Decommissioning Procedure is attached in Attachment C. At least 5 business days advance written notice shall be given to the City prior to monitoring wells abandonment activities. Permittee shall provide the City with a copy of the monitoring well abandonment report in acceptable form.
  - g) This item is applicable for environmental minor works only. Following installation of any Environmental wells/ boreholes or testpits, the Permittee shall provide the City with a letter report including a scaled map or figure specifically identifying the locations of the monitoring wells including a copy of all the data collected in a letter report (see Attachment B) within 60 days of the samples being obtained and analyzed. There should be no limitation or restriction on the letter report preventing the City from relying on the data, and the report must be acceptable to the City of Burnaby.
  - h) Any costs, expenses, or liability for environmental response or remediation shall be considered as restoration and shall be the sole responsibility of the Permittee.
  - i) The Permittee warrants and represents that it has all required permits, licenses, or approvals from other government authorities or agencies with jurisdiction over the Permittee's activities.
  - j) The City reserves the right to require the Permittee to remove all or any well(s) if in the sole opinion of the City it is necessary to facilitate other improvements within the work area, with no reimbursement of cost to the Permittee or its contractor.
  - k) The City and/or its agents are not responsible for any injury or damage caused by Permittee, its contractor, their representatives, employees, or agents.
  - l) Silt or silt laden water must not be allowed to enter the storm water system and this permit may be revoked if this occurs, or if measures to prevent it appear inadequate.
  - m) An application for variation of work hour restrictions can be submitted to the City of Burnaby for consideration (application forms available online or alternatively available upon request). Traffic volumes and safety concerns will be considered as part of the review process.
  - n) The applicant will include a copy of the Occupational Health and Safety Plan for the proposed drilling work.
9. **Indemnification.** The Permittee shall defend, indemnify, and hold harmless the City and its directors, officers, servants, employees, volunteers, and agents from and against all cost and expense and from all liability for claims, damages, costs, expenses, or fees, including any attorney fees, or fines or awards brought against or charged to the City by any person, firm, government body, or corporation arising in any manner from the permission hereby granted to the Permittee; furthermore, the Permittee hereby agrees to release, waive, and forever discharge the City and its directors, officers, servants, employees, volunteers, and agents from all claims, costs, causes of action, or demands of any kind or nature that it may otherwise have made or claimed against the City arising in any manner out of the permission hereby granted.
- The City of Burnaby accepts neither liability nor loss related to the disruption and/or destruction to the aforementioned installations (be it intentional or accidental) by City of Burnaby staff, contractors retained by the municipality, or by third parties. The City of Burnaby retains the right to maintain or remove, or have the installer maintain or remove, offsite infrastructure (wells/extraction units etc.) at any time at the bold holder's expense.*
10. **Terms of Permit.** The privilege granted by the Permit shall continue for a period of one (1) month from the date of signature. After the one (1) month date has passed, a request for extension, along with an extension fee will be required. If installed monitoring wells are required to remain longer than 1 year, an annual application renewal fee is due on first day of April, unless terminated in accordance with Paragraph 12 below. After five (5) years, an additional annual fee per monitoring well or test hole/location will be required (Engineering fees are outlined in the Burnaby Engineering Fees Bylaw).
11. **Limitation of Permit.** This permit does not relieve the Permittee from complying with any applicable laws and regulations of other government authorities or agencies. The Permittee is responsible for obtaining additional permits or authorizations, as necessary, which may be required in connection with this work from other government agencies, public utilities, private entities and individuals, including private property owners.
12. **Assignment.** This Permit may not be assigned without the written consent of the City. However the terms and conditions herein shall be binding upon the respective heirs, representatives, and successors of the Permittee.
13. **Permit Revocation or Surrender.** The City may cancel and revoke the Permit at its sole discretion at any time with fourteen (14) days written notice to the Permittee without refund of fees. The Permittee may surrender the Permit at any time with fourteen (14) days written

## MINOR WORK PERMIT AND AGREEMENT

### REFERENCE INFORMATION

notice to the City without refund of fees. Upon the voluntary relinquishment or abandonment of the Permit, or upon cancellation and revocation thereof by the City, the Permittee shall properly abandon all of its works and restore the property in a manner satisfactory to the City at the expense of the Permittee and shall pay forthwith to the City any cost, repair of damage, or expense the City may incur in such restoration.

14. **Violation of Permit.** In the event the Permittee fails or refuse to conform to any of the terms and conditions of the Permit, the privilege hereby granted shall immediately terminate and become null and void and the Permittee shall pay forthwith to the City any cost, repair of damage, or expense the City may incur as a result thereof. Attachment A

## Minimum Insurance Requirements

1. The Permit holder (the Permittee) shall insure and keep insured while the Permit is in force, with the City's latest prefilled Certificate of Insurance for Minor Work Permits found [online](#). For reference, the following basic Liability Insurance coverage is shown as of February 10, 2023:
  - 1.1 Commercial General Liability Insurance written on an Occurrence basis with coverage suitable for the work to be performed and including; Premises and Operations Liability; Owner and Operator's Protective Liability with respect to the Operations of sub-contractors; Completed Operations Liability; Pollution Liability on a Sudden and Accidental basis with a wording that is not less than the coverage provided by the Insurance Bureau of Canada's form IBC 2336 (form available upon request); Contractual Liability; and, Non-Owned Automobile Liability and cannot contain an XCU exclusion.
  - 1.2 Automobile Liability Insurance in respect of all licensed vehicles owned or leased by the contractor.
  - 1.3 Professional Errors & Omissions Liability Insurance in certain circumstances, such as when the Permittee is a Professional consulting firm.
2. The Limits of insurance shall not be less than the following:

Personal and Bodily Injury	\$5,000,000 -each occurrence \$5,000,000 -aggregate products and/or completed operations
Property Damage	\$5,000,000 -each occurrence \$5,000,000 -aggregate products and/or completed operations
Owned & Non-Owned Auto Liability, Bodily Injury & Property Damage	\$3,000,000 - any one accident
Professional Liability	\$1,000,000 - per occurrence \$2,000,000 - annual aggregate

3. The General Liability policy shall be written on a Primary basis such that it does not call into contribution any other insurance that may be held or maintained from time to time by the City of Burnaby and name the City as an Additional Insured; the General Liability policy shall include a cross liability and/or severability of interests endorsement and contain a waiver of subrogation clause in favor of the City of Burnaby.
4. Both the General Liability and Professional Liability policies shall be endorsed by the insurer to provide that the policy will not be cancelled or adversely changed without thirty (30) days written notice to the City of Burnaby.
5. Prior to the commencement of any work the Permittee shall file with the City either a certified copy of each required insurance policy, with all of the necessary endorsements attached, or suitable certificates of insurance that clearly verify all of the requisite coverage and endorsements are in place.
6. The requirement to provide insurance with specified minimum limits of liability does not in any way limit the liability of the Permittee.

## Monitoring Report Requirements Letter Report Format

The letter report should be submitted in both a hard copy and an electronic form and it should include the following:

- i. Scope of work
- ii. Site identification (location, including meets and bounds)
- iii. Contamination potential sources – if applicable (e.g. equipment, above ground and underground storage tanks, spill areas, utilities, conduits, etc.)
- iv. Geology and hydrology
- v. Sampling and analysis plan and sampling methodology
- vi. Results
- vii. Conclusions
- viii. Ongoing site monitoring – if applicable (include schedule)
- ix. Remedial action plan – if applicable (include schedule)

Attachments:

- A. Tables (soil, groundwater, sediment, air - compared to applicable CSR standards/criteria)
  1. B. Figures (all figures as a minimum should be 28 cm x 43 cm -11" x 17") must include: Surface sample locations, boreholes, monitoring wells, and vapour sampling points, including groundwater direction and gradient.
  2. Soil contamination including analytical data in relation to investigated location (coloured coded – black <CSR, green> CSR, and red suspect HW)
  3. Groundwater contaminant plumes including analytical data in relation to investigated location (coloured coded –black <CSR, blue> CSR, and red LNAPL in mm)

In addition to the above information, all figures should contain, as appropriate, the following details:

- i. Scale bar in metres
- ii. North arrow
- iii. Street names
- iv. Adjacent property boundaries
- v. General indication of topographic relief and site drainage
- vi. Location of all utilities, including depth
- vii. Legend identifying symbols used on plan
- viii. Direction and distance to surface water (creeks, lakes, etc.) and sensitive areas
- ix. Title block showing consultant's name, site name, site address and date

- B. Borehole and Monitoring well logs
- C. Laboratory Report

*Note: There should be no limitations or restrictions on the report preventing the City from relying on the data and the report must be acceptable to the City of Burnaby's Engineering Department.*

## Wells/boreholes and Vacuum Holes Decommissioning Procedure

This document provides information on typical decommissioning methods that are suitable for use by industry during or following environmental and / or geotechnical site work.

### Objectives

The main objectives for decommissioning are to prevent surface water infiltration into an aquifer via the monitoring well, to prevent the vertical movement or migration of contaminated water within a monitoring well/borehole to other aquifer zones and to remove potential physical hazards.

### Definitions

**Bentonite** a type of processed natural clay material used to seal wells. When hydrated with water, bentonite has low permeability, is non-shrinking and is highly viscous. Bentonite is available in powder (for slurries), granular, chip and pelletized form.

**Clay** an extremely fine grained, cohesive soil material that meets the classification for clays as determined under the Unified Soil Classification System (ASTM D 2487-00) and has a relatively low permeability capable of meeting a laboratory tested value for hydraulic conductivity no greater than 10-6 cm/s.

**Decommissioning** the process of properly and permanently filling in and sealing an environmental monitoring well or borehole or vacuum hole to prevent surface water infiltration into an aquifer via the well, to remove it as a potential physical hazard and to prevent movement of water and contaminated water within the well.

**Grout** any stable and impervious bonding material that is capable of preventing the vertical movement of water within decommissioned monitoring wells and boreholes. Typical grout materials include bentonite and neat cement. In some cases, such as for salt water or contaminated well applications, grout may need to be specifically designed to be nonshrinking and non-reactive.

**High Solids** powdered, or granular, bentonite clays mixed in water to form a high density

**Bentonite Grout** slurry that contains at least 20 percent bentonite solids by weight and when set exhibits a flexible, low permeability grout seal.

**Neat Cement** cement slurry containing Portland cement and water. When cured, neat cement forms a hard, rock-like impermeable barrier.

**Pressure Grout** method grout placement that pumps liquid grout under pressure through a hollow tremie pipe, or hose, placed to the bottom of a monitoring well. The tremie pipe is typically gradually withdrawn as grouting proceeds to fill the monitoring well. Water is displaced as the grout fills the hole from the bottom up to the surface.

### Methods

Borehole / well or vacuum holes decommissioning should be conducted by experienced environmental and geotechnical drilling contractors, or other knowledgeable industry consultants.

The following are decommissioning methods recommended for typical (51 mm diameter, or 2 inch) monitoring wells and other monitoring wells. Decommissioning under conditions other than the typical ones described should involve greater evaluation by City of Burnaby prior to approval.

### Environmental Monitoring Wells

1. All pumping equipment including pumps, tubing and other obstructions from the well should be removed.
2. The total depth of the well should be measured and recorded.
3. The entire monitoring well casing should be removed. Where removal of casing is difficult and may result in geologic formation collapse into the borehole. If casing is not removed, it should be drilled out to a minimum depth of 3.5 metres prior to grouting.
4. Monitoring wells should be typically decommissioned by entirely filling the monitoring well or remaining borehole annulus with grout, after pulling the casing, by either:
  - a. **Pressure grout method** - Placement of an appropriate mix of neat cement, sand cement concrete mix (no gravel), high solids (>20%) bentonite grout or other nonshrinking liquid grout from the bottom of the well to the top of casing using a tremie pipe or hose.
    - Volumes of liquid grout placed in a well should closely match the estimated amount needed to fill the well. Where

possible, at least 0.3 m additional grout should be placed above the top of the casing, followed by a minimum of 0.3 m compacted natural fill to grade; or

- b. **Hand placement of dry granular bentonite chips** - For wells less than 5 m (16.5ft) deep, medium or coarse grade, dry screened bentonite pellets may be installed by hand pouring. For wells greater than 5 m (16.5 ft) deep it is recommended that only coarse grade (i.e. greater than 3/4 inch or 1.9 cm) dry screened bentonite pellets be used. Pelletized and/or coated bentonite materials that have slower hydration times should be used to reduce premature swelling, adhesion and possible bridging of material in the hole.
    - All dry granular bentonite pellets used should be adequately screened over a wire mesh screen during placement to prevent fine particles that are typically present in bags from entering the well and causing premature swelling and bridging. Bentonite pellets should be poured slowly into a well no faster than manufacturer recommended rates. Bentonite grout levels should be checked periodically using a weighted line to ensure bridging is not occurring in the well.
    - Volumes of bentonite pellets placed in a well should closely match the estimated amount needed for sealing. Grout should fill to the top of the casing. Where possible, at least 0.3 m additional grout should be placed above the top of the casing, followed by a minimum of 0.3 m compacted natural fill to grade.
5. The surface restoration of the decommissioned monitoring well/borehole should be completed meeting the Pavement Restoration Policy and ensure paving or grading to eliminate surface water ponding, as well as using topsoils to promote the establishment of vegetation, if appropriate. The potential for grout settlement in the boreholes over time should be considered and accounted for.
6. The Final Restoration Report to be submitted to the City shall include the exact location of each decommissioned well/borehole on a site plan, as well as the details of the decommissioning to confirm that correct methods have been followed.
7. Other monitoring well grouting methods may be possible for deep monitoring wells (>30 m), larger diameter monitoring wells (>150 mm), multi-level installations, artesian flow conditions or other non-typical situations. However, site specific decommissioning methods that do not follow the typical methods described here should be proposed in a written decommissioning plan to City of Burnaby by a professional geoscientist or engineer qualified in hydrogeology. The decommissioning plan must be acceptable to the City of Burnaby.