

Installation of New Water and Sewer Works Technology in Saskatchewan



Saskatchewan Ministry of Environment encourages municipalities, systems owners and other interested parties to look for innovative ways to meet water and wastewater standards established to minimize risks to the environment and public health.

Through a review and licensing process, the Drinking Water Quality Section of Environment strives to add value in the areas of human health protection and environmental protection as well as helping to protect the investment of municipalities or interested parties in new drinking water or wastewater treatment technology. The review process also helps to assure that treatment technology performs as expected.

Environment considers three options when evaluating water and wastewater projects involving new or un-proven technologies:

1. Approval by Regulatory History

In this case, the new technology has a track record of approval by other municipal regulatory agencies and a history of operation. The Ministry looks for:

- an application (Attachment A);
- proof that the new technology has a track record of approval by other regulatory agencies and a history of successful operation, including but not limited to technical performance and operation under climatic conditions similar to Saskatchewan's; and
- a statement stamped by an experienced professional engineer that the new technology meets all Environment standards, guidelines or requirements for performance and quality as a means to protect public health and the environment.

2. Approval by Verification or Certification

For this option, both Verification or Certification by a third-party Evaluation Agency and the application requirements seen in Attachment A are provided to Environment. The Evaluation Agency could be Environmental Technology Verification Program (ETV) or National Sanitation Foundation (NSF) or a similar agency.

Information for these agencies is online at <http://www.etvcanada.ca/faq.asp#question12> or http://www.nsf.org/consumer/about_NSF/cert_benefits.asp. Environment does not endorse any specific testing agency.

Environment also requires a statement stamped by an experienced professional engineer that the new technology meets all of Environment's standards, guidelines or requirements for performance and quality as a means to protect public health and the environment.

EPB 410 Feb/10



Saskatchewan
Ministry of
Environment

www.environment.gov.sk.ca

SaskH₂

3. Approval by Evaluation of Pilot Test by Environment

In this scenario, Environment would assist the proponent with a pilot test of the new technology. Environment has conducted several of these pilot evaluations in the past. Major issues surrounding this option are that the pilot may have to operate for an extended period; we have had pilot plant evaluations that exceeded three years in length. Should the model pilot (or full-scale pilot) fail to operate as intended approval for full scale implementation would not be appropriate. The proponent or community then has to remove the pilot works and plan and pay for different technology.

For this case, Environment also requires a statement stamped by an experienced professional engineer that the new technology meets all of Environment's standards, guidelines or requirements for performance and quality as a means to protect public health and the environment. The proponent may wish to obtain professional engineering services for design and operation of the pilot study over a period of years.

For Approval of Pilot Plants

Pilot plants or small-scale plants are commonly used to demonstrate new technology. Until the full performance of pilot plants can be assured, installation at water or wastewater treatment facilities may represent a threat to health or environmental quality, therefore it is important that these are not installed before Environment authorization. Some pilot plants require an application for a written Permit to Construct from Environment. For pilot plants and applications, all technical information submitted to Environment must be reviewed and stamped by a Professional Engineer with significant municipal experience, and include a statement that the new technology will not negatively impact public health and environmental quality.

For more information on provincial approval of new water and wastewater technology, or information on how to conduct a pilot plant, contact one of the Approvals Engineers at the Municipal Branch at (306) 787-6517.

ATTACHMENT A

February, 2010

File: 21020-50/WW/Mun/Con/Village of Anywhere

Mr. Anyone
Administrator
Village of Anywhere
Box 99
Anywhere, SK S0K 3X0

Dear Mr. Anyone:

Permit to Construct – Sewage Works and Waterworks Alteration

The Ministry of Environment wishes to thank the Village of Anywhere for the question regarding need for an Application for Permit to Construct, Extend or Alter Existing Works for waterworks and sewage works. The Ministry reviews these applications and issues a Permit to Construct once provincial requirements are met. The issued permit contains conditions of the construction and adds value in the areas of human health protection and environmental protection and helps to protect the investment of municipalities in new treatment technology. We hope the enclosed information assists your community in preparing and submitting applications.

1. Typical Information Submitted For Waterworks

Please note that the typical information requirements for a successful waterworks extension application are listed in Section 1 'Information Submissions for Approvals' from the document [A Guide to Waterworks Design EPB 201](#). A copy of the guide is available online at <http://www.saskh2o.ca/DWBinder/EPB201AGuideWaterworksDesign.pdf> on the SaskH20 site.

2. Typical Information Submitted For Wastewater Works

The typical information requirements for a successful wastewater works application are listed in Section 1 'Information Submissions for Approvals' from the document [Guidelines for Sewage Works Design EPB 203](#). Engineering consultants are familiar with these submission requirements. Only the information relevant to a particular project needs to be submitted. A copy of the guide is available online at <http://www.saskh2o.ca/DWBinder/EPB203GuidelinesSewageWorksDesign.pdf> on the SaskH20 site.

3. Plans and Reports

Along with the application, for many complex projects we require a set of engineer-stamped plans and any associated reports. Engineering consultants are familiar with these submission requirements and the application and associated information is nearly always assembled and submitted by a consultant on behalf of the community as part of the consultant's routine work.

4. Application Forms

Application forms are available online at <http://www.saskh2o.ca/foroperators.asp> on the SaskH20 site.

An example of projects that need permits include alterations to process or capacity at wastewater and water plants, and extensions to water and sewer mains systems. Many other Ministry laws and guidance documents are available online at <http://www.saskh2o.ca/DWBinder.asp> on the SaskH20 site.

Some simpler water and sewer projects do not require an application. If you have any questions about the application requirements for any project, for example to determine if engineer-stamped plans are needed, please feel free to contact me at (306) 787-3356.

Yours sincerely,

Frank Reid, P.Eng.
Senior Approvals Engineer
Drinking Water Quality Section
Municipal Branch

cc: Ministry of Environment, Regina