# **First Memorial Crematorium Report**

### Background

Representatives from the Falaise Community Association, met with First Memorial Funeral Services management on Wednesday August 25, 2021. The purpose was to gain insight into the operation of the crematorium and to discuss some of the concerns expressed by Falaise residents. Earlier in the year (April 2021), conversations with local residents had revealed that the majority of respondents have a limited knowledge of the crematorium operation. Worries they expressed included: are the smoke emissions harmful to human health, should we be concerned about the odour, how often do the crematoria operate, are there provincial regulations for air emissions from crematoria? The meeting was initiated to discuss these questions.

This report summarizes our discussion with First Memorial and references the BC funeral legislation and pertinent points from our literature research.

#### History

First Memorial has been conducting funeral services at its Falaise Drive location since the mid-1960s. The company provides funeral planning and services, cremation, and cremation ashes burial in its memorial gardens. The crematorium was established in 1996 in recognition of the increasing preference by the public for cremation instead of ground burial. Cremation, as a preferred option, has climbed over the years to approximately 90 percent of all funeral arrangements in BC.

There are four crematoria in the Greater Victoria area: two on Falaise Drive (Royal Oak Burial Park and First Memorial) and two in Langford (Hatley Memorial Gardens and Affordable Cremation and Burial).

## Regulations

Management of cemeteries in BC are legislated under the Cremation, Internment and Funeral Services Act and the associated Cremation, Internment Funeral Services Regulation. Consumer Protection BC, a government agency, is tasked with administering the act. Under this act this agency is required to conduct periodic inspections of the internment records including records of cremation. It does not include reviewing on-site operation of the cremation process.

The regulation prohibits the use of plastics, fiberglass, foam, Styrofoam, rubber, PVC and zinc in funeral containers in order to reduce harmful emissions during cremation. Our literature research found that air emissions from crematoria potentially contain a combination of particulate matter – dust, sulphur dioxide – which smells, nitrogen oxide – causes smog, volatile organic compounds ((VOCs) – from solvents and heavy metals – mercury. That said, there is no provincial regulation specifically applicable to air emissions from crematoria. We understand this is because crematoria are deemed by government to be relatively low total emitters compared to other incineration facilities (e.g. municipal waste incinerators and industrial

plants). We also understand that the periodic air emissions generated during a cremation are not considered by the government to be a public health hazard. This position is common to governments across North America although Ontario and Québec do have specific regulations.

#### Operation

First Memorial has one cremation unit. It has been operating since 1996. The company retains an independent contractor to undertake regular maintenance checks. These are completed every six months under a rigorous periodic maintenance inspection (PMI) program. This enables the unit to be maintained in good operating condition; a major upgrade has not been required during its operating life.

Cremations are carried out five days a week, Monday through Friday and sometimes into the evening. It is also operated in weekends, commonly if a family requests to attend the cremation.

The unit consists of a two-chamber combustion system. It is fitted with a control system to manage the cremation process. The main chamber burns at about 1700 degrees. The residue from the main chamber then enters an after-burner for further combustion. Any remaining residue then passes through baffles in the scrubbers (dust collectors) which are designed to remove particulate matter before emission into the air via a chimney. First Memorial contends that this results in relatively clean smoke exhausting from the chimney into the atmosphere and that noticeable odour is an infrequent occurrence.

Nevertheless the crematorium operator is very aware that air emissions - smoke and odour - from gas pollutants can be upsetting to local residents. They assured us that do their very best to ensure emissions are minimized by such actions as scheduling and adjusting the burning temperature. Considering the amount of the time the crematorium operates weekly they consider deviations from acceptable air emissions are minimal. Notable odour is a local phenomenon that is noticed by nearby residents and would dependent on the direction of prevailing wind during the period of the cremation. It is worth noting that the majority of containers used in cremation are cardboard which do not contain the substances forbidden by the regulation to be in a funeral container.

The operator or the provincial government does not monitor air emissions from crematoria. We understand that newer state-of the-art cremation units operate with computerized process controls, which allow continuous monitoring of pollutants and alerts when action should be taken.

First Memorial stated they are always open to discussing further any concerns of residents

This review was undertaken by Stuart Macpherson (President 2021) and Sandrine Lio (board member 2019-20) September 20 2021

Reference : Crematoria emissions and air quality impacts Juliette O'Keeffe National Collaborating Centre for Environmental Health March 24, 2020