Chapter 692 SITING OF OIL STORAGE FACILITIES

SUMMARY: This chapter sets forth restrictions on the geographic location of new oil storage facilities.

1. **Purpose.** The purpose of this rule is to protect drinking water resources from oil contamination by controlling the location of oil storage facilities consistent with legislative policy under 38 M.R.S.A. §1391.

2. **Definitions.** The following terms as used in this rule have the following meaning:

   A. **Aboveground heating oil supply tank.** "Aboveground heating oil supply tank" means an aboveground oil storage tank that is connected directly to an oil-burning heating appliance and is used solely to store heating oil.

   B. **Aboveground oil storage facility.** "Aboveground oil storage facility" means any aboveground oil storage tank or tanks, together with associated piping, transfer and dispensing facilities located over land or water of the State at a single location for more than 4 months per year and used or intended to be used for the storage or supply of oil. Oil terminal facilities, as defined in 38 M.R.S.A. §542(7) are not included in this definition.

   C. **Aboveground oil storage tank.** "Aboveground oil storage tank" means any aboveground container, less than 10% of the capacity of which is beneath the surface of the ground, that is used or intended to be used for the storage or supply of oil. Included in this definition are any tanks situated upon or above the surface of a floor and in such a manner that they may be readily inspected. Drums or other storage containers that have a capacity of 60 gallons or less and oil-containing electrical equipment are not included in this definition.

   D. **Bulk plant.** "Bulk plant" means an intermediate fuel oil distribution facility with truck loading racks.

   E. **Chapter 34.** "Chapter 34" means the Department of Public Safety Rules and Regulations for Flammable and Combustible Liquids, 16-219 CMR chapter 34 (last amended Sept. 3, 2007).

   F. **Chapter 691.** "Chapter 691" means the Department of Environmental Protection Rules for Underground Oil Storage Facilities, 06-096 CMR chapter 691(last amended April 3, 2007).

   G. **Commissioner.** "Commissioner" means the Commissioner of Environmental Protection.

   H. **Community drinking water well.** "Community drinking water well" means a public drinking water well that supplies a community water system as defined under 22 M.R.S.A. §2660-B(2).

   I. **CMR.** "CMR" means the Code of Maine Regulations.

J. Department. "Department" means the Department of Environmental Protection composed of the Board of Environmental Protection and the commissioner.

K. Double-walled tank. "Double-walled tank" means a tank with inner and outer walls separated by an interstitial space that allows detection and containment of leaks.

L. Fire marshal. "Fire marshal" means the Office of the State Fire Marshal in the Department of Public Safety.

M. Marketing and distribution facility. "Marketing and distribution facility" means any underground and/or aboveground oil storage facility where oil is stored for eventual resale.

N. M.R.S.A. "M.R.S.A." means the Maine Revised Statutes Annotated.

O. Oil. "Oil" means oil, oil additives, petroleum products and their by-products of any kind and in any form including, but not limited to, petroleum, fuel oil, sludge, oil refuse, oil mixed with other nonhazardous waste, crude oils and all other liquid hydrocarbons regardless of specific gravity. "Oil" does not include propane, liquefied natural gas or other liquefied petroleum that is a gas at ambient temperatures.

P. Oil storage facility. "Oil storage facility" means an aboveground oil storage facility or an underground oil storage facility.

Q. Person. "Person" means any natural person, firm, association, partnership, corporation, trust, the State and any agency of the State, government entity, quasi-governmental entity, the United States and any agency of the United States and any other legal entity.

R. Private drinking water well. "Private drinking water well" means a well that is used to supply water for human consumption and that is not a public drinking water well.

S. Public drinking water well. "Public drinking water well" means a drinking water supply well for a public water system as defined in 22 M.R.S.A. § 2601(8).

T. Public drinking water supply. "Public drinking water supply" means any well or other source of water that furnishes water to the public for human consumption for at least 15 connections, regularly serves an average of at least 25 individuals daily at least 60 days out of the year, or that supplies bottled water for sale.

U. Underground oil storage facility. "Underground oil storage facility" means any underground oil storage tank or tanks, as defined in subsection V, below, together with associated piping and dispensing facilities located under any land at a single location and used, or intended to be used, for the storage or supply of oil, as defined in this rule. Underground oil storage facility also includes piping located under any land at a single location associated with above ground storage tanks and containing 10 percent or more of the facility's volume capacity.

V. Underground oil storage tank. "Underground oil storage tank" means any container, 10% or more of its volume being beneath the surface of the ground and which is used, or intended to be used, for the storage, use, treatment, collection, capture or supply of oil as

defined in this subchapter, but does not include any tanks situated in an underground area if these tanks or containers are situated upon or above the surface of a floor and in such a manner that they may be readily inspected. For the purpose of this rule, "underground oil storage tank" does not include underground propane storage tanks, underground oil-water separators, storm water and emergency catch basins, and hydraulic lift tanks. An overflow tank associated with an oil-water separator is considered an underground oil storage tank.

W. Wellhead protection zone. "Wellhead protection zone" means:

A. In the case of a private drinking water well, the area within 300 feet of the well; and

B. In the case of a public drinking water well, the greater of:

(1) The area within 1,000 feet of the well; and

(2) The source water protection area of the well if mapped by the Department of Health and Human Services as described under 30-A M.R.S.A. §2001(20-A).

3. Prohibition on facilities in wellhead protection zones. A person may not install or cause to be installed an oil storage facility in a wellhead protection zone.

A. Exceptions. The prohibition of this section does not apply to:

(1) An underground oil storage facility in existence or under construction on September 30, 2001 or an aboveground oil storage facility in existence or under construction on September 30, 2008;

(2) The replacement or expansion of an underground oil storage facility in existence on September 30, 2001 or an aboveground oil storage facility in existence on September 30, 2008 as long as the replacement or expansion occurs on the same property and the facility meets all applicable requirements of Chapter 34 and Chapter 691;

(3) The conversion of an aboveground oil storage facility permitted by the fire marshal and in existence on September 30, 2001 to an underground oil storage facility or the conversion of an underground oil storage facility to an aboveground oil storage facility as long as the conversion occurs on the same property;

(4) A facility used solely to store heating oil for consumption on the premises;

(5) Facility components, such as buildings and parking lots, that are not designed or intended to contain oil in a liquid or vapor phase; or

(6) The wellhead protection zone of a well located on the same property as the facility and serving only users of that property.

This subsection may not be interpreted to allow the conversion or expansion of an underground oil storage tank or underground oil storage facility subject to the abandonment requirements of Chapter 691(11).

B. Variances. The commissioner may grant a variance to the prohibition of this section if:

(1) In the case of a community drinking water well, a private drinking water well or a well that supplies drinking water to a school, the applicant demonstrates to the commissioner's satisfaction that no hydrogeologic connection exists between the proposed facility and the water supply at issue; or

(2) In the case of a public drinking water well other than a community drinking water well or a drinking water well supplying drinking water to a school, the commissioner determines that the engineering and monitoring measures proposed by the applicant exceed regulatory requirements and will effectively minimize the likelihood of drinking water contamination due to the discharge of oil.

In considering whether to grant a variance under this section, the commissioner may consider the importance of the groundwater resource, the hydrogeology of the site and other relevant factors.

C. Special requirements for heating oil supply tanks in wellhead protection zones.

Effective July 1, 2009, a person may not install an aboveground heating oil supply tank in the wellhead protection zone of a community drinking water well unless:

A. The tank is a double-walled tank or has secondary containment approved by the commissioner;

B. The tank and any secondary containment are listed and approved by a nationally recognized, independent testing authority; and

C. The tank is installed by a journeyman or master oil burner technician licensed by the Oil and Solid Fuel Board under 32 M.R.S.A. § 2401-B or, in the case of an outside tank serving manufactured housing, by any person licensed by the Oil and Solid Fuel Board under 32 M.R.S.A. § 2401 to install such tanks.

The requirements of this subsection do not apply to tanks with a capacity of more than 660 gallons or to tanks at an aboveground oil storage facility with an aggregate tank capacity of more than 1,320 gallons. The requirements of this section are in addition to any other installation standards provided for in law or rule.

4. Prohibition on facilities in sand and gravel aquifers. A person may not install or cause to be installed an oil storage facility within a significant sand and gravel aquifer (herein "aquifer") mapped by the Maine Geological Survey. This prohibition applies regardless of proximity to a public or private drinking water well.

NOTE: Significant Sand and Gravel Aquifer maps are available for inspection in most municipal offices and from the Maine Geological Survey, (207) 287-2801. Electronic versions are available from the Maine Office of Geographic Information Systems, **http://megis.maine.gov**.

A. Exceptions. The prohibition of this section does not apply to:

(1) An underground oil storage facility in existence on July 1, 2002 or an aboveground oil storage facility in existence on July 1, 2010;

(2) The replacement or expansion of an underground oil storage in existence on July 1, 2002 or an aboveground oil storage facility in existence on July 1, 2010 as long as the replacement or expansion occurs on the same property and the facility meets all applicable requirements of Chapter 691 and Chapter 34;

(3) The conversion of an aboveground oil storage facility permitted by the fire marshal and in existence on July 1, 2002 to an underground oil storage facility or the conversion of an underground oil storage facility to an aboveground oil storage facility as long as the conversion occurs on the same property;

(4) A facility used solely to store heating oil for consumption on the premises; or

(5) Facility components, such as buildings and parking areas, which are not designed or intended to contain oil in a liquid or vapor phase.

This subsection may not be interpreted to allow the conversion or expansion of an underground oil storage tank or underground oil storage facility subject to the abandonment requirements of Chapter 691(11).

B. Variance for incorrectly mapped aquifer. The commissioner may grant a variance to the prohibition of this section if the applicant submits a site-specific hydrogeological investigation demonstrating to the commissioner's satisfaction that the proposed facility site does not overlie an aquifer even though it is mapped as such by the Maine Geological Survey;

C. Variance for potentially low use or polluted aquifers. The commissioner may grant a variance to the prohibition of this section if the commissioner finds that the aquifer has a low potential for future use as a public or private drinking water supply because one of the following circumstances applies:

(1) A public water system serves all water users within 1000 feet up gradient and 2000 feet down gradient of the proposed facility site, and the site is in an urban area or an area made up of dense commercial land uses, industrial land uses or dense residential development not served by public sewer;

(2) The installation of drinking water supply wells within 1000 feet up gradient or within 2000 feet down gradient of the facility site is prohibited by property deed restrictions, municipal land use ordinance or a zoning rule of the Maine Land Use Regulation Commission (LURC);

(3) The applicant has submitted hydrogeological studies or ground_water quality testing data demonstrating to the commissioner's satisfaction that:

(a) The aquifer is polluted with one or more man-made contaminants in concentrations exceeding federal maximum contaminant levels (MCLs) or an MCL or maximum exposure guideline (MEG) established by the Maine Center for Disease Control and Prevention; and

(b) The aquifer has not been and is not now the subject of a commissioner-supervised remediation effort with the goal of the eventual restoration of or the protection of ground water in the aquifer to a quality suitable for human consumption; or

(4) The applicant has submitted other documentation demonstrating to the commissioner's satisfaction that the aquifer is unsuitable or unavailable as a future public or private drinking water resource.

D. Variance for moderate yield aquifers. The commissioner may grant a variance to the prohibition of this section if the applicant demonstrates to the commissioner's satisfaction that:

(1) The aquifer is mapped by the Maine Geological Survey as having a moderate potential for future use as a water supply resource, with yields generally less than 50 gallons per minute as confirmed by a commissioner-approved hydrogeological test conducted in accordance with Appendix A; and

(2) The aquifer does not have a high potential as a future drinking water resource as defined in subsection E of this section; and

(3) The facility will be designed and installed to include a combination of complementary leak and spill prevention equipment, discharge monitoring equipment, stand-by remediation system equipment or other engineering and monitoring measures that collectively are more stringent than State or federal requirements and that are determined by the commissioner to further reduce the risk of oil discharges and the likelihood of future ground water contamination.

NOTE: The following are examples of an acceptable combination of additional facility design and monitoring measures for applicable facilities.

- For underground oil storage facilities, retail and fleet fueling facilities, electrical generator facilities and bulk plants,, the installation and sampling of a ground water monitoring well network or vapor extraction system surrounding the facility. Where ground water monitoring wells are installed, they must be sampled quarterly and samples analyzed in accordance with Appendix S of Chapter 691. For facilities storing gasoline, samples must be analyzed for gasoline, benzene, and methyl tertiary butyl ether (MTBE). For facilities storing diesel fuel, heating oil or waste oil, fuel oil analyses must be performed. The installation and sampling of any ground water monitoring wells must be conducted under the supervision of a Maine-certified geologist. Positive results must be reported to the commissioner as evidence of a possible leak in accordance with section 5(D) or section 7(D) of Chapter 691, as applicable. Monitoring wells must be made accessible to the commissioner or the commissioner's agents for inspection and collection of water samples.

- For underground oil storage facilities:

  (a) Installation of safe suction piping systems and liquid tight dispenser sumps with pump shutoff leak sensors;

(b) Annual sump tightness testing;

(c) Installation of flush mounted 15-gallon, double wall, spill containment buckets;

(d) Concrete pad bermed or notched to contain 10 gallons of motor fuel spilled during fueling of vehicles; and

(e) Remote storage tanks serving generators to have telemetry or phone service to immediately notify owner in case of alarm.

- For retail and fleet fueling facilities and electrical generator facilities:

(a) double wall tanks with continuous electronic monitoring of the interstitial space;

(b) Double wall tank located on concrete pad. Concrete pad to be as large as footprint of tank and accompanying dispenser in order to facilitate detection and clean-up of spills and leaks;

(c) Where underground piping is installed, installation of liquid tight dispenser sumps with pump shutoff leak sensors;

(d) Where underground piping is installed, annual sump tightness testing;

(e) Installation of a clock gauge in addition to redundant overfill protection required by National Fire Protection Association (NFPA) Standard 30-A *Code for Motor Fuel Dispensing Facilities and Repair Garages*, 2008 edition;

(f) Concrete pad with berm to contain the volume of the most probable discharge of the delivery vehicle during deliveries;

(g) Concrete pad bermed or notched to contain 10 gallons of motor fuel spilled during fueling of vehicles;

(h) Fence to provide security and deter vandalism around tanks; and

(i) Remote storage tanks serving generators to have telemetry or phone service to immediately notify owner in case of alarm.

For bulk plants:

(a) Double wall tanks or single wall tanks with containment and a roof extending over all containment;

(b) Concrete pad with berm at loading rack to contain the volume of the largest compartment of the delivery vehicle during deliveries;

(c) Roof extending over the loading rack and over concrete pad with berm;

(d) Two stage, high level alarm with pump shut off interlocked with transfer pump to automatically stop the transfer of oil before an overfill occurs;

(e) Normally closed valves located as close as possible to the tank, but downstream of the block valve; and

(f) Fence to provide security and deter vandalism around tanks and loading rack.

E. High potential aquifers; variance prohibited. Notwithstanding Section 4(B), the commissioner shall not grant a variance from the prohibition of this section if any part of the proposed facility site overlies a mapped aquifer that has high potential as a future public drinking water resource. A high potential aquifer is any part of a mapped aquifer that has good to excellent potential ground water yield, generally exceeding 50 gallons per minute, and good water quality. High potential aquifers include:

(1) Any area designated on a Maine Geological Survey "Significant Sand and Gravel Aquifer Map" as a surficial deposit generally with yields greater than 50 gallons per minute;

(2) An aquifer or ground water resource protection zone as designated in a municipal ordinance or a LURC zoning rule;

(3) The source water or recharge area of a community public drinking water system supply well, including a well that is in the process of being developed, or areas within 1000 feet of such a well, whichever is greater, provided the aquifer has been found to yield more than 50 gallons per minute, based on hydrogeological pump test data and analysis by a Maine-certified geologist; or

(4) A portion of a mapped aquifer that, based on a borehole test conducted in the center of a proposed facility site and in accordance with Appendix A of this rule is expected to yield more than 50 gallons per minute.

Note: If the applicant believes that a high potential aquifer, as listed above, has been incorrectly mapped or identified, the applicant should engage the entities responsible for that mapping or identification regarding appropriate changes.

5. Variance procedure. Processing of applications for a variance under sections 3 and 4 including, but not limited to, application requirements, public notice, and appeal procedures, are governed by the Department of Environmental Protection Rules Concerning the processing of Applications and Other Administrative Matters, 06-096 CMR chapter 2, except as specified below.

A. Application requirements. Requests for variance from the siting restrictions of this rule must be submitted in writing on forms provided by the commissioner. In addition to the information required under Chapter 2(11), application must include at a minimum the following information:

(a) The registration materials required under Chapter 691(4);

(b) The names and mailing addresses of all abutters to the property on which the facility is proposed;

(c) A plan view of the proposed facility showing the precise location and footprint of all facility components that will contain oil in either a liquid or vapor phase;

(d) The map coordinates of each corner of the facility footprint and any proposed ground water monitoring wells to sub-meter precision and accuracy in a format compatible with the State of Maine Geographical Information System;

NOTE: The Maine Geographic Information System (GIS) uses as a standard the UTM (Universal Traverse Mercator) system. The datum system used is the NAD83 (North American Datum 1983) version.

(e) If a variance is sought under section 4(B) or 4(C) of this chapter, a written report supporting the variance request. If the report includes ground water quality or other hydrogeological data that was collected and interpreted in support of the variance request, the data and its written analysis must be certified by a Maine-certified geologist. If the variance request is based on a municipal land use ordinance, the report must include a copy of the relevant sections of the ordinance and a copy of the relevant land use mapping, certified by an authorized official of that municipality as being current and true copies. The proposed facility site location must be accurately shown on the land use map.

(f) If a variance is sought under section 4(D) of this chapter, identification and a description of the design, installation, monitoring or other engineering and operating enhancements that will supplement the requirements of Chapter 691 and a narrative explaining how the enhancements further minimize the risk of oil discharges and the likelihood of future ground water contamination.

NOTE: A pre-application meeting with the Department is recommended to ensure the applicant understands the variance requirements as they may apply to the specific proposed facility site. Such meetings usually avoid misunderstandings of expectations and processing delays.

B. Public notice. Within 30 days before filing an application, the applicant shall provide notice by certified mail of the application:

(1)To the chief administrative officer and planning board chairperson of the municipality in which the facility is proposed to be located, or to the county commissioners and the LURC director if the facility is proposed in an unorganized township or plantation;

(2) To the local public water utility or other community public water provider, if any;

(3) To abutters of the property on which the facility is proposed;

(4) To other interested persons who have requested in writing of the commissioner to receive variance notices, a list of such persons and their mailing addresses to be maintained by the commissioner; and

(5) By publication once in a newspaper generally circulated in the area where the facility is proposed.

The notice must include the information listed in Chapter 2(14)(A).

C. Public meeting. In lieu of or in addition to holding a public hearing on a variance application as provided under Chapter 2(7), the commissioner may hold a public informational meeting where deemed appropriate for the applicant to provide information about the variance request to interested parties. If the commissioner decides to hold a public meeting, notice must be sent at least 10 business days prior to the meeting to the applicant, abutters, the local public water utility or community water provider, the planning board chairperson and chief administrative officer of the municipality in which the facility is proposed (or the LURC director and appropriate county commissioners if the facility is proposed in an unorganized township or plantation) and other interested persons who have requested in writing of the commissioner to receive variance notices.

D. Decision; appeal. The commissioner may deny a variance request or approve the request with or without conditions. The decision must be in writing with findings sufficient to explain the basis of the decision. A copy of the decision must be provided to the applicant, abutters, the local public water utility or community water provider, and the planning board chairperson and chief administrative officer of the municipality in which the facility is proposed (or the LURC director and county commissioners if the facility is proposed in an unorganized township or plantation). Copies also must be provided to other interested persons upon request. Each copy must be accompanied by a plain statement of the rights of administrative and judicial review of the decision and the time within which those rights must be exercised, as provided under 38 M.R.S.A. §341-D(4)(A)and Chapter 2(24).

AUTHORITY: 38 M.R.S.A. § 341-D(1-B); PL 2001, c. 302, §3 and PL 2007, c. 569, §7

APPENDIX A: Determination of the Water Supply Potential of a Proposed New Oil Storage Facility on a Mapped Significant Sand and Gravel Aquifer

If the site of the proposed facility falls within a zone mapped as generally yielding 10 to 50 gallons per minute (gpm), but possibly more than 50 gallons per minute in some locations, the applicant must implement a limited hydrogeological evaluation to determine whether the site is located on a previously unrecognized high yield zone (well yield greater than 50 gpm) of the aquifer.

The evaluation may be as extensive as the applicant chooses, but at a minimum it must demonstrate to the commissioner's satisfaction whether or not a properly constructed well in the sand and gravel aquifer beneath the site would yield greater than 50 gallons per minute. The design of the evaluation, the fieldwork and the written report must be supervised and certified by a Maine-certified geologist with demonstrated expertise in hydrogeology.

The Sand and Gravel Aquifer Mapping Program at the Maine Geological Survey has used a single-borehole evaluation to estimate the projected long-term yield of aquifers in areas where no other information is available. The techniques are described on pages 15-18 of Maine Geological Survey Open File No. 98-2, Hydrogeology and Water Quality of Significant Sand and Gravel Aquifers in Parts of Piscataquis and Somerset Counties, Maine, 1998, Nichols, W. J., Neil, C. D., Locke, D. B. and Foley, M. E. (authors). The method requires a borehole advanced to the bedrock surface with continuous soils sampling. Geological information along with the grain size analysis of the soils samples will be used to estimate the hydraulic conductivity of the strata, and the aquifer thickness will be used to calculate a transmissivity value and to estimate the long-term yield of a well at that location. An evaluation using this methodology is the minimum that the commissioner would accept. The commissioner would also accept the results of a properly conducted and interpreted pumping test.

NOTE: Copies of the above referenced technical document are available from the Department or the Maine Geological Survey

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