Managing the Consequences of Dangerous Goods Occupancies in Red Deer

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Background

- Change to the bylaw to control public assembly
- Dangerous goods were the problem
- Encroachment and boundary issues
- Lack of an accurate inventory of Dangerous Goods
- Lack of understanding of the extent of consequences
- Mayor’s Task Force
Definitions

1. Dangerous Goods Occupancy - any occupancy at which Dangerous Goods are unloaded, loaded, stored, processed, or otherwise handled.

2. Dangerous Goods means dangerous goods for which placards would be required if the quantity of material in question were to be transported under the Transportation of Dangerous Goods Control Act and Regulations pursuant thereto.
Zoning Changes

3. Dangerous Goods occupancies are discretionary uses in all I-2 Zones.

4. Dangerous Goods occupancies are discretionary uses in all I-1 Zones.

5. Dangerous Goods occupancies are discretionary uses in all commercial zones, based on fulfilling a need of the local residents.

6. Dangerous Goods occupancies are prohibited uses in all zones except Industrial, Commercial, and Direct Control Zones.

7. Public assembly occupancies are discretionary uses, based on their proximity to existing Dangerous Goods Occupancies, in all C-4 zones.
Modifications to the Bylaw

8. Dangerous Goods Occupancy - any occupancy where Dangerous Goods in quantities that exceed the amounts specified in Table 3.3.6.A. of the Alberta Fire Code (1992) are unloaded, loaded, stored, processed, or otherwise handled. Service stations dispensing refined petroleum products are excluded.
Current Definition

9. Dangerous Goods Occupancy, unless otherwise determined by the Fire Chief, includes, but is not limited to, any occupancy where dangerous goods, as defined in the Transportation of Dangerous Goods Control Act, are unloaded, loaded, stored, processed, or otherwise handled in quantities in excess of the amounts set forth in Schedule “B”.
## Schedule B

<table>
<thead>
<tr>
<th>Section</th>
<th>Hazard Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Mass Explosion Hazard</td>
<td>Any</td>
</tr>
<tr>
<td>1.2</td>
<td>Severe Fragment Projection</td>
<td>Any</td>
</tr>
<tr>
<td>1.3</td>
<td>Predominant Fire Hazard</td>
<td>Any</td>
</tr>
<tr>
<td>1.4</td>
<td>No Significant blast Hazard</td>
<td>50 kg</td>
</tr>
<tr>
<td>1.5</td>
<td>Insensitive Substance (Mass Hazard)</td>
<td>250 kg</td>
</tr>
<tr>
<td>1.6</td>
<td>Extremely Insensitive Substances</td>
<td>250 kg</td>
</tr>
<tr>
<td>2.1</td>
<td>Flammable Gases</td>
<td>100 L or kg</td>
</tr>
<tr>
<td>2.2</td>
<td>Compressed Gases</td>
<td>1000 L</td>
</tr>
<tr>
<td>2.3</td>
<td>Toxic Gases</td>
<td>Any</td>
</tr>
<tr>
<td>3.1</td>
<td>Flammable Liquids</td>
<td>250 L</td>
</tr>
<tr>
<td>3.2</td>
<td>Combustible Liquids (incl. Waste Oil)</td>
<td>1000 L</td>
</tr>
<tr>
<td>4.1</td>
<td>Flammable Solids</td>
<td>25 kg</td>
</tr>
<tr>
<td>4.2</td>
<td>Spontaneous Combustible Material</td>
<td>25 L or kg</td>
</tr>
<tr>
<td>4.3</td>
<td>Dangerous When Wet Material</td>
<td>25 L or kg</td>
</tr>
<tr>
<td>5.1</td>
<td>Oxidizing Substances</td>
<td>50 L or kg</td>
</tr>
<tr>
<td>5.2</td>
<td>Organic Peroxides</td>
<td>1 L or kg</td>
</tr>
<tr>
<td>6.1</td>
<td>Toxic Materials</td>
<td>5 L or kg</td>
</tr>
<tr>
<td>6.2</td>
<td>Infectious Substances</td>
<td>Any</td>
</tr>
<tr>
<td>7</td>
<td>Radioactive Materials</td>
<td>Any</td>
</tr>
<tr>
<td>8</td>
<td>Corrosives</td>
<td>250 L or kg</td>
</tr>
<tr>
<td>9</td>
<td>Miscellaneous Dangerous Goods</td>
<td>250 L or kg</td>
</tr>
</tbody>
</table>
Implementation

- New Facilities – Development Permit
- Change in Occupancy
- Change in Ownership
- Change in Dangerous Goods storage
Benefits of the Bylaw

- Property Owners
- Real Estate Agents
- City Planners
- Emergency Services
Red Deer Emergency Services

- Catalogue of Dangerous Occupancies
- Maintenance of Dangerous Goods Occupancy Database
- Application of the database
- Building, Planning, and Emergency Response
- “Heads Up” list of hazards from inspections
- Safety Codes Officer on shift
- 99% confidence in the data
POTENTIAL HAZARDS

FIRE OR EXPLOSION

- Substance does not burn but will support combustion.
- Some may react explosively with fuels.
- May ignite combustibles (wood, paper, oil, clothing, etc.).
- May ignite with air and spread along ground.
- Runoff may create fire or explosion hazard.
- Containers may explode when heated.
- Ruptured cylinders may rocket.

HEALTH

- Vapors may cause dizziness or asphyxiation without warning.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire may produce irritating and/or toxic gases.

PUBLIC SAFETY

- CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.
- As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (300 ft) in all directions.
- Keep unauthorized personnel away.
- Stay wind.
Summary

- New Legislation was not required
- City exercises control of DG Occupancies
- Fire Chief involved in the process
- Emergency Responders are protected