CASA and Odour

Areas of Focus

The air will have no adverse odour, taste or visual impact and have no measurable short- or long-term adverse effects on people, animals or the environment.

- Health
- Complaints
- Assessment
- Prevention & Mitigation
- Enforcement & Regulation
- Education, Communication & Awareness
- Continuous Improvement
Task Groups and Reports

Five groups reporting to Odour Management Team

- Report to the Clean Air Strategic Alliance Odour Management Team Enforcement/Role of Regulation Task Group – RWDI AIR Inc.
- Review of Odour Assessment Tools and Practices for Alberta – Millennium EMS Solutions Ltd., and Environmental Odour Consulting
- Review of Odour Prevention and Mitigation Tools for Alberta – Pinchin Ltd.
- Odour and Health Backgrounder (with Symptom Tracking Tool) – Developed by the Task Group
Principles for the guide

Although focused on Alberta, the guide is considered applicable to anyone involved in odour management

- Assess and recommend national and international best practices applicable in the Alberta context
- Capture the products and recommendations of the individual task groups
- Offer practical tools and approaches
- Be clear, concise and user friendly
- Provide keys/roadmaps to guide tool selection and use
UNDERSTANDING ODOR

Summary of elements that are essential to the understanding and characterization of odours and odour events
## Symptom and Odour Tracking Tool

### Symptom Details

<table>
<thead>
<tr>
<th>Date</th>
<th>Symptom Description and Other Relevant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>(e.g., I smelled manure and rotten eggs in the same day, had a headache followed by trouble sleeping)</td>
</tr>
<tr>
<td>Location (e.g., home, work)</td>
<td></td>
</tr>
<tr>
<td>Intensity (0-5)</td>
<td></td>
</tr>
<tr>
<td>Did the symptoms come and go during the day?</td>
<td></td>
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### Odour Details

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ODOUR COMPLAINTS

Guidance and advice about odour complaint management, from taking the complaint to preparing for an investigation
Odour Complaint Referral Process

Odour Complaint Decision Tree

If at any time the caller indicates the odour is causing physical symptoms or illness, advise them to call:
- Their family doctor
- Health Link Alberta (911)
- 911 (for emergencies only)

Is the source of the odour known?

YES

Refer the caller to the appropriate organization or agency or follow your organization’s odour complaint process.

NO

Is your organization responsible for follow-up?

YES

Follow your organization’s odour complaint process.

NO

Refer the caller to the appropriate organization or agency.

Chemical/Petroleum Odours
- Possible sources:
  - Manufacturing
  - Refineries
  - Oil & gas operations

Contact: Local Organization AER/AEP

Manure/Sewer Odours
- Possible sources:
  - Agriculture

Contact: Local Organization Municipality NRCB

Rotten Odours
- Possible sources:
  - Sewerage
  - Pulp mill

Contact: Local Organization AER/AEP

Odour
- Possible sources:
  - Miscellaneous

Contact:

- Alberta Energy Regulator (AER)
  1-800-222-6314
- Alberta Environment and Parks (AEP)
  1-800-222-6314
- Natural Resources Conservation Board (NRCB)
  1-866-383-6722
- 311 Calgary or 311 Edmonton

Customize the boxes as appropriate for your local industries and activities
ODOUR ASSESSMENT

Outline of the different odour assessment tools and approaches that can be used and when and how to use them
# Tool Use Guide

## PURPOSE OF ODOUR ASSESSMENT

<table>
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<tr>
<th>PURPOSE OF ODOUR ASSESSMENT</th>
<th>SUGGESTED STEPS</th>
</tr>
</thead>
</table>
| To verify and investigate odour complaints                            | 1. Non-analytical assessment  
  2. Ambient sampling and measurement  
  3. Source sampling and measurement                                     |
| To comply with conditions outlined in operating/industrial permits    | 1. Source sampling and measurement  
  2. Ambient sampling and measurement                                     |
| To determine compliance with odour legislation                        | 1. Source sampling and measurement  
  2. Ambient sampling and measurement                                     |
| To assess long-term odour exposure levels in an area                  | 1. Non-analytical assessment  
  2. Ambient sampling and measurement                                     |
| To rank potential odour sources for mitigation purposes               | 1. Source sampling and measurement (OU or individual compounds)                 |
| To determine background odour concentrations before building a new facility | 1. Ambient sampling and measurement                                           |
| To determine the off-site odour impact from existing operations      | 1. Non-analytical assessment  
  2. Ambient sampling and measurement                                     |
| To determine the expected changes in off-site odours resulting from new facilities, expansions of existing facilities or other operational changes | 1. Source sampling and measurement  
  2. Ambient sampling and measurement  
  3. Dispersion modelling                                                  |
ODOUR PREVENTION

Outlines actions and tools to prevent or mitigate odorant releases and/or nuisance odour events
Source-Pathway-Receptor Model and Tools

<table>
<thead>
<tr>
<th>BENEFITS</th>
<th>CONSIDERATIONS</th>
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<tbody>
<tr>
<td>Prevention techniques can drastically reduce or eliminate the potential for odour</td>
<td>Material substitutions can require expensive and time consuming trials</td>
</tr>
<tr>
<td>Operational/maintenance modifications can be simple and easy to implement</td>
<td>Process changes may affect the quality of products</td>
</tr>
</tbody>
</table>
ODOUR MANAGEMENT

Regulatory options identified as potential approaches for managing odours
Regulatory Approaches

General considerations

- Guide provides general considerations for any potential regulatory-based odour management framework
- Identifies strengths, weaknesses and considerations of 8 ambient-based and 2 emission-based regulatory systems
FUTURE PLANS

Continuous improvement and education, awareness and communication strategies
Questions?

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