

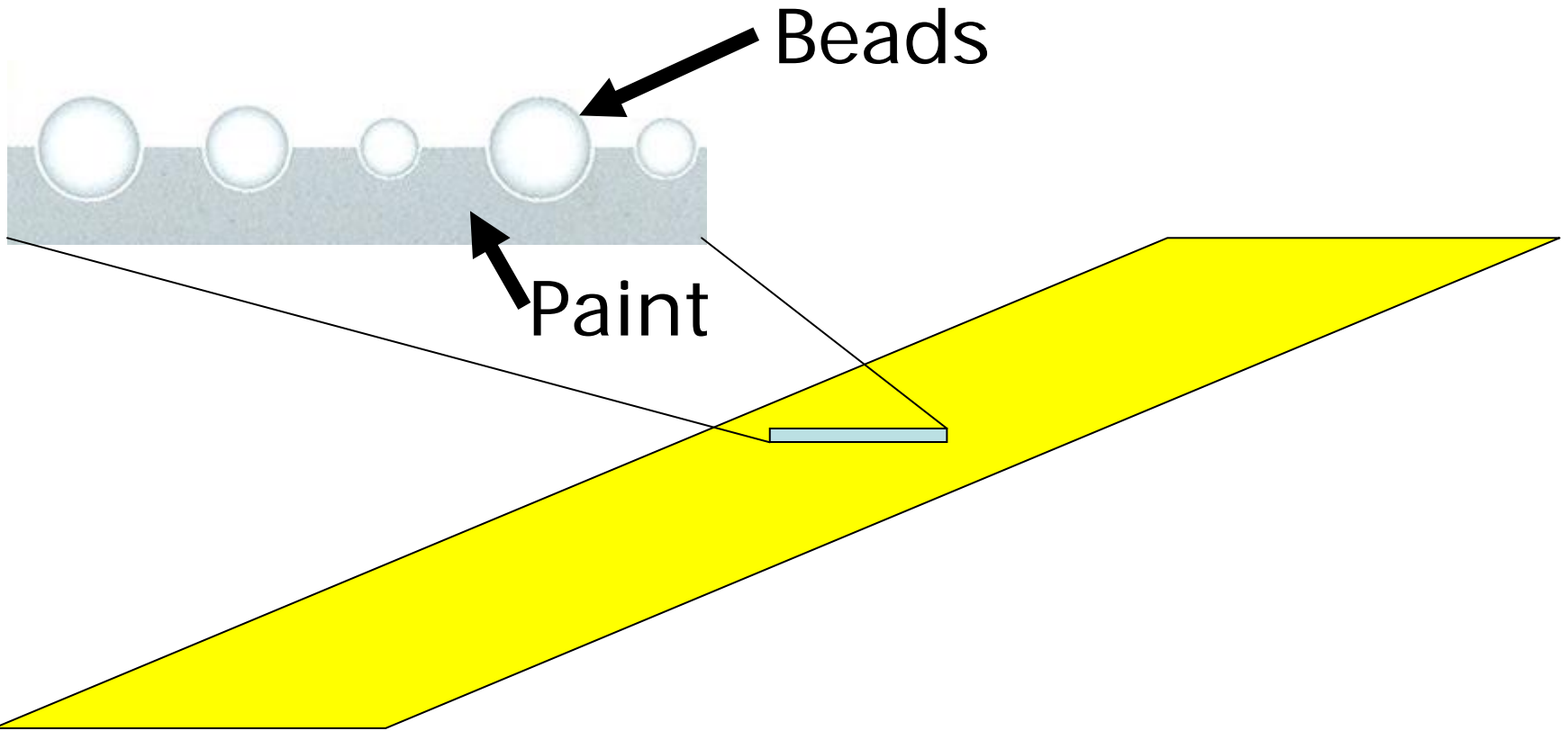


NZ TRANSPORT AGENCY  
WAKA KOTAHI

# Heavy Metals in Roadmarking Materials

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RCA Forum**



# Beads

- Desirable to limit heavy metals
- AS/NZS 2009:2006 non-compulsory limits
- Effects based limits
- Ministry for the Environment's Environmental Guideline Value (EGV) database



# Bead Heavy Metal Limits

<b>Contaminant</b>	<b>EGV Database Recommended Limit for Soil (mg/kg or ppm)</b>	<b>AS/NZS 2009:2006(mg /kg or ppm)</b>
<b>Arsenic</b>	<b>55</b>	<b>50</b>
<b>Antimony</b>	<b>15</b>	<b>50</b>
<b>Lead</b>	<b>140</b>	<b>50</b>
<b>Mercury</b>	<b>10</b>	<b>10</b>
<b>Cadmium</b>	<b>12</b>	<b>10</b>
<b>Chromium VI</b>	<b>0.4</b>	<b>10</b>

# Bead Facts

- \$840 to \$995 + GST/tonne
- 2 of the 4 suppliers already testing
- Testing costs \$130 + GST in NZ
- 3 of the 4 suppliers can meet the proposed limits except for Chromium VI
- Propose total Chromium instead



# Bead Heavy Metal Requirements

- Will be included in the next version of M/7 Roadmarking Paints
- New sampling and testing spec T/17
- By the end of April 2009
- Implement progressively into new contracts
- Contract Clauses Available



# Yellow Lead-Based Paint

- M/7 Roadmarking Paints does not require lead-free paint
- Some suppliers have moved to lead-free yellow
- Desirable to discontinue use of lead-based products



# Expected Costs & Implementation

- **Roadmarking contract costs may rise by 2 to 5% initially**



## Cost increase due to:

- Yellow = 15% of all paint
- Paint = 40% of roadmarking contract
- Additional cost of 39% for lead-free pigment
- $0.4 \times 0.15 \times 0.39 = 2.3\%$



# Implementation

- All of NZ change to lead-free yellow at the same time
- Proposed change-over of 1 July 2009
- Changes will appear in next version of M/7 Roadmarking Paints
- Contract Clauses Available



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