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## Case Study Using WATSIN to Appeal an Improvement Order

A company was recently inspected by a Workplace Safety and Health Inspector. The inspector issued an Improvement Order for air testing based on their opinion that the worker was exposed above the Occupational Exposure Limit (OEL). The product contains styrene and is only used a couple of hours a day. The workplace also has general ventilation that it turns on when the product is used.

The information regarding how the product is used, what controls are in place, etc. were entered into the WATSIN program which produces a prediction of the worker's exposure. A copy of the WATSIN prediction is shown below. It predicts an exposure less than 1% of the OEL and recommends that no further action is needed.

WATSIN FOR LIQUIDS	
Process Name: Working with body filler	
Description of Process: applying and sanding body filler that contains styrene	
Name of Product: Light Weight	
Duration: Exposure occurs 1 - 2 hours / day	
Proximity: Worker at arm's length	
Vapour Hazard Ratio: 200 - 500	
Respiratory Protection: No respirator	
Nature of Process: Default	
Controls: Good general ventilation (e.g. 6 - 12 air changes per hour of general ventilation)	
Estimated exposure is	Action to take
<1 % of the OEL	No Action Recommended
1 - 10% of OEL	General WHMIS Training
10 - 20% of OEL	plus specific training on hazards of products
20 - 100% of OEL	plus periodic exposure monitoring
> 100% of OEL	plus respiratory, engineering or other controls
Multiple of OEL	greater respiratory protection, improved controls or process shutdown

A company can appeal an improvement order if it feels that the order is not correct. In this case, rather than appeal the Improvement Order, the company performed sampling to measure the worker's exposure. A sampling device was worn by the worker over the course of the day to measure the concentration of styrene in their breathing zone. The sample was then sent to a lab for analysis. The laboratory results of the test showed that the worker received an exposure of only 0.04% of the OEL.

Exposure algorithms have been proven to be more accurate than individual opinion. Had the company ran the scenario through the WATSIN program, it would have had grounds to appeal the Improvement Order. This would have saved the company the time and expense of performing air testing.

Should you have any questions, please contact us at (204) 668-3141 or by email at [contact@winnipegairtesting.com](mailto:contact@winnipegairtesting.com).

Sincerely,

**Winnipeg Air Testing**

