

# Submission:



Workplace Exposure Standard (WES-TWA) for diesel particulate matter (DPM)

19 Dec 2014

**SUBMISSION OF  
THE NEW ZEALAND MINING INDUSTRY  
SAFETY COUNCIL (MinEx)  
TO WORKSAFE  
ON**

**Consultation on Workplace Exposure Standard (WES-TWA) for  
diesel particulate matter (DPM)**

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**Organisation: MinEx**

**Position: CEO**

### INTRODUCTION

MinEx<sup>1</sup> welcomes the opportunity to submit on the Workplace Exposure Standard (WES-TWA) for diesel particulate matter (DPM). We note the submission deadline of 28 November 2014 and the agreement to an extension to 19 December 2014 which has given the mining industry time to review the proposal properly.

### SUBMISSION

#### Introduction

Given the highly technical nature of the proposal, one of our members most affected by the proposal, OceanaGold, commissioned an expert review of the issue of diesel particulates relating to the mining industry. Their submission and the accompanying technical report appears in Attachment II and forms part of the MinEx submission.

Understandably the combination of a confined environment in underground mines and tunnels and the use of diesel machinery in these environments means that setting an appropriate diesel particulate workplace exposure standard is a critical issue for the industry.

This submission, even though it simply supports the OceanaGold submission, is a submission on behalf of all of the industry and particularly the MinEx members listed in Attachment I.

Worksafe has invited comment on:

1. the proposed 8 hour TWA WES value of 100µg/m<sup>3</sup> for diesel particulate matter (measured as elemental carbon);
2. the feasibility of meeting the proposed WES value;
3. the sampling and analytical methods that are proposed and the suitability of those methods in New Zealand.

#### The WorkSafe Technical Report

WorkSafe have supplied a report by TERA entitled *Occupational Exposure Limit Evaluation: Diesel Particulate Matter* dated 9 October 2014 in support of the proposed WES value.

This report does not present us with any new technical support for the proposed WES value but simply reports what other jurisdictions have done.

We are surprised to find no mention in the report of the Canadian approach to the issue of diesel particulates given the size and relatively advanced technological nature of the Canadian mining industry.

#### MinEx Submission

Our submission is the same as that of OceanaGold:

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<sup>1</sup> MinEx is the national Health & Safety Council for the New Zealand quarry, coal and minerals industry. Its main purpose is to help industry to improve its health and safety performance, and to provide centralised industry representation on matters relating to health and safety.

1. The proposed WES value of  $100\mu\text{g}/\text{m}^3$  (measured as elemental carbon) is too low, for the following reasons:
  - i. It has been derived arbitrarily through a succession of increasingly aspirational targeted initiatives in a reaction to poor historic practices around the world and is sentiment rather than science based;
  - ii. It fails to take into account decades of lower DPM exposures as a result of improvements in diesel quality and technology of which the benefits for long-term health are yet to be acknowledged in the available research;
  - iii. In the absence of robust science, it is primarily based on what TERA believes to be feasible using exhaust filtration but is considered by Dr Howes and OceanaGold to be overly optimistic and very difficult to achieve in that regard; and in consequence
2. Taking these considerations into account, the recommended exposure standard for DPM should be  $400\mu\text{g}/\text{m}^3$  total carbon (approximately  $300\mu\text{g}/\text{m}^3$  for elemental carbon), which is the limit recently adopted in Ontario, Canada;
3. In addition, the application of an 8 hour TWA, using the WES methodology to adjust for shifts exceeding 8 hours, is overly conservative and is not supported by the available research or industry norms for mining operations; and as such
4. No additional allowance should be imposed for extended shifts other than a pro rata adjustment if the working year exceeds 2000 hours; and,
5. In so far as monitoring is concerned, WorkSafe should take a lead from the Australian mining industry practices.

## ATTACHMENT I – MINEX MEMBERSHIP

This submission is made on behalf of the individual companies listed in Attachment III and the following list of MinEx members.

A B Equipment Ltd	McGregor Concrete Ltd
A B Lime	Mike Edridge Contracting Ltd
Atlas Quarries Ltd	MITO
Bellingham Quarries Ltd	Monovale Sand Quarry Ltd
Birchfield Coal Mines Limited	New Creek Mining
Blackhead Quarries Ltd	Newmont
Bradken Resources Pty Ltd	NZ Steel
Brightwater Engineering	Oamaru Shingle Supplies Ltd
Buller Coal Limited	OceanaGold
Burkes Creek Coal	ORICA Mining Services
Byfords Construction Co Ltd	Origin Quarries Ltd
Christchurch Ready Mix Concrete Ltd	Perry Resources (2008) Ltd
CRL Energy Ltd	Porritt Sand
Digger School	Porter Group
Downer Edi Works Ltd	Prenters Aggregates Ltd
Envirofert Ltd	Pukepoto Quarries Ltd
First Break Mining & Construction Ltd	Quality Roding & Services (Wairoa) Ltd
Francis Mining Co Ltd	Rangitikei Aggregates Ltd
Fulton Hogan Ltd	Ravensdown Fertiliser Co-op
Glencol Energy Ltd	RealSteel
Goughs	RedBull
Green Vision Recycling Ltd	River Run Products Ltd
Groeneveld New Zealand Ltd	Roa Mining Co Ltd
H G Leach & Co Ltd	Road Metals Co Ltd
Harliwich Holdings Ltd	Roding New Zealand
Hauraki District Council	Rock Products Ltd
Higgins Aggregates Ltd	Rocktec Ltd
Higgins Contractors Wairarapa	Sandvik Mining & Construction Ltd
Holcim (New Zealand) Ltd	Selwyn Quarries Ltd
Holcim (NZ) Ltd Kiwi Point Quarry	Sibelco NZ Ltd
Horokiwi Quarries Ltd	Solid Energy NZ Ltd
Huntly Quarries Ltd	Southern Aggregates Ltd
Infracon Aggregates	Stevenson Resources Ltd
J Swap Contractors Ltd	Stevensons Mining
K B Contracting & Quarries Ltd	Taupo Scoria Ltd
Kai Point Coal Co Ltd	Taylor Coal Ltd
Kaipara Excavators	Taylor's Contracting Co Ltd
Kenroll Industrial Coal (2011) Ltd	The Isaac Construction Co Ltd
Lake Road Quarries	Total Lubricants/Oil Imports
Liebherr Australia Pty Ltd	Transdiesel Ltd

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Longburn Shingle Company Ltd  
Materials Processing Ltd  
Maungaraki Lime Ltd  
McCallum Bros Ltd

Tyreline Distributors Ltd  
Victory Lime 2000 Ltd  
Waiotahi Contractors Ltd  
WaterCare Laboratory Services  
Wharehine Ltd  
Winstone Aggregates

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## ATTACHMENT II

Digital copy of the OceanaGold submission