

Not Relevant

603 SECOND HEALTH RISK ASSESSMENT REPORT - WHYALLA RED DUST -
NOTED

Not Relevant

603

**MINUTES forming ENCLOSURE to
CABINET NOTE**

TO: THE PREMIER FOR CABINET

**RE: SECOND HEALTH RISK ASSESSMENT REPORT - WHYALLA RED
DUST**

1. PROPOSAL

That Cabinet notes preliminary data of a health risk assessment of impacts associated with Whyalla **OneSteel** is nearing completion.

- 1.1 **A** health risk assessment specific to the dust in Whyalla (second report) is nearing completion as a draft. The assessment suggests residents are probably being adversely impacted by emissions from **OneSteel**, combined with background, dust leading to chronic respiratory disease, possibly lung cancer and iron overload complications amongst susceptible residents. Further refinement of the assessment is desirable.
- 1.2 **Some** stakeholders who question the indenture proposal may seek to use the second report to advocate the need for further health protection measures given that **OneSteel's** responsibilities will be limited.
- 1.3 **Several** stakeholders have an interest in the report's findings and are anticipating its timely release: Whyalla **Council**, **EPA** (**Crown Solicitor**), **Environment Defenders Office** (civil court action), vocal residents, health care providers.
- 1.4 **A** process for review and refinement of the health risk assessment is suggested.
- 1.5 If the health impacts are accepted by Government as reasonably plausible, the **Department of Health** will need to determine appropriate health protection measures and release the second report.

2. BACKGROUND

- 2.1 Iron rich red dust emissions from OneSteel's pellet plant have caused amenity and potential health concerns amongst neighbouring residents for some years.
- 2.2 Residents have formed the Whyalla Red Dust Action Group (WRDAG) and have actively complained about OneSteel's failure and delays in controlling these emissions. WRDAG currently has a civil court action in progress supported by the Environmental Defender's Office.
- 2.3 Following a meeting of OneSteel and the EPA with the Premier in December 2003, the Department of Health was requested to provide an urgent assessment of recent developments in the literature relevant to the Ambient Air Quality National Environmental Protection Measure (NEPM) for particulate matter (PM) and to document the Department's position with regard to health based dust standards. A 'draft for discussion' report was distributed for consultation in March 2004 (first report). In the absence of specific information on Whyalla dust characteristics, exposure levels and residents with susceptible conditions, the first report was not able to offer firm conclusions on Whyalla. The need for a second report was explicitly recognised.
- 2.4 In early 2005, OneSteel appealed to the Environment, Resources and Development Court against recent amendments to its licence conditions sought by the EPA. The application, which sought to stay the new licence conditions pending resolution of the appeal, was refused. Dr Maynard from the Department of Health acted as expert witness for the EPA providing some information which is included in the draft second report.
- 2.5 Cabinet recently approved a proposal to provide OneSteel with a new indenture and to fix environmental performance conditions for the next 10 years. OneSteel's board has approved the \$325m Project Magnet. Information on health risks was provided in the Department of Health's comments on the Cabinet submission.
- 2.6 An alternative iron source and major changes to the processing of feedstock at the front end of the plant (Project Magnet) is viewed by nearly all stakeholders as the best solution to the red dust emissions but has been delayed until at least 2007. Red dust will also continue to be exported in increased tonnage (4m tonnes pa) for a further 10 years.

3. DISCUSSION

- 3.1 A Departmental senior medical specialist has conducted an extensive review of the literature, assisted by the findings of 2 studies of the characteristics of OneSteel red dust, sampling inside adjacent houses and primary school, analysis of hospital separations and cancer notifications, and assays of red dust solubility. The second report aims to provide a health risk assessment specific to Whyalla.
- 3.2 The assessment in the second report suggests iron rich dust from OneSteel is likely to be contributing to adverse health impacts particularly amongst those residents who are known to be susceptible. All potential impacts depend on cumulative dust exposure over some years and include background as well as OneSteel dust.
- 3.3 This risk assessment has identified several potential health concerns:
- irritation effects to eyes, nose, throat and upper airways,
 - fibrosis of lungs in association with silica and clay components of OneSteel in combination with background dusts,
 - potentiation of chronic obstructive pulmonary disease,
 - an inability to exclude a small cancer effect based on available evidence, and
 - effects of chronic additional iron exposure particularly in residents with pre-existing disturbance of iron handling within the body.
- 3.4 Health records show a higher rate of hospital separations for chronic lung disease, chronic liver disease and some anaemias and a higher rate of lung cancer notifications than for a combined rural cities comparison group.
- 3.5 Indoor dust loadings are high. Chemistry results are not yet to hand.
- 3.6 Screening assays suggest iron from the red dust is poorly absorbed from the gut.
- 3.7 **FURTHER ACTION AND OPTIONS**

Some sections of the draft second report are yet to be completed:

- Iron toxicology
- Recent 'inert' dust conference proceedings
- Recent crystalline silica health impact reports
- Indoor exposure modelling
- Indoor dust sampling results

Further refinements of the risk assessment may also need to be included in order to more fully identify possible impacts. These include:

- Routine health records analysed for relationships with domicile proximity to OneSteel,
- Check incidental blood ferritin (a substance in the body that absorbs iron) and chest x-rays done at the hospital for abnormal results,
- Case record review of patients at the hospital suffering from indicator conditions to check domicile history, occupation, smoking and alcohol history and results of relevant laboratory investigations.

In order to include these aspects in the risk assessment patient confidentiality issues need to be explored.

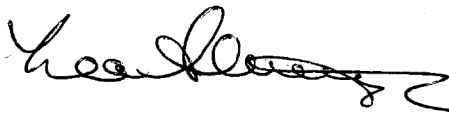
It is proposed that the draft be peer reviewed by an independent expert.

Completion of the final report may take several months and the peer review an additional 2-3 months.

4. RECOMMENDATION

- 4.1 That Cabinet notes preliminary data of a health risk assessment of impacts associated with Whyalla OneSteel is nearing completion.

In Cabinet

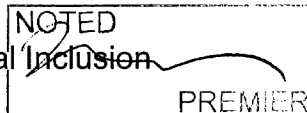


25 JUL 2005

HON LEA STEVENS MP

Minister for Health

Minister Assisting the Premier in Social



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