



Hillside Mine Community Voice, 3 April 2017
Dust: Sources, Controls, Management, Monitoring and Compliance

Dust: Sources, Controls, Management, Monitoring and Compliance

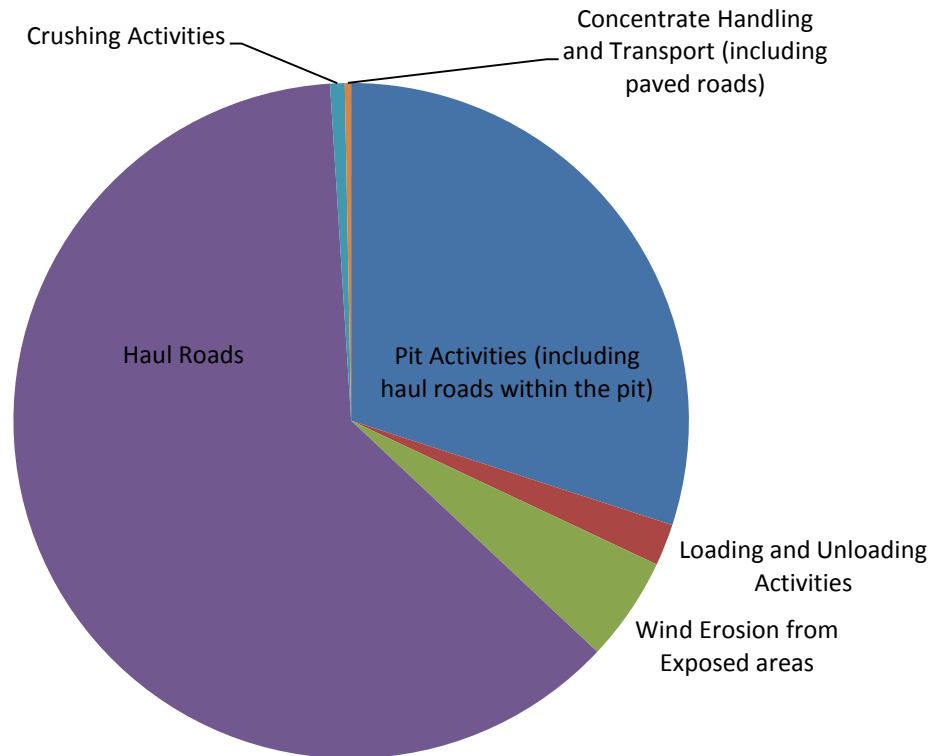
Quick Overview:

- What are the dust sources?
- How will dust be controlled and managed?
- What are the compliance criteria?
- What will be in place for monitoring?

Dust: Sources

Sources of dust:

Annual TSP Emissions (from assessment Year 5)



Dust: Sources

Definitions of dust (and how it is categorised for measurement):

Air borne concentrations of dust:

- TSP: Total suspended particulates
- PM₁₀: dust particles size fraction with aero dynamical equivalent diameter up to 10 micro meters
- PM_{2.5}: dust particles size fraction with aero dynamical equivalent diameter up to 2.5 micro meters

And then there is dust fall out - measured as dust deposition.

Dust: Controls and Management

For effective control and management of dust the following is required:

Design:

- Mine design and specifications to high standards incorporating dust as a design parameter – Example haul roads is largest source of dust, need to be designed and constructed to perform well and easy to maintain.

Operations:

- Planning of operations with seasonal weather & wind in mind – preferred situation with operations near the boundary where wind blows back on site rather than off site.
- Rehabilitation, stabilisation and minimisation of disturbed areas.
- Proactive management: Considering weekly & day to day dust risks so that additional dust controls can be prepared and activities moved to lower risk areas.
- Reactive management: Additional dust controls and changes to activities to improve dust performance based on observations and monitoring.
- Dust controls.
- Management plans and procedures.

Monitoring:

- To ensure compliance and to manage operations to improve performance.

Dust: Monitoring

Dust monitoring includes:

- All 👁️ 👁️ across operations at all times looking out for excessive generation of dust.
- Boundary/early warning monitoring to inform dust management.
- Compliance monitoring.

Compliance Monitoring:

- For assessment of compliance against MLC
- PM₁₀ and TSP
- PM_{2.5} for one year to evaluate levels
- Dust deposition monitoring

Boundary/Early Warning Monitoring:

- To better manage nuisance dust and inform operations of rising dust trends.
- Alerts based on dust concentrations to operations to trigger review of operations, additional controls and changes in operation.



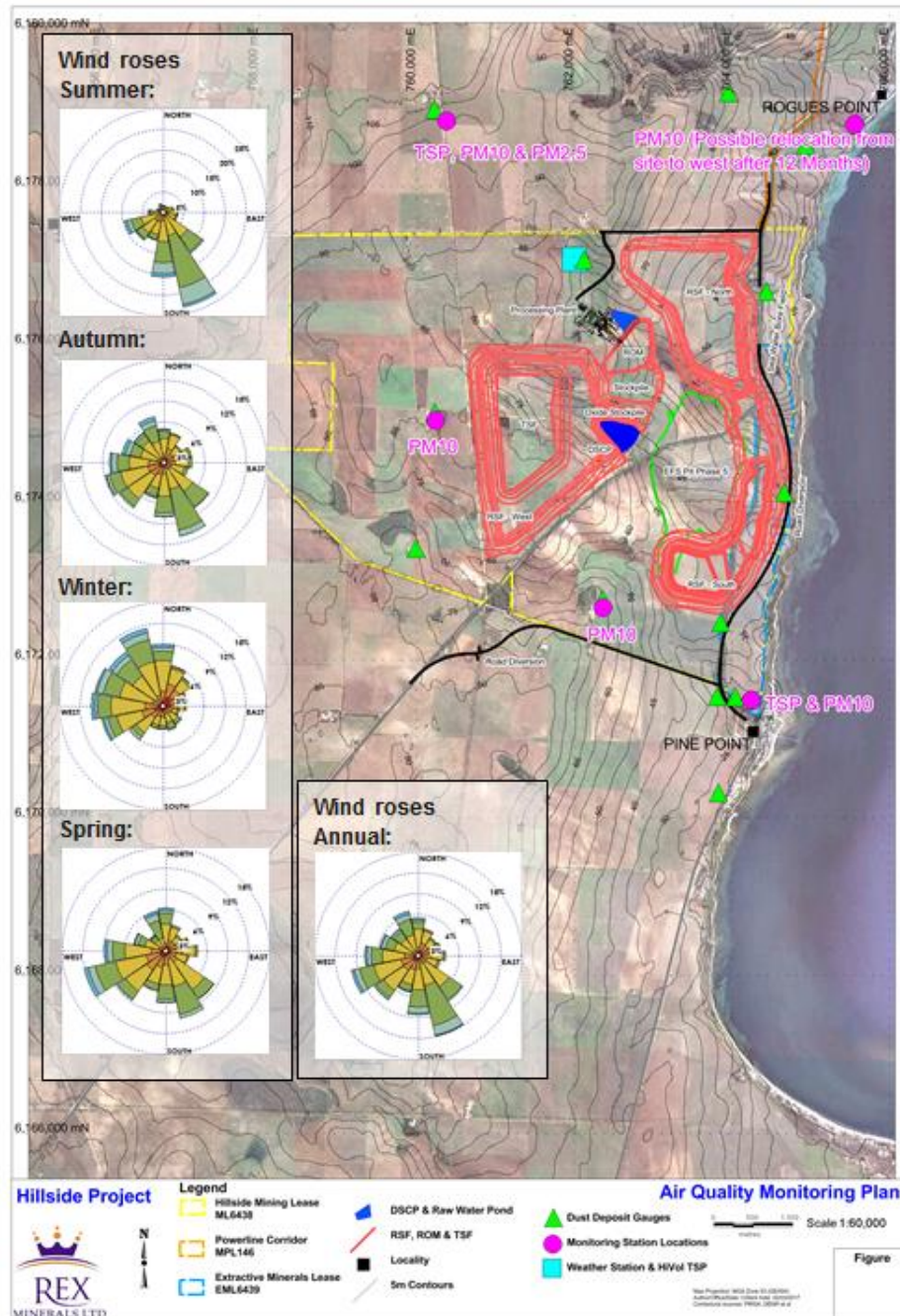
Dust: Monitoring & Compliance

Draft layout of proposed monitoring network:

- Focus on monitoring near receptors (residences).
- Covering ambient dust concentrations PM₁₀, TSP & PM_{2.5} and dust deposition.
- Considering prevailing wind directions (including seasonal)

MLC measurement criteria:

| Pollutant | Averaging period | Criterion | Basis |
|---|------------------|--------------------------|-------------------|
| Particulate matter <10µm (PM ₁₀) | 24 hour | 50 µg/m ³ | Total |
| Particulate matter <10µm (PM _{2.5}) | 24 hour | 25 µg/m ³ | Total |
| Total suspended particulate (TSP) matter | 24 hour | 120 µg/m ³ | Total |
| Total suspended particulate (TSP) matter | 12 month period | 90 µg/m ³ | Total |
| Total Dust Deposition (TDD) | Annual | 4g/m ² /month | Total |
| Total Dust Deposition (TDD) | Month | 2g/m ² /month | Mine contribution |



Contact details

Website: www.rexminerals.com.au

Email: community@rexminerals.com.au