

COAL DUST MANAGEMENT



FACT SHEET

ABOUT INLAND RAIL

Inland Rail is a once-in-a-generation project that will enhance supply chains and complete the backbone of the national freight network by providing for a transit time of 24 hours or less for freight trains between Melbourne and Brisbane via regional Victoria, New South Wales and Queensland.

Inland Rail will transform the way we move freight around the country, connect regional Australia to markets more efficiently, drive substantial cost savings for producers and consumers, and deliver significant economic benefits.

Comprising 13 individual projects and spanning more than 1,700km, Inland Rail is the largest freight rail infrastructure project in Australia and one of the most significant infrastructure projects in the world.

The Australian Government selected the Australian Rail Track Corporation (ARTC) to deliver Inland Rail, in partnership with the private sector.

The Australian Government has committed \$9.3 billion to the delivery of Inland Rail, with construction having commenced in late 2018. Inland Rail is expected to be fully operational in 2025, and one 1,800m double-stacked train operating on Inland Rail will carry the same volume of freight as 110 B-double trucks.

Better infrastructure and an effective national freight operation are key to delivering efficient supply chains, improving Australia's global competitiveness and lifting our nation's wealth and prosperity.

ARTC'S COMMITMENT

ARTC aims to deliver and operate the Inland Rail Program with the least environmental, cultural heritage and social impact possible, while providing new benefits to the people of Australia at a local, regional and national scale. ARTC is committed to environmental management, including air quality, during all stages of the project delivery cycle.

COAL DUST MANAGEMENT

WHAT IS DUST?

Dust is a key focus for communities and the Government due to the potential impact it can have on human health and amenity. Dust is small particles (also known as particulate matter), which come from a range of different sources. Dust can take a number of forms and sizes. For environmental and health purposes, dust is usually described by size:

- ▶ >PM10: Particle sized 10 microns in diameter and greater;
- ▶ PM10: Particle sized less than 10 microns in diameter; and
- ▶ PM2.5: Particle sized 2.5 microns and smaller.

PM2.5 and PM10 are invisible to the naked eye. For context, the below figure illustrates how small these particles are when compared with the size of a single thread of human hair or a grain of sand.

WHAT IS THE LEGISLATIVE FRAMEWORK FOR ITS MANAGEMENT?



Source: United States Environmental Protection Agency (2018) Particulate Matter (PM) Basics

The Queensland and Commonwealth Governments set criteria for background (ambient) air quality, based on independent national and international studies, to ensure the ongoing health and wellbeing for communities and the environment.

At the Commonwealth level, the National Environment Protection Measure (NEMP) for Ambient Air Quality establishes standards for a range of emissions, including dust particles. These standards have been adopted under Queensland law and are provided in the Environmental Protection (Air) Policy 2008.

The Air EPP specifies air quality indicators and objectives for the air environment of Queensland. In addition to reporting in accordance with the requirements of the Ambient Air Quality NEPM, the Queensland Government has adopted the Ambient Air Quality NEPM standards for the six criteria air pollutants (including PM10) and the advisory reporting standards for PM2.5 as objectives in the Air EPP.

WHAT FACTORS CONTRIBUTE TO COAL DUST EMISSIONS?

Coal dust emissions generated in the rail corridor are the result of three general activities:

1. Coal handling
2. Wind erosion of the exposed surface of coal in a wagon
3. Spillage of coal into the rail corridor and subsequent wind erosion / re-entrainment

MANAGING TECHNIQUES FOR CONTROLLING RAIL COAL DUST EMISSIONS

The following management measures will be considered during the design phase of the project:

Preventing coal dust emissions from handling

- ▶ Ensure coal moisture content is above the dust extinction moisture level (DEM)
- ▶ Conduct loading or unloading within a shed or building with a fabric filter dust collection system

PREVENTING WIND EROSION OF COAL IN THE WAGON

- ▶ Profiling the loaded coal wagon surface to reduce coal dust lift-off
- ▶ Apply chemical suppressant / veneer* to the coal surface of a loaded wagon to reduce coal dust lift-off
- ▶ Monitoring residual coal and cleaning/washing wagons after unloading to prevent residual coal carry-back to the mine

* Veneering is the application of a biodegradable polymer onto the surface of the loaded coal to form a crust that provides a significant reduction in coal dust lift-off.

AIR QUALITY SURVEYS AND MONITORING

Air quality monitoring will be undertaken during the assessment phase of the project to collect information about existing air quality conditions. During operation of Inland Rail, air quality will continue to be monitored to ensure compliance with the NEMP and EPP.

References:

qrc.com.au

epa.nsw.gov.au

WANT TO KNOW MORE?

ARTC is committed to working with landowners, communities, state and local governments as a vital part of our planning and consultation work, and we value your input. If you have any questions or comments, please let us know.

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ARTC

The Australian Government is delivering Inland Rail through the Australian Rail Track Corporation (ARTC), in partnership with the private sector.

CURRENT AS AT APRIL 2019