



FLINDERS POWER ASH DAM

Frequently asked questions

Issued Wednesday 11 January 2017

What's causing the increased dust in Port Augusta?

In late December 2016, approximately 60 mm of rain flooded parts of Port Augusta. On 30 December 2016 Flinders Power advised the Environment Protection Authority (EPA) that rainfall had created pooling and ponding on the ash dam surface, and had likely impacted the effectiveness of the dust suppressant. Subsequent to this, strong southerly winds caused dust from the ash dam to blow over the Port Augusta township.

Who is legally responsible for the dust?

Dust control is the legal responsibility of Flinders Power, and since it was announced the power station would cease operation in May 2016, the EPA placed a number of conditions on Flinders Power to ensure it met environmental requirements (see below: What are the EPA licence requirements?).

What has the EPA done about it?

The EPA has been working to ensure Flinders Power brings the situation under control as soon as possible to alleviate the impact on the community. On 2 January 2017 the EPA made arrangements to mobilise staff to Port Augusta and requested Flinders Power meet urgently to ensure immediate remedial action was in place.

On 3 January 2017 the EPA met with Flinders Power and required:

- evidence of a dust suppressant order placed for full coverage
- re-application of the dust suppression aurally, informed by aerial photography and observations on source areas of priority
- further actions to inform the community and respond to questions and concerns on immediate and long-term closure of the ash dam
- information on timing of commissioning of continuous PM₁₀ monitoring stations at the ash dam and installation for continuous air monitoring within the township (at locations approved by the EPA) water carts on roadways to suppress dust on the edges of the ash dam
- monitoring of weather conditions and proactive measures for dust suppression across the Flinders Power site
- close monitoring of polishing pond water levels, odour generation and application of odour suppressant.

Following the heavy rains and winds which reduced a dust suppressant previously applied to the ash dam, there has been strong community concern about the health implications of dust in and around Port Augusta.

While Flinders Power has begun respraying dust suppressant onto the ash dam, an [environment protection order](#) (EPO) was issued to ensure their environmental responsibilities to the community were being met.

An EPO is a formal statutory order issued under the Environment Protection Act 1993 that requires Flinders Power to take actions to prevent further environmental harm. Under the Act, it is an offence for Flinders Power to fail to comply with the requirements of the EPO. This includes:

- Re-applying dust suppressant to achieve full coverage of the ash dam in accordance with the November 2016 approved Flinders Power Dust Management Plan.
- To undertake a Root Cause Analysis (RCA) of all contributing factors that caused the recent dust event and to provide the EPA with a satisfactory report.

The EPO is also available by contacting 8204 2004 or 1800 623 445 (non-metropolitan callers) during business hours, or by [email](#).

The EPA has also undertaken the following actions:

- staff worked through the night on Saturday 7 January to set up HIVOL air sampling devices at their temporary accommodation and will be holding further discussions with Flinders Power about air monitoring at their premises
- residents adjacent to the ash dam have also kindly allowed us to set up a mobile unit on their property to collect 24-hourly samples
- the EPA has distributed community service announcements on local radio stations advising people to stay indoors when necessary to avoid dust
- community engagement staff and the EPA Emergency Response Team have been responding to phone calls and emails, providing a 24-hour service, including weekends
- the EPA has liaised with the Port Augusta Council to advise the Aboriginal Community. Community safety messages have been distributed via council networks, Aboriginal Liaison Officer, texts, Community Safety Patrol Officers, and commonwealth government officers.

The EPA has staff in Port Augusta who are available to meet with residents in person. To make arrangements please contact us on tel: 1800 623 445 or [email](#).

What is in the dust?

Dust in areas such as Port Augusta, may arise from regional dust storms, wind-blown soil materials, local traffic on dirt roads, sea salt and wind-blown material from the ash dam. During October 2016, the EPA installed its own air quality monitoring equipment adjacent to the ash dam to collect samples and to ascertain the composition of the dust. The monitoring equipment is used to collect total amount of particles suspended in the atmosphere. After sampling, the sample was sent to National Association of Testing Authorities (NATA) accredited laboratories for detailed analysis.

While any dust is potentially harmful to health and is treated seriously by the EPA, the wind-blown ash dam dust has been analysed and SA Health advises that the airborne dust contains minimal toxic metals and substances.

The ash sample was taken from next to the ash dam in October 2016. The EPA is currently taking further samples for analysis and will publish results when available.

- [Dust sample result](#)
- [Mineralogy report](#)
- [Port Augusta metals in air](#)

Is there asbestos in the dust?

Flinders Power advised that no asbestos would be contained in the dust from the dam, however the EPA treats all asbestos reports very seriously and acted immediately on advice received on 6 January 2017.

Existing dust samples were analysed under microscope following claims that ash may contain asbestos. These preliminary results confirm that no asbestos fibres are present and revealed a high level of red dust and salt crystals. To further confirm these results, six samples were sent to an independent laboratory (NATA accredited) and the [results](#) confirmed that asbestos was not detected in the samples. Five out of six samples were collected on 1 Jan 2017 in residential areas and the other sample was collected immediately adjacent to the ash dam over two and a half weeks in October 2016.

Is there a health risk?

For health advice, please visit the SA Health publication [Dust and your health](#). Residents with health concerns or questions, please contact (08) 8226 7100. This is a 24 hour call-back service, so please be sure to leave your name and number.

The EPA has been working closely with public health experts in SA Health to ensure that any potential health impacts are identified. The EPA sent its monitoring data and samples to an accredited laboratory and provided the results to SA Health for [assessment](#).

SA Health has provided the following general advice during any significant dust event:

- Stay indoors, and close windows and doors where possible.
- Avoid exposure to outdoor dust clouds.
- Seek medical advice if experiencing increased symptoms.
- Avoid prolonged or heavy exertion in areas of high dust pollution.
- Air conditioners are safe to use because of their filter systems.

Residents who are experiencing non-emergency symptoms relating to dust should contact their local GP. SA Health has contacted all local GP clinics and the majority are available for appointments. Several clinics in Port Augusta bulk bill, but if there is a gap the state government will reimburse patients for any out-of-pocket expenses.

Residents who are unable to attend their local GP clinic and who have symptoms relating to dust exposure can attend a clinic at Port Augusta Hospital between 10 am and 2 pm, where they will be examined by clinicians. The clinic began on Tuesday 10 January.

As usual, anyone requiring urgent medical attention is encouraged to ring 000 or present to the emergency department of their local hospital.

Residents who have concerns about the general impact of dust on health can discuss these issues with a public health expert by calling the SA Health hotline on (08) 8226 7100 at any time. Callers will be forwarded to a public health specialist (Monday to Friday, 9 am to 5 pm) and for after hours a specialist will call back. General information is also available on the [SA Health website](#), and has been distributed to GPs in Port Augusta.

Is it safe to drink my rainwater?

SA Health advises the dust in Port Augusta will not reduce the safety of rainwater collected from roof catchments. Please contact SA Health on (08) 8226 7100 for health-related information and advice.

Is it safe to swim in my pool?

SA Health advises that the dust will not reduce the safety of water in swimming pools and recreational pools are safe to use. Please contact SA Health on (08) 8226 7100 for health-related information and advice.

Where are the dust monitors?

Permanent dust monitors maintained by Flinders Power are located at Stirling North (Mosely Street), Lea Memorial Oval, the Pigeon Club, the Tennis Club and the Port Augusta Hospital. [Data from this monitoring network](#) is available in the form of monthly reports. In response to the recent dust event, the EPA has directed Flinders Power to increase sampling frequency from 1-in-6 day sampling to daily sampling. Data will be provided to the EPA and published on the EPA website as soon as it becomes available.

At the direction of the EPA, Flinders Power has recently installed three continuous dust monitors adjacent to the ash dam to provide real-time information to inform dust management measures during the earthworks for the long-term rehabilitation plan for the ash dam (see below). This equipment is now being calibrated and further data validation work is being undertaken.

Last year, the EPA also set up an air monitor adjacent to the ash dam at the SA Water wastewater treatment site. A sample was taken and analysed in October 2016 with an [assessment by SA Health](#). The EPA is currently taking further samples for analysis and will publish the results as soon as they are available.

The EPA has also required further changes to be made to the Flinders Power dust monitors within the community. The monitors at Lea Memorial Oval and Stirling North are being changed to provide continuous dust monitoring. Flinders Power expects delivery of the units on 16 January 2017, with installation and commissioning to occur shortly after.

Why isn't Flinders Power pumping water over the ash dam like they used to?

When the power station was operational, dust was controlled by the ongoing pumping of an ash and seawater slurry into the ash dam, producing a salt crust that effectively sealed the surface. After the power station's closure in May 2016, this pumping arrangement was changed to the application of seawater only. This eventually proved to be ineffective and alternative arrangements were investigated and negotiated with the EPA. Flinders Power then trialed a dust suppressant, which required the dams to be dry in order for the sealant to adhere.

Flinders Power undertook aerial spraying of the dust suppressant in November 2016 as an interim measure until long-term rehabilitation with soil and revegetation, in accordance with the [Station Closure Plan](#). This long-term work will take approximately six months and the dam has to be dry for the works to be completed. Dust suppressant is the best option in the shorter term.

What is Flinders Power going to do to manage dust in the long term?

Covering and revegetating is the most effective option to deliver dust management, surface water and groundwater management, and improved amenity to the entire area. The long-term plan for the ash pit is revegetating with seeds sourced locally and using soil from Flinders Power land that already sustains vegetation. Vegetation growing around the ash dam is evident of the ability for the plan to be successful in the longer term. Flinders Power has commenced laying topsoil on the ash dam in the form of 'access fingers' across the surface, which establishes the preparation work required in order to construct the final capping solution.

What about the proposal to reuse the ash to make bricks?

As the site owner, Flinders Power is the only party able to enter into a commercial arrangement for the long-term management of the ash dam including any proposals to re-use the ash into building materials. The EPA's legal authority is to ensure that Flinders Power meets its environmental obligations under its licence. The proposed long-term strategy does not preclude future re-use if a process and market is established. Any questions regarding the likelihood of this proposal being implemented should be directed to Flinders Power on (08) 8372 8605.

Where will the soil come from, and will it create more dust?

A long-term solution for the rehabilitation of the ash storage area has commenced and involves the application of topsoil, seeded with native plants and grasses, which will cover the entire ash storage area.

Flinders Power is sourcing the soil from its own site, and has sought and obtained necessary native vegetation and EPA approvals. Over 8–9 January 2017, over 100 loads of topsoil were placed on the surface of the ash dam and were pushed out to construct the first 'access finger'. Four trucks continued to operate during the week commencing 9 January.

The application of topsoil over the ash is considered the most effective process for the long-term management of the area. This work will continue over the next six months which will include the appropriate mitigation measures in place to manage dust which may be generated during the earthworks.

What are the EPA licence requirements?

The Flinders Power site is regulated by the EPA under the *Environment Protection Act 1993* for several activities of environmental significance. Since the announcement that the power stations would cease operation, the EPA placed a number of conditions on Flinders Power to ensure it met environmental requirements, including development of a Closure Plan and a Dust Management Plan for the site.

Conditions of the EPA licence include:

- Dust Prevention (S-9): develop and implement a Dust Management Plan approved by the EPA.
- Closure and Post-Closure Plan (U-251): develop and implement a closure and post-closure plan to address environmental considerations at the site. This includes, but is not limited to:
 - decommissioning and decontamination of coal burning equipment
 - removal of coal from the coal stockpile and other coal handling areas
 - ash dam rehabilitation
 - assessment and removal of chemicals and hazardous materials
 - removal of waste including appropriate disposal of asbestos.
- Ambient Monitoring and Reporting (U-124): to monitor and report ambient pollutants including TSP (total suspended particles) and PM₁₀ (particulate matter 10 micrometres or less in diameter).

[Dust management plan](#)

[Station closure plan](#)

Is this causing any groundwater contamination from the site?

Flinders Power has entered into a [voluntary site contamination assessment proposal](#) with the EPA. Included in this is the assessment of soil and groundwater which will involve extensive assessment works until the end of 2017.

A site contamination auditor has been engaged at the site to determine the nature and extent of any contamination present or remaining on or below the surface. The audit will also determine what remediation is or remains necessary for the final intended use of the site.

Site contamination consultants engaged by Flinders Power have undertaken groundwater investigations across the sites to target potential contamination source areas. There are more than 700 groundwater monitoring wells within the site and in Port Augusta to the north.

A number of groundwater monitoring wells have been installed around the ash dam, coal-loading areas, railway line and in the wider area with chemical analysis including heavy metals. In all, more than 2,000 soil and water samples have to date been taken. Elevated concentrations of petroleum hydrocarbons identified at the site due to spills and underground storage tanks. Metals and nutrients were identified in the groundwater around the ash pond in 2014. The consultants consider this to be due to leaking sewage ponds.

The site investigation work and audit report will be placed on the EPA Public register and made available on the EPA website once complete.

All assessment and identification of remediation requirements will be undertaken as part of the site contamination assessment proposal and the audit.

Will the dust suppressant get into the waterways and cause contamination?

Prior to use, the dust management via suppressant was assessed and determined as unlikely to cause any impact in the marine environment. The dust suppressant contains acrylic polymers, and the EPA's understanding based on published studies is that this material has low degradation and bioaccumulation potential.

Though the dust suppressant was washed from the surface of the ash dams in the recent heavy rains, it is expected that it would be contained within the ash dam and polishing pond areas. EPA water quality officers are on-site and are inspecting Hospital Creek to ensure it has not affected waterways.

What about Bird Lake?

In the late 1960s, Port Augusta City Council asked the power station operator to divert water to create an artificial lake on dry clay pans, to improve the appearance of the entrance to the city, leading to the creation of Bird Lake.

In the mid-1970s, midge flies became a problem due to their breeding in the lake. Drying out was tried, but decomposing algae caused odour problems. The solution was to manipulate the salinity of the water in Bird Lake, to make it too salty for midge flies to breed in.

Now that the power station has closed and sea water is no longer being used by Flinders Power to reduce dust from the ash dam, Bird Lake is drying out and odour has become an issue. Any solution must also prevent any freshwater (eg rainfall or stormwater runoff) from ponding in the dried-out lake bed, so that midges do not become an issue again.

The Port Augusta City Council is leading the process of identifying and implementing a solution to the drying out of the lake, and working to identify a long-term solution to this issue, with support from the EPA and the state government task force.

For further information please contact:

Telephone:
(08) 8204 2004

portaugustadust@epa.sa.gov.au
www.epa.sa.gov.au

(Click on the link if viewing this publication online) or follow the link at the bottom left hand corner to Port Augusta Power Station Site.

To request any of this information in the post, please do not hesitate to call us on the above number.

For health related information please contact:

Telephone:
(08) 8226 7100

Website: www.sahealth.sa.gov.au

(Click on the link if viewing this publication online, or type into the search window 'dust Port Augusta'.)

SA Health also has a fact sheet on dust and advises to stay indoors, use air conditioners wherever possible, and seek medical advice if you are experiencing any problems.

