



Over 30 Years in Providing **Odor Control Solutions**

Air & Waste Management Association WORKSHOP
Odour: Science and Technology Advances
Presentation: Asphalt Odour Case Study

ASPHALT ODOURS

Transient Odours:

Driveway,
patching projects,
highway resurfacing

Permanent / Semi-Permanent Odours:

Asphalt Manufacturing and Regrinding Facilities
Portable Sites at large projects (1-2 years)

Permanent Odour Generation



Odour Generation

The permanent or portable facility heats the asphalt / bitumen to high temperatures with boilers to make the bitumen flowable for easy mixing with the aggregate.

The hot bitumen/aggregate blend, called **Asphaltic Concrete**, is loaded into trucks and spread on roadways for compaction.

- Material is stored and transported at 150C (300F)

Odour Generation

Treatment at the source of the odour is the most efficient.

Point source treatment,

Allows the product to come in intimate contact with the odours

Gives the maximum time for treatment before reaching the nearest sensitive receptor

Why do they need treatment?

Increased Odours
Or
Perception of Odours

- Increased production
- Decreased distance (encroachment)
- Weather conditions

Why do they need treatment?

Regulatory Pressures

- Community concerns frequently result in complaints to the Ministry of Environment.
- Encroachment on an existing plant moves the Nearest Sensitive Receptor closer (2km vs 500m)

“Good Neighbor” concerns

- Most companies are proactive, trying to be invisible before complaints begin

Why do they need treatment?

Regulatory Pressures

MOE has the power to mandate

- ↓ production
 - ↓ tonnage
 - Restrict hours of operation
 - Fines
 - Shut down the facility
-
- An abatement plan and treatment can prevent enforcement measures

How can we solve the problem?

The facility requires:

Highly reliable systems 24/7

Proven technology

Environmentally friendly

Safe

Cost effective

Permanent neutralization of odour

- Non-reversible reaction
- Not a masking agent or perfume
- Specific treatment for the problem

How do we attack the problem?

Site evaluation

- Production
 - Schedule
 - Volume
- Trucks
- Review key areas releasing odours
- Determine the best approach
 - Systems
 - Solution
- Take samples if required
- Examine odour testing results if available

Provide a logical, systematic Odour
Management Plan

Review with the company and MOE if required.

Odour Generation

Two key areas treated are:

- the stack off the furnace
- the truck loading area where trucks fill up with hot asphalt.

Stack Treatment

No longer a local problem

- High stacks can send odours up to 2km downwind

Constant during construction season

- may be all year depending on weather
- may be all day and all night

Affects quality of life

- People want to be outside
- People will feel they cannot open their windows at night

Encroachment

- More people
- Closer to the facility

Stack Treatment

- The odour control system runs continuously when the stack fan is on.
- Power to the odour control system is tied to the stack fan power.
- Provides continuous treatment when odours are being released

Truck Loading Area

Closed Position between loads





The system is tied to the power of the door open switch

Nozzles are on the beams and the system will spray as soon as the door is opened.



- It takes about 10-15 seconds to load a truck

The system runs for 1 minute and 15 seconds each time a truck is loaded.

This extra minute of treatment after loading addresses any lingering odours



AirSoluton™ 9316 Odor Counteractant – For odors related to high temperature drying of organic materials such as grains, yeast, beans and leaf products. A unique formulation with increased resistance to heat source making more stable in higher temperature applications.

The odor counteraction is a series of absorption and decomposition processes converting odor molecules into non-volatile compounds reducing both their odor concentration and intensity. AirSolution 9316 is optimized to eliminate the odors created by higher temperature drying processes. AirSolution 9316 is non-toxic, non-corrosive in nature, making it ideal for a wide variety of applications; it is safe to handle, fog or spray in areas where there will be human activity.

Instructions for Use

Application Rates:

Topical: Dilute Super Concentrate 10:1, then dilute the Concentrate 50:1

Fogging Treatment: .3 to .5 oz. of Concentrate per nozzle per hour. (10 - 15 mL of Concentrate per nozzle per hour)

In-duct Treatment: 1oz. of concentrate per 1,500 - 3,000 CFM of airflow per hour. (6-12 mL of concentrate per 1000m3/hr)

Misting Treatment: Dilute Super Concentrate 3:1 to make concentrate. Concentrate may be diluted 50:1 to 500:1

Application Method:

Fogging / Misting
Application Areas: : Decomposition and decay in open areas, such as odors from rotting grains, organic waste piles, rotting silage and decaying green waste. Also recommended for Perimeter Treatment for organic odors from industrial wastewater lagoons, Manufacturing sites, Roof and wall fan discharges, Processing areas, Lagoons, Other open spaces and contained areas

- Mix product with clean potable water before use.
- Mixed product should be used within 30 days for optimal performance.
- Guidelines for calculating chemical usage are estimates only. Actual usage is affected by odor concentration, temperature, particulate levels, and equipment type etc.

Ordering Information: AirSolution™ #9316

Code	Size	Wt.	Dimensions
50-AIR-8125-B12	12 x 1L 5.28 gal	15.9 kg. 35 lbs.	28 x 38 x 20 cm 11" x 15" x 8"
50-AIR-8125-C20	20 L 5.28 gal	21.8 kg. 48 lbs.	23 x 28 x 38 cm 9" x 11" x 15"
50-AIR-8125-D20	200 L 52.8 gal	228 kg. 500 lbs.	57 x 57 x 89 cm 23" x 23" x 35"

* other packaging sizes available upon request. Minimum orders apply.
 * available in super concentrate. Please call to inquire.



AirSolution 9316

Ideal for Ethanol Plants

Odor Neutralizer Concentrated Liquid Air-Contact Technology Safe & Effective

Applications

- Ethanol Plants
- Distilleries
- Breweries
- Coffee Roasting
- Yeast Drying
- Cooking Exhaust Stacks
- Manufacturing sites
- Roof and wall fan discharges
- Processing areas
- Other open spaces and contained areas

Types of Odors Treated

- Burnt Odors
- Acrid Odors
- Nuisance Organic Odors
- Organic Acid Odors
- Fermentation Odors



Typical Installation for Automated Treatment

Fully automated system

Serviced monthly



Perimeter systems



Mobile Treatment



Topical Treatment



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