

SHIRE OF MUNDARING

INTER-OFFICE MEMORANDUM

FILE REF: PE.OHS 4
TO: SAFETY & TRAINING ADVISOR
FROM: MANAGER HEALTH SERVICE
DATE: 31 MAY 2007
SUBJECT: USE OF MULCH, LEGIONELLOSIS PREVENTION

Sharon,

Further to the meeting of the Occupational Safety and Health Committee meeting held on 17 April 2007 I advise as follows re the above matter.

Firstly in relation to the report of an employee presenting with a rash around the neck after loading mulch. I have been able to obtain only limited information on the actual circumstances suspected of being the cause of that rash.

From the information I have obtained I understand that the mulch concerned was being loaded into a tipper truck by use of an open bobcat. As the bobcat cab is open at the front and the operator is relatively close to the bucket. I further understand that dust from the mulch came into contact with the employee as the mulch was lifted over the sides of the tipper and then dropped into the tipper. I therefore am of the opinion that the rash was most likely due to Allergic Contact Dermatitis or Contact Urticaria (Hives) arising as a result of an immune response to an allergen/chemical (the dust).

In that regard I would recommend that use of the yard loader tractor which has a fully enclosed airconditioned cab should be used to load or move bulk mulch or soils. The performance capability of that airconditioning unit should also be determined in relation to the filtration of outside air brought into the cab through that unit to ensure that dusts and aerosols are excluded from entering the cab.

Legionellosis or Legionella infection is a disease of the lungs caused by inhalation of *Legionella* bacteria. Legionella infection is more common in middle aged and older persons and those whose immune systems are weak. Factors that increase the risk of Legionella infection include smoking, pre-existing lung disease, steroid use, kidney disease, excessive alcohol consumption and pre-existing diseases that compromise immunity.

The Legionella bacteria can be transmitted through the air by inhalation of aerosols created when mulches, composts, garden soils, potting mixes or soil conditioners are handled. The conditions giving rise to the release of aerosols and the rapid multiplication of Legionella bacteria, would be when the material concerned being

handled/moved, contains moisture without being saturated and is of a warm temperature respectively.

In terms of Personal Protective Equipment (PPE) a respirator with a cartridge suitable for organic vapours and dusts should be used when handling mulches. Dusts associated with mulches might not be capable of lodging within the lungs upon inhalation however may carry harmful bacteria that could cause disease or irritation by other means. Mulches should also be thoroughly wetted down prior to handling. Gloves should also be used if mulch is to be directly handled. The decision as to whether a respirator should be used by an employee moving mulch, (by use of the abovementioned yard loader) should be made after assessment of the performance capability of the cab airconditioning unit on that loader.

Regards

Adrian Dyson