

I have put a few of my initial thoughts down on the Diphoterene vs. Drench showers and eye wash stations after the discussion at the Health and Safety meeting and studying the cost benefit analysis document. The document is fairly raw though hopefully some of the information may prove useful for item 5 of today's agenda. You may find you do not agree with my conclusions!

Replacement of Safety Showers and Eyewash Stations in the Chemistry Building with Diphoterene.

Legionella

Within the School we have 26 showers and a similar number of eye wash stations. Currently there is a School policy that each of these should be run for two minutes every two weeks. A record should subsequently be made showing when the shower/eye wash station was tested and by whom. This is to ensure that legionella is not allowed to build up in the stagnant water contained within the pipes of the showers and eye wash stations.

The eye wash stations are relatively easy to test. However the showers are much more difficult. Due to the design of the building and for historic reasons, there are no open drains in labs so the flushing of showers is done using a bucket and hose contraption, which often requires someone having to use a stepladder to rig up the test and waiting for the shower to stop dripping thus making. This activity has the following hazards:- risks of working at height, manual handling, legionella and slips trips and falls. Though it should be noted there have been no recorded accidents as a result of under taking this activity.

It has become apparent from Health and Safety inspections that numerous showers and eye wash stations are not being run in accordance with the School's policy.

As part of any decision I believe it is important that we consider how we control against legionella within the School's laboratories.

Diphoterene

Chemical burns treatment

Within the School Diphoterene has been used for a number of years in the teaching laboratories and administered by first aiders. First aiders have found this solution very effective in the treatment of chemical burns. A number of published papers are also in favour of diphoterene being used instead of a mass dilution treatment using water.

Thermal burns

Diphoterne is currently not recommended for purely thermal burns. Combined thermal/chemical burns from chemicals used at high temperatures may well benefit from initial Diphoterine decontamination. It is recommended by the manufacturer to first decontaminate the chemical burn and then to treat the thermal burn.

Possible Options

1. Replace all showers and eyewash stations with Diphoterine. Re-plumb piping to showers and eye wash stations to eliminate need for running showers and eye wash stations.
2. Replace all showers with Diphoterine . Re-plumb pipes to showers to eliminate need for running showers . Keep eye wash stations. Implement suitable policy and monitor for control of legionella within the School.
3. Use Diphoterene in laboratories along side Drench showers and Eyewash stations. Implement suitable policy and monitor to for control of legionella within the School.
4. Keep both showers and eye wash stations. Implement suitable policy for monitor and control of legionella within the School.
5. Change nothing. Keep showers and eye wash stations and change nothing on how we control and monitor legionella from drench showers and eye wash stations.
6. Assess each location where a shower and eye wash station is currently installed. Decide on a case-by-case basis if the showers are a benefit or a hindrance.

There will be others that I have not thought off.

Option 1

Advantages

Solves our risk of legionella from drench showers and eye wash stations.

Provides a good alternative for the treatment of serious but smaller chemical burns (less than 20% of the body) Use of Diphoterene has results in reduced damage and scarring from injury. Consequently recovery time from injury tends to be reduced.

No longer any need to run eye wash stations and drench showers every two weeks.

Diphoterine is very portable and can be taken to an injured person, the person does not have to be taken to it.

Disadvantages

Provides less protection for thermal burns. Is not recommended by the manufacturer for thermal burn. It was suggested for thermal burns at the our committee meeting a tap and piece of rubber tubing could be used instead of a drench shower. This may work but would it be as good has a drench shower that is designed for this very purpose?

Diphoterene will only be available in a finite quantity. So could run out.

Diphoterene may be slower to cover large areas of the body than a drench shower.

Diphoterene has two year shelf like. Will required monitoring to ensure replaced at appropriate time.

Option 2

Advantages

Provides a good alternative for the treatment of serious but smaller chemical burns (less than 20% of the body) Use of Diphoterene has results in reduced damage and scaring from injury . Consequently recovery time from injury tends to be reduced.

Solves the risk of legionella from stagnant water in drench shower pipes.

No longer any need to run water in drench showers every two weeks.

Diphoterine is very portable and can be taken to an injured person, the person does not have to be taken to it.

Disadvantages

Provides less protection for thermal burns. Is not recommended by the manufacturer for thermal burns. It was suggested for thermal burns at the our committee meeting a tap and piece of rubber tubing could be used instead of a drench shower. This ay work but would not be as good has a drench shower that is designed for this very purpose.

Diphoterene will only be available in a finite quantity. So could run out.

Diphoterene may be slower to cover large areas of the body than a drench shower.

Legionella controls need to be looked out. Suitable policy put in place and monitored. To control risk of legionella from the eye wash stations.

Diphoterene has two year shelf like. Will required monitoring to ensure replaced at appropriate time.

Option 3

Advantages

This option provides the best cover to chemical and thermal burns. With both Diphoterene and Drench showers and eye wash stations available.

Diphoterine is very portable and can be taken to an injured person, the person does not have to be taken to it.

Disadvantages

Legionella controls need to be looked out. Suitable policy put in place and monitored. For both Drench showers and eye wash stations.

Need to still run showers and eye wash stations every other week.

This is the most costly option financially.

Diphoterene has two year shelf like. Will required monitoring to ensure replaced at appropriate time.

Option 4

Advantages

No reduced protection to treatment of thermal burns.

No additional costs

Disadvantages

Legionella controls need to be looked out. Suitable policy put in place and monitored. To control legionella in eye wash stations and drench showers.

Using mass dilution with water is not as efficient a treatment has diphoterene for chemical burns.

Option 5

I believe that this option is simply not suitable. The failings in our control of legionella needs to be addressed. To simply do nothing we risk being negligent.

Conclusion

My personal preference is option 3. The purchase of some diphoterine to go along the existing drench showers and eye wash. I would suggest the smaller quantity being purchased to go alongside the showers. We should perhaps also consider diphoterene provision for laboratories that have no drench shower currently installed (Where the activities undertaken warrant some provision). It

would be a big shame to remove purpose made fully functional safety equipment from the laboratories.

The diphoterene if bought in the smaller quantity to complement the shower and eyewash stations would have an initial start up cost of £962 (based on the smaller quantity of diphoterene being purchased). There would however need to be an additional outlay for replacing any diphoterene that was used in first aid treatment.

My second preference would be for option 6, where each shower and eye wash stations is considered individually.