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**Scottish Employment Injuries Advisory Council Bill**

**Note to the Social Justice and Social Security Committee**

This note is intended to assist the Committee with its consideration of the Employment Injuries Advisory Council Bill.

I am the spokesperson for the Alex Ferry Foundation, a charity and campaigning organization set up to support workers in their struggle for good workplace health and safety. It also helps to educate our members on the very real dangers of industrial dust and fume, with a current emphasis on welding fume, dust and the exhaust gases produced by all our welding and cutting processes.

The World Health Organization estimates that there are 9-12 million deaths worldwide each year caused by air pollution (gases, fumes and ultra- fine particulate matter PM.2.5 and smaller). Public Health England claim that between 28-32,000 people are killed by ambient (i.e. background) air pollution every year in their jurisdiction alone. In the workplace setting UK- wide, the HSE (Health and Safety Executive) say that 13,000 workers are made ill by their work every year, 12,000 of whom contract an industrial lung disease/condition that goes on to kill them. For every death at work, 117 workers are made ill by their work, most of this is lung related. The workers that the CSEU represent are exposed to very much higher levels of pollutants than the general public and hence the reason for our campaign.

In 2017 the WHO agency the International Agency for Research on Cancer (IARC) declared weld fume and dust a Group 1 Carcinogen to humans and in 2019 the UK Government adopted this definition into Health and Safety Legislation. HSE LEGISLATION SAYS THERE IS NO SAFE WORK PLACE EXPOSURE LIMIT FOR A CARCINOGEN.

It is currently thought that 154 Welders and related Trades die of lung cancer annually, but this is not the only cancer risk these groups of workers are exposed to. Weld Fume and Dust is implicated in the onset of cancers of the nasal septum, throat, oesophagus, stomach, bowel, bladder and kidneys. These cancer risks are just the tip of health risk iceberg that our members are exposed to. The other risks include chronic lung diseases caused by the exhaust gases produced by all hot working tasks. The gases include nitrogen dioxide, ozone, sulphur dioxide, carbon dioxide, carbon monoxide and argon. Exposure to these gasses over time produces an immune- suppressant effect on the lungs, killing and reducing the numbers of T cells and macrophages that protect the lungs from viruses and bacteria. Please note, nitrogen dioxide and ozone are used by the food packing and processing Industry to kill single cell pathogens. The white cells that protect our lungs are also single cells.

There are also an number of very serious chronic health conditions caused by the inhalation/ indigestion of metalized fume of particulate matter, PM2.5 and smaller, these metalized fumes include aluminium, iron, manganese and copper. These 4

metals are neurotoxic and are implicated in the development of conditions such as Alzheimer's and Huntington's disease. Manganese causes a condition called Parkinsonism, an industrial form of Parkinson's disease. Nickel and chromium are both asthmagens and carcinogens and molybdenum is also a carcinogen. These ultra-fine particles are able to enter the blood stream through the lungs where they cause an immediate rise in blood pressure (inflammatory response). They also pit and score the lining of the blood vessels allowing cholesterol to adhere to the sides of the blood vessels inducing narrowing of the arteries and heart disease. The particles are so infinitely small that they can cross both the blood- brain barrier and the cell membranes of all the major systems of the body. Once in the body's cells they can kill the cells' mitochondria (the cells' power plant) , they also attack and destroy or damage the cells' telomeres. Telomeres are the caps at the end of the double helix of DNA where all the cells chromosol genetic information resides. Damaging or shortening of the telomeres can result in premature cell death and a cut in human life expectancy or faulty cell division that can lead to the development of cancers.

The neurotoxic effect on the brain and central nervous system happens in much the same way as outlined above. Both aluminium and iron are highly oxygen- reactive and all the brains of Alzheimer's victims have shown elevated levels of these metals post- mortem.

Finally, we come to the endocrine system, the system that controls the production of hormones and insulin. Who would have believed that exposure to both ambient and industrial air pollution could be linked to the development of type2 Diabetes. In much the same as all the other systems of the body are attacked and compromised by PM2.5 Pollution, so too is the endocrine system leading, in many cases, to insufficient production of insulin.

Many of the health conditions outlined above are usually put down to lifestyle choices, when a working man or woman goes to their doctor, they are invariably asked 3 questions; Are you still drinking? Do you smoke? and How many pies/curries do you have in a week? This patronising claptrap from the medical profession needs to be challenged. At no point are you asked about your working environment or housing conditions which, as indicated above, are crucially important to the health of working people. That is why we in the CSEU, through the Alex Ferry Foundation, have launch the Breath Safe Campaign to try and raise both awareness and understanding of health conditions outlined in this summation. Most importantly, we want to stop our members being poisoned by their work.

I will end on this incontrovertible fact, the welders I represented in my yard die, on average, between the ages of 71 to 75 years. Many of them having contracted a chronic debilitating health condition which takes away their ability to enjoy an active retirement.

Thank you for taking the time to read this submission. I hope it sheds some light on these very serious issues.

John Brown, GMB on behalf of the Alex Ferry Foundation (C.S.E.U.)

Sources;

HSE Breathe Safely, HSE Dust Kills ,HSE COSHH Reg 7, Royal Society of Chemistry, the Lancet and many Peer- reviewed papers from Science Direct.