

BCCF - RESPONSE TO THE DRAFT ENVIRONMENTAL PERMIT FOR THE PROPOSED STEWARTBY WASTE INCINERATOR EPR/WP3234DY

STATEMENT OF THE RELEVANCE OF THESE OBJECTIONS TO THE CORE RESPONSIBILITIES OF THE ENVIRONMENT AGENCY 1-4.

1 Does the Environment Agency (EA) have a statutory responsibility for controlling the industrial pollution of the environment and has it the technical, legal and enforcement powers to so do? YES (EA Our Ambitions 2016-2020. "cleaner air")

2 Does the EA have stated objectives related to care of the environment on behalf of the human population? YES. (EA Our Ambitions 2016-2020 "A cleaner, healthier environment which benefits people....")

3 Should the EA help communities? YES (EA Our Ambitions 2016-2020. "help local communities to achieve the outcomes they want".

4 Do the EA intent to help? YES (EA Our Ambitions 2016-2020. "we go the extra mile for the people and places we serve".

SPECIFIC OBJECTIONS TO THE ISSUE OF A FULL ENVIRONMENTAL PERMIT (EP) TO THE EVENTUAL INCINERATOR OPERATORS, BASED UPON THE CONTENTS OF THE DRAFT ENVIRONMENTAL PERMIT 5-8.

5 Our primary objection is to the creation and discharge into the atmospheric environment of particulate pollution by the proposed mass burn incinerator. In particular we are concerned with the levels of hazardous 2.5 micron particulates (primary and secondary) generated by the combustion process which will be discharged into the atmosphere and distributed dependent upon atmospheric conditions.

For such particulates the World Health Organisation states that "There is no evidence of a safe level of exposure or a threshold below which no adverse health effects occur". DEFRA's Air Quality Expert Group (AQEG) agree with this assessment. The Committee On Medical Effects Of Air Pollution (COMEAP) add that "clear evidence for significant contribution to human mortality".

In the general environment pm 10s are 'mechanical in origin, produced by friction ,cutting, rubbing grinding. Wheels on roads, ploughs in fields and manufacturing processes. The pm 2.5s normally arise from combustion processes and are often composed of un-burnt carbon. It is unfortunate that such small carbon particle surfaces are ideal for other materials to be absorbed upon. In the post combustion stages of an incinerator Dioxins, Furans, Heavy Metals and other toxic materials can lace these already dangerous particles with added dangers.

The state of the science is not yet able to quantify the share of the health consequences that can be assigned to each component of this mix but in any event pm 2.5s enter the lungs pass into the blood and accumulate in the bodies tissue and organs! The EA state in the draft EP that the not yet fully published Imperial College SASU report on the analysis of the impact of incinerator particulate pollution on human health suggests that there is no significant problem . This attempt at reassurance is flawed as it fails to acknowledge that the Imperial College research (as far as can be judged by the content published to date) has focused upon the pm 10 (10 micron) particulates which are of very little medical significance compared with the pm2.5s. Furthermore the pm 10 particles being large and with a significant mass do not behave in

the atmosphere as pm 2.5s do, The pm10 particles fall out relatively rapidly as a dust closer to the source of origin, contaminating a smaller footprint, Even if they are inhaled they are 'swept out' of the lungs without entering the bodies tissues. In contrast pm 2.5s are distributed in the atmosphere like any gas would be and for the purposes of understanding are treated by DEFRA's AQEG as a gas.

This means that any study such as Imperial College's which investigates pm 10 is making little contribution to our understanding of the concentrations, distributions and hence risks of pm 2.5s. Any suggestion that the distributions and concentrations of pm 10s can be a proxy for that of 2.5s is scientifically and technically incorrect and misleading.

7 As the dangers of pm 2.5s are beyond dispute the issue for this incinerator becomes one of the levels and distributions of pm2.5s discharged into the environment and the health consequences for those who inhale them. There are many pm 10 sampling stations across England and very few for pm 2.5s. There are substantial technical difficulties associated with accurate, repeatable, standardised sampling and analysis of pm 2.5s despite ISO standards published for them. It is normal to express pm 10 and 2.5 concentrations by mass NOT particle numbers. There is an interesting comparison to be drawn here with that other well known atmospheric pollutant asbestos where it is fibre numbers that are considered the clinically significant hazard level measurement. **It is important to understand that a pm 10 particle sphere is four times the diameter of pm 2.5 particle sphere. But that it has 64 times the volume and mass! This means that when TOTAL particulates are sampled the mass of the sample will under represent the NUMBERS of pm 2.5s as the bulk of the mass will be due to the very much fewer but much more MASSive pm 10s. This is most important when statements regarding incinerator bag filter efficiencies are made. A filter will much more easily trap the larger pm 10s and due to their large mass will record a high particulate (mass) capture. It may well be that a 95% filter efficiency rate is superficially reassuring but masks the fact that the very much smaller pm2.5s may not be trapped so easily and even the 'missing' 5 % of mass will represent a huge NUMBER of 2.5 particles released to the environment. Mass can therefore significantly misrepresent the true levels of expose to the very small light and highly dangerous pm 2.5s.**

8 In the past EA has publically supported the performance figures provided by incinerator bag filter manufacturers and operators (while not addressing the mass/ diameter considerations stated above). This has occurred while INTERNAL EA communications openly acknowledge that the bag filter capture rates are much lower than those stated. Private Eye reported that while an EA leaflet stated a 99% efficiency for bag filters an EA officer wrote that they will only be 65-70 % efficient for pm 2.5s up to pm 10s and that for " particles below the diameter of pm 2.5 microns the bag filters are only 5-30% efficient". (Newhaven Incinerator).

SUMMARY

Taken in total it is our case that the health dangers of pm 2.5s, the uncertainties regarding incinerator bag filter performances and the failure of the UKs primary safety research study to even consider 2.5s adds up to a situation in which the safety of the public down wind of the proposed incinerator can not be assured. Therefore in accordance with the objectives and ambitions of the EA (as stated 1-4 above)a full environmental permit should not be issued in this case.