



Consultee Response to SITA Additional Information

Consultee
St.Dennis Anti Incinerator Group (S.T.I.G.)

Air Quality



In Respect Of
Planning Application to Cornwall County Council
Application No. 08/00203/WAS

Air Quality

After close perusal of both SITA's planning and permitting applications, their Regulation 19 response gives much cause for concern.

SITA continues its litany of anomalies, errors and oversights.

Even the simplest of calculations seems beyond them - is the proposal for a 240,000 tpa Mass Burn Incinerator or a 252,000 tpa one?

If they are unable to cope with the simplest of facts and figures, what confidence can the people of Cornwall have that they are fit to run a Mass Burn Incinerator for 30 years?

April 2009 sees the advent of the Food and Environment Research Agency (FERA) whose remit will include plant and crop protection, food chain safety, environmental risk assessment and crisis response. This 'new' department will be in charge if Cornwall has a **Dioxin crisis** such as experienced in Ireland last year. That event saw 130,000 pigs and 4,500 cattle **slaughtered and excluded** from the food chain and (to date) approximately 50 million Euros paid out in compensation. Incineration produces Dioxins. Given that there are cleaner and greener waste treatment technologies, **is it justifiable to risk the future of Cornish farmers and food producers through the perception that their goods are no longer pure and wholesome?**

It is noted that in the event of "a process failure or mechanical upset that leads to a significant change in the process emissions, it is the responsibility of the operator as a precautionary measure to either reduce the load of the plant or shut down."

How 'significant' will such changes need to be?

How many members of staff at the plant will have the authority to make such decisions?

How long will these 'changes' be permitted to continue before such decisions are made?

Only continuously monitored emission exceedances will trigger an 'automatic' shut down.

While it may now be possible to continuously monitor Dioxin emissions, it seems clear from all of SITA's submissions for the Cornwall Mass Burn Incinerator, that they have no intention of doing so here.

Therefore, Dioxins (which would only be monitored twice a year) could be polluting the environment for a considerable time before any measures or action can be taken.

Air Quality

If the reason for not continuously monitoring Dioxins is one of cost, what other safeguards or mitigations will be dismissed on the same grounds?

Can **Cornwall** afford to let SITA (or indeed any business) put profit before people and the environment?

SITA has, yet again, failed to recognise that exceedances are typical in the incineration industry and that even with the best will in the world accidents happen, bag filters split, mechanical failure and human errors occur.

This being the case, and given the sensitivity of both the human and ecological environments that are in such close proximity to the proposed site, and SITA's appalling Health & Safety record, its record on the EA Pollution Register and the fact that the Environment Agency has identified "symptomatic mis-management" at other SITA facilities in the UK, how confident can the population of mid Cornwall be that a sufficient duty of care will be taken on their behalf?

SITA maintains that their emission modelling can be relied upon. However as long as there remains no provision for a 'Dirty MRF' in their planning, the reality is that the **chemistry of emissions will always be unknown** and also un-predictable and therefore so will any possible effects.

With regards to air quality degradation resulting from the construction process, it is of great concern that SITA have utilised the C.J. Baughan study and the DTLR report 562 (29 and 15 years old respectively). As greater knowledge now exists on the effects of the fine particulate matter produced by all construction and industrial processes, surely there exist more recent studies that could and should have informed SITA's application?

Were no reports done in respect of the A30 construction that would have been very applicable in this case?

There remains no clarification regarding the routing of construction traffic and therefore how can the pollution effects and the 'receptors' be calculated to anyone's satisfaction?

It is also somewhat arrogant and dismissive of the Council's concerns, in that rather than embracing a duty of care approach and furnishing the County Council with a hard copy of these studies, SITA merely directs it to an internet link from where it can be purchased.

Air Quality

On the subject of duty of care, and in the spirit of 'good neighbourliness', have SITA done the decent thing and informed the people who live in Primrose Cottage, Little Treviscoe, of the **79 PM10 exceedances** (as much as 75% of which could be PM2.5's and smaller) **they had in just one 8 month period?**

SITA continues to be wholly dismissive of the **pre-existing pollution** that is endured locally. Not just from Clay Dust, but also the Power Station, electricity pylons and transport networks.

SITA has not considered that other facilities may be built and operational before any incinerator would be. A case in point is the proposal at Penare Farm in Fraddon. At Penare Farm they intend to produce Bio-Gas from a combination of Pig Waste and waste food products. This is a far more benign way of generating energy from waste. It will however still emit Oxides of Nitrogen into a Nitrate Vulnerable Zone. Therefore 'critical load' may be breached on Goss Moor even without the addition of a Mass Burn Incinerator.

If this proves to be the case, the Environment Agency will have no choice but to refuse SITA an operating permit. If SITA have blindly rushed ahead and built the plant in the belief they will receive a permit, Cornwall will be left with an un-usable white-elephant (SITA having stated that the plant cannot be refitted for alternate technologies). The EA could also revoke any permit that was granted between construction and operation.

If it is not possible to refit the plant for use by other technologies, will it be possible to adjust/refit the equipment installed in the proposed development, if (as it looks increasingly likely) EU Directives come into force that tighten emission limits and/or impose emission taxes?

SITA gives consideration to chemicals that have high rates of emission but seems to ignore those that have greater toxicity and are more polluting - in both human and environmental terms.

Locals are only too aware that the stack height was increased to 120 metres to 'protect' butterfly habitats and not human ones - further engendering a sense of worthlessness.

According to SITA all emissions can be considered in isolation - there is never any combining or synergy of chemicals in their calculations.

SITA seems to ignore basics truths - that chemicals inevitably react together and can produce other potentially more 'toxic' ones.

Air Quality

Given the 'sensitivity' of Goss Moor and the "Nitrate Vulnerable Zone" classification, and the attention they give to Nitrogen emissions, it does seem somewhat strange that SITA has paid little attention to **AMMONIA**.

Nitrogen emissions from incinerator stacks are in the form of Oxides of Nitrogen and Ammonia. The latter is not a direct product of incineration, but rather it is used as an agent to 'neutralise' acidic gases.

The Oxides of Nitrogen combine with water vapour, to form weak nitric acid, and that falls to earth as 'acid rain', while the Ammonia combines with water vapour to form Ammonium Hydroxide (ammonium).

Once on the ground, the nitric acid forms nitrates, by combining with alkaline minerals in the soil, and the ammonium hydroxide enters the soil as ionic radicals (NH₄⁺). In the ground, nitrogen fixing bacteria turn these radicals firstly into nitrites and then into nitrates.

In poor soils, these nitrates can be very useful in stimulating plant growth. However, if the soil is over-fertilised, either artificially or through excess manure, then a build-up of nitrates occurs.

In boggy conditions, such as exist at Goss Moor, where the water table is only just below the surface, the excess nitrates leach into the water system.

In brooks, streams and rivers, these nitrates are responsible for the death of many fresh water and marine species. This is because the nitrates react by deoxygenating the water, and this in turn alters the structure of haemoglobin to prevent it carrying enough oxygen in these aquatic species. (This would also be true in the human population if drinking water were to be affected in such a way.)

The most noticeable effect of nitrate pollution of water courses, is the growth of green algae bloom on the surface.

The important points to note from these facts are, that in the case of pollution from incineration and the deposition to the surrounding land (and inevitably to water), **both NO_x and Ammonia eventually produce nitrates**. Therefore, they **MUST** be considered in combination, and given the already fragile status of the 'critical load' at Goss Moor, it would indicate that this load value would inevitably be breached at this sensitive, protected site.

As SITA have seen fit to use conjecture and extrapolation in other areas of its application, why could it not have offered data using models produced using meteorological data gathered from St. Dennis? It may not have met EA guidelines but would have allowed both residents and councillors a better understanding of the actual weather patterns the Mass Burn Incinerator would experience at the site and the emission dispersion resulting from it. Especially as the data that **HAS** been included from **St. Dennis School** shows **5 PM10 exceedances in less than a year** (and this is with 46 days of "lost" data - how much worse could it really be?).

Air Quality

SITA should have requested, as a matter of great importance, that the monitoring equipment be maintained permanently at St. Dennis C.P. School. This would not only have given an increased level of data for the planning process, but should permission be granted, it would also have provided both parents and children with a measure of peace of mind that their health and well-being was being shown due care and attention.

Ambiguous wording in SITA's Regulation 19 response still leaves readers unclear as to whether modelling has actually been **repeated** using twin 120m stacks rather than extrapolating data from the results from the original 75m stack.

SITA's response is still lacking in clarity and transparency and also raises the question - if a truly UNBIASED, INDEPENDENT 'specialist air quality consultancy' were to run their own models, how confident are SITA that they would concur with ERM's findings?

It would serve both officers and councillors alike, if a request to the Environment Agency were made in respect of the details of all of SITA UK appearances on its **Pollution Registers**. This would provide a record of pollution incidents and would therefore aid in the consideration of the veracity of SITA's claim that they are up to the task of safely dealing with Cornwall's waste whilst not adversely affecting either human or ecological environments.

As, no doubt, SITA have had sight of **all** the objections and questions raised by consultees arising from both the planning application and permitting application, it is a great shame that they did not take the opportunity, whilst responding to County's Regulation 19 request, to add an appendix that answered some or all of the concerns raised by consultees.

The issues raised here are in response to CCC's Regulation 19 request and should not be read in isolation.

S.T.I.G. maintains its objection to SITA's planning application as set out in our full response document previously submitted as consultees.