

PE1646/G

Petitioner submission of 30 August 2017

PE1646/A The Water Industry Commission submission states that the Water Industry (Scotland Act 2002) established the DWQR to ensure that Scottish Water (SW) complies. After 5 years with concerns over safe but undrinkable water local residents have lost confidence in the supply. Is that compliance?

PE1646/B The Scottish Government submission states that the DWQR, created by 'the Act', is an independent regulator, accountable to Scottish Ministers with enforcement powers to ensure that action is taken when the drinking water quality is not of an acceptable quality. In Badenoch and Strathspey(B&S) over the past 5 years this has not happened and the DWQR has failed to ensure SW has provided not only a safe water supply but one that is pleasant to drink. Concerning Chloramination hopefully the Government will review SW's best practice and industry advice.

PE1646/C Scotland's Environmental Protection Agency, (SEPA) 'monitors environmental water quality in 'some' Drinking Water protected Areas (DWPA) and works with SW to protect sources of public drinking water from pollution.' SEPA maintains a register of protected areas which include DWPA which are used for the abstraction of water intended for human consumption. The Spey Valley contains highly permeable sands and gravel of glacial, glaciofluvial, alluvial origins which lead to a highly complex groundwater system connected to the surface water. The lateral extents are dictated by the low permeability of the precambrian bedrock which by its nature is susceptible and would contain any pollution if it were to leach. SEPA gave SW the license to extract water via bore holes from the aquifer but the groundwater of Kinakyle is not included in the DWPA. Why not? Surface water is, (within metres of Granish landfill), but a small area around the landfill is not. What about the Groundwater Protection Policy for Scotland v3 2009? and the Planning Advice Note PAN 33? SEPA are also responsible for the Scottish Pollutant Release Inventory(SPRI) of the landfill site at Granish, which long term will accept up to 126,000 tonnes of rubbish where the leachate is not measured, only calculated by an experimental validation. Granish landfill not only accepts household but in the last few years also hazardous waste. What happened to the source protection zone? Over time containment measures breakdown and release leachate which may be grey in colour or jet black producing a strong smell of bad eggs. In our own survey (Nov16) this bad smell was mentioned from 'potable' water and black sludge was cleaned out from the distribution pipes. Where are the Hydrogeological Risk assessments for Granish landfill and Kinakyle bore holes? The EU Directive on Groundwater(80/68/EEC)forbids the introduction of certain listed substances into the groundwater. Design philosophy of landfill in the past was not as robust, migratory leachate requires careful monitoring, there is no mention in the SPRI, why not? SEPA in its response 'does not believe that the responsibilities and processes identified above give rise to a conflict of interest'. Is there a conflict of interest in the above?

PE1646/D The DWQR's job amongst many is to monitor the quality of the water not just its safety but that it is pleasant to drink. Since the change over from Loch Einich in 2012 the water has been undrinkable and SW and the DWQR did nothing about it

for 5 years until our MP became involved. SW only notified the DWQR in March 2016 that a number of consumers in the area remained dissatisfied with the taste and odour of their supply. The DWQR states they audited the treatment works in March 2016 to verify that it was satisfactory but did not pick up that, on SW's own admission it was substandard. This only came about from the independent survey of consumers with extensive work from the S&B Water Action Group and our MP. If you believe this is best practice then the DWQR's standards and monitoring are falling short. If the DWQR's view about the nature and numbers of complaints is anything to go by they are not looking into how they are carried out. SW boasts that complaints have fallen and how they have a new electronic system for collecting them. The residents of B&S know their complaints fall on deaf ears and have done so for the past 5 years.

On Chloramination: The DWQR states that it's an 'extensively used water treatment process, using chemicals which are approved for this purpose'. I would like to ask who has approved these chemicals, on whose authority, where and when? The DWQR quotes the EU Directive's 'wholesomeness,' but omits to include the Disinfectant By Products's (DBP) produced by the 'improvements' that SW have made to their supply. 'In 2009, DWQR published research work (written by Simon Parsons a Director in SW)... It concluded that in general, by product formation was lower in chloramination' but failed in their submission to say, "It has been reported that switching from chlorine to monochloramine can increase the concentration of certain nitrogenous disinfection by-products... These two groups of by-products have been shown to be considerably more cytotoxic and genotoxic than THMs and HAAs (Plewa et al., 2004; Muellner et al., 2007). There are no UK regulatory guidelines for these by-products.... One other group of N-DBPs that has been identified in chloraminated waters are the nitrosamines.....(Mitch et al., 2003; Valentine et al., 2005). NDMA has been classified as a probable human carcinogen....." Within this same study it states more sampling is needed. How are SW monitoring these DBP's as they are unregulated? because in this same study one of seven treatment works tested contained these DBPs? I reiterate, the EU directive states that nothing in the water supply must cause a risk to human health and at present SW by chloraminating the water are potentially doing this. This same study concludes that more data on the occurrence of NDMA on health concerns is needed.

The DWQR wish to inform the Committee that their officers in 2015/16 are investigating short comings in the monitoring of the chloramination process and have appointed an independent technical expert, why did they not have one in place before chloramination was introduced? Are they putting everyone at risk with their guinea pig techniques? This is the 'improvement' B&S and 25% of Scotland are now being subjected too? We have no alternative supplier where do we go? Buying bottled water is adding unknown amounts of plastics to landfill and oceans?

Over the past 5 years SW have confirmed to us in B&S that their state of the art treatment works have produced a substandard product and that was by adding chlorine on its own (not forgetting the phosphate dosing etc) In adding ammonium sulphate it becomes a very complicated chemical reaction dependent on ph, temperature, etc. it is not even a good disinfectant,(1) it is cheap in the short term, (2) with what consequences? Where are the cumulative risk assessments? Self monitoring did not pick up B&S's substandard water?

PE1646/E Scottish Water's self monitoring as mentioned above did not pick up the substandard supply in B&S over 5 years how can the DWQR be efficient in protecting and driving forward standards?

PE1646/F On the health implications, Doctors in Aviemore have confirmed young children have been adversely affected since the change in 2012. Statistics?

On Chloramination: 'In my view there is little to be gained by further research' so finding known carcinogens and toxic chemicals in the DWQR's study are therefore of no consequence? This from SW to NHS. "Scotland Health Boards must give serious consideration to monitoring for possible nitrification the water supplied to wards with young babies and relatively inexpensive testing kits are available for this purpose. NHS Boards should also have an action plan in place to account for any sudden increase in nitrate levels. Additionally, a line of communication must be established between Scottish Water and NHSScotland Health Boards which would raise an early alarm in the event of a problem arising in the water supply. This will also help to ensure that unilateral decisions are not taken." So there are no detrimental effects? Did your respondent know of this consideration above? If not why not? How many in the NHS do know? NHS states the regulated DBP's are reduced, they make no mention of the unregulated ones found and that the DWQR's Cranfield University study is far from complete.

I hope whoever replied on behalf of NHS Highland will reconsider the comment made in your submission "Whether this(further studies)would fully alleviate the concerns of those who already have concerns about it (chloramination)is doubtful... i.e. proving something is safe and has no detrimental effect is a significant challenge'. People have every right to be concerned. Nitrification can be a serious problem when you disinfect water with chloramination. (Nitrification can significantly diminish water quality and can cause violations of coliform, disinfectant residual, and nitrite limits, as well as overall increased microbial growth in the affected areas. Therefore, utilities using chloramines are concerned about nitrification events that occur when chloramines decay in the distribution system.)