Water UK Response to the Environment Agency consultation on Pollution Reduction Plans

Introduction

Water UK welcomes the opportunity to contribute to the Environment Agency's consultation on Pollution Reduction Plans for the 33 substances identified in the Water Framework Directive as priority substances and priority hazardous substances.

Water UK represents water and wastewater service providers at UK and European level. Our members provide the UK with safe, clean water and contribute to the protection and enhancement of public health and the environment.

We are pleased that the EA is developing these pollution reduction plans for the priority and priority hazardous substances which are expected to be subject to progressive reduction or cessation. Our expectation, as reinforced in the Environmental Quality Standards Directive recitals 1 and 2, is that - *"as a matter of priority, causes of pollution should be identified and emissions should be dealt with at source, in the most economically and environmentally effective manner". "Also as set out in second sentence of Article 174(2) of the Treaty, Community policy on the environment is to be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should, as a priority, be rectified at source and that the polluter should pay"*. Since wastewater treatment works are throughputs for these substances and not sources, we see reliance on end-of-pipe treatment as a direct contravention of the principle enshrined in the Directive and the need to cease discharges of priority hazardous substances and progressively reduce those of priority substances. We believe the "emissions, discharges and losses" of such substances should be controlled primarily at their sources of manufacture and if necessary in products which contain them.

We support the principles of sustainability and control of pollution at source to ensure better outcomes for the environment and consumers. However, we fear that the EQS Directive will be a significant contributor to greenhouse gas emissions if there is continuing emphasis on the use of end-of-pipe treatment rather than using the basic principle of source control as a fundamental part of its implementation.

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Recital 9 and Article 5 of the EQS Directive requires Member States to improve the knowledge and data available on sources of priority substances and ways in which pollution occurs in order to identify targeted and effective control options. We are not clear how this obligation is being met for all the substances under the proposed EA PRP. Monitoring data is limited and use of pollution inventory data is questionable as this uses limits of detection as 'real' values.

The current PRP proposals do not appear to include the Agency monitoring priority substances upstream of the sewerage system, or investigating diffuse sources or prior to drinking water abstraction points. Further, there seem to be no plans for progressive reduction or cessation of substances at these points. For example, we do not believe Recital 19 of the EQS Directive is being met by the proposed PRP; recital 19 states that…

"It is necessary to check compliance with the objectives for cessation or phase-out, and reduction, as specified in Article 4(1)(a) of Directive 2000/60/EC, and to make the assessment of compliance with these obligations transparent, in particular as regards the consideration of significant emissions, discharges and losses as a result of human activities. Further, ***a timetable for cessation or phase-out, and reduction, can only be related to an inventory.*** It should also be possible to assess the application of Article 4(4) to (7) of Directive 2000/60/EC. An appropriate tool is likewise needed for the quantification of losses of substances occurring naturally, or resulting from natural processes, in which case complete cessation or phase-out from all potential sources is impossible. In order to meet those needs, **each Member State should establish an *inventory of emissions, discharges and losses for each river basin district* or part of a river basin district in its territory**.

We think the PRP should, where possible, include reduction plans for products and processes that manufacture or contain these substances. We see little or no evidence in this regard. Where reductions are not deemed possible, this should be clearly stated.

General comments

We do not believe the individual PRPs adequately summarise the current position on the substances. The PRPs appear to be based substantially on an UKWIR study from 2002 to 2004 and emission data taken from the Pollution Inventory reporting year 2006. Further updates are available from recent UKWIR research in which the EA is involved. Control of diffuse pollution with the exception of the legal mechanism through

market and use restrictions is very limited or absent for most substances.

The PRPs do not allow for monitoring and control measures for substances that are in products. We think, for the proposal to be truly a pollution reduction programme, these products need to be identified and their impacts on all inland and other surface waters such as drinking water sources monitored and controlled. Water companies have a number of water abstraction sources where additional water treatment processes continue to be used to remove these substances.

One suggestion is that Safeguard Zones should be established for all drinking water abstraction sources, where these substances should be monitored and their application (including products they contain) controlled so that their concentrations do not exceed the annual averages or the maximum allowable concentrations (MAC). Water Protection Zones should also be utilised to control diffuse sources so that these substances do not exceed the EQS or specific water quality objectives for drinking water abstraction sources or other protected areas.

We do not accept the RPA pCEA report (2007) as a basis for establishing a "phasing strategy". The Government's response to the consultations makes it clear that the pCEA was based on the data available and that the EA should not use this information as a basis for preparing a pollution reduction strategy. We suggest the PRP should be informed by its own economic and impact assessment which captures all cost and benefits in the supply chain.

The EQS Directive requires compliance as Annual Averages and Maximum Allowable Concentrations in "Inland Waters" as well as "Other Surface Waters" (Transitional and Coastal Water, Marine Waters). For drinking water sources, we expect MAC to apply, as compliance with drinking water directive/regulations requires compliance at all times. In addition, we expect that where the drinking water quality is more stringent than the EQS Directive, the objectives for the relevant substances will be set to enable the WFD Article 7 objective to be met (i.e. to seek to reduce the level of treatment for drinking water supply).

We question the adequacy of the EA monitoring programme for all water-bodies including protected areas. Some of the individual PRPs admit that the EA does not have monitoring data for that substance – others describe data as limited. This is very disappointing, and suggests that the PRPs are

founded on the first WW17 project and Pollution Inventory data from reporting year 2006 only. In 2007, we reviewed the coefficients used in the Pollution Inventory reporting tool for the priority hazardous substances and will repeat that exercise this year and include the remainder of the priority list. Further, another UKWIR project (2005 to 2007) in the WW17 series provides better information on the priority list substances and the results from this latter project should be included in the PRPs.

We attach copies of the DEHP factsheet and PRP to illustrate our view that the PRPs should be updated to reflect updates to Pollution Inventory reporting coefficients and the later WW17 report.

Detailed PRP for Protected Areas including Drinking Water Abstraction Sources

In summary, the PRP places emphasis on environmental standards whereas the Water Companies require a more focused approach to the impact on drinking water as defined within Article 7.

For a number of chemical parameters where the companies are already experiencing levels above that of the Drinking Water Standard (e.g. Atrazine and Diuron), a more detailed assessment plan would be more appropriate in terms of developing a pollution action plan and further integration with Drinking Water Safety Plans.

Inadequate Monitoring

Many of the reports assess the current strategy based upon a comparatively low sampling/testing process and subsequently have a resultant action plan based upon this limited data, in some cases less that 1%. We think this is unsatisfactory.

EQS and WFD Article 7 Objectives

With specific reference to the EQS parameters, it would be helpful to set out how they relate to the Drinking Water Standards and the objective for WFD Article 7 Protected Areas.

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Groundwater

Generally it is unclear whether groundwater samples have been taken and included in the reports. Although several chemicals have been, or are about to be banned or restricted, they may be persistent in groundwater for a significant time. More information on groundwater risk and the degradation potential of chemicals would be useful.

Economic Assessment

Very few economic assessments of the value of achieving EQS have been undertaken. Assessments are required for key parameters, especially where significant actions are proposed.

Diffuse Pollution control from land

It is not clear what the risk is from contaminated land or from landfill for many priority compounds, despite many reports identifying them as an on-going risk (e.g. Phthalate and DEHP).

Water company data and other data sources

Reference to water company raw water data is not generally included in the plans. The Company feels that this is an important source of data, which could be useful for filling in gaps and in directly assessing the risk of deteriorating raw water (Article 7).

Other Pollutants (eg Metaldehyde, Isoproturon)

It is noted that the PRP list includes additional pesticides as specific pollutants e.g. 2,4-D and Mecoprop but excludes Metaldehyde, which is now a prominent pollutant. Further comparison of Annex X also identifies the absence of Isoproturon from the PRPs.

"Cessation or Phasing Out of Emissions, Discharges and Losses"

We suggest the wording in the opening paragraphs of all the individual PRPs should be sharpened up to reflect the EQS Directive i.e. "apply the EQS (not "meet" the EQS); should say "cease or phase out all emissions, discharges and losses" (not "eliminate"). It is clear from the use of the phraseology "cessation or phasing out emissions, discharges and losses" in the EQS Directive that discharges are only one pathway into the water

environment. The PRPs need to address how "emissions" and "losses" will be controlled at source.

Comments on Specific Pollution Reduction Programmes

Alachlor, Atrazine, Chlorfenvinphos, Diuron, Simazine and Trifluralin

Alachlor & Atrazine are included in one PRP along with other pesticides such as Diuron and Simazine. The PRPs appear to indicate that the EA does not perceive Alachlor or Atrazine to be a problem in achieving the EQS as they were banned under the Plant Protection Products Directive in Dec 2008. We think the PRPs (and the Agency) should accept that these products will still be in use as old stocks are used up over the years to come. In addition we call for specific control measures such as prohibition of use of these substances (old stock, etc) in catchments or safeguard zones/water protection zones where the water-bodies are at risk of failing the EQS or any consequent objective of the water body.

We also question the EA's monitoring and its use of this as a decision making tool. For example, only 12 out of 1021 water-bodies in the South West RBD have been monitored for these substances: does this really give a good insight into the extent of the problem? We know water companies Article 7 returns to the Agency include a number of surface water sources where problems with these substances (including Atrazine) are identified, and in some cases the levels in raw water have exceeded 200ug/l - which is concerning given that the EQS is 0.3ug/l.

The PRP identifies discharges from STWs as the largest sources of these chemicals into the environment and uses the Pollution Inventory figures. We think agricultural diffuse pollution (on the basis of the Article 7 data) represents a larger input into water-bodies than STWs, and the EA's inability to quantify these sources is due to lack of monitoring data. We suggest each RBD includes a measure for monitoring and targeted control measures for use of these substances. If the EA does not include adequate monitoring of these substances then it will not be able to establish the appropriate Inventory as required by Article 5 of the EQS Directive. The reference period is expected to be 2009 and we believe there is a significant risk that this milestone will not be met.

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EQS Directive Article 5

1. On the basis of the information collected in accordance with Articles 5 and 8 of Directive 2000/60/EC, under Regulation (EC) No 166/2006 and other available data, ***Member States shall establish an inventory, including maps, if available, of emissions, discharges and losses of all priority substances and pollutants*** listed in Part A of Annex I to this Directive ***for each river basin district or part of a river basin district*** lying within their territory including their concentrations in sediment and biota, as appropriate.
2. The reference period for the estimation of pollutant values to be entered in the inventories referred to in paragraph 1 ***shall be one year between 2008 and 2010***.

Anthracene

Anthracene is a priority hazardous substance which should be subject to cessation. It is mainly derived from the coke industry and the PRP indicates that it does not offer a major threat of non-compliance. The report also indicates that UK uses of Anthracene are as a component in the feedstock for carbon black production and as a component of creosote.

The EA's data indicates that sewage treatment works discharges are below the EQS and there is >90% removal at STWs. However, there are proposed actions which will affect the industry: EA to review discharge consents and water companies to amend trade effluent consents where there are known Anthracene discharges. We do not believe there is a proper evidence base for this proposal to amend trade effluent consents. There appears to be very little EA sampling data.

We suggest the measures should include:

- Clear plans for cessation of Anthracene, including a ban on all Anthracene products with a specified timetable so that manufacturers can plan for alternatives.
- Additional EA monitoring in water-bodies within each RBD.
- Specific delivery plans included in the RBPs for Anthracene. We think generic references such as “improve design/code of practice for runoff…” and “encourage enhanced use of SUDs” are inadequate.
- Delivery plans for Protected Areas with each RBD.

Benzene

We do not agree that the PRP for Benzene adequately summarises the current position.

We do not support the measures identified, as they appear to be generic and do not reflect the assessments in the plan. For example, there are

measures to tighten emissions from sewage treatment works and related further investigations, when the PRP indicates otherwise. We think measures and delivery plans for roads and highways and related monitoring of runoff need strengthening. We call for better recognition and protection of drinking water abstractions that are at risk of pollution from Benzene.

We think the data upon which the PRP is based needs updating as reliance on 2006 pollution inventory is insufficient. We note that of 214 surface water bodies monitored in England and Wales up to 2006, none of them were classified as either significantly or marginally failing the EQS for Benzene. On this basis, the EA have classified Benzene as very low risk of non-compliance and have concluded that the present level of control should continue without any additional actions being appropriate.

We suggest the PRP should indicate how progressive reduction will be achieved for Benzene in each RBD.

Brominated diphenylether

We do not believe the summary captures all the relevant issues. For example we think the data and monitoring needs improving. We also consider that the PRP should include clear steps towards cessation so that manufacturers can plan for alternatives.

We note that Brominated diphenylether is a group of priority hazardous substances (pentabromodiphenylether is the one normally considered). It is persistent, bioaccumulative and toxic but was previously used as a flame retardant in furniture foam, car seats, etc.

Production in England and Wales stopped in 1996 and its use was prohibited from use within the EU from 2004 (use in aircraft escape chutes from 2006).

The report indicates that Pentabromodiphenylether is still found in discharges from STWs; the PRP suggests that this is due to transfer from furniture to clothing which is then washed. We think updated information

is needed on the sources of these substances such as clothing and imported fabrics.

There has been no monitoring of surface waters for pentabromodiphenylether up to 2006, though the EA classify the risk as a very low risk of non-compliance with the EQS. The basis of this conclusion is unclear.

The action plan proposed is to measure discharges from STWs as part of the AMP5 chemical investigations.

We suggest the following measures to be included in the PRP:

- All products containing Brominated diphenylether identified by the EA in conjunction with manufacturers and the supply chain.
- Clear plans prepared for cessation of Brominated diphenylether including a ban on all products containing the substance(s) with specified timetables so that manufacturers and the supply can plan for alternatives.
- Additional EA monitoring in water-bodies within each RBD that are at risk.
- Specific delivery plans included in the RBPs including Protected Areas for the substance.

Cadmium (and its compounds)

Cadmium is a priority hazardous substance which must be subject to cessation. We do not believe the draft PRP sets out clear plans to achieve the objective. We cannot see how Protected Areas objectives are to be achieved. We think diffuse pollution control measures and specific delivery plans are not well defined, although reference is made on page 4 that "The full pollution reduction programme provides details of sources and releases and an evaluation of pollution reduction measures to support these proposals". We would like to see the full reduction programme.

We note that the PRP indicates that Cadmium is used in the production of rechargeable batteries, pigments and, to a lesser extent, as a stabiliser; use as a stabiliser (in PVC) is now limited due to market restrictions and voluntary action by PVC manufacturers. A clear obligation relating to the

manufacturers and the supply chain would be helpful for planning purposes.

Releases into the environment come mainly from metal production and processing plant, lead battery recycling and STWs. Disused metal mines "are thought to be a potentially significant source".

Of 629 surface water bodies monitored in England and Wales up to 2006, 18 significantly fail EQS and a further 15 marginally fail; 12 of the 18 and 13 of the 15 water bodies are in the "historic metal mining regions" of Northumbria and West Wales.

We suggest the following measures to be included in the PRP:

- All products containing Cadmium identified by the EA in conjunction with manufacturers and the supply chain.
- Clear plans prepared for cessation of Cadmium except the naturally-occurring components including a ban on all products containing cadmium with a specified timetable so that manufacturers and the supply chain can plan for alternatives.
- Additional EA monitoring in water-bodies within each RBD.
- Specific delivery plans included in the RBPs (including Protected Areas such as drinking water abstraction sources).

1, 2-Dichloroethane

Used in production of vinyl chloride monomer and hence PVC. Believed by EA to be very low risk of non-compliance with EQS (and this is monitored in a more reasonable number of water-bodies than some of the substances - 340). No additional measures are proposed. EA will monitor at a sufficient level to demonstrate compliance with WFD. This was also identified as low risk in WW17, so this seems reasonable.

We think the measures identified for the water industry regarding tightening emission limits and additional removal at STWs is unreasonable as there is no supportive robust evidence.

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Dichloromethane

The sources of Dichloromethane are reported as the pharmaceutical industry (by far the largest), paint stripping, aerosols, adhesives and "other applications". However, the measures and plans fail to assign proper responsibility to these sectors and the supply chain, but somehow, on the basis of the 2006 pollution inventory report, conclude that sewage treatment works are the predominant source. We call on the EA and Defra to ensure that the principles of the Directive (which recognises the need to control these pollutants at sources) should be respected and reflected in the revised PRP. Sewage treatment works and the sewer systems are not sources of these pollutants and only serve as pathways and throughputs. Specific measures and actions aimed at progressive reduction should be directed to the manufacturing and supply chain for relevant products and processes (such as the pharmaceutical industry, paint stripping, aerosols and adhesives). We think measures and actions in the current PRP are inadequate.

We note that the EA believes there is very low risk of non-compliance with EQS although it is monitored in relatively few water-bodies - 11. No additional measures are proposed. EA will monitor at a sufficient level to demonstrate compliance with WFD – though details are not provided. We are unaware of any monitoring proposals for Protected Areas including drinking water abstraction sources. We think this should be addressed.

Di(2-ethylhexyl)phthalate (DEHP)

We do not believe the PRP summarises the current position on DEHP. The current PRP is founded on an UKWIR study from 2002 to 2004 and emission data taken from the Pollution Inventory reporting year 2006 which is not the best information available. We also note that although it is acknowledged that the DEHP is from mainly diffuse sources, there is no clear and targeted strategy for controlling the products and processes and the supply chain.

The EA believes DEHP to be very low risk of non-compliance with EQS although no water-bodies monitored for it. The only measure proposed is

to monitor STWs under the PR09 PS investigation proposals to confirm that discharges are declining. The PRP states that EA will monitor at a sufficient level to demonstrate compliance with WFD and, given that it currently does not have any water quality monitoring, this is rather concerning.

The list of potential measures includes “Tighten emission limits and require additional removal at STWs". This is flagged as feasible, probably achievable by 2015 and probably disproportionate costs. We are not clear what this means, but if the reference to emission limits is to trade effluent consents it is not appropriate, as the sources are acknowledged to be diffuse. We believe additional removal at STWs is unlikely to be achievable by 2015. WW17 assessed DEHP as high risk and subject to variable/poor removal by treatment technologies. The proposal for STW monitoring seems appropriate but we would like to see a corresponding level of EA monitoring for WFD compliance.
We suggest the following measures to be included in the PRP for DEHP:

- All products containing DEHP identified by the EA in conjunction with manufacturers and the supply chain.
- Clear plans prepared for progressive reduction of DEHP
- Additional EA monitoring in water-bodies within each RBD.
- Specific delivery plans included in the RBPs (including Protected Areas such as drinking water abstraction sources).

Endosulfan

Endosulfan is a priority hazardous substance which must be subject to cessation. Given that endosulfan is a plant protection product we would like to see a clear statement in the PRP prohibiting its use including any products containing endulsulfan particularly around drinking water abstraction sources.

We would like to see all products containing endosulfan identified and supply chain responsibilities for cessation of “emissions, discharges and losses” assigned.

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We do not believe sewage treatment works should provide end-of-pipe treatment for any of these substances. We disagree with measures considered for the water industry such as tightening limits in consent discharges and "investigate emissions from STWs and appraise options (to reduce at source or treat at STW) to meet EQS and reduce/cease emissions in this or subsequent rounds". As the EQS Directive requires we believe *"as a matter of priority, causes of pollution should be identified and emissions should be dealt with at source,…". "…that preventive action should be taken, that environmental damage should, as a priority, be rectified at source and that the polluter should pay"*. [EQS Directive, Article 5 and Recitals 1 and 2]

Flouranthene

We would like the PRP to set out plans for Drinking Water Protected Areas as flouranthene is a specific requirement for drinking water. The current draft PRP does not include measures to meet WFD Article 7 obligations for drinking water protected areas.

We note that no actions are proposed on the draft PRP on flouranthene for the following sectors:

- Agriculture and rural land management
- Local Government
- Navigation
- Fishing & Conservation
- Mining and Quarrying

We also note that "Urban and Transport" are also identified as sources of flouranthene into the water environment however no further actions are identified.

Hexachlorocyclohexane, Hexachlorobenzene and Hexachlorobutadiene

We acknowledge the EU ban on these substances; however, it has to be enforced to ensure use of products already in stock are controlled. These substances are priority hazardous substances requiring cessation, so we call for the true sources to be controlled and the supply chain given a clear mandate for cessation. We do not believe the summary captures all

the relevant issues. For example, we think targeted action is required to protect areas including Drinking Water Abstraction sources by ensuring use of existing stock is prohibited in these areas.

The PRP should identify all relevant products, organisations and regulators in the supply chain responsible for ensuring cessation.

We do not believe sewage treatment works should provide end-of-pipe treatment for any of these substances. We disagree that the EA should tighten limits in consent discharges to EQS levels and require STW owners to identify sources entering their works. We are unclear how the EA plans to investigate losses from contaminated land, groundwater and sediment, and meet EQS, eliminate all emissions and discharges to water and ensure no deterioration from current position. Further details to the PRP will be helpful.

Isoproturon

There is no PRP proposal for Isoproturon but we think there should one as Isoproturon is a primary concern for a number of drinking water abstraction sources.

Lead and its compounds

Lead is ubiquitous and requires a comprehensive diffuse pollution control plan. We think the proposals in the current PRP are a good start but not enough. We comment on some of the specifics as follows:

- We ask for PRPs and related monitoring and control strategies for lead (and other substances as appropriate) in each river basin district.
- Clarity is needed on what is meant by “pollution prevention” by EA – further details would be useful
- ‘Water industry measure’ is repeated in the table on page 2, one should be deleted
- STWs are identified as the largest point source discharges; however, no clear figure is given for diffuse sources, although the text suggests it could be higher than point source. The text suggests urban roads are largely the cause of diffuse source

discharges, yet no measures are identified to tackle this. This should be addressed under the Polluter Pays Principle.

- Costs, benefits background data would be useful, our general comments on the need for costs and benefits assessment for these PRPs other than reference to the PRA report of 2007 is applicable.

Mercury and its compounds

Mercury is ubiquitous and requires a comprehensive diffuse pollution control plan. It is also a PHS and requires cessation. We think for all PHS there should be no additional end-of-pipe treatment and source control must be the only measure. We comment on some of the specifics as follows:

- We ask for PRPs and related monitoring and control strategies for mercury (and other substances as appropriate) in each river basin district.
- Clarity is needed on what is meant by "pollution prevention" by EA – details would be useful
- There is a large unallocated consumption of mercury – the apportionment and control strategies are needed.
- Main cause of load at STW discharges is cited as dental amalgam. Background data used for this conclusion would be useful, given that there is a large unallocated consumption
- Source investigation by water companies is identified as the best step for control, but we do not consent dental surgeries. If we identified dental surgeries as being the main cause of EQS failure it would need to be controlled by EA under SCE

Naphthalene

We note:

- There are no failures in EQS in any water body
- There are measures given for control; however, disproportionate cost is cited as justifying exemption "as EQS is being met"
- We suggest targeted controls are needed, especially for protected areas, to ensure no deterioration in terms of "emissions discharges and losses" of Naphthalene.

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Octylphenol, Pentachlorobenzene, Pentachlorophenol

Octylphenol and Pentachlorophenol are priority substances and, Pentachlorobenzene, a priority hazardous substance. We note that in all cases no additional actions are currently planned in the PRPs as the EA says:

- we are already compliant with the EQS;
- we consider the risk of non-compliance with the EQS to be very low;
- previously adopted pollution prevention and control measures have substantially controlled releases to water.

EA plans to monitor for these substances at sufficient levels to demonstrate compliance with Water Framework Directive objectives. Some clarity on what is deemed sufficient will be helpful.

We will welcome EA proposals in the PRP for ensure Protected Area objectives under WFD Article 7 are met. We note that no monitoring or assessment has been reported in the current draft for protected areas.

Nickel

Nickel is ubiquitous and widely used in manufactured products. We consider that it requires a comprehensive diffuse pollution control plan. We think the proposals in the current PRP are a good start but not enough. We comment on some of the specifics as follows:

- We ask for PRPs and related monitoring and control strategies for nickel (and other substances as appropriate) in each river basin district.
- Clarity is needed on what is meant by “pollution prevention” by EA – further details would be useful
- Although some of the uses in products and sources have been identified in the PRP, no specific control measures are assigned to the supply chain – which should be.
- There is again over-reliance on pollution inventory data which then leads to a wrong assignment of “control measures”.
- We reiterate the need for control of pollution at sources and the polluter pays principle. We think it is wrong for water consumers to be made to pay for pollution caused by others.

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- Again, costs and benefits background data would be useful. Our general comments on the need for costs and benefits assessment for these PRPs other than reference to the PRA report of 2007 is applicable.

Nonylphenol and 4-(para) Nonylphenol

We do not believe the PRP adequately summarises the current position on Nonylphenols. Nonylphenol is a priority hazardous substance, subject to marketing and use restrictions in the UK and the EU. The PRP speculates that it is still being used in the Far East with respect to clothing manufacture and then appears at wastewater treatment works via washing. If that is the case then relevant clothing businesses in the supply chain should be identified and prohibition plans with agreed timescales clearly set. The relevant regulators should be tasked to enforce compliance.

We think, for all PHS, there should be no additional end-of-pipe treatment requirement on the water industry and that source control must be the only measure.

We note that the AMP4 Endocrines study suggested removal in wastewater treatment works is significant, although detection above the LOD was patchy. We also note the action plan proposed for the water industry is to measure discharges from STWs as part of the AMP5 chemical investigations.

Polyaromatic Hydrocarbons (PAHs)

We do not consider the PRP summarises the current position on PAHs. Our general comments on use of pollution inventory data for 2004 and the need to use more-recent UKWIR research information apply to PAHs.

PAHs are all priority hazardous substances which are expected to be subject to cessation. The PRP must therefore set out how the cessation will be achieved for all sources in manufacturing processes and products in the supply chain. Measures and controls and costs should be allocated to the PAH supply chain which are not adequately captured in the current PRP.

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We reiterate that the sewer system and the sewage treatment works are only pathways and throughputs and not sources of PAHs.

We note the complex picture on failure, with benzo(g,h,i)perylene and indeno(1,2,3-cd)pyrene being a challenge. We are unaware of any EA monitoring that captures these substances in the water environment.

We suggest the wording in the opening paragraph should be sharpened up to reflect the EQS Directive i.e. "apply the EQS (not "meet" the EQS); "cease and phase out emissions, discharges and losses" not “eliminate" It is clear from the use of "cease and phase out all emissions, discharges and losses" in the EQS Directive that discharges are to be considered as only one pathway into the water environment. The PRPs need to address how “emissions” and “losses” will be controlled at source.

Page 2 table of measures - the link to groundwater for PAHs needs to be made clearer in this document. PAHs are often associated with contaminated land and groundwater may well be the pathway to surface waters. The document acknowledges this point in a number of places, but seems to focus on discharges, rather than other losses of PAHs via contaminated land. The link with the Part IIA Contaminated Land regime needs to be made - as does the EA's duties and powers for special sites of contaminated land where land is polluting controlled waters. The EA have direct powers to deploy under Part IIA, but these don't get a mention in this document.

Page 2 table of measures, row 1 - "discharges" from STWs (not emissions). This whole measure needs sharpening up. STWs are NOT the source of PAHs (unless there are faulty operations such as a spill of fuel oil, for which operators should be rightly culpable). As operators of STWs, we are not the source or cause of PAHs in rivers, and source control is essential. This measure should say "review of activities within the catchment to identify potential sources of PAHs entering sewerage network and STW".

In section 3.2, it appears that fuel & power, metal processing and production and other industries contribute most to EQS failure - but the measures in the tables don't refer to these sectors!

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The tables on page 2, page 11 and page 14 are unnumbered and are all called Pollution Reduction Plan but seem slightly different – why is this?

Tributyltin

We do not consider that the PRP adequately summarises the current position on Tributyltin (TBT). Our general comments on the use of pollution inventory data for 2004 and the need to use more-recent UKWIR research information apply to this PRP.

TBT is a priority hazardous substance which is expected to be subject to cessation of emissions, discharges and losses. The PRP must therefore set out how the cessation will be achieved for all sources in the manufacturing processes and products in the supply chain.

Tributyltin is a PHS and the document suggests that 1.8% of water bodies in England and Wales are at risk of failing EQS.

As noted above for PAHs, we suggest the wording in the opening paragraph should be sharpened up to reflect the EQS Directive i.e. "apply the EQS (not "meet" the EQS); "cease and phase out all emissions, discharges and losses" not “eliminate". It is clear from the use of "cease and phase out emissions, discharges and losses" in the EQS Directive that discharges are only one pathway into the water environment. The PRPs need to address how “emissions” and “losses” will be controlled at source.

Considering the table on page 1, STWs are not the sources of TBT (see point 4 above). The measure should be about investigating the catchment of the sewerage network and STW to identify potential sources of TBT and determining whether source control measures can be taken.

The document highlights that discharges of TBT from STWs is significant and achieving the EQS for TBT will be difficult and problematic and that more work is required on TBT (p15).