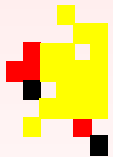


Proposed Drinking Water Directive Update John Fawell



CIWEM March 2010

Why a New Directive

- Evolution and experience.
- Many parameters not found near prescribed value.
- Changes in WHO Guidelines.
- Introduction of drinking water safety plans.
- Recommendations from 2003 workshop



Article 12

- Two working groups
 - Microbiology
 - Sampling
- Contract to DHI with John Fawell and Owen Hydes to prepare proposals for chemical and related parameters.
 - Required to take into account DWSPs.



Sampling

- Need for harmonisation of sampling across member states.
- Introduction of more flexibility on sampling points.

Parameters that do not change in distribution can be sampled immediately post-treatment.

- Final water sampling not enough to assure DW safety.



Microbiology

- Some changes recommended.
- Clostridium to be dropped.
- Confirmation that total coliforms are not suitable as a substitute for *E. coli*.
- Also endorsed the DWSP concept.



Chemical Parameters

- Always likely to be controversial.
- But more room for change.
- Proposals discussed by stakeholders at two meetings and final proposals took into account stakeholder comments.
- However not possible to please everyone on everything.



Grouping of Chemicals

- Must be checked by analysis
 - 1a – toxic and similar chemicals with mandatory standards.
 - 1b – broadly similar to previous indicator parameters.
- Group 2 – substances that would be considered following risk assessment under DWSPs.



Suggested deletions

- Antimony (new WHO GV is 20 $\mu\text{g/l}$),
- Cyanide – not normally found at significant concentrations except spills
- 1,2-dichloroethane – rarely, if ever seen
- Total pesticides!
- Dieldrin, heptachlor, etc.
- Oxidisability
- Selenium, sulphate, mercury, benzene



Group 1a and changes

- **Antimony** (20 µg/l), Arsenic, Boron (2.4mg/l),
- Cadmium (3 µg/l), Chromium, Copper,
- Fluoride, Lead, Nickel (30 µg/l), Nitrate/nitrite,
- Pesticides, Selenium (30 µg/l), Uranium (30 µg/l).
- Additional parameters identified as important for particular member states through DWSP hazard identification and risk assessment.



Group 1b and changes

- Aluminium (200 but target $<100 \mu\text{g/l}$),
- ammonium, chloride, colour, conduct.,
- pH, iron, manganese, odour/taste,
- sulphate, turbidity (1.0 target <0.5 pre-disinfection, 4.0 at tap), aggressivity,
- TOC



Group 2

- Acrylamide, epichlorohydrin, benzene,
- bromate, chlorite (0.7 mg/l),
- chlorate (0.7 mg/l), cyanide (WHO GV)
- NDMA (10 ng/l), mercury (6 µg/l),
- Total THMs, Total HAAs (80 µg/l),
- PAH, B(a)P, Nitrite (distribn), Vinyl Chloride,
- Trichloroethene (10 µg/l), Tetra (40 µg/l)
- EDCs, Cyanobacterial toxins, additional.



Endocrine Disrupting Compounds

- Markers oestradiol, bisphenol a, nonyl phenol.
- Precautionary values 0.01, 0.1 and 0.1 $\mu\text{g/l}$ respectively.
- Risk assessment use to show if present at intake and then if in final water.
- NOT routine monitoring.



Conclusions

- Proposals are intended to provide more flexibility while also providing reassurance to consumers.
- Need to move away from system that relied purely on analysis of final water at tap.
- Need to stop monitoring things that aren't there and focus on public health.

http://ec.europa.eu/environment/water/water-drink/revision_en.html

