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Mr Brian Labza
Public Health Group
Department of Human Services
GPO Box 1670N
MELBOURNE VIC 3001

Dear Mr Labza

SAFE DRINKING WATER REGULATIONS 2004 FORMAL SUBMISSION IN RESPONSE TO DRAFT REGULATIONS

I refer to the exposure draft for the Regulations and the Regulatory Impact Statement, as well as the Department's presentation on this subject at the seminar dated 08 October 2004. This letter comprises a formal submission-in-response to the Victorian Government. I also advise that I am copying this submission to others in the industry who were involved in relevant discussions at the seminar.

General

As the Department is requesting suggested word changes, it is perhaps unfortunate that the draft regulations have only been made available in PDF form, meaning that the whole of any revision must be typed by the proponent. Providing raw or formatted text would have allowed a 'track changes' procedure to be more easily adopted. However in most of the revisions proposed below, the usual 'track changes' procedure of marking inserted text and ~~deleted text~~ has been followed.

I would imagine that there is by now no objection in principle to the approach taken by the proposed regulations ("the regs."), and the Department should be congratulated on reaching the present position. It appears from reading the RIS and the regs. that there has been some difficulty in drafting legal verbiage to express specific technical requirements clearly and concisely.

Reg. 4

In sub-reg.(4) (b) you might consider in the case of a road or other 'boundary' of finite width whether you need in the regs. to mention that a side or centre-line is to be adopted as the boundary of the locality. In the previous definition of 'geographic coordinates' you might also wish to get specialist advice as to whether a reference to the AMG system might be appropriate.

Reg. 5

The use of the word 'tap' to represent a 'bib-cock' or similar, might be thought informal since the word 'tap' also has other technical meanings such as the tool for cutting a thread in a drilled hole. In sub-reg. (2) (b), the concept of limiting the number of sampling points is reasonable, however the figure of 100 seems high. If as many as 100 points were indeed necessary, surely it could be argued the quality was NOT in fact the same throughout the locality and therefore two (or more) separate localities should therefore be defined.

Reg. 5

The use of the word 'algae' in sub-reg. (2) (a) (v) [and also in other sections of these regs.] as an adjective is queried. The adjectival form usually adopted is 'algal'.

Reg. 6

[The reasons for this addition are included later, under the discussion on water sampling frequencies etc.]

After sub-reg. (2), add new sub-reg. (3) which states:

- a. For the purposes of complying with paragraph (a) of sub-reg.(2), a water supplier must include in the risk management plan a Water Quality Compliance Verification Program for each water supply locality.
- b. The Water Quality Compliance Verification Program –
 - i. must include the parameters listed in column 1 of Schedule 2
 - ii. is not limited to such parameters
 - iii. must set out the sampling frequencies for each parameter included in the Program, which shall not be less than the minimum frequencies nominated in column 2 of Schedule 2
 - iv. must set out a procedure to ensure that, as far as is practicable, samples of drinking water shall be collected within a water sampling locality such that each water sampling point is equally represented over any period of six months

[Note the expression "as far as is practicable" has a precedent in sub-reg. 5(2)]

Reg. 11

In sub-reg. (1) the wording appears to preclude the taking of more than the stipulated minimum number of samples, which would be absurd, thus the words "not less than" need to be added before "the relevant sampling frequency".

In sub-reg. (2) the requirement appears not to be stated correctly. No doubt the intention is that all sampling points be sampled at an equal frequency. The current wording

- a. would at an extreme allow only 2 points within a locality to be sampled alternately, and
- b. would appear to prevent a sampling regime from sampling more than half the points in a locality at the one time (because on the 'next' occasion, at least one point would have been sampled on the 'previous' occasion)

It is quite clear that the more initial samples are taken, the better the information about the quality, therefore this does not seem correct. However, there is a need to exclude 'retests' where a quality failure has occurred, or there is scope to bias the results.

There is a minor logic error in the wording of sub-reg. (3).

It is therefore suggested that the following changes be made:

- o Add new Sub-reg. (3) to Reg. 6, as set out above
- o Amend sub-reg. (1) of Reg. 11 to read:
 - collect samples of drinking water (*words deleted*) within each water supply locality in accordance with the Water Quality Compliance Verification Program
- o Amend sub-reg. (2) to read:
 - Nothing in sub-reg. (1) shall prevent a water supplier from collecting water samples additional to those prescribed by the Program.

- Amend sub-reg. (3) to read:
... vary the minimum frequency at which water samples are to be collected ~~at a water sampling point located~~ within a water sampling locality

Regs. 12 & 13

It seems to me that the layout and structure of these regs. is less satisfactory than the equivalent requirement for audit and approval of auditors and (e.g.) although the expression 'accredited water analyst' is used in reg. 12 and is implied by the title to reg. 13, it is not actually used until sub-reg. (5).

I therefore propose the following changes:

Reg. 12

Renumber existing wording as sub-reg. (1) and add the following words as sub-reg. (2):

(2) All analyses of drinking water shall be undertaken in a laboratory that is accredited by NATA to conduct analyses of, and report on, samples of water.

[*This is an important implied requirement which however is nowhere actually stated!*]

Reg. 13

- Amend sub-reg. (1) to read:
... to be accredited as a water analyst for the purposes of these regulations
- Amend sub-reg. (2) to read:
(2) An application under sub-reg. (1) must –
 - (a) be in writing, and
 - (b) include evidence of the applicant's qualifications, experience and competence to undertake analyses of drinking water, and
 - (c) be accompanied by a written declaration ... *(etc, as before)*, and
 - (d) include an undertaking to carry out the analysis of drinking water only in full accordance with these regulations and the limitations (if any) which the Secretary may impose upon the accreditation of the applicant.
- Consider amending sub-reg. (3) to read:
(2) On receipt of an application under sub-reg. (1), and after any investigations of enquiries which he or she considers appropriate, the Secretary may (etc) ...
- Amend sub-reg. (4) to read:
(4) ... unless –
 - (a) ... appropriately qualified and competent
[we all know people who may have the formal qualification, but who have not subsequently demonstrated through experience and performance that they are professionally competent]
 - (b) the Secretary is satisfied that the person will only carry out analyses in conformity with sub-reg. 12 (2).
- Amend sub-reg. (5) to read:
(4) ... –
 - (b) ... type of parameter or test methodology or equipment specified ...
[A competent person may be perfectly suitable to work with one test procedure or type of equipment while not being adequately experienced with a different method etc]

Schedule 2

Further to our discussion last week, the expression of this schedule implies a population which is assumed to be statistically normal and it is further implied in the rather complex mathematical statements that a large number of samples would be taken. [The maths can be computed for small numbers of samples, but it is arguable whether the results have any meaning].

Furthermore, the sampling frequencies stated must be regarded as a minimum, although this is not stated, and there needs to be some time limitation to exclude early results which no longer have significance to current performance.

In the case of E. coli, there is no requirement to limit the 2% of samples which can have a presence of the bacterium.

To get over these problems, I consider it is necessary to separate the quality standard from the statistic, and simplify the requirements. For this purpose we need to include the previously-suggested sampling program. The schedule then would look like this:

Column 1	Column 2	Column 3	Column 4
Parameter	Minimum sampling frequency to be adopted in the Water Quality Compliance Verification Program for each water sampling locality	Quality Standard	Water Quality Compliance Statistic for a set of drinking water samples collected in any 12 month period in accordance with these regulations
<i>Escherichia coli</i>	One sample per week	Not present	(a) at least 98% of all samples in such a set must contain no E. coli, and (b) no such sample shall contain more than five (5) E. coli bacteria
Chloroacetic acid	One sample per month	0.15 milligrams per litre	The 95 th percentile for all samples in such a set shall not exceed the quality standard
Turbidity	One sample per week	5.0 Nephelometric Turbidity Units	The arithmetic mean for all samples in such a set shall not exceed the quality standard

[I have not addressed the issue of what action is to ensue if the Compliance Statistic is not in fact achieved, and it also needs to be stated somewhere that only samples collected and tested in accordance with the Compliance Verification Program are to be used to compute the Statistic].

I hope you and the Department may find these comments helpful and constructive. Please do not hesitate to contact me, preferably by e-mail as I may be overseas, if you wish to discuss these issues further.

Best wishes
Yours sincerely

[original letter signed by]

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