

Groundwater Public Water Supply (PWS) Audit Report



The audit process is a random sample on a particular day of a facility's operation. Where a recommendation against a particular issue has not been reported, this should not be construed to mean that this area is fully satisfactory

Date of visit	01/03/2012 10:15:32		Water Service Authority	Donegal County Council	
WFD Site Code	05_004		Site name	Pettigo	
Water Supply Zone Code	0600PUB1104	Name of Water Supply	PETTIGO	Easting : 210538	Northing : 368362
Name of WSA Personnel 1	Paul Lyons		Job Title of WSA Personnel 1	Area Engineer	
Name of WSA Personnel 2	Hugh Kerr		Job Title of WSA Personnel 2	Other	
Time In	10:15		Time Out	10:38	
Site Contact					
Meteorological conditions at the time of audit	Dry				
Meteorological conditions over the previous 24 hours	Wet				
Name of Auditor	Ronan Doyle				

General	Response	Comment
1. Has the caretaker completed a recognized training course on disinfection ?	Yes	
2. Is there a single ground water bore hole in use ?	No	
3. If there is more than one ground water borehole in use specify the numbers	2 one main and one backup	
4. Specify the volumes in m3/day of groundwater abstracted from each of the boreholes ?	150m3/day from used borehole	
5. Is there a surface water source in use in addition to the groundwater source ?	Yes	
6. If there is a surface water source in use in addition to the groundwater source specifies the volume abstracted in m3/day	50m3/day	
7. In the case of multiple sources are they mixed prior to treatment ?	Yes	Although surface water is slow sand filtered before being mixed with borehole water
8. How long does it take water to get to the first consumer (in minutes approx) ?	10 min. after contact/storage tank which has one and a half days capacity	
9. Has a photograph of the well/borehole or spring been taken ?	Yes	

Treatment Processes	Response	Comment
10. Is the supply fluoridated ?	No	
11. Is the water passed through a filtration process ?	Slow Sand	
12. Is pH correction being used at the plant ?	No	
13. Specify any other treatment processes at the plant		

Source Protection	Response	Comment
14. Are there borehold logs and construction details available for the supply ?	Yes	
15. Is there visual evidence of surface water ingress at the source ?	No	
16. Is the spring or wellhead adequately protected ?	Yes	
17. Is a Source Protection Zone delineated ?	Yes	
18. Are there any abandoned well/boreholes for this supply ?	Yes	
19. If yes, have they been decommissioned in accordance with best practice ?	No	
20. Have the GAP regulation setback distances been put in place ?	No	
21. Has the landowner been advised in writing of the setback distances ?	No	
22. Is there any evidence of landspreading within the setback distances ?	No	

23. Is there an on-site wastewater treatment system at the plant or within 60m of the borehole(s) ?	No	
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Water Quality	Response	Comment
24. Is the source susceptible to rapid variations in raw water quality ?	No	
25. Does an assessment of the historical raw water data indicate microbiological contamination ?	Yes	On surface water
26. Does an assessment of the historical raw water data indicate turbidity levels routinely in excess of 1 N.T.U. ?	No	
27. Is there a turbidity meter and alarm in place ?	No	
28. Is the turbidity reading at the time of the audit less than 1 N.T.U. ?	N/A	
29. Is the source routinely monitored for Cryptosporidium ?	Yes	
30. What is the frequency of Cryptosporidium monitoring ?	4 times per year	

Disinfection - Chlorination	Response	Comment
31. Is the water disinfected using chlorination ?	Yes	
32. Is there a chlorine monitor in place ?	Yes	
33. Does the chlorine monitor have an alarm and if so what is the low alarm setting ?	Yes	1.00mg/l
34. What is the chlorine residual reading on the monitor at the time of the audit ?	1.44	
35. Is the chlorine monitor after the contact tank / clear water tank ?	No	Before although there is also one after contact tank
36. Is there a documented procedure for responding to the alarm in place at the treatment plant ?	Yes	
37. Is there a duty and standby chlorine dosing pump in place ?	Yes	
38. Does it have an automatic changeover in the event of failure of one of the pumps ?	Yes	
39. Is there an automatic shut off of the abstraction pump in the event of chlorine residual levels dropping below low-alarm setting ?	No	
40. How is chlorine dosing in the treatment process achieved ?	Flow Proportional linked to Chlorine Residual Monitor	
41. Is the chlorine residual manually checked in the network ?	Yes	
42. How many locations in the network are routinely checked for chlorine residual ?	2	
43. Specify the frequency of chlorine monitoring in the network	Daily	
44. Are result of chlorine monitoring in the network recorded and available for inspection ?	Yes	

Disinfection - U.V.	Response	Comment
45. Is the water disinfected using U.V. ?	No	
46. Is there a validation certificate for the U.V. treatment unit ?		
47. Was the system operated within its validated range within the past month ?		
48. Is there a continuous U.V.T. or U.V.I. monitor and alarm in place ? If not elaborate in comments		
49. Is there a documented procedure for responding to the alarm in place at the treatment plant ?		
50. Is there a duty/standby U.V. system in place ?		
51. Is there an automatic changeover of the system ?		
52. Is there an automatic shut off of the pump in the event of both systems failing ?		

Audit Notes

Recommendations

The Water Services Authority should submit a report, as appropriate to the Agency within one month of the date of the issue of this audit report detailing how it has dealt with the issues of concern identified during the audit. The report should include details on the action(s) taken and planned to address the various recommendations, including timeframe(s) for completion of any planned work.

The EPA advise that the findings and recommendations from this audit should, where relevant, be addressed at all other treatment plants operated and managed by the Water Services Authority

Recommendation 1 (This recommendation related to audit question 19) :

The WSA should ensure that all abandoned boreholes/wells are de-commissioned in accordance with guidelines issued by the UK Environment Agency (Environment Agency, National Groundwater and Contaminated Land Centre 'Decommissioning Redundant Boreholes and Wells' <http://publications.environment-agency.gov.uk/pdf/SCHO0499BEHE-e-e.pdf> or similar.

Recommendation 2 (This recommendation related to audit question 20) :

The Water Services Authority should implement the requirements of the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations 2010 (SI No.610 of 2010) to ensure, unless an alternative setback distance has been set as per Article 17, that:

- i. Organic fertiliser or soiled water is not applied to land within 200 m of the abstraction point; and
- ii. Farmyard manure held in a field prior to landspreading is not placed within 250 m of the abstraction point.

Recommendation 3 (This recommendation related to audit question 21) :

The Water Services Authority should inform farmers about the buffer zones and set-back distances as outlined in the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations 2010 (SI No.610 of 2010).

Auditors signature :



Date reviewed : 07/03/2012

Reviewers signature

