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	05/03/2012 10:44:06		Water Service Authority	Meath County Council	
WFD Site Code	17_002		Site name	Dunshaughlin Bore (College Park)	
Water Supply Zone Code	2300PUB1007	Name of Water Supply	Dunshaughlin	Easting : 296611	Northing : 252259
Name of WSA Personnel 1	Barry Leonard		Job Title of WSA Personnel 1	Other	
Name of WSA Personnel 2			Job Title of WSA Personnel 2		
Time In	10:43		Time Out	11:06	
Site Contact	Declan Keating				
Meterological conditions at the time of audit	Sunny, Breezy, Dry, Cold				
Meterological conditions over the previous 24 hours	Dry				
Name of Auditor	Pat Groves				

General	Response	Comment
1. Has the caretaker completed a recognized training course on disinfection ?	No	New caretaker, scheduled to do course
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 no. bhs	
4. Specify the volumes in m3/day of groundwater abstracted from each of the boreholes ?	Approximate combined supply of 900-950 m3/day over 24 hours	
5. Is there a surface water source in use in addition to the groundwater source ?	No	
6. If there is a surface water source in use in addition to the groundwater source specifies the volume abstracted in m3/day	N/A	
7. In the case of multiple sources are they mixed prior to treatment ?	Yes	2 boreholes mixed
8. How long does it take water to get to the first consumer (in minutes approx) ?	Approximately 8 hours	
9. Has a photograph of the well/borehole or spring been taken ?	Yes	

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

Source Protection	Response	Comment
14. Are there borehold logs and construction details available for the supply ?	No	Not available at time of audit
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 ?	No	
19. If yes, have they been decommissioned in accordance with best practice ?	N/A	
20. Have the GAP regulation setback distances been put in place ?	Yes	
21. Has the landowner been advised in writing of the setback distances ?	Yes	
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	

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 ?	No	
26. Does an assessment of the historical raw water data indicate turbidity levels routinely in excess of 1 N.T.U. ?	Yes	There is an issue with turbidity with regard to high iron levels in raw water
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 ?	No	
30. What is the frequency of Cryptosporidium monitoring ?	N/A	

Disinfection - Chlorination	Response	Comment
31. Is the water disinfected using chlorination ?	Yes	Sodium hypochlorite
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	Low 0.20 High 1.20
34. What is the chlorine residual reading on the monitor at the time of the audit ?	0.53	
35. Is the chlorine monitor after the contact tank / clear water tank ?	Yes	
36. Is there a documented procedure for responding to the alarm in place at the treatment plant ?	No	Not available at time of audit
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	
41. Is the chlorine residual manually checked in the network ?	Yes	
42. How many locations in the network are routinely checked for chlorine residual ?	1 location	
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
Dunshaughlin WTW to close in future; College Park to join up with new boreholes/ tower/ plant later this year. Site use in monitoring round may need to be confirmed.

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 14) :
The Water Service Authority (WSA) should collate all available information on the borehole and maintain a copy on site and in the WSA offices for future reference and management of the source. Information should include the hydrogeological report, borehole logs and construction details.

Recommendation 2 (This recommendation related to audit question 36) :
The Water Services Authority should ensure that all monitors are linked to recording devices and, where appropriate, alarmed. A procedure should also be put in place defining the actions to be taken in response to the different levels of alarm.

Auditors signature :

Date reviewed : 21/03/2012

Reviewers signature

Audit Photographs

E6-17-002 Dunshaughlin Bore - site of wells

E6-17-002 Dunshaughlin Bore -filters

E6-17-002 Dunshaughlin Bore -sampling point