

## Incidents in England and Wales 2005

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
26/04/05 for 2 days (ESK)	Parts of Chigwell, Romford, Ilford, & Dagenham, Essex 300,000	Musty odour problem caused by algal die back in supplying raw water reservoir in the Lea Valley	<p>Company actions:</p> <ul style="list-style-type: none"> <li>• Sampled affected area</li> <li>• Shut down six filters to achieve higher flow rates through remaining slow sand filters</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommended particular attention is paid to the operating regime and management of works during periods of unusual operating conditions.</li> </ul>
03/06/05 for 2 days (ANG)	Southill, Stanford, Broom & Upper Caldecote, near Biggleswade, Bedfordshire 10,250	Discoloured water (brown) following planned work by company staff	<p>Company actions:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Review of procedures</li> <li>• Provided bottled water on request</li> <li>• Retrained staff</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Review adequacy of staff training in Impact Plans in particular the impact of upstream and downstream flows for zones with a higher risk of discoloration.</li> <li>• Promote the use of network modelling to assess the impact of work on higher risk zones.</li> </ul>
06/06/05 for 20 hours (ANG)	Barnack & Wittering, near Peterborough, Cambridgeshire 937	Discoloured water (brown) following a mains burst	<p>Company actions:</p> <ul style="list-style-type: none"> <li>• Repaired and flushed main</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <p>Satisfactory handling of incident - no recommendations</p>
27/07/05 for 35 minutes (ANG)	Dunton WTW Dunton & Potton villages, near Sandy, Bedfordshire 16,411	Loss of chlorination as a result of failure of the disinfection system	<p>Company actions:</p> <ul style="list-style-type: none"> <li>• Shut down treatment works</li> <li>• Repaired faulty equipment</li> <li>• Installed low oxygen pressure alarm</li> <li>• Flushed delivery main</li> <li>• Review of fail-safe shutdown procedures</li> <li>• Staff awareness briefings</li> </ul> <p>DWI comments and findings:</p> <p>Confirmation required that Company has taken follow up actions, specifically:</p> <ol style="list-style-type: none"> <li>(1) installed a telemetry alarm to indicate any future reduction in oxygen pressure.</li> <li>(2) reviewed the maintenance regime and training for fail-safe shutdown items</li> <li>(3) briefed operational and scientific staff on this event to raise awareness.</li> </ol> <p>Anglian Water have confirmed that these actions have been taken.</p>

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17/08/05 for 3 days (ANG)	Blakesley near Milton Keynes, Buckinghamshire Supply Zone 5,000	Microbiological contamination (coliform) found in distribution following mains repair	<p>Company actions:</p> <ul style="list-style-type: none"> <li>• Repaired and flushed main</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings: Robust response from company with thorough investigation but cause not identified.</p>
20/08/05 for 4 days (ESK)	Victoria Road, Romford, Essex 6 properties affected serving 30 people	<i>E.Coli</i> in repaired main sample following a mains burst	<p>Company actions:</p> <ul style="list-style-type: none"> <li>• Increased chlorine residuals in the distribution system</li> <li>• Issued a boil water notice</li> <li>• Provided bottled water</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommend review procedures for sampling following a mains repair, particularly the number and location of sampling points.</li> <li>• Review guidance on selection of suitable taps for sampling.</li> </ul>
24/08/05 for 5 days (ANG)	Westfields, Buckingham 162	Issue of boil water advice as a result of a presumptive <i>E.Coli</i> in repaired main sample	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Chlorinated and flushed distribution main</li> <li>• Provided bottled water</li> <li>• Issued a boil water notice</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings: • Robust response by company to the incident but no cause identified. No recommendations.</p>
10/09/05 for 7 days (ANG)	Croughton, near Brackley, Northants 470	Issue of boil notice as a result of a positive <i>E.coli</i> test following planned work by company staff	<p>Company action;</p> <ul style="list-style-type: none"> <li>• Issued a boil water notice and provided bottled water on request</li> <li>• Increased chlorine residuals in the distribution system</li> <li>• Awareness briefing of network staff in issues highlighted by the incident</li> <li>• Specialist leakage detection contract brought in as a follow up to identify any leakage or possible ingress points.</li> <li>• Proactive visits to customer and regular written updates to boil water notice to improve relations &amp; cooperation of customers.</li> </ul> <p>DWI comments and findings: Commend robust company approach to handling of incident. No recommendations.</p>

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02/12/05 for 6 days (ANG)	Pitstone village (near Winslow) Buckinghamshire 625	Evidence of microbiological (coliform) contamination	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Increased chlorine residuals at service reservoir</li> <li>• Sampled affected area</li> <li>• Isolated and drained reservoir for cleaning &amp; inspection</li> </ul> <p>DWI comments and findings: Thorough investigations but no cause identified.</p>
20/12/05 for 3 days (ESK)	Long Riding Basildon, Essex 52	Microbiological contamination in distribution resulted in issue of boil water advice	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Issued a boil water notice</li> <li>• Provided bottled water on request</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings: • Thorough investigation but no cause identified. • Company reminded that to ensure public health standards vigilance is required at all times with hygiene procedures.</p>
08/02/05 for 5 days (SVT)	Bamford Derbyshire 193,980	Discolouration (brown) and following work at the treatment works	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Increased chlorine residuals at treatment works</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings: • Assessment ongoing</p>
13/04/05 for 24 hours (SST)	Dudley Area Springmire Zone West Midlands 20,000	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Sampled affected area</li> <li>• Provided bottled water on request</li> <li>• Close liaison maintained with SVT regarding their bulk supply during the incident.</li> </ul> <p>DWI comments and findings: • Service level agreement for the Severn Trent bulk supply requires review to ensure clarity and precision on actions and delivery of information in the planning of work and in the event of incidents. • Investigate condition and performance of valves along the trunk mains and the condition of cross-connection pipe work. • Review operational maintenance requirements for the trunk mains.</p>

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14/04/05 for 23 hours (SVT)	Jeremy Rd, Wolverhampton City (part) 31,000	Discolouration (brown) from SVT bulk supply serving the area	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Rezoned area (brought in water from different source)</li> <li>• Provided bottled water on request</li> <li>• Removed service reservoir from supply to prevent turbid water entering.</li> <li>• Sensitive customers contacted and given advice</li> <li>• Close liaison maintained with bulk supplier (SST) during incident</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Sampled affected area</li> <li>• Flushed mains</li> <li>• Service level agreement for the bulk supply requires review to ensure clarity and precision on actions and delivery of information.</li> </ul>
07/06/05 for 2 days (SVT)	Barlborough, Derbyshire 76	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Assessment ongoing</li> </ul>
14/06/05 for 3 days (SVT)	Properties on London Road, Oadby, Leicestershire 7	Issue of advice not to drink the water following a repair to a burst main	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice</li> <li>• Sampled affected area</li> <li>• Provided bottled water</li> <li>• Flushed mains</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Company failed to identify closed valve during flushing operation, following an earlier mains burst, which resulted in a section of main containing poor quality water being supplied to consumers.</li> <li>• Sampling was not timely enough. Recommendation made that company review sampling arrangements in light of delay. However, commended the company for the extensive sampling carried out in order to identify the cause of the problem.</li> </ul>
24/06/05 for 50 hours (SVT)	Epperstone WTW, Oxtun & Farnsfield, Nottinghamshire 465	Wholesomeness concern as a result of a plant failure associated with the disinfection system	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Shut down treatment works</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Supplied water which had not been disinfected in breach of regulations.</li> <li>• Inappropriate shutdown system installed at the site.</li> <li>• Further work required to assess potential for recurrence at other sites.</li> <li>• Company did not notify CCWater.</li> </ul>

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09/08/05 for 9 hours (SST)	Sedgley, West Midlands 7,400	Discolouration (brown) associated with the failure of a booster pump	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• No maintenance of uninterruptible power supply that led to booster pump failures.</li> <li>• Booster pump restarted even though it had already tripped out twice on the same fault that morning – subsequent reversal of high morning demand flows caused discolouration.</li> <li>• Recommended that the company review procedures.</li> <li>• Company commended for contacting customers on the day after event to ensure water supplies normal.</li> <li>• Company recommended to undertake periodic flushing of the mains.</li> <li>• Company supplied water that contravened the Regulations for a period of hours.</li> </ul>
23/08/05 for 24 hours (SVT)	Ladyflatte WTW (Ashbourne, Wirksworth area of Derbyshire 67,905	Evidence of microbiological contamination ( <i>E-coli</i> )	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Sampled affected area</li> <li>• Shut down treatment works</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Assessment ongoing</li> </ul>
05/09/05 for 8 weeks (SVT)	Oadby & Wigston areas of Leicester  870,000 served by the works	Chironomid larvae present in mains which resulted in consumer contacts and media interest	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Anaerobic treatment of granular activated carbon contactors at supplying works</li> <li>• Company received 386 complaints.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Assessment ongoing</li> </ul>
05/10/05 for 16 hours (SVT)	Birmingham Road works, Warwick Birmingham Road zone, Kenilworth  8,422 served by works	Plant failure resulted in loss of disinfection.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Shut down treatment works</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate communication caused delay in response.</li> <li>• Unacceptable delay in notifying Inspectorate, local and health authorities.</li> <li>• Sampling was not timely enough.</li> <li>• Disinfection of water leaving site compromised, but mixed with other chlorinated supplies before being distributed to consumers.</li> </ul>

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22/11/05 for 6 days (SVT)	Stafford and Butterhill, Staffordshire 1,250	Discolouration (brown) associated with a burst main	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Sampled affected area</li> <li>• Repaired main</li> </ul> <ul style="list-style-type: none"> <li>• Rezoned area (brought in water from different source)</li> <li>• Blended supply with another source</li> <li>• Provided bottled water on request</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate approach to assessment of water quality risks prior to repair.</li> </ul>
12/12/05 for 24 hours (SVT)	Pinnock Springs Booster Pumping Station, Evesham, Worcestershire 8,542	Evidence of microbiological contamination ( <i>E.coli</i> & coliforms) in final treated water sample	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Shut down treatment works</li> <li>• Chlorination set point increased to 0.5mg/l</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate investigations into root cause. Suggested to company that a full revised assessment be made of the catchment area to take into account possible sources of <i>E.Coli</i> and raw water contamination to examine practicality of control measures within the catchment area.</li> <li>• Recommendation made that company should review other operational sites to ensure that disinfection regime is appropriate for the source water as at Pinnock Springs marginal chlorination was being used, and it was felt that this was not appropriate at a site which was classified as being at high risk for microbiological contamination.</li> <li>• Company commended for taking source out of supply. The source will not be reinstated until the installation of a membrane plant (for <i>Cryptosporidium</i> removal) is complete at Childswickham service reservoir.</li> </ul>
16/12/05 for 24 hours (SVT)	Buxton, Derbyshire 35,250	Discolouration (brown) associated with rezoning following repair to the service reservoir inlet valve	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided bottled water to vulnerable consumers</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Assessment ongoing, consumer statements and company statements taken in March 2006.</li> </ul>
23/12/05 for 3 days (SVT)	Ogston New works Derbyshire supplying Chesterfield, Bolsover, Barlborough and South Sheffield 324,000 served by works	Evidence of microbiological contamination ( <i>E.coli</i> and coliforms) in final treated water sample	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Increased chlorine residual at works</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate follow up sampling – too few samples taken from receiving area.</li> <li>• Greater consideration to be given to accuracy of analytical results to rule out possibility of analytical error (original positive samples).</li> <li>• Recommended that improvements are made to the storage and availability of the on line operational data at key works to allow comparison and interrogation.</li> </ul>

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06/01/05 1 day (UU)	Lancaster WTW, Lancashire 96,000	Wholesomeness concern as a result of deterioration in final water quality following loss of coagulation due to pump failure at works	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Dispatched process controller to site and restarted pump within two hours</li> <li>• Sampled final water leaving treatment works and customer taps</li> <li>• Repaired fault in pump that prevented automatic shutdown</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Requested that company investigate the cause of the air lock that led to pump failure and take action to prevent recurrence.</li> <li>• Recommended that the company modifies its procedures to ensure that the Consumer Council for Water (North West) is informed of incidents at about the same time as it informs the other authorities.</li> </ul>
08/01/05 for 10 days (YKS)	Bentley, Doncaster 15,035	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Rezoned area (returned system to original source)</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Satisfactory action.</li> <li>• Suggestion regarding risk assessment.</li> <li>• Commended the company for flushing the system.</li> </ul>
09/01/05 6 days (NNE)	Hexham, Northumberland 14,903	Damage to main associated with extreme weather and flooding resulted in loss of supplies / poor pressure	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided an alternative supply by tanker / bowser</li> <li>• Provided bottled water</li> <li>• Issued a boil water notice</li> <li>• Constructed &amp; commissioned 5km temporary overland trunk main</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Company commended for overall response, specifically for their attention to water quality issues; liaison with HA &amp; LA; provision of information to consumers and overall speed of response given to challenges faced.</li> </ul>
09/01/05 for 8 hours (YKS)	Otley, north of Bradford, Yorkshire 17,000	Discolouration (brown) associated with the failure: of a valve on inlet to reservoir	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Repaired faulty equipment</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate communication caused delay in response. Suggested the company considers whether changes are needed into the way it prioritises alarms.</li> </ul>

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10/01/05 for 4 days (YKS)	Langthwaite works Supplying the villages of Langthwaite, Reeth, Whaw, Booze and Arkletown, North Yorkshire. 250	Power failure at the works resulted in chlorination failure	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Issued a boil water notice</li> <li>• Works shut down automatically, customers supplied by water already in the treated water reservoir</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate procedures.</li> <li>• Supplied unwholesome water in breach of regulations.</li> <li>• Supplied water unfit for human consumption.</li> <li>• Acknowledged that company resources &amp; equipment stretched due to severe weather conditions.</li> </ul>
12/01/05 N/A (UU)	Bridgend works, Keswick, Cumbria N/A	Regulatory Breach, <i>Cryptosporidium</i> reported in final water	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided information to indicate that this was a laboratory error</li> <li>• Amended laboratory procedures to minimise the possibility of it occurring again.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Confirmed likely that two samples had been transposed during analysis so that the wrong results were attached to the wrong site.</li> <li>• Recommended that the company review its procedures, and amend them as necessary to minimise the possibility of samples being transposed. The procedures should include such checks, as are necessary, to ensure that the correct sample is put onto the correct slide.</li> </ul>
09/02/05 for 1 day (NNE)	Darlington 19,347	Discolouration (brown) associated with damage to a main by contract staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Did forewarn customers as part of ongoing rehabilitation scheme.</li> <li>• Company has revised arrangements for storing of cap-ends.</li> </ul>

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26/02/05 2 days (UU)	Wallasey, Merseyside 52,500	Discolouration (brown) associated with mains burst	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Repaired leaking valve</li> <li>• Provided bottled water on request</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate procedures and risk assessment</li> <li>• Recommend that where a 'loss of supplies' is reported by consumers the location of the burst is asked for and recorded so that the Network Controller can quickly locate and isolate the burst to minimize low pressure and discolouration of the water supply.</li> <li>• Recommend that the procedures for repairing failed couplings are checked to minimize the possibility of repaired couplings failing.</li> <li>• Critical of the length of time the company took to identify the source of the low pressure and loss of supply. It took over 3½ hours to determine the location of the burst and it was only because a member of the public informed the Network Controller that it was located.</li> <li>• Commend the company for the prompt response once the burst had been located and returning the distribution system to its normal state without exacerbating the discolouration of supplies.</li> <li>• Critical of the work undertaken to extend the bypass around the meter which probably disturbed the coupling allowing it to fail.</li> </ul>
22/03/05 for 12 hours (UU)	Birkenhead & Bebbington, Sutton Hall North, Merseyside 23,265	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided bottled water on request</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate contingency planning, procedures and risk assessment.</li> <li>• Recommended that the company re-assess its network modelling procedures to ensure that they include variations in output from the treatment works as well as the flows and velocities in the mains.</li> </ul>
30/03/05 for 27 hours (NNE)	Houghton le Spring, Hetton-le-Hole, Easington & Seaham Co Durham 60,248	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Supplied unwholesome water in breach of regulations.</li> <li>• Supplied water likely to have been unfit for human consumption.</li> <li>• Company did consider risks to water quality in planning of activity but this was inadequate as they did not take into account combination of stop/starting of pump and the change in valve position.</li> <li>• Recommendation made re: planning and assessment of risks to water quality.</li> </ul>

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26/04/05 2 days (UU)	Skelmersdale, Lancashire 40,000	Discolouration (brown) conclusive cause could not be identified	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided bottled water on request</li> <li>• Sampled affected area</li> <li>• Carried out a thorough investigation of flows and pressures</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Concluded that the company were unable to establish a conclusive cause .</li> <li>• Recommended that the company considers the number and timing of reports by category (discolouration and aeration) in each district metered area when assessing the cause of incidents and includes this information in future reports.</li> <li>• Recommended that the company should review the priority of the mains cleaning in this zone to take into account the risk of discolouration demonstrated by this incident.</li> </ul>
20/05/05 2 days (UU)	Whitehaven, Cumbria 32,000	Discolouration (brown) associated with essential maintenance on air valves	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Took action to minimise discolouration by reducing outputs and flushing from hydrants</li> <li>• Checked for sensitive customers and made bottled water available on request</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Critical of the company for not carrying out a formal risk assessment before starting to operate valve.</li> <li>• Recommended that the company advises the Inspectorate of the results of the network modelling to be carried out before opening of the valve in the future.</li> <li>• Recommended that the company carries out sufficient investigation of incidents to establish the likely cause.</li> </ul>
25/05/05 for 30 hours (YKS)	Earby, Southwest of Skipton, North Yorkshire 4,540	Discolouration (brown) associated with rezoning of supplies to support mains rehabilitation	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided bottled water on request</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Suggest company makes sure adequate supplies of bottled water are available when it informs consumers it has been provided.</li> <li>• Recommend the Health Authority and Local Authority are kept up to date at significant points throughout event.</li> </ul>

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26/05/05 1 day (UU)	Newton-le-Willows, Cheshire 20,783	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided bottled water on request</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate procedures.</li> <li>• Recommended that the company ensures its reports are accurate before submitting them to the Inspectorate.</li> <li>• Noted that the company is reviewing its methodology for commissioning the main and recommended that the company informs the Inspectorate of the results of that review and when the main has been successfully commissioned.</li> <li>• Recommended that the company states in its reports that it notified the Customer Service Committee.</li> <li>• Recommended that the company modifies its procedures to ensure that it meets the notification requirements.</li> </ul>
27/05/05 for 13 hours (NNE)	Kenton Bank Foot, Newcastle Upon Tyne 4,994	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided bottled water on request</li> <li>• Sampled affected area</li> <li>• Flushed mains</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommended that a procedure for risk assessment is put in place.</li> <li>• Recommended that risk assessment is documented.</li> </ul>
07/06/05 for 2 days (NNE)	Prudhoe (Tyneside) and Crawcrook (Gateshead) 11,952	Discolouration (brown) associated with mains burst	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommendation regarding conducting additional risk assessment if a change is made prior to the job starting.</li> <li>• Recommend company considers the most appropriate time to conduct work on the distribution system where the risk of discolouration is identified.</li> <li>• Recommend company has procedures for recharging mains that takes into account size of main and the need to recharge slowly.</li> <li>• Recommend risk assessment is documented with details of what issues were considered and the decision making process involved.</li> </ul>

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10/06/05 6 hours (UU)	Preston Lancashire 32,500	Discolouration (brown), cause due to increases in flow caused by a defective ball valve	<p>Company action:</p> <ul style="list-style-type: none"> <li>• The ball valve and inlet replaced which company indicate should prevent a recurrence of the incident.</li> <li>• Bottled water supplied upon request and register of people at risk checked</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• No recommendations made but requested information on the company policy with regard to ball valves and inlets to service reservoirs.</li> </ul>
29/06/05 for 9 days (UU)	Westhoughton, Southwest of Bolton, Lancashire 18,832	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Sampled affected area</li> <li>• Provided bottled water on request</li> <li>• Flushed mains</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommendation made regarding putting in place monitoring when conducting work.</li> </ul>
06/07/05 for 24 hours (UU)	Sutton Hall North, Wirral, Merseyside 21,548	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided bottled water on request</li> <li>• Abandoned planned work when discolouration complaints reached significant numbers.</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate procedures and risk assessment.</li> <li>• Critical of the company for not undertaking a proper assessment of the possibility of a discolouration incident. The distribution system at the junction is quite complex and the valving sequence was more than opening a simple cross connection.</li> <li>• Recommend that assessment of planned valving operations are not just based upon the knowledge that on previous occasions the use of cross connections on different parts of the main had not caused a discolouration incident. Each separate valving incident should be carefully assessed to determine the potential for minimal disturbance of mains deposits, especially when it is known that the mains contain significant deposits.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
28/07/05 10 Hours (UU)	Denton works and Denton SR - No direct zones supplied	Failure of disinfection plant at works	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Increased chlorine residuals at service reservoir so that all water entering supply to consumers did receive disinfection</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommended that the control centre should be able to determine the status of a water treatment works so that staff can be called out when necessary following generation of an alarm.</li> <li>• Recommended that for works with automatic shutdown, the control centre should be able to confirm automatic shutdown has occurred following alarm.</li> <li>• Recommend that the company reviews its procedures for dealing with disinfection failures particularly the sections dealing with checks on plant status and fail-safe systems.</li> <li>• Expressed concern that there may be an inherent fault in some of the company's dosing systems and recommended that the company carries out a full review of similar dosing systems at other works.</li> <li>• Recommended that the company modifies its procedures to take samples of water leaving works when there is a disinfection failure.</li> <li>• Noted that the water leaving Denton SR and supplied to consumers was disinfected and met water quality standards.</li> </ul>
29/07/05 13 hours (UU)	Preston Lancashire 5,000	Discolouration (brown) associated with mains burst	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided bottled water on request</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Assessment completed and no recommendations made.</li> </ul>
26/08/05 for 4 days (YKS)	Langley Lane, Baildon, North of Bradford 190	Issue of warning advice (boil notice) as a result of the presence of microbiological contamination in distribution ( <i>E.coli</i> )	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Increased chlorine residuals in the distribution system</li> <li>• Issued a boil water notice</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommend that the company changes its chlorination procedures to meet the current code of practice and principles of hygiene.</li> <li>• Recommend the company reminds its staff of the potential impact of faecal pollution.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
26/08/05 for 11 hours (NNE)	Ponteland Darras Hall, Northumberland 6,792	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Commended the company for instigating local meetings and making personnel available to discuss rehabilitation problems.</li> <li>• Recommended that the company reviews its procedures and details when to conduct a risk assessment.</li> <li>• Asked the company to present its work planning tool and risk assessment procedures to the Inspectorate.</li> </ul>
31/08/05 4 days (UU)	Bispham, Blackpool 50,000	Discolouration and loss of supplies / poor pressure as a result of a mains burst	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Repaired main</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommended that the company informs the Inspectorate of the origins of the discolouration and actions taken to be taken in the future to prevent discolouration, should it be necessary to supply Bispham from the high pressure main from Warbreck Tower SR in the future.</li> <li>• Recommended that the company modifies its repair procedures to ensure that it has the correct couplings for burst mains repairs.</li> </ul>
09/09/05 for 2 days (NNE)	Carshields WTW, Carshields, southwest of Hexham 43	Issue of warning advice (boil notice) as a result of the presence of elevated turbidity in final water and potential ingress	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Issued a boil water notice</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Enforcement action considered.</li> <li>• Recommend the company ensures no ingress to all post treatment assets and that drainage is adequate.</li> <li>• Recommend the company re-examine the covers and vents to ensure there is no risk of ingress.</li> <li>• Recommend the company ensures no ingress to tank.</li> <li>• Commended the company for taking precautionary action.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
12/09/05 for 18 days (YKS)	Caldervale road industrial estate, Wakefield 75	Issue of warning advice (do not drink) as a result of back siphonage ( <i>E.coli</i> and Enterococci)	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice</li> <li>• Sampled affected area</li> <li>• Provided bottled water on request</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Suggest that all employees who work with contaminants are trained in the basics of ensuring that they do not create a health risk.</li> <li>• Recommend that appropriate equipment is in place at sewage works to ensure that a contaminant cannot be introduced into the potable water system.</li> <li>• Minded to recommend that all standpipes which do not meet the company standard are removed from use (company undertook work prior to completion of the Inspectorate assessment).</li> <li>• Minded to recommend that relevant staff are made aware of the appropriate numbers to contact the duty manager for use during a high priority event (company actioned this prior to completion of the Inspectorate assessment).</li> </ul>
05/10/05 for 3 days (NNE)	Brandon, Ushaw Moor, Sacriston, Spennymoor and Ferryhill, Durham 93,070	Derwent South Trunk Main Discolouration (brown) associated with valve failure during planned work	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Minded to recommend technicians undergo training into taking appropriate samples (company actioned this prior to completion of the Inspectorate assessment).</li> <li>• Recommendation concerning inadequate investigations into root cause of the valve operation.</li> <li>• Recommendation concerning labelling equipment correctly.</li> <li>• Recommendation concerning staff being briefed with adequate instructions.</li> </ul>
08/10/05 for 12 hours (YKS)	Woodhouse, Sheffield 6,700	Discolouration (brown) associated with planned rehabilitation work	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided bottled water on request.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommend that procedures reviewed to ensure control room is aware of work.</li> <li>• Commend the network technician for discussing the appropriate action having identified a potential issue.</li> <li>• Requested to be informed of the outcome of the investigation into the valve inspection.</li> </ul>
08/11/05 for 4 days (NNE)	Cramlington, North of Newcastle Upon Tyne 67,500	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommend the company follows its method statements.</li> <li>• Commend for putting in place contingency arrangements.</li> <li>• Recommend the company models any future work in the area before work commences and ensures that enough information is available to carry out an informed risk assessment.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
17/11/05 8 hours (UU)	Penrith, Cumbria 200	Taste / odour (petrol) problem as a consequence of planned work by the company	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Carried out a risk assessment for discolouration before carrying out work</li> <li>• Once reports of unusual taste and odour were received, quickly initiating an investigation, collecting water samples and carrying out localised flushing to minimise the impact</li> <li>• Checked for sensitive consumers, delivering bottled water to consumers who reported problems and advising them not to drink water until the investigations were complete</li> <li>• Once the results of the analyses of samples were known, advising those consumers that the water was safe to drink.</li> <li>• At the conclusion of the incident, writing to all affected consumers apologising for the incident and explaining its cause</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Critical of the company for not identifying in its method statement, prepared prior to carrying out the work on 15 November, that there was water in a 1.2 km section of main that had been in contact with a bitumen lined pipe for several months and that stale water would enter supply when the valve was commissioned and the cross connection closed. The incident could have been avoided had the company realised this and made arrangements to flush this water to waste.</li> <li>• Consider that it would have been prudent for the company to have consulted its public health scientist once the problem was discovered but before the nature of the contaminant was known and then to have considered whether it was necessary to advise all potentially affected consumers.</li> <li>• Noted that the company has identified this fault and is taking steps to review its procedures and will consider this type of situation in its Drinking Water Safety Plans.</li> <li>• Recommend that the company advises the Inspectorate of the outcome of its review and the actions taken as a consequence.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
18/11/05 for 12 hours (YKS)	Holmbridge works Holmbridge and Honley village, Yorkshire 250	Wholesomeness concern following failure of works to shut down (failure of alarm)	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Increased chlorine residuals at treatment works</li> <li>• Removed service reservoir from supply</li> <li>• Sampled affected area</li> <li>• Shut down treatment works</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Commended for using reservoir to 'quarantine' water to minimise risk.</li> <li>• Called for information on operation of chlorination system in case of power failure.</li> <li>• Recommended that the company investigates the failure in communication.</li> <li>• Commend the company for its subsequent actions to prevent a recurrence.</li> <li>• Recommend that lessons learnt are applied to all sites.</li> <li>• Recommend the company undertakes a thorough review of how it manages electrical supplies following five notifications since January 2004.</li> </ul>
16/12/05 5 hours (UU)	St Helens North Merseyside 12,500	Discolouration (brown) associated with planned work by company staff to repair a leaking valve on a main	<p>Company action:</p> <p>Flushing considered but not conducted as it may have worsened the problem Bottled water provided on request Sampled affected area</p> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Critical of time taken to identify and repair leak on valve (6 days to locate and 10 days to repair).</li> <li>• Recommended that the company review their procedures in this respect.</li> <li>• Concluded that the network controller did not follow company procedures correctly.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
Jan/Feb 2005 for 5 weeks (SRN)	Powdermill raw water reservoir, Brede works, and Brede Zone serving, Brede, Broadoak, St.Leonards on Sea, Hastings & Rye, Sussex 42,500	Wholesomeness concern due to detectable pesticide in the treated water leaving Brede works	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Blended supply with another source and reduced flow from Powdermill Reservoir</li> <li>• Environment Agency were involved to help identify the source of the contamination</li> <li>• Enhanced sampling undertaken over a prolonged period</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Concluded that the company supplied water to consumers in Brede with an individual pesticide in excess of that specified in Schedule 1 Table B of the Water Supply (Water Quality) Regulations 2000 for at least one day.</li> <li>• Recommend that the company fast track samples where verification of AQC failure results indicate a breach of the 2000 Regulations, comply with regulation 17 on investigation, and ensures that an appropriate water transfer arrangement is in place to prevent a recurrence in a similar situation.</li> <li>• Company provided further information from the Environment Agency (EA), supporting the belief that the carbetimide contamination of Powdermill Reservoir was an isolated occurrence. The EA are working within the catchment on a number of actions to protect the catchment.</li> <li>• Note that the company continue to monitor for carbetimide in the raw water source and no increase has been seen in nine months. I therefore conclude that this breach of the regulations is unlikely to recur.</li> <li>• Concluded that the company did not meet the notification and reporting requirements for such events and recommended that the company ensures that it fully complies with regulation 35(8) of the 2000 Regulations and the Water Undertakers Information direction 1998.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
31/03/05 for 3 hours (SRN)	Otterbourne works only N/A No zones supplied directly at the time of the incident	Loss of chlorine at the Otterbourne works due to failure of the disinfection dosing plant	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Repaired faulty equipment –chlorine dosing pump 31/3/05</li> <li>• Replaced faulty equipment – standby dosing pump 8/4/05</li> <li>• Review of procedures, including at the Testwood Control Centre, where the controller used an alarm override facility to prevent automatic shutdown of the works</li> <li>• Comprehensive review of the chlorination system, telemetry system, plant &amp; works procedures.</li> <li>• Turbidity alarm levels reduced</li> <li>• Significant improvement programme initiated to prevent a recurrence.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Concluded that there was a failure on 31/3/05 to ensure disinfection of the water leaving the works in breach of regulation 26, but that there was no evidence to indicate that the breach posed a significant risk to human health. (Note; water supplied via a large reservoir of treated water)</li> <li>• Did not notify or liaise with local / health authorities and did not notify Inspectorate.</li> <li>• Minded to enforce letter sent to the company for failure to comply with the notification requirements of regulation 35(8) of the 2000 Regulations and Water Undertakers Information direction 1998. The company have implemented actions to ensure that the situation does not recur.</li> <li>• Concluded that inadequate communication caused delay in response. Recommended that the company revises its procedures to ensure that critical information regarding treatment works operations and plant failures are communicated without delay to appropriate senior managers.</li> <li>• Critical of the company for not identifying the cause of repeat alarms at the site sooner and for disabling a turbidity alarm.</li> <li>• Once the Inspectorate had drawn the attention of the company to the disinfection failure incident, an appropriate investigation was undertaken.</li> <li>• Inadequate procedures and training. Recommended that the company ensures its own procedures on alarm responses are followed. Company issued written instruction to staff.</li> <li>• Recommended that the company revises its procedures and ensures that contingency plans are in place to ensure appropriate responses whilst repairs of critical equipment are carried out, also recommended that the company ensures that appropriate staff are informed of the need for vigilance when process critical equipment is off-line, for whatever reason.</li> <li>• Critical of the communication deficiencies which resulted in an inadequate sampling response.</li> <li>• Expressed concern regarding lack of prompt maintenance of equipment at the site.</li> <li>• A number of deficiencies at the works were identified and the company completed the priority actions by 31/12/05, further improvements were delivered by 31/3/06, additional improvement work is ongoing.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
29/04/05 for 6 days (FLK)	Worlds Wonder works, Henbury, Kent 25	Issue of boil advice following failure of the disinfection system at Worlds Wonder works	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Shut down treatment works</li> <li>• Rezoned area (brought in water from different source)</li> <li>• Issued a boil water notice</li> <li>• Sampled affected area</li> <li>• Corrected fault with disinfection system</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommended training includes clear guidance to appropriate staff of the need to ensure robust disinfection systems are in place at all treatment works to safeguard public health.</li> <li>• Inadequate disinfection system in place – shutdown system electronically by-passed.</li> </ul>
21/06/05 for 2 days (SEW)	Boreham Street, near Hailsham, East Sussex 250	Discoloured water (brown) following company action to increase flow to meet demand	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Took booster pump out of supply</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate number of samples taken and sampling not timely enough.</li> <li>• Unacceptable delay in notifying Inspectorate and local / health authorities.</li> <li>• Recommendation to review customer complaint handling process.</li> </ul>
08/07/05 for 3 days (SRN)	Owslebury/Baybridge Reservoir Owslebury and Baybridge in Hampshire 725	Issue of advice to boil water as a result of microbiological ( <i>E.coli</i> & coliform bacteria) contamination of the service reservoir	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Increased chlorine residuals at service reservoir.</li> <li>• Issued a boil water notice 8/07/05.</li> <li>• Removed service reservoir from supply 9/07/05.</li> <li>• Provided alternative supplies.</li> <li>• Drained down, inspected and sterilised the reservoir 9/07/05. No problems found.</li> <li>• Reservoir filled, samples satisfactory, reservoir returned to service 11/07/05.</li> <li>• Installed non return valves on direct supplies to some industrial units to prevent back siphonage.</li> <li>• Undertook enhanced sampling in the supply area over an extended period.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• No specific cause identified but company investigation adequate.</li> <li>• Enhanced sampling in supply area over an extended period confirmed water quality satisfactory.</li> <li>• Company committed to completing improvement works at the reservoir to improve turnover time and help to maintain the residual disinfectant level in the both the reservoir and associated distribution system. Work to be completed in 2006.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
07/07/05 for 6 days (SEW)	Selsfield / Butlers Green , West Sussex 200	Evidence of microbiological contamination (Coliforms and <i>E.coli</i> ) in distribution	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Sampled affected area</li> <li>• Increased chlorine residuals in the distribution system</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate follow up sampling. Recommended all exceedences are followed up.</li> <li>• Supplied unwholesome water in breach of regulations.</li> <li>• Supplied water unfit for human consumption.</li> <li>• Source of contamination not identified but booster chlorination instigated in zone. The company will keep the situation under review.</li> </ul>
18/07/05 for 2 days (SRN)	Twyford, Eastleigh, Bursledon, West End, Fair Oak areas , parts of Southampton and Winchester in Hampshire 146,627	High turbidity at Twyford works & reservoir and some consumer contacts, increase in turbidity occurred as a result of low water level in well	<p>Company actions:</p> <ul style="list-style-type: none"> <li>• Well pump at Twyford Works stopped due to a low water level alarm, well isolated from supply until cause of turbidity could be identified. Turbidity caused by mobilisation of chalk deposits in adit.</li> <li>• Sampled affected area</li> <li>• Increased output from other works to blend water in reservoir with other sources</li> <li>• Installed final water turbidity alarm 19/07/05</li> <li>• Commissioned a survey of well and adit system</li> <li>• Installed low level pump cut outs to prevent a recurrence (December 2005)</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Supplied water from Twyford works that exceeded the turbidity indicator value prescribed in Schedule 2 of the Water Supply (Water quality) Regulations 2000.</li> <li>• No final water turbidity alarm at Twyford Works. Alarm installed 19/07/05.</li> <li>• Inadequate follow up sampling as no samples were taken from specific areas where complaints were received from consumers. Recommendation made to review company procedures to ensure that samples are not only collected from representative areas of supply, but also targeted to locations where consumers have reported water quality problems.</li> <li>• Thorough investigation undertaken of well and adit system to identify cause and any problems (September 2005).</li> <li>• Low level pump cut outs were needed to prevent a recurrence and these were installed.</li> <li>• Further work undertaken to provide a detailed survey of the well and adit system .</li> <li>• Post survey phased reintroduction of the well.</li> <li>• Work to stabilise the southern shaft to be completed by 31/03/07.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
20/08/05 for 2 hours (SRN)	Rumfields water tower, Broadstairs, Thanet in Kent 15,200	Loss of supplies and poor pressure as a result of a pump failure caused by an electrical trip during a storm, followed by discolouration complaints as supplies were restored	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Restarted booster pump</li> <li>• Sampled affected area</li> <li>• Received 22 discoloured water calls as supplies returned</li> <li>• Amended telemetry so that falling trend in tower can be viewed remotely</li> <li>• Text set up on alarm to warn the control room operator to check that the standby booster has started</li> <li>• Rate of change alarm changed to level 5 requiring an immediate response.</li> <li>• Learning cascaded to operators.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Critical of communication between and actions of the control room operator and standby supply operator, which resulting in a slow response.</li> <li>• Inadequate follow up sampling (not adequately targeted) and sampling was not timely enough (specifically of the tower once it had refilled).</li> <li>• Rate of change alarm given insufficient priority and access to information via telemetry was poor. Former was critical to preventing the loss of supply and this alarm has since been reprioritised to ensure an immediate response.</li> <li>• Inadequate training / competence of staff, recommended that training be reviewed.</li> <li>• Inadequate communication caused delay in response, recommended that adequate and prompt warning is given by the control centre to allow a speedy response to be made.</li> <li>• Recommended that the company review the power supply arrangements to ensure that any simple modification that can be made to prevent a recurrence of this incident are made.</li> </ul>
03/10/05 N/A (PRT)	Portsmouth Water Itchen works and Hoads Hill Reservoir Fareham, Gosport, and Waterlooville in Hampshire N/A	Notification from Health Protection Unit (HPU) of increased cases of cryptosporidiosis in the community , outbreak control team established	<p>Company actions:</p> <ul style="list-style-type: none"> <li>• Initially reduced supply of water from Itchen works to Hoads Hill service reservoir and continued sampling at Hoads Hill reservoir and Itchen works (raw and treated)</li> <li>• Attended meetings of, and provided information to, the OCT established by the Health Protection Unit</li> <li>• As part of action plan agreed previously with HPU shut down Itchen Works on 3/10/05 as a precaution, continued running works to waste to enable sampling to continue</li> <li>• Prepared a joint press release with the HPU. Reminder given that immuno-compromised individuals should always boil their water. Advice given on what to do if you become ill and how to prevent spread of the illness</li> <li>• Extended the opening hours of the company call centre, briefed staff and provided them with prepared text for the response they should give to likely questions from the public. Provided information on the company website</li> <li>• Appointed an independent consultant to review the treatment process (report dated January 2006) and acted upon the findings and recommendations</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• The HPU are undertaking a case control study</li> <li>• Investigation ongoing</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
14/12/05 for 8 hours (SRN)	Michelmersh Reservoir & Timsbury Works Michelmersh, Romsey (north) & Awbridge in Hampshire 10,500	Loss of supply due to equipment cable damage. Action taken to restore supplies resulted in loss of residual chlorination due to a failure of the disinfection system	<p>Company actions:</p> <ul style="list-style-type: none"> <li>• Repaired faulty equipment (cable)</li> <li>• Rezoned area (brought in water from different source)</li> <li>• Appointed an independent consultant to investigate the cause, company actions, any lessons and recommend any changes needed to be made (7 recommendations made)</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• No evidence to indicate that water unfit for human consumption was supplied.</li> <li>• Once first complaint received staff acted promptly and used initiative to restore supplies when works could not be restarted.</li> <li>• Critical that feed taken for chlorine motive pumps at works was taken from distribution, so once the supply was lost the pumps could not be started. Company advised work to address this was completed on 7/3/06 and that no other works have a similar feed arrangement.</li> <li>• Inadequate contingency planning when half of reservoir taken out of supply for maintenance.</li> </ul> <p>Recommended procedures reviewed for operating reservoirs at reduced storage capacity and the company have confirmed that this review is complete</p> <ul style="list-style-type: none"> <li>• Critical for not ensuring that the temporary cable for the water level transducer was adequately protected. When this was broken the telemetry signal was lost.</li> <li>• Critical of the company for the delay in collecting samples from the reservoir and downstream properties.</li> <li>• Critical that control room operator cleared the alarm without taking any action. Recommended review of training and procedures for dealing with regular alarms.</li> <li>• The cable damage may have been an act of vandalism, recommended a review of site security.</li> </ul>
07/01/2005 for 5 hours (TMS)	Putney Booster PS, London 33,181	Loss of supplies / poor pressure following a power failure	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Repaired faulty equipment</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Did not notify Water Voice Thames.</li> </ul>
09/03/2005 for 2 days (TVW)	Middle Street, Clavering, Essex 10	Taste / Odour (creosote / phenolic) associated with static water following burst main / valving	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Sampled affected area</li> <li>• Issued a do not drink notice</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate planning in repair of main.</li> <li>• Thorough investigation into root cause.</li> <li>• Good communication with consumers.</li> <li>• May have supplied water unfit for human consumption.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
19/03/2005 for 18 days (TVW)	Well End, Borehamwood, Hertfordshire 75	Taste / Odour (musty) associated with a burst main	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Issued a do not drink notice</li> <li>• Provided bottled water on request</li> <li>• Left system to settle</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Supplied unwholesome water in breach of regulations.</li> <li>• Supplied water unfit for human consumption.</li> <li>• Company took prompt and appropriate action.</li> <li>• No recommendations.</li> </ul>
06/05/2005 for 9 weeks (TVW)	North Mymms works Hertfordshire 68,912	Evidence of chemical contamination (mecoprop herbicide) associated with a deterioration of the raw water	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Shut down treatment works</li> <li>• Rezoned area (brought in water from different source)</li> <li>• Replaced granular activated carbon at works</li> <li>• Requested short-term Authorised Departure whilst remedial works under way (due to increase in demand).</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Supplied unwholesome water in breach of regulations.</li> <li>• Recommendation made regarding the timeliness of the works shutdown.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
12/05/2005 for 20 weeks (TMS)	High Wycombe Buckinghamshire 9,775	Discolouration (brown) associated with a change in the source of the water	<p>Company action:</p> <ul style="list-style-type: none"> <li>• The Company's Customer Centre gave general advice for discoloured water. More than 700 consumers contacted the company to report discoloured water or request bottled water</li> <li>• As of 16/06/05 the company returned the affected area to water supplied from primarily from Bourne End WTW, excepting where hot weather required some support from Dorney WTW.</li> <li>• Mill End WTW was brought back in to supply on 22/06/05 (after clear sample results) to cope with the increased demand in the area.</li> <li>• The Orthophosphoric Acid dose at Bourne End WTW was increased gradually. . This was a temporary change to aid in reducing the iron release from the affected pipe work.</li> <li>• The company undertook surveys, replaced communication pipes and supply pipes with 131 properties having had both lots of pipe work replaced.</li> <li>• All properties, which had their pipe work replaced, had sampling carried out to confirm that the situation has been resolved.</li> <li>• Four cartridge filters have been fitted to properties with particularly elevated iron levels due to long service pipework.</li> <li>• A letter drop was carried out to inform all consumers in the area immediately affected</li> <li>• The company provided bottled water</li> <li>• Once notified communication maintained throughout with external authorities, including the MP &amp; councillors.</li> <li>• An online oxygen monitor was installed at Dorney WTW and a further one is due to be installed at Hedsor Service Reservoir to monitor the situation.</li> <li>• Two pipe rigs have been constructed at Dorney WTW to determine the mechanism of iron release from customer's iron pipes and confirm or reject the suspected cause of low dissolved oxygen.</li> <li>• As a way forward, a temporary engineering solution is being sought by the company at Hedsor and options for a long term solution at Dorney are being developed.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Concluded that it is unlikely that the company could have used existing water quality models to predict this incident, however research following the incident did identify the change in dissolved oxygen content as the most likely cause.</li> <li>• Critical of the time that the company permitted this situation to continue.</li> <li>• Recommended the company ensures sufficient research is carried out prior to any change of source or blending of water and that where unforeseen adverse effects occur that the company investigates the cause as soon as possible, including the early use of expert scientific and technical knowledge to minimise the impact on consumer's supplies.</li> <li>• Recommend that the company notifies the relevant bodies as required by the Water Undertakers (Information) Direction 2004 and regulation 35(8) of the Water Supply (Water Quality) Regulations 2000 as soon as may be after the event has come to the undertakers attention.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
22/07/2005 for 5 days (TMS)	Westonfield, Albury, Guildford, Surrey 87	Taste and Odour (petrol) associated with planned work by an approved contractor	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Opened the closed valve that was the root cause of the incident.</li> <li>• Provided bottled water on request</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Two factors in combination contributed to this incident: a) the valve was closed at the Monument which will have resulted in a stagnant length of main, and b) the connection of the new main at the apex of Weston Fields caused disturbance of the stagnant part of the main, resulting in the complaint from a consumer and the increase in measured iron, manganese, turbidity, polycyclic aromatic hydrocarbons and dissolved hydrocarbons. The presence of the taste and odour was confirmed by the company Water Quality Technician at each property where he was able to gain access up to number 23 on one side of the road.</li> <li>• Recommended that where the company has detected a failure of a particular parameter that the subsequent re-samples be tested for the parameter that initially failed.</li> <li>• Recommended that the company ensures that prior to any work the network is in an appropriate configuration for such work to proceed.</li> </ul>
16/08/2005 for 4 days (TMS)	Aldbourn (SN8) Wiltshire 350 (approx)	Taste and Odour (petrol) following planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided bottled water on request</li> <li>• Flushed mains</li> <li>• Sampled affected area</li> <li>• Reversed rezoning</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Assessment Ongoing</li> </ul>
26/08/2005 for 2 days (TMS)	Hurtwood & Abinger, Surrey 6,500	Loss of supplies / poor pressure following a power failure	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Provided an alternative supply by tanker / bowser</li> <li>• Sampled affected area</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Telemetry failure due to a loss of power and back up telephone line also failed. Delay in company realising communication with the site had been lost.</li> <li>• Generator out of service for nine days prior to incident and backup only available following incident.</li> <li>• Inadequate contingency planning. Recommended that the company has a temporary replacement of standby generators where there is no possibility of acquiring a standby generator and/or restoring power to the site before the supply to consumers is impacted.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
17/10/2005 for 3 days (SES)	Langley Park Reservoir 1 0	Evidence of microbiological contamination ( <i>E.coli</i> and coliform bacteria) as a result of inadequate sampling arrangements at the site	<p>Company action:</p> <ul style="list-style-type: none"> <li>• The sampling discharge lines have now been changed to prevent this occurring again.</li> <li>• Lab investigation into results supported analysis was correct.</li> <li>• Consultant Microbiologist contacted for advice.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• There was contamination of the regulatory sample taken on 13 October 2005 from Langley Park Reservoir no.2 as a result of poor sampling arrangements. Improvement work completed on site.</li> </ul>
24/11/2005 for 25 hours (SES)	Edenbridge, Kent 3,750	Discolouration (brown) associated with planned work by company staff	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Opened hydrant at the downstream end of new main and established that the mains supply was aerated. Left the hydrant running for a period of almost 4 hours until it ran clear.</li> <li>• Company staff progressively flushed the trunk mains that run through the area affected in order to remove any trapped air.</li> <li>• Sampled four properties of consumers who had complained</li> <li>• Customers who contacted the company were advised to continue to flush the water from their taps until it became clear.</li> <li>• Where requested, bottled water was provided.</li> <li>• Reviewed sensitive customer register, contacted consumers by telephone to establish what assistance was needed.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• The existing procedures are not sufficiently explicit about how they should be applied to trunk mains, when the connection works typically result in the main being put into full service directly (such as in this case).</li> <li>• Trunk main works will now be clearly described in the company mains commissioning procedure of the Network Operating Manual such that the likelihood of a similar event occurring in the future is minimised.</li> <li>• In the interim, until the new procedure is in place, all works on mains greater than 6inches /150mm diameter where they affect the existing network will be referred to the Distribution Manager.</li> </ul>
09/12/2005 15 hours (SES)	Cold Harbour Lane, Westcott nr. Dorking, Surrey 2,030	Discolouration (brown) associated with a burst main	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains</li> <li>• Provided bottled water on request</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Company acted appropriately in response to mains burst.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
15/12/2005 for 9 days (TVW)	Runley Wood Greensand works, Luton, 4,750	Evidence of chemical contamination (bromate) in final water from works, as a result of elevated bromide level in the salt used for on site generation of chlorine	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Resamples contained elevated bromide, works shut down</li> <li>• Company investigation established that the bromide levels in the salt used in the process of chlorine generation was not appropriate because of the high chlorine dose used at the works.</li> <li>• Salt changed for a lower bromide concentration.</li> <li>• Operating procedures were revised to ensure only treatment chemicals with low bromide concentration are now used at this site.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Initial findings indicate that the change of salt to one which had a higher bromide concentration was inappropriate for this works.</li> <li>• Assessment Ongoing</li> </ul>
17/03/2005 for 18 hours (BRL)	Flax Bourton and Backwell, North Somerset 237	Discolouration (brown) associated with work on a 21 inch main as a result of a mains burst.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Repaired main</li> <li>• Flushed mains</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommended that operational staff have access to accurate records of locations of mains.</li> <li>• Sampling was not timely enough.</li> <li>• Commended company for its prompt response to the discolouration.</li> </ul>
03/06/2005 for 7 days (WSX)	Hutspill and Alstone Village, Somerset Part of the Danesborough zone 21 12,000	Evidence of microbiological contamination, repeat coliform occurrences.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains and sampled affected area.</li> <li>• Increased chlorine residuals at service reservoir.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate investigations into root cause.</li> <li>• Supply arrangement records incorrect.</li> <li>• Supplied unwholesome water in breach of regulations.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
12/09/2005 for 5 days (WSX)	Bridgwater, Somerset 500	Evidence of microbiological contamination, low levels of coliforms in supply. Believed to be due to ingress during rehabilitation work to reline a main.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Increased chlorine residuals at treatment works.</li> <li>• Increased chlorine residuals in the distribution system.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate communication caused delay in response – the potential contamination of the main during rehabilitation only came to light in the later stages of the investigation.</li> <li>• Inadequate investigation into root cause – although contamination appears to have entered via rehabilitated main.</li> <li>• Inadequate training / competence of staff – contractors did not take adequate action following potential contamination of rehab main.</li> <li>• Unacceptable delay in notifying Inspectorate, local and health authorities.</li> </ul>
22/09/2005 for 7 weeks (WSX)	Sutton Bingham WTW and Yeovil area in Somerset 34,000 served by works	Algal bloom in reservoir tainted water with a geosmin taste and odour.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Reduced output from works to increase removal on GAC and increase dilution in service reservoir.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate contingency planning.</li> <li>• May have supplied water unfit for human consumption.</li> <li>• Unacceptable delay in notifying Inspectorate, local and health authorities.</li> <li>• Did not provide alternative supplies.</li> </ul>
15/11/2005 for 2 days (WSX)	Dulverton, Somerset 5	Issue of warning advice following the discovery of a broken sewer in the vicinity of a burst water main.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Repaired main.</li> <li>• Issued a boil water notice.</li> <li>• Blended supply with another source.</li> <li>• Sampled affected area.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Action taken satisfactory – no recommendations/suggestions.</li> <li>• May have supplied water unfit for human consumption.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
17/12/2005 for 1 day (WSX)	Sutton Bingham WTW and Yeovil area in Somerset 34,000	Raw water deterioration resulting in isoproturon herbicide being present in the treated water at twice the level of the standard.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Shut down treatment works.</li> <li>• Completed work at Durleigh so that this source could be put back into supply within the week, then removed Sutton Bingham Reservoir from use.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Assessment is still ongoing but the Inspectorate is satisfied that the immediate response made by the company to return supplies to normal was satisfactory.</li> </ul>
11/05/05 for 2 days (DWR)	Ferndale area, Rhondda Valley 8,000	Discolouration (brown) caused by planned work by company staff.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed main and sampled affected area.</li> <li>• Made bottled water available to special needs customers.</li> <li>• Prepared water tankers for deployment.</li> <li>• Wrote to all consumers who had reported discolouration with an apology and an explanation.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Supplied unwholesome water in breach of regulations.</li> <li>• Cause of the discolouration was due to status of a key valve being incorrectly recorded. This valve was not checked prior to work commencing.</li> <li>• Recommendation made to review procedures to ensure that status of key valves are checked as part of risk assessment prior to operation of distribution network.</li> </ul>
Aug/Sept for 4 weeks (DWR)	Usk Reservoir Swansea, Gower and parts of Camarthen 125,000	Raw water deterioration resulted in musty taste and odour problem.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Blended supply with another source.</li> <li>• Rezoned area (brought in water from different source).</li> <li>• Sampled affected area.</li> <li>• Commenced dosing powdered activated carbon (PAC) at two works (Bryngwyn &amp; Portis).</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Procedures inadequate for recognition of potential taste and odour event and recommended a review of procedures.</li> <li>- Company did not follow its own protocol for the instigation of PAC dosing and additional sampling, resulting in delays in remedial action.</li> <li>-The company are reviewing type of PAC used to ensure optimisation of removal of taste forming compounds.</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
19/09/05 for 3 days (DWR)	Clydach Vale, Rhondda Valley 2,000	Evidence of widespread microbiological contamination (low level coliform bacteria) detected in Clydach Vale No 6 service reservoir and distribution.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Increased chlorine residuals at service reservoir.</li> <li>• Increased chlorine residuals in the distribution system.</li> <li>• Set up chlorine dosing system at service reservoir.</li> <li>• Service Reservoir subsequently abandoned.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Recommended company reviews its notification procedures.</li> <li>• Suggested company assigns and uses one name for each site in all communication.</li> <li>• Recommended that company has a process to ensure schematics are kept updated.</li> </ul>
10/10/05 for 7 days (DWR)	Senghenydd, Rhymney / Bargoed. Abertridwr, Bedlinog and parts of Caerphilly 12,000	Discolouration (brown) caused by planned work by company staff.	<p>Company action:</p> <ul style="list-style-type: none"> <li>• Flushed mains.</li> <li>• Provided bottled water on request.</li> <li>• Sampled affected area.</li> <li>• Delivered bottled water to special needs customers.</li> <li>• Carried out survey and review of trunk main system.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Discolouration caused by a valve adjustment made in response to increased demand.</li> <li>• Inadequate risk assessment.</li> <li>• Supplied unwholesome water in breach of regulations.</li> <li>• Critical of company for providing a report with inconsistent and poorly presented data.</li> </ul>
04/11/05 for 12 weeks (DWR)	North West Wales – North Gwynedd (Caernarfon, Bangor) & South Anglesey 70,000	Notification from Health Protection Team of increased cases of cryptosporidiosis in the community, followed by boil water advice.	<p>Company action;</p> <ul style="list-style-type: none"> <li>• Meeting with Local authority EHOs and health board medical advisors.</li> <li>• Established an enhanced sampling regime.</li> <li>• Rezoned area (brought in water from different source) to reduce properties supplied by Cwellyn WTW to 33,000.</li> <li>• Participated fully in Outbreak Control Team.</li> <li>• Issued a boil water notice on 29 November 2005, subsequently lifted on 30 January 2006.</li> <li>• Installed UV treatment at Cwellyn WTW, operational from 6 Jan 2006.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Assessment Ongoing (see 'issues of local interest' section for further details)</li> </ul>

Date and duration (Company)	Area and estimate of population affected	Nature and cause of the incident	Main actions and findings from the Inspectorate investigation
10/11/05 for 6 weeks (DWR)	Abertrinant, Flintshire 2 properties fed by isolated concessionary supply (spring)	Evidence of significant faecal microbiological contamination in supply led to boil water advice.	<p>Company action;</p> <ul style="list-style-type: none"> <li>• Issued a boil water notice to two properties fed from spring source.</li> <li>• Manually increased chlorine tablet dosing frequency.</li> <li>• Replaced inadequate treatment unit.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate treatment process - Disinfection and pH control.</li> <li>• Company requested to upgrade treatment and confirm efficacy.</li> <li>• Recommended that company undertake a review of all such concessionary supplies in its area to ascertain adequacy of treatment and any associated maintenance regimes.</li> <li>• Company commended for its liaison with customers during this incident .</li> </ul>
11/11/05 for 5 days (DWR)	Cwmphill, Crai, Upper Swansea Valley 28,000	Discolouration (brown) due to increased flows as a result of damage to main whilst carrying out planned work.	<p>Company action;</p> <ul style="list-style-type: none"> <li>• Provided an alternative supply by deploying static tanks.</li> <li>• Repaired Main. <ul style="list-style-type: none"> <li>• Systematic flushing of mains.</li> </ul> </li> <li>• Issued press statement. <ul style="list-style-type: none"> <li>• Sampled affected area.</li> </ul> </li> <li>• Provided bottled water on request and delivered to special needs customers.</li> <li>• Company have amended procedures to minimise risk of recurrence in Crai system.</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Inadequate valving installation - valve blown off during planned work to replace a meter. Company state cause of this to be inadequate engineering installation which was buried and therefore not visible at time of excavation.</li> <li>• Recommended that the company undertake a review of how such an installation could have been put in place as this is not usual practice.</li> <li>• Company requested to provide confirmation that partners have been instructed not to use this type of installation.</li> <li>• Recommended that the company review likelihood of similar installations in other areas and build this into the overall risk assessment procedures.</li> </ul>
14/11/05 for 4 days (DWR)	Cynghordy Service Reservoir, Nr Llandoverly, Camarthenshire 180	Evidence of microbiological contamination: Low level coliform failures from service reservoir and in distribution	<p>Company action;</p> <ul style="list-style-type: none"> <li>• Increased chlorine residuals in the distribution system by direct injection into mains</li> <li>• Company initially unable to obtain resamples from service reservoir due to localised flooding in area</li> <li>• Service reservoir taken out of supply following evidence of possible ingress, and programmed for abandonment</li> </ul> <p>DWI comments and findings:</p> <ul style="list-style-type: none"> <li>• Minor delay in notifying Inspectorate.</li> <li>• Minor delay in notifying local / health authorities.</li> </ul>