



ENVIRONMENT
AGENCY

An audit of performance in the
AQC inspection of standard biological
Macro-invertebrate samples in 2001:
The Environment Agency

Centre for Ecology and Hydrology

CEH Report Ref: C00158/24

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Research Contractor:
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Statement of Use

Information in this document is to help biologists in the Agency to identify where analytical errors occur so that they can be reduced or eliminated. Data in the tables provide measures of the accuracy of data produced in the Agency's internal Analytical Quality Control (AQC) scheme. This covers samples analysed in accordance with the standard methods for the River Invertebrate Prediction and Classification System (RIVPACS) and analysed to the level required for the Biological Monitoring Working Party (BMWP)-score system, including General Quality Assessment (GQA). Information in this report may be used to determine the AQC parameters used in individual laboratories as well as for estimating errors in the primary data from information obtained from AQC inspections.

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CONTENTS

1	Introduction	1
2	Sample selection	1
3	Sample processing	2
4	Reporting	3
5	Results	6
	Estimating sample biases for the compare module of RIVPACS III+	6
6	Acknowledgements	6
7	References	7
8	Audit of Anglian Region	9
9	Audit of Midlands Region	17
10	Audit of North East Region	25
11	Audit of North West Region	33
12	Audit of Southern Region	39
13	Audit of South West Region	45
14	Audit of Thames Region	53
15	Audit for Wales	61
16	Summary of results of AQC Audit for the Environment Agency	67
17	Appendix: Analysis dates for the Agency's audited samples	77

1. INTRODUCTION

The collection of standard macro-invertebrate samples and their analysis to the level required for the Biological Monitoring Working Party (BMWP) system is the most widely used biological technique for evaluating river quality in the water industry in the United Kingdom. Used with the computer model RIVPACS (River Invertebrate Prediction and Classification System) developed by the Centre for Ecology and Hydrology (CEH), they are the basis for the Agency's biological classification of water quality. This is used for national General Quality Assessment (GQA) river quality surveys and one of the government's Headline Indicators of environmental quality, as well as for purely operational purposes including Catchment Abstraction Management Strategies, drought orders and drought permits, and determining appropriate discharge consents. These samples are also used for assessing pollution and setting priorities for capital investment. Data from these samples are made available to the public. An independent audit of these biological samples is required to ensure that a high and consistent standard of sorting and identification is maintained, to assess the proficiency of the internal laboratory analytical quality control (AQC) inspection and to demonstrate the quality of the data to its users.

In 2001, biological monitoring of rivers was undertaken by the Environment Agency (The Agency) in England and Wales, the Scottish Environment Protection Agency (SEPA) in Scotland, the Industrial Research and Technology Unit (IRTU) in Northern Ireland and the Government Laboratory in the Isle of Man. Each organisation employed standard collection procedures (Murray-Bligh 1999a) to ensure that the data collected were compatible with RIVPACS. Each Environment Agency laboratory appointed at least one experienced analyst to act as an internal analytical quality control (AQC) inspector. These inspectors re-sorted a random selection of 1 in every 10 of their laboratory's standard samples. In addition, CEH was contracted to undertake an independent external audit of the quality of the laboratories' analyses of standard biological samples. This commission was consistent with the audit performed by CEH staff for the national River Quality Surveys in 1990, 1995 and 2000 and for the biological monitoring and assessment surveys each year between 1991 and 1994 and between 1996 and 1999. The audit for the Agency comprised two elements. The AQC Audit provided a measure of the quality of the AQC inspection and was used to adjust the control parameters of the AQC scheme for each laboratory. The Primary Audit provided an independent measure of the quality of the data from each laboratory (data was not adjusted for errors identified by the audit) and hence the errors in biotic indices calculated from that data. The net error in number of BMWP-scoring taxa (bias) was used to determine confidence limits of EQIs and the probabilities of sites belonging to each grade of the Agency's GQA environmental quality classification, and the probabilities of changes or differences in grade (see Section 5).

For 2001, CEH were contracted to audit 520 samples for the Agency. However, an outbreak of Foot and Mouth Disease led to a restriction on the movement of Agency staff, severely curtailing their sampling programme in spring 2001, so some laboratories did not send their full quota of samples for audit. This report presents the results of the audit of 318 samples that were sorted and identified by the Agency's AQC inspectors. The results of the Primary Audit, detailing the quality of the primary analysis of these samples, are reported separately (Gunn *et al.*, 2002).

2. SAMPLE SELECTION

Samples for audit were selected internally by each of the organisations being audited. The precise manner of sample selection, which biologists would be monitored and the number of audit samples from each season, were left to the discretion of the organisation, within the limits of the total number of samples that CEH was contracted to audit. The standard method of selection used by the Agency is

described in Murray-Bligh (1999b). Each Agency laboratory should have randomly selected for audit 20 samples that had been analysed twice (once for primary analysis and once for internal AQC inspection). However, if there were insufficient AQC-inspected samples to make up the laboratory's quota by the deadline for dispatch to CEH, primary samples that had been analysed just once were sent instead. The biologists analysing these samples had no prior knowledge of which samples were to be audited.

3. SAMPLE PROCESSING

The normal protocol for Agency biologists was to sort their samples, either live or preserved, in the laboratory. Samples were sorted for all families of aquatic macro-invertebrates and examples of each taxon were removed. The specimens were placed in a vial of preservative (70% industrial alcohol) and the taxa present were recorded on a standard data sheet. The vial of animals and the bulk of the sample were then returned to the sample container and preservative added. Samples were re-sorted for internal AQC inspection in the same manner as the primary analysis. The AQC inspector's task included confirming the identification of the contents of the vial and ensuring that the results recorded on the data sheet were correct. Any additional taxa found in the AQC inspection were to be put in a separate vial so that the contents of the primary analyst's vial was not altered, although this instruction was not always followed.

Each sample available to CEH for audit should have included:

- i) A vial or vials containing representatives from each family.
- ii) A data sheet containing a list of the families to be found in the vial(s).
- iii) The preserved sample.

When these three elements were present, the sequence of operations at CEH was as follows:

- a) The remainder of the sample was sorted, without reference to the data sheet or to the vial of animals, and the families of aquatic macro-invertebrates were identified.
- b) The families contained within the vial(s) were identified.
- c) The list of families recorded on the data sheet was compared with those found in the sample by the CEH auditor.
- d) The list of families recorded on the data sheet was compared with those identified from the vial(s) by the CEH auditor.
- e) "Losses", "gains" and "omissions" from the list of families recorded on the data sheet were noted. In the case of "gains", each additional family was identified to species, where possible, so that species causing repeated errors could be noticed. Any "gains" represented in the sample by a single specimen were noted as such.
- f) For each "loss" or "gain", the CEH auditor selected a code from a list at the foot of the result sheet to indicate the most likely cause of the error.

Definitions

Losses are taxa recorded as present by the analyst whose quality was being audited, but that were not found in the vial or sample by the auditor. Gains are taxa found in the vial or sample by the auditor, that were not recorded as present by the analyst whose quality was being audited. Omissions are taxa that were recorded as present by the analyst whose quality is being audited, and that the auditors found in the sample, but not in the vial.

Occasionally a sample did not include a vial containing representative examples of the families recorded on the data sheet, while some arrived with the vial damaged in transit such that the

representative specimens were no longer separated. For these samples, only operations a), c), e) and f) above were appropriate.

Several directives were issued to CEH relating to the treatment of macro-invertebrate taxa. Every taxon recorded on the data sheet must have been supported by a voucher specimen of that family in the vial (or, for very large specimens, left in the sample). The only exceptions to this rule were the native crayfish, *Austropotamobius pallipes*, the medicinal leech, *Hirudo medicinalis* and the pearl mussel, *Margaritifera margaritifera*, all of which are protected species. Animals deemed to have been dead at the time of sampling, cast insect skins, pupal exuviae and empty mollusc shells were to be excluded from the list of families recorded on the data sheet as present. Isolated posterior ends of "living" specimens were not acceptable as records of a taxon. In these cases, thorax plus abdomen was deemed acceptable but abdomen only was deemed unacceptable. Terrestrial representatives of families were also to be excluded from the audit. Clambidae, Chrysomelidae and Curculionidae, which appear in the original BMWP list, were excluded because most representatives of these families are terrestrial and they are excluded from the BMWP-score system as currently used in the UK, including the Agency's GQA classification. Trichopteran pupae were to be included in the listing of families as they were to be identified by Agency biologists.

4. REPORTING

The results of each sample audit were recorded on a standard report form (see Figs 1 & 2) and sent to the Agency's Project Manager and to the Area and Regional Biologists. For audit samples where a vial of animals was included, the comparison between the families recorded on the data sheet and the taxa found in the vial by CEH was shown in the section of the report form headed "VIAL". Discrepancies could be caused by misidentifications or by mistakes in recording the results on the data sheet. Families not recorded on the data sheet but found by CEH in the remainder of the sample were entered in the section of the report form headed "SAMPLE" under "Additional taxa found in sample". For Primary Audit results, this section also included taxa added by the internal AQC inspector. Taxa recorded here represent families missed by the analyst(s) on sorting the sample. When the families listed as "losses" in the first section of the report form were compared with the full list of families recorded in the sample by CEH, some apparent losses from the vial were offset by the presence of those families in the remainder of the sample. These taxa were therefore listed both as "losses" from the vial and as "gains" from the sample and were neither a net loss nor a net gain. These families were marked with an asterisk in both sections to highlight this fact. These errors were recorded as "omissions". They were usually caused by an analyst forgetting to place an example of the taxon in the vial, although occasionally they occurred when an animal in the vial had been misidentified, but the CEH auditor subsequently found the recorded taxon in the sample.

Species identifications, state of development (e.g. adult or larval coleopterans) and the presence of a single representative of a family were recorded in the centre section of the audit report form.

CEH was asked to interpret each error to suggest its probable cause. An error code, selected from a list of options at the foot of each result sheet, was entered against each taxon in the column headed "Presumed cause of error". Where an error was modified by the findings of the internal AQC inspector, a code to indicate this was selected instead (either code 11 or 12).

Figure 1. An example of a Primary Audit result sheet

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES

REGION: Example	LABORATORY: Example	DATE: 12 April 2001
WATER-COURSE: Beautiful River	PRIMARY ANALYST: XX	AQC ANALYST: YY
SITE: Utopia	CODE: 0001/AQC01	SORT/AQC METHOD: Live/Preserved

RESULTS OF PRIMARY AUDIT

Family name	Presumed cause of error (see footnotes)
<u>VIAL</u>	
<u>Taxa not found in vial</u>	
Planorbidae	12
Terrestrial snail in vial	
Baetidae *	1
Limnephilidae	7
<u>Additional taxa found in vial</u>	
Lepidostomatidae	7
Lepidostoma hirtum (Fabricius)	
<u>SAMPLE</u>	
<u>Taxa not found in sample</u> (for samples where vial is broken or absent)	
N/a	
<u>Additional taxa found in sample</u>	
Baetidae *	1
Baetis rhodani (Pictet)	
Hydrophilidae (incl. Hydraenidae)	9
Hydraena gracilis Germar (a) 1 only	
Hydroptilidae	11
Hydroptila sp. (p)	
Psychomyiidae (incl. Ecnomidae)	11
Psychomyia pusilla (Fabricius) 1 only	

SUMMARY OF AUDIT (For BMWP taxa only)

LOSSES: 2 **GAINS:** 4 **OMISSIONS:** 1

NET EFFECTS:
ON BMWP SCORE 19
ON NO. OF SCORING TAXA 2

1 No representative of family in vial
 2 Alternative terrestrial specimen in vial
 3 Posterior end only in vial
 4 Empty shell or case or cast skin in vial

5 Specimen dead at time of sampling
 6 Taxon in vial but not recorded
 7 Mis-identification
 8 Typographical error - wrong box ticked

9 Taxon missed in sorting
 10 Unexplained error
 11 Taxon added in internal AQC
 12 Recorded taxon that was rejected by AQC analyst

Omission (*) = Recorded, not in vial but found by CEH in sample (no net loss or gain)

Figure 2. An example of an AQC Audit result sheet

EXTERNAL AUDIT OF BIOLOGICAL SAMPLES

REGION: Example	LABORATORY: Example	DATE: 12 April 2001
WATER-COURSE: Beautiful River	PRIMARY ANALYST: XX	AQC ANALYST: YY
SITE: Utopia	CODE: 0001/AQC01	SORT/AQC METHOD: Live/Preserved

RESULTS OF AQC AUDIT

Family name	Presumed cause of error (see footnotes)
<u>VIAL</u>	
<u>Taxa not found in vial</u>	
Baetidae *	1
Limnephilidae	7
<u>Additional taxa found in vial</u>	
Lepidostomatidae	7
Lepidostoma hirtum (Fabricius)	
<u>SAMPLE</u>	
<u>Taxa not found in sample</u> (for samples where vial is broken or absent)	
N/a	
<u>Additional taxa found in sample</u>	
Baetidae *	1
Baetis rhodani (Pictet)	
Hydrophilidae (incl. Hydraenidae)	9
Hydraena gracilis Germar (a) 1 only	

SUMMARY OF AUDIT (For BMWP taxa only)

LOSSES: 1 GAINS: 2 OMISSIONS: 1

NET EFFECTS:

ON BMWP SCORE 8
ON NO. OF SCORING TAXA 1

1 No representative of family in vial
2 Alternative terrestrial specimen in vial
3 Posterior end only in vial
4 Empty shell or case or cast skin in vial

5 Specimen dead at time of sampling
6 Taxon in vial but not recorded
7 Mis-identification
8 Typographical error - wrong box ticked

9 Taxon missed in sorting
10 Unexplained error
11 Taxon added in internal AQC
12 Recorded taxon that was rejected by AQC analyst

Omission (*) = Recorded, not in vial but found by CEH in sample (no net loss or gain)

For those samples in which the vial of animals was damaged or missing, the "VIAL" sections of the report form were not applicable (N/a). Families not on the list but present in the sample were entered in the section under "SAMPLE" and "Additional taxa found in sample", as before. Families recorded on the list but not found by CEH were indicated in the section headed "Taxa not found in sample." If the vial of animals had been retained by the sorter, entries in this box could include the sole representative of a family which was removed, a family seen at the site which escaped or was released (without mention being made on the data sheet), inaccurate identification or the wrong family box being ticked on the data sheet.

The final section of the result sheet summarises the audit, giving details of the numbers of "losses", "gains" and "omissions" of families included in the BMWP scoring system only, together with the net effects on BMWP score and the number of scoring taxa.

5. RESULTS

The results of the AQC Audit for 2001 for the Agency are presented in Tables 1 to 58. A summary of the basic audit results in terms of losses, gains and omissions (of BMWP taxa only) is followed by the statistics of these regional audit results based on the target of acceptability for AQC inspectors of no more than 0.5 missed taxa per sample on average. These data are presented for each analyst, for their Area laboratory and for the Region as a whole. Then follows information on the net effects of the AQC Audit on the BMWP score and number of scoring taxa. Following this are listings for the Region of the taxa missed at family and species levels in the 2001 AQC Audit. Tables 59 and 60 summarise the statistics and net effects of the 2001 AQC Audit for the whole of the Agency. Tables 61 and 62 list all taxa, at family and species levels respectively, missed in sorting by the Agency's AQC inspectors. Data for the Primary Audit are presented in a separate report (Gunn *et al.*, 2002).

Estimating sample biases for the compare module of RIVPACS III+

The underestimation of the number of BMWP-scoring taxa is termed bias for the purpose of the compare module of RIVPACS III+. An estimate of bias is provided by the net gains (number of gains minus number of losses) in the Primary Audit. Values are listed in the Primary Audit report (Gunn *et al.*, 2002) and can be used directly for RIVPACS. When basing bias on results from internal AQC inspections, it is necessary to add the net gains owing to errors made in AQC inspection to the net gains reported by the AQC. Errors made in AQC inspection for each laboratory, Region and the Agency as a whole are listed in Table 60 in the column "mean net effect on no. of taxa". To estimate the bias over a different period to that covered by this audit, the value in Table 60 can still be used if the quality of AQC inspection is consistently good for the period under consideration (mean number of gains should be no more than 0.5, see Table 59). If the AQC inspection was of poor or varying quality, it is necessary to refer to the individual AQC Audit result sheets for individual audit samples. Note that estimates of bias should be based on the results of at least 20 audited samples. Further instructions are given in Clarke *et al.* (1997).

6. ACKNOWLEDGEMENTS

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AUDIT OF ANGLIAN REGION'S AQC INSPECTORS

Table 1 The 20 samples audited for Northern Area of Anglian Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Waring	Belchford	AH	10/09/2001	0	2	0
Waithe Beck	Brigsley	AH	24/09/2001	0	0	0
Louth Canal	Tetney Lock	AH	26/09/2001	0	2	0
West Glen	Little Bytham	AH	03/10/2001	0	2	1
East Glen	Edenham	AH	09/11/2001	0	1	0
Laceby Beck	Littlecoats	AH	15/11/2001	0	1	0
Langton Brook	Thorpe Langton	CAE	03/12/2001	0	2	0
Laceby Beck	Laceby	HW	02/01/2002	0	0	0
Willow Brook	Weldon Lodge	HW	04/02/2002	0	0	0
Lower Witham	Langrick Bridge	JF	12/09/2001	0	1	0
Nettleham Beck	Sudbrooke	JF	09/10/2001	0	0	0
Barlings Eau	Langworth	JF	15/10/2001	0	0	0
North Kelsey Beck	B1434	JF	29/10/2001	0	2	0
Willow Brook	Fotheringhay	JF	30/11/2001	0	0	0
Welland	Uffington Rd Bridge	JF	20/12/2001	0	1	0
Jordan	Little Bowden	JF	27/12/2001	0	0	0
South Drove Drain	Horseshoe Bridge	JF	27/12/2001	0	0	0
Welland	Tallington	JF	28/12/2001	0	1	0
Nene	Wollaston Mill	JF	04/02/2002	0	1	0
Gwash	Gunthorpe	JP	28/12/2001	0	2	0

Table 2 The 5 samples audited for Central Area of Anglian Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Millbridge Brook	B1042, Potton	KJP	02/10/2001	1	0	1
Alconbury Brook	Grindley's Bridge	MAC	05/09/2001	0	1	1
Ouse	Bourton Mill Manor Farm	WTC	01/11/2001	0	4	0
Ouse	W.Q.M.S. Foxcote intake	WTC	02/11/2001	0	2	1
IDB Drain	Welney	WTC	11/01/2002	0	1	0

Table 3 The 11 samples audited for Eastern Area of Anglian Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Brett	Higham Bridge	CSA	05/10/2001	0	2	0
Deben	Glevering Bridge	HJB	18/09/2001	0	1	0
Deben	Eyke Ford	HJB	03/10/2001	0	1	0
Pant	Petches Bridge	HJB	07/11/2001	0	1	1
Gipping	Sproughton Mill	HJB	16/11/2001	0	3	0
Gipping	Claydon Bridge	HJB	16/11/2001	0	1	0
Colne	u/s Earls Colne STW	JHS	23/10/2001	0	1	0
Blackwater- Chelmer Canal	Heybridge Canal	RDB	23/11/2001	0	5	0
Blackwater Drain	Gades Mill, Whitwell	RDB	29/11/2001	0	2	0
Brain	d/s Braintree STW	RDB	11/12/2001	0	0	0
Gipping	STW Tributary	RDB	14/02/2002	0	0	0

Table 4 Statistics of the 2001 AQC Audit for Anglian Region

Analyst/Group	n	Mean gains	Standard error	Highest no. gains	Mean errors (l+g+o)	Standard error
Northern	20	0.90	0.19	2	0.95	0.21
AH	6	1.33	0.33	2	1.50	0.43
CAE	1	2.00	-	2	2.00	-
HW	2	0	0	0	0	0
JF	10	0.60	0.22	2	0.60	0.22
JP	1	2.00	-	2	2.00	-
Central	5	1.60	0.68	4	2.40	0.51
KJP	1	0	-	0	2.00	-
MAC	1	1.00	-	1	2.00	-
WTC	3	2.33	0.88	4	2.67	0.88
Eastern	11	1.55	0.43	5	1.64	0.43
CSA	1	2.00	-	2	2.00	-
HJB	5	1.40	0.40	3	1.60	0.40
JHS	1	1.00	-	1	1.00	-
RDB	4	1.75	1.18	5	1.75	1.18
Anglian Region	36	1.19	0.19	5	1.36	0.20
Whole of Agency	318	0.70	0.05	5	0.87	0.06

Table 5 Net effects of the AQC Audit on BMWP score and number of scoring taxa for Anglian Region

Analyst/ Group	n	Mean net effect on BMWP score	Standard error of net effect on score	Maximum underestimate of BMWP score	Mean net effect on no. of taxa	Standard error of net effect on no. of taxa	Maximum underestimate of no. of taxa
Northern	20	5.15	1.24	17	0.90	0.19	2
AH	6	6.17	1.82	11	1.33	0.33	2
CAE	1	17.00	-	17	2.00	-	2
HW	2	0	0	0	0	0	0
JF	10	3.50	1.42	12	0.60	0.22	2
JP	1	14.00	-	14	2.00	-	2
Central	5	8.20	5.07	26	1.40	0.81	4
KJP	1	-5.00	-	-5	-1.00	-	-1
MAC	1	5.00	-	5	1.00	-	1
WTC	3	13.67	6.33	26	2.33	0.88	4
Eastern	11	8.91	2.63	26	1.55	0.43	5
CSA	1	8.00	-	8	2.00	-	2
HJB	5	9.40	3.84	24	1.40	0.40	3
JHS	1	6.00	-	6	1.00	-	1
RDB	4	9.25	6.16	26	1.75	1.18	5
Anglian Region	36	6.72	1.25	26	1.17	0.20	5
Whole of Agency	318	3.50	0.36	30	0.58	0.06	5

Table 6 The families missed in sorting by Anglian Region's AQC inspectors

Family	n	% of Anglian Region's missed families in AQC Audit
Psychodidae	7	10.94
Empididae	5	7.81
Hydroptilidae	4	6.25
Ephydriidae	4	6.25
Ceratopogonidae	3	4.69
Elmidae	3	4.69
Glossiphoniidae	3	4.69
Limnephilidae	3	4.69
Hydracarina	2	3.13
Ancylidae (incl. Acroloxidae)	2	3.13
Hydrophilidae (incl. Hydraenidae)	2	3.13
Psychomyiidae (incl. Ecnomidae)	2	3.13
Muscidae	2	3.13
Physidae	2	3.13

Table 6 continued

Family	n	% of Anglian Region's missed families in AQC Audit
Simuliidae	2	3.13
Hydrobiidae (incl. Bithyniidae)	2	3.13
Caenidae	1	1.56
Calopterygidae	1	1.56
Sphaeriidae	1	1.56
Dytiscidae (incl. Noteridae)	1	1.56
Scirtidae	1	1.56
Ephemerellidae	1	1.56
Ephemeridae	1	1.56
Erpobdellidae	1	1.56
Molannidae	1	1.56
Haliplidae	1	1.56
Polycentropodidae	1	1.56
Neritidae	1	1.56
Tabanidae	1	1.56
Lepidostomatidae	1	1.56
Leptoceridae	1	1.56
Pyralidae	1	1.56
Total	64	100

Table 7 The species missed in sorting by Anglian Region's AQC inspectors

Species	n	% of Anglian Region's missed species in AQC Audit
Ephydriidae indet	4	5.80
Hydroptila sp.	4	5.80
Ceratopogonidae indet	3	4.35
Clinocerinae	3	4.35
Pericoma trivialis group	3	4.35
Hydraena riparia Kugelann	2	2.90
Chelifera group	2	2.90
Hydracarina indet	2	2.90
Tinodes waeneri (L.)	2	2.90
Limnephilidae indet	2	2.90
Limnophora sp.	2	2.90
Pericoma fallax Eaton	2	2.90
Potamopyrgus antipodarum (Gray)	2	2.90
Chrysops sp.	1	1.45
Erpobdella sp.	1	1.45

Table 7 continued

Species	n	% of Anglian Region's missed species in AQC Audit
<i>Simulium</i> (<i>Boophthora</i>) <i>erythrocephalum</i> (de Geer)	1	1.45
<i>Ephemerella ignita</i> (Poda)	1	1.45
<i>Ephemera</i> sp.	1	1.45
<i>Empididae</i> indet	1	1.45
<i>Elodes</i> sp.	1	1.45
<i>Holocentropus picicornis</i> (Stephens)	1	1.45
<i>Simulium</i> sp.	1	1.45
<i>Glyptotaelius pellucidus</i> (Retzius)	1	1.45
<i>Theodoxus fluviatilis</i> (L.)	1	1.45
<i>Theromyzon tessulatum</i> (Muller)	1	1.45
<i>Cataclysta lemnata</i> (L.)	1	1.45
<i>Calopteryx splendens</i> (Harris)	1	1.45
<i>Caenis luctuosa</i> group	1	1.45
<i>Ancylus fluviatilis</i> Muller	1	1.45
<i>Agabus</i> sp.	1	1.45
<i>Elmis aenea</i> (Muller)	1	1.45
<i>Ithytrichia</i> sp.	1	1.45
<i>Pericoma exquisita</i> Eaton	1	1.45
<i>Oulimnius tuberculatus</i> (Muller)	1	1.45
<i>Mystacides nigra</i> (L.)	1	1.45
<i>Molanna angustata</i> Curtis	1	1.45
<i>Physa fontinalis</i> (L.)	1	1.45
<i>Limnius volckmari</i> (Panzer)	1	1.45
<i>Glossiphonia complanata</i> (L.)	1	1.45
<i>Lepidostoma hirtum</i> (Fabricius)	1	1.45
<i>Glossiphoniidae</i> indet	1	1.45
<i>Pisidium</i> sp.	1	1.45
<i>Psychoda severini</i> Tonnoir	1	1.45
<i>Acroloxus lacustris</i> (L.)	1	1.45
<i>Hemerodromia</i> group	1	1.45
<i>Helobdella stagnalis</i> (L.)	1	1.45
<i>Haliplus</i> sp.	1	1.45
<i>Pericoma neglecta</i> Eaton	1	1.45
<i>Physa</i> sp.	1	1.45
Total	69	100

AUDIT OF MIDLANDS REGION'S AQC INSPECTORS

Table 8 The 10 samples audited for Upper Severn Area of Midlands Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Wesley Brook	d/s Manor CSO	1	31/08/2001	1	0	0
Rea Brook	u/s Silt pollution	1	01/11/2001	0	0	1
Cound	Condover	1	28/11/2001	0	0	0
Camlad	Shiregrove Bridge	1	18/01/2002	0	1	0
Lyde Brook	d/s Dale End CSO	1	08/02/2002	0	0	0
Wordsley Brook	Middle Site, Bevan Rd CSO	1	22/02/2002	1	2	0
Dulas	d/s Rhydycludan	1	22/02/2002	0	0	0
Smestow Brook	Compton	1	05/03/2002	1	0	0
Blakedown Brook	u/s Blakedown WRW	7	22/10/2001	0	0	0
Rea Brook	Hanwood	7	12/11/2001	1	2	0

Table 9 The 14 samples audited for Lower Severn Area of Midlands Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Ell Brook Tributary	u/s Springfield Cottage Pool	11	28/09/2001	0	1	0
Ell Brook Tributary	u/s B4222	11	01/10/2001	1	2	0
Leam Trib	Midland Oak CSO	11	27/12/2001	1	1	0
Ruscombe Brook	u/s Humphreys End	11	27/12/2001	0	1	0
Cinderford Brook	u/s Lorry Park	11	28/12/2001	0	0	0
Leadon	Wedderburn Bridge	11	22/01/2002	0	1	0
Isbourne	A46 Road Bridge	11	22/01/2002	0	0	0
Swift	u/s Kimcote WRW	11	23/01/2002	0	0	0
Sherbourne	Charterhouse	11	23/01/2002	0	1	0
Sow Brook	d/s Paynes Lane P.S.	11	24/01/2002	0	1	0
Elmley Castle Brook	u/s Crophorne P.S.	11	24/01/2002	0	1	0
Severn	u/s Netheridge STW	11	24/01/2002	0	0	0
Frome	d/s Stanley Downton	11	29/01/2002	0	0	0
Bushley/Longdon Brook	Queenhill	11	22/02/2002	0	1	0

Table 10 The 20 samples audited for Upper Trent Area of Midlands Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omission s
Alders Brook	Combridge	3	15/03/2001	0	1	0
Ford Green Brook	Milton	3	01/06/2001	0	1	0
Tame (Oldbury)	Holloway Bank	3	04/06/2001	0	0	0
Bond Brook RH Trib	u/s Rowtons Well	3	30/07/2001	0	1	0
Bond Brook LH Trib	Sutton Park	3	30/07/2001	0	2	1
Dove	Beresford Dale	3	02/08/2001	0	0	0
Bourn Brook	Grange Road	3	24/09/2001	0	0	0
Picknall Brook	Uttoxeter	3	26/09/2001	0	3	0
Henmore Brook	Atlow	3	25/10/2001	1	4	0
Dove	Milldale	3	29/10/2001	0	2	0
Bradley Brook	d/s Roughwood Trib	3	09/11/2001	1	4	0
Small Brook	A520 Road Bridge	3	20/11/2001	0	2	0
Cole	Colebank Road	3	11/12/2001	0	3	0
Kingshurst Brook	Chelmsley Wood	3	17/12/2001	0	3	0
Mease	Measham	3	22/01/2002	0	3	0
Bourne	Furnace End	3	23/01/2002	0	0	0
Blythe	Ryton End	3	06/02/2002	0	3	0
Cran Brook	Widney Manor	3	07/02/2002	0	1	0
Walsall Canal	u/s Cerro	3	04/03/2002	0	0	0
Walsall Canal	Moors Mill Lane	3	05/03/2002	0	0	0

Table 11 The 20 samples audited for Lower Trent Area of Midlands Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omission s
Wood Brook	u/s Nanpantan Reservoir	5	25/05/2001	0	1	0
Leas Brook	d/s Culvert	5	31/05/2001	0	0	0
Poulter	d/s Langwith Lodge	402	31/05/2001	0	1	0
Idle	Bawtry	402	31/05/2001	0	3	0
Erewash	Pye Bridge	402	08/06/2001	0	0	0
Dutch Dyke	d/s Pumping station	402	18/07/2001	0	0	0
Poulter	Nether Langwith	402	13/08/2001	0	1	0
Trent	Winthorpe	402	24/08/2001	0	1	0
Dover Beck	Shelt Hill	402	12/11/2001	0	0	0
Erewash	u/s Bentinck Colliery	402	30/11/2001	0	1	0
Erewash	Ilkeston	402	30/11/2001	0	1	0
Grace Dieu Brook	d/s Snarrows STW	402	03/12/2001	0	0	0
Warping Drain Trib	Burringham Road	402	28/12/2001	0	0	0
Whissendine Brook	u/s Langham Brook	402	28/12/2001	1	1	0
Pickwell Brook	u/s Pickwell CSO	402	07/01/2002	0	1	0
Smite	Colston Bassett	402	08/01/2002	0	1	0
Cuttle Brook	Reckitt & Colmans	402	22/01/2002	0	1	0
Maun	d/s Mansfield CSO	402	12/02/2002	0	3	0
Thorpe Brook	Chadwell	402	05/03/2002	0	1	0
Grace Dieu Brook	Woodlands	402	05/03/2002	0	0	0

Table 12 Statistics of the 2001 AQC Audit for Midlands Region

Analyst/ Group	n	Mean gains	Standard error	Highest no. gains	Mean errors (l+g+o)	Standard error
U. Severn	10	0.50	0.27	2	1.00	0.37
1	8	0.38	0.26	2	0.88	0.35
7	2	1.00	1.00	2	1.50	1.50
L. Severn	14	0.71	0.16	2	0.86	0.23
11	14	0.71	0.16	2	0.86	0.23
U. Trent	20	1.65	0.32	4	1.80	0.37
3	20	1.65	0.32	4	1.80	0.37
L. Trent	20	0.85	0.20	3	0.90	0.20
5	2	0.50	0.50	1	0.50	0.50
402	18	0.89	0.21	3	0.94	0.22
Midlands Region	64	1.02	0.14	4	1.19	0.16
Whole of Agency	318	0.70	0.05	5	0.87	0.06

Table 13 Net effects of the AQC Audit on BMWP score and number of scoring taxa for Midlands Region

Analyst/ Group	n	Mean net effect on BMWP score	Standard error of net effect on score	Maximum underestimate of BMWP score	Mean net effect on no. of taxa	Standard error of net effect on no. of taxa	Maximum underestimate of no. of taxa
U. Severn	10	0.60	1.21	6	0.10	0.23	1
1	8	0.13	1.41	6	0	0.27	1
7	2	2.50	2.50	5	0.50	0.50	1
L. Severn	14	3.50	0.98	10	0.57	0.14	1
11	14	3.50	0.98	10	0.57	0.14	1
U. Trent	20	9.65	1.91	24	1.55	0.29	3
3	20	9.65	1.91	24	1.55	0.29	3
L. Trent	20	5.35	1.59	30	0.80	0.20	3
5	2	3.50	3.50	7	0.50	0.50	1
402	18	5.56	1.74	30	0.83	0.22	3
Midlands Region	64	5.55	0.90	30	0.88	0.13	3
Whole of Agency	318	3.50	0.36	30	0.58	0.06	5

Table 14 The families missed in sorting by Midland Region's AQC inspectors

Family	n	% of Midlands Region's missed families in AQC Audit
Hydracarina	13	13.83
Empididae	8	8.51
Psychodidae	7	7.45
Caenidae	5	5.32
Simuliidae	5	5.32
Elmidae	4	4.26
Ceratopogonidae	4	4.26
Leptoceridae	4	4.26
Hydrophilidae (incl. Hydraenidae)	3	3.19
Nemouridae	3	3.19
Planariidae (incl. Dugesiidae)	3	3.19
Polycentropodidae	2	2.13
Psychomyiidae (incl. Ecnomidae)	2	2.13
Ephemerellidae	2	2.13
Lymnaeidae	2	2.13
Gyrinidae	2	2.13
Hydroptilidae	2	2.13
Planorbidae	2	2.13
Limnephilidae	1	1.06
Dytiscidae (incl. Noteridae)	1	1.06
Dendrocoelidae	1	1.06
Ephemeridae	1	1.06
Haliplidae	1	1.06
Chaoboridae	1	1.06
Asellidae	1	1.06
Hydrobiidae (incl. Bithyniidae)	1	1.06
Ancylidae (incl. Acroloxidae)	1	1.06
Leuctridae	1	1.06
Veliidae	1	1.06
Muscidae	1	1.06
Nematomorpha	1	1.06
Philopotamidae	1	1.06
Sericostomatidae	1	1.06
Sphaeriidae	1	1.06
Stratiomyidae	1	1.06
Tabanidae	1	1.06
Tipulidae	1	1.06
Valvatidae	1	1.06
Leptophlebiidae	1	1.06
Total	94	100

Table 15 The species missed in sorting by Midlands Region's AQC inspectors

Species	n	% of Midlands Region's missed species in AQC Audit
Hydracarina indet	13	13.27
Chelifera group	5	5.10
Pericoma trivialis group	4	4.08
Clinocerinae	4	4.08
Ceratopogonidae indet	4	4.08
Caenis luctuosa group	3	3.06
Nemoura avicularis Morton	2	2.04
Oulimnius sp.	2	2.04
Orectochilus villosus (Muller)	2	2.04
Mystacides azurea (L.)	2	2.04
Elmis aenea (Muller)	2	2.04
Athripsodes sp.	2	2.04
Ephemerella ignita (Poda)	2	2.04
Simulium sp.	2	2.04
Caenis rivulorum Eaton	2	2.04
Leuctra hippopus (Kempny)	1	1.02
Hydroptila sp.	1	1.02
Ithytrichia sp.	1	1.02
Hydraena gracilis Germar	1	1.02
Limnephilidae indet	1	1.02
Hydrophilidae indet	1	1.02
Hemerodromiinae	1	1.02
Helophorus (Atracthelophorus) brevipalpis Bedel	1	1.02
Halipus sp.	1	1.02
Limnophora sp.	1	1.02
Ephemera sp.	1	1.02
Dugesia polychroa group	1	1.02
Dendrocoelum lacteum (Muller)	1	1.02
Chrysops sp.	1	1.02
Chaoborus (Chaoborus) flavicans (Meigen)	1	1.02
Asellus aquaticus (L.)	1	1.02
Armiger crista (L.)	1	1.02
Gyraulus albus (Muller)	1	1.02
Polycelis nigra group	1	1.02
Velia sp.	1	1.02
Valvata cristata Muller	1	1.02
Tipula sp.	1	1.02
Simulium (Wilhelmia) sp.	1	1.02
Simulium (Simulium) ornatum group	1	1.02
Simulium (Boophthora) erythrocephalum (de Geer)	1	1.02
Sericostoma personatum (Spence)	1	1.02
Psychomyia pusilla (Fabricius)	1	1.02
Psychodidae indet	1	1.02
Psychoda gemina Eaton	1	1.02
Psychoda cinerea Banks	1	1.02

Table 15 continued

Species	n	% of Midlands Region's missed species in AQC Audit
Potamopyrgus antipodarum (Gray)	1	1.02
Lymnaea truncatula (Muller)	1	1.02
Polycelis sp.	1	1.02
Lymnaea peregra (Muller)	1	1.02
Plectrocnemia conspersa (Curtis)	1	1.02
Pisidium sp.	1	1.02
Pericoma sp.	1	1.02
Paraleptophlebia submarginata (Stephens)	1	1.02
Oxycera nigricornis Olivier	1	1.02
Oxycera dives Loew	1	1.02
Nemurella picteti Klapalek	1	1.02
Nematomorpha indet	1	1.02
Nebrioporus elegans (Panzer)	1	1.02
Wormaldia sp.	1	1.02
Lype sp.	1	1.02
Ancylidae indet	1	1.02
Polycentropus flavomaculatus (Pictet)	1	1.02
Total	98	100

AUDIT OF NORTH EAST REGION'S AQC INSPECTORS

Table 16 The 20 samples audited for Northumbria Area of North East Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Harthope Burn	West Shipley Farm	EWS	20/06/2001	0	1	0
Holywell Beck	d/s Brandon	EWS	18/07/2001	0	1	0
Linton Burn	Northumberland F7M 2A	EWS	30/07/2001	0	0	0
Wear	Shincliffe	EWS	02/02/2002	0	0	0
Derwent	Ebchester	EWS	22/02/2002	0	0	0
Nent	Alston	EWS	22/02/2002	0	2	0
Steads Burn	Bullocks Hall	FM	10/07/2001	1	0	0
Steads Burn	Bullocks Hall	FM	27/11/2001	0	1	0
Steads Burn	Site 2 - North Steads	FM	30/11/2001	0	0	0
Ouseburn	u/s Airport Trib	FM	06/12/2001	0	2	0
Don	Jarrow Cemetery	FM	07/12/2001	0	0	0
Coquet	d/s Hazon Burn	FM	07/12/2001	0	0	0
Hazon Burn	u/s Minewater discharge	FM	17/12/2001	0	0	0
Airport	u/s Ouseburn	FM	22/01/2002	0	0	0
Tyne	Ovingham	FM	08/02/2002	0	1	0
Hazon Burn	u/s Minewater	FM	19/02/2002	1	1	0
Pont	Kirkley Mill	FM	22/02/2002	0	2	0
Hedleyhope	Cowsley	VW	06/12/2001	0	1	0
Hedleyhope	Cowsley	VW	06/12/2001	0	2	0
Wear	u/s Gaunless	VW	07/12/2001	0	0	0

Table 17 The 20 samples audited for Dales Area of North East Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Ouse	u/s Clifton Bridge	EA	20/09/2001	0	0	0
Ure	Aldwark Toll Br	EA	01/10/2001	0	1	0
Wharfe	d/s Tadcaster Weir	EA	03/10/2001	0	0	0
Ure	Masham	EA	04/10/2001	0	0	0
Burn	Masham	EA	02/01/2002	0	1	0
Oak Beck	Harrogate	EA	02/01/2002	0	0	0
Swale	Thornton Bridge	EA	03/01/2002	0	0	0
Swale	Morton-on-Swale	EA	04/01/2002	0	0	0
Ure	Aldwark Toll Br	EA	04/01/2002	1	1	0
Ouse	Beningbrough Hall	EA	07/01/2002	0	3	0
Wharfe	Boston Spa	EA	07/01/2002	0	1	0
Pickering Beck	Pickering	EA	25/01/2002	0	0	0
Ure	West Tanfield	EA	28/01/2002	0	0	0
Ouse	d/s Nidd Mouth	EA	29/01/2002	0	0	0
Nidd	Walshford Bridge	EA	30/01/2002	0	0	0
Ouse	Beningbrough Hall	EA	30/01/2002	0	0	0
Ouse	Naburn Marina	SW	09/08/2001	0	0	0
Ouse	u/s York Water Works	SW	16/08/2001	0	0	0
Greatham Creek	u/s Railway	SW	23/01/2002	0	0	0
Calais Beck	Site D	SW	24/01/2002	0	0	0

Table 18 The 15 samples audited for Ridings Area of North East Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Rivelin	u/s Rivelin Dams	MC	20/07/2001	0	0	0
Worth	Keighley Garforth Road	MC	01/08/2001	0	2	0
Hebden Water	Hebden Bridge	MC	06/08/2001	0	2	0
Dearne	d/s Billings Dyke	MC	01/10/2001	0	0	0
Dearne	Marles Bridge	MC	16/11/2001	0	1	0
Wessenden Brook	u/s Mill	MC	07/01/2002	0	0	0
Rivelin	u/s Rivelin Dams	MC	07/01/2002	0	0	0
Bradshaw Beck	Bradshaw	MC	31/01/2002	2	1	0
Booth Dean Clough	d/s Reservoir	MC	05/02/2002	1	1	0
Little Don	Crookland Wood	MC	14/02/2002	0	1	0
West Beck	Rainbow Springs	RJJ	12/12/2001	0	0	0
Crimsworth Dean Beck	u/s Hebden Water	RJJ	04/01/2002	0	0	0
Little Don	Crookland Wood	RJJ	04/01/2002	0	2	0
Dearne	B6098 Bridge	RJJ	07/01/2002	0	0	0
Scout Dike	u/s Scout Bridge	RJJ	07/01/2002	0	2	0

Table 19 Statistics of the 2001 AQC Audit for North East Region

Analyst/ Group	n	Mean gains	Standard error	Highest no. gains	Mean errors (l+g+o)	Standard error
Northumbria	20	0.70	0.18	2	0.80	0.19
EWS	6	0.67	0.33	2	0.67	0.33
FM	11	0.64	0.24	2	0.82	0.26
VW	3	1.00	0.58	2	1.00	0.58
Dales	20	0.35	0.17	3	0.40	0.18
EA	16	0.44	0.20	3	0.50	0.22
SW	4	0	0	0	0	0
Ridings	15	0.80	0.22	2	1.00	0.28
MC	10	0.80	0.25	2	1.10	0.35
RJJ	5	0.80	0.49	2	0.80	0.49
N. East Region	55	0.60	0.11	3	0.71	0.12
Whole of Agency	318	0.70	0.05	5	0.87	0.06

Table 20 Net effects of the AQC Audit on BMWP score and number of scoring taxa for North East Region

Analyst/ Group	n	Mean net effect on BMWP score	Standard error of net effect on score	Maximum underestimate of BMWP score	Mean net effect on no. of taxa	Standard error of net effect on no. of taxa	Maximum underestimate of no. of taxa
Northumbria	20	3.15	0.95	10	0.60	0.20	2
EWS	6	3.33	1.67	10	0.67	0.33	2
FM	11	2.55	1.34	10	0.45	0.28	2
VW	3	5.00	2.89	10	1.00	0.58	2
Dales	20	2.20	1.37	25	0.30	0.16	3
EA	16	2.75	1.69	25	0.38	0.20	3
SW	4	0	0	0	0	0	0
Ridings	15	3.53	1.29	13	0.60	0.25	2
MC	10	3.00	1.42	13	0.50	0.31	2
RJJ	5	4.60	2.82	12	0.80	0.49	2
N. East Region	55	2.91	0.69	25	0.49	0.12	3
Whole of Agency	318	3.50	0.36	30	0.58	0.06	5

Table 21 The families missed by North East Region's AQC inspectors

Family	n	% of North East Region's missed families in AQC Audit
Empididae	11	18.33
Hydrophilidae (incl. Hydraenidae)	5	8.33
Ceratopogonidae	5	8.33
Psychodidae	5	8.33
Hydracarina	4	6.67
Planariidae (incl. Dugesiidae)	4	6.67
Hydrobiidae (incl. Bithyniidae)	3	5.00
Goeridae	2	3.33
Lymnaeidae	2	3.33
Dytiscidae (incl. Noteridae)	2	3.33
Nemouridae	2	3.33
Syrphidae	1	1.67
Chaoboridae	1	1.67
Dolichopodidae	1	1.67
Elmidae	1	1.67
Rhyacophilidae (incl. Glossosomatidae)	1	1.67
Ephydriidae	1	1.67
Hydroptilidae	1	1.67

Table 21 continued

Family	n	% of North East Region's missed families in AQC Audit
Psychomyiidae (incl. Ecnomidae)	1	1.67
Calopterygidae	1	1.67
Polycentropodidae	1	1.67
Tipulidae	1	1.67
Leptoceridae	1	1.67
Limnephilidae	1	1.67
Muscidae	1	1.67
Haliplidae	1	1.67
Total	60	100

Table 22 The species missed by North East Region's AQC inspectors

Species	n	% of North East Region's missed species in AQC Audit
Clinocerinae	6	9.38
Ceratopogonidae indet	5	7.81
Hemerodromia group	4	6.25
Hydracarina indet	4	6.25
Pericoma fallax Eaton	3	4.69
Chelifera group	3	4.69
Potamopyrgus antipodarum (Gray)	3	4.69
Hydraena gracilis Germar	3	4.69
Polycelis felina (Dalyell)	2	3.13
Lymnaea peregra (Muller)	2	3.13
Helophorus (Atrathelophorus) brevipalpis Bedel	1	1.56
Haliplus sp.	1	1.56
Goera pilosa (Fabricius)	1	1.56
Ephydridae indet	1	1.56
Elmis aenea (Muller)	1	1.56
Dolichopodidae indet	1	1.56
Cyrnus trimaculatus (Curtis)	1	1.56
Crenobia alpina (Dana)	1	1.56
Chaoborus sp.	1	1.56
Ceraclea sp.	1	1.56
Calopteryx splendens (Harris)	1	1.56
Dicranota sp.	1	1.56
Oreodytes sanmarkii (Sahlberg)	1	1.56
Syrphidae indet	1	1.56
Silo pallipes (Fabricius)	1	1.56
Rhyacophila sp.	1	1.56

Table 22 continued

Species	n	% of North East Region's missed species in AQC Audit
<i>Rhyacophila dorsalis</i> (Curtis)	1	1.56
<i>Psychoda gemina</i> Eaton	1	1.56
<i>Phagocata vitta</i> (Duges)	1	1.56
<i>Hydraena riparia</i> Kugelann	1	1.56
<i>Oulimnius</i> sp.	1	1.56
<i>Agabus</i> sp.	1	1.56
Nemouridae indet	1	1.56
<i>Nemoura cambrica</i> group	1	1.56
<i>Limnophora</i> sp.	1	1.56
<i>Limnephilus rhombicus</i> group	1	1.56
<i>Tinodes waeneri</i> (L.)	1	1.56
<i>Ithytrichia</i> sp.	1	1.56
<i>Pericoma trivialis</i> group	1	1.56
Total	64	100

AUDIT OF NORTH WEST REGION'S AQC INSPECTORS

Table 23 The samples audited for Northern Area of North West Region

Due to the Foot & Mouth outbreak, no samples were audited in 2001/02 for Northern Area

Table 24 The 20 samples audited for Central Area of North West Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Douglas	Wanes Blade Bridge	AS	15/01/2002	0	0	0
Colne Water	ptc North Valley Rd Brook	BL	09/01/2002	1	0	0
Yarrow	Limbrick	BL	13/02/2002	0	1	0
Goit	Site 2, Brinscall	BL	21/02/2002	0	4	0
Dean Brook	ptc R. Douglas	BL	22/02/2002	1	0	0
Savick Brook	Grimsargh Road Bridge	BL	22/02/2002	0	0	0
Douglas	Longton Brook ptc	BL	25/02/2002	0	0	0
Calder	Green Brook ptc	BL	25/02/2002	0	0	0
Douglas	Parbold d/s bridge	DL	18/01/2002	0	0	0
Yellow Brook	ptc R. Douglas	DL	07/02/2002	0	0	0
Black Brook	Nr Hospital	DL	13/02/2002	0	0	0
Douglas	Wigan FC	DL	14/02/2002	0	0	0
Douglas	d/s M61	DL	19/02/2002	0	0	0
Yarrow	Limbrick	DL	21/02/2002	0	0	0
Buckrow Brook	By Tilcon Ltd	GK	14/02/2002	0	1	0
Wade Brook	ptc Mill Brook	GK	15/02/2002	0	1	0
Brock	d/s Brock Mill Car Park	GK	19/02/2002	0	0	0
Smithy Brook	Lady Lane	GK	21/02/2002	0	0	0
Hillylaid Pool	d/s Royles Brook	GK	22/02/2002	0	0	0
Barley Water	ptc Pendle Water	GK	22/02/2002	1	1	0

Table 25 The 20 samples audited for Southern Area of North West Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Medlock	Dawson St	KA	11/10/2001	0	1	1
Roch	ptc Irwell	KA	17/10/2001	0	0	0
Irk	u/s Cedar Grove	KA	23/10/2001	0	0	0
Astley Brook	ptc Shaw Brook	NR	08/01/2002	0	0	0
Tong End Brook	ptc R. Spodden	NR	11/01/2002	0	0	0
Marsh Brook	ptc Hall Lee Brook	NR	06/02/2002	0	0	0
Westleigh Brook	ptc Pennington Brook	NR	07/02/2002	1	1	0
Irk	u/s Collyhurst Weir	NR	20/02/2002	0	0	0
Diggle Brook	The Wharf	NR	27/02/2002	0	0	0
Glaze	Little Woolden Hall	NR	01/03/2002	0	0	0
Clough Brook	Peak Park	NR	06/03/2002	0	1	0
Beal	ptc Piethorne Brook	RM	11/12/2001	0	0	0
Mersey	d/s Northenden Weir	RM	11/12/2001	0	1	1
Moss Brook	ptc Bedford Brook	RM	20/12/2001	1	0	0
Whittle Brook	Halton's Bridge	RM	09/01/2002	0	0	0
Bedford Brook	ptc Moss Brook	RM	10/01/2002	1	1	0
Irwell	University FB	RM	20/02/2002	0	0	0
Irwell	u/s Bury ETW	RM	21/02/2002	0	0	0
Newton Brook	ptc Sankey Brook	RM	25/02/2002	0	0	0
Cowpe Brook	u/s Boarsgreave	RM	28/02/2002	1	1	1

Table 26 Statistics of the 2001 AQC Audit for North West Region

Analyst/ Group	n	Mean gains	Standard error	Highest no. gains	Mean errors (l+g+o)	Standard error
Northern	0	-	-	-	-	-
Central	20	0.40	0.21	4	0.55	0.22
AS	1	0	-	0	0	-
BL	7	0.71	0.57	4	1.00	0.53
DL	6	0	0	0	0	0
GK	6	0.50	0.22	1	0.67	0.33
Southern	20	0.30	0.11	1	0.65	0.22
KA	3	0.33	0.33	1	0.67	0.67
NR	8	0.25	0.16	1	0.38	0.26
RM	9	0.33	0.17	1	0.89	0.39
N. West Region	40	0.35	0.12	4	0.60	0.16
Whole of Agency	318	0.70	0.05	5	0.87	0.06

Table 27 Net effects of the AQC Audit on BMWP score and number of scoring taxa for North West Region

Analyst/ Group	n	Mean net effect on BMWP score	Standard error of net effect on score	Maximum underestimate of BMWP score	Mean net effect on no. of taxa	Standard error of net effect on no. of taxa	Maximum underestimate of no. of taxa
Northern	0	-	-	-	-	-	-
Central	20	1.45	1.18	15	0.25	0.23	4
AS	1	0	-	0	0	-	0
BL	7	1.00	3.06	15	0.43	0.65	4
DL	6	0	0	0	0	0	0
GK	6	3.67	1.76	10	0.33	0.21	1
Southern	20	1.10	0.78	10	0.10	0.10	1
KA	3	3.33	3.33	10	0.33	0.33	1
NR	8	1.25	1.25	10	0.13	0.13	1
RM	9	0.22	0.86	5	0	0.17	1
N. West Region	40	1.28	0.70	15	0.18	0.12	4
Whole of Agency	318	3.50	0.36	30	0.58	0.06	5

Table 28 The families missed in sorting by North West Region's AQC inspectors

Family	n	% of North West Region's missed families in AQC Audit
Psychodidae	2	16.67
Leptoceridae	2	16.67
Leuctridae	1	8.33
Lepidostomatidae	1	8.33
Hydrophilidae (incl. Hydraenidae)	1	8.33
Hydracarina	1	8.33
Empididae	1	8.33
Dolichopodidae	1	8.33
Dendrocoelidae	1	8.33
Ceratopogonidae	1	8.33
Total	12	100

Table 29 The species missed in sorting by North West Region's AQC inspectors

Species	n	% of North West Region's missed species in AQC Audit
Mystacides azurea (L.)	2	16.67
Pericoma pseudoexquisita Tonnoir	1	8.33
Pericoma fallax Eaton	1	8.33
Leuctra sp.	1	8.33
Lepidostoma hirtum (Fabricius)	1	8.33
Hydraena gracilis Germar	1	8.33
Hydracarina indet	1	8.33
Dolichopodidae indet	1	8.33
Dendrocoelum lacteum (Muller)	1	8.33
Clinocerinae	1	8.33
Ceratopogonidae indet	1	8.33
Total	12	100

AUDIT OF SOUTHERN REGION'S AQC INSPECTORS

Table 30 The samples audited for the Hants & Isle of Wight Area of Southern Region

Hants & Isle of Wight Area sent primary samples only for audit.

Table 31 The 4 samples audited for the Kent Area of Southern Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Littlestone Sewer	d/s New Romney STW	E1	20/09/2001	0	0	0
Little Stour	d/s Seaton Mill	SW	28/11/2001	0	4	0
Rother	Blackwall Bridge	SW	04/12/2001	0	2	0
Little Stour	White Bridge	SW	03/01/2002	0	3	0

Table 32 The 5 samples audited for the Sussex Area of Southern Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Barnham Tributary	Site 3	AG	30/10/2001	0	0	0
Sheffield Park Stream	North Hall Farm	AG	02/01/2002	0	3	0
Longford Stream	Longford Farm	AG	14/02/2002	0	2	0
Framfield Stream	B2141 Bridge	SE	13/11/2001	0	1	0
Uck	u/s Tributary	SE	03/01/2002	0	0	0

Table 33 Statistics of the 2001 AQC Audit for Southern Region

Analyst/ Group	n	Mean gains	Standard error	Highest no. gains	Mean errors (l+g+o)	Standard error
Hants & IOW	0	-	-	-	-	-
Kent	4	2.25	0.85	4	2.25	0.85
E1	1	0	-	0	0	-
SW	3	3.00	0.58	4	3.00	0.58
Sussex	5	1.20	0.58	3	1.20	0.58
AG	3	1.67	0.88	3	1.67	0.88
SE	2	0.50	0.50	1	0.50	0.50
Southern Region	9	1.67	0.50	4	1.67	0.50
Whole of Agency	318	0.70	0.05	5	0.87	0.06

Table 34 Net effects of the AQC Audit on BMWP score and number of scoring taxa for Southern Region

Analyst/ Group	n	Mean net effect on BMWP score	Standard error of net effect on score	Maximum underestimate of BMWP score	Mean net effect on no. of taxa	Standard error of net effect on no. of taxa	Maximum underestimate of no. of taxa
Hants & IOW	0	-	-	-	-	-	-
Kent	4	10.50	4.41	21	2.25	0.85	4
EI	1	0	-	0	0	-	0
SW	3	14.00	3.79	21	3.00	0.58	4
Sussex	5	6.60	3.16	17	1.20	0.58	3
AG	3	8.33	4.91	17	1.67	0.88	3
SE	2	4.00	4.00	8	0.50	0.50	1
Southern Region	9	8.33	2.54	21	1.67	0.50	4
Whole of Agency	318	3.50	0.36	30	0.58	0.06	5

Table 35 The families missed in sorting by Southern Region's AQC inspectors

Family	n	% of Southern Region's missed families in AQC Audit
Veliidae	1	7.69
Valvatidae	1	7.69
Sphaeriidae	1	7.69
Simuliidae	1	7.69
Leptoceridae	1	7.69
Hydrophilidae (incl. Hydraenidae)	1	7.69
Hydridae	1	7.69
Haliplidae	1	7.69
Dytiscidae (incl. Noteridae)	1	7.69
Dendrocoelidae	1	7.69
Calopterygidae	1	7.69
Baetidae	1	7.69
Asellidae	1	7.69
Total	13	100

Table 36 The species missed in sorting by Southern Region's AQC inspectors

Species	n	% of Southern Region's missed species in AQC Audit
Velia (Plesiovelia) sp.	1	7.69
Valvata cristata Muller	1	7.69
Simulium (Simulium) ornatum group	1	7.69
Platambus maculatus (L.)	1	7.69
Pisidium sp.	1	7.69
Hydridae indet	1	7.69
Dendrocoelum lacteum (Muller)	1	7.69
Centroptilum luteolum (Muller)	1	7.69
Calopteryx splendens (Harris)	1	7.69
Brychius elevatus (Panzer)	1	7.69
Athripsodes bilineatus (L.)	1	7.69
Asellus aquaticus (L.)	1	7.69
Anacaena limbata (Fabricius)	1	7.69
Total	13	100

AUDIT OF SOUTH WEST REGION'S AQC INSPECTORS

Table 37 The 20 samples audited for Cornwall Area of South West Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Red	Godrevy	AB	22/03/2001	0	1	0
Cober	Trenear Bridge	AB	09/04/2001	1	0	0
Wolf	u/s Thrushel (Milford)	AB	26/04/2001	0	0	0
Red	u/s South Crofty Mine	AB	24/05/2001	0	0	0
Reskadinnick Stream	Reskadinnick	AB	10/09/2001	0	0	0
Fal	Kernick Bridge	AB	19/11/2001	0	0	0
Gover Stream	d/s Carrancarrow	AB	20/12/2001	0	0	0
Tehidy Stream	Coombe	JMB	09/03/2001	0	0	0
Red	Kieve Bridge	JMB	16/03/2001	0	0	0
Trevenen	u/s Tewennack STW	JMB	13/07/2001	0	0	0
Red	d/s Brea Addit Bridge	JMB	12/10/2001	0	0	0
Fowey	Draynes Bridge	JMB	06/11/2001	0	1	0
Walkham	Grenofen Bridge	JMB	09/11/2001	0	0	0
Wolf	Roadford New Bridge	LD	30/03/2001	0	0	0
Plym	u/s Ditsworthy	TG	13/03/2001	0	0	0
Newlyn	Newlyn Bridge	TG	18/04/2001	0	0	0
Lyd	Lifton Bridge	TG	01/06/2001	1	0	0
Tavy	d/s Willsworthy Leat	TG	15/08/2001	0	0	0
Warleggan (Bodelda)	Temple	TG	30/08/2001	0	0	0
Tamar	Buses Bridge	TG	17/10/2001	0	0	0

Table 38 The 4 samples audited for Devon Area of South West Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Barnstable Yeo	d/s Brockham Bridge	AD	07/12/2001	0	0	0
Dunkeswell Stream	u/s Madford River	AG	05/12/2001	0	0	0
Umber	Combe Martin	AH	06/12/2001	0	0	0
Lemon	u/s South Knighton STW	APH	04/01/2002	0	0	0

Table 39 The 10 samples audited for North Wessex Area of South West Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Hillfarrance Trib	Wiverliscombe STW	IH	08/02/2002	0	0	0
South Drain	d/s Peat Discharge	IH	05/03/2002	0	0	0
Bristol Avon	Lackham College	IN	06/02/2002	0	1	0
Hillfarrance Brook	Milverton STW	JS	08/02/2002	0	0	0
Tone	Waterrow	JS	11/02/2002	0	1	0
Tone	Waterrow	JS	25/02/2002	0	0	0
Chalfield Brook	Broughton Gifford	WO	08/02/2002	0	0	0
Durleigh Brook	Albert Street	WO	13/02/2002	0	0	0
Buckington Drove	Pinkney Farm	WO	04/03/2002	1	0	0
Lopen Brook	Summer Lane	WO	05/03/2002	0	0	0

Table 40 The 10 samples audited for South Wessex Area of South West Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Nine Mile	Nine Mile Ford	PRH	24/04/2001	0	1	0
Fonthill Brook	Hillground Copse	PRH	29/06/2001	0	1	0
Hooke	d/s Hooke	PRH	24/07/2001	0	0	0
Piddle	White Lackington	PRH	05/09/2001	0	1	0
Devil's Brook	Lower Ansty	PRH	24/10/2001	0	1	0
Ashfield Water	Burton	PRH	21/11/2001	0	0	0
Tarrant	u/s Preston Farm	PRH	24/01/2002	0	0	0
Bourne Stream	Talbot Heath	PRH	01/02/2002	0	2	0
Devil's Brook	Mill House	PRH	12/02/2002	0	1	0
Bourne Stream	Town Centre Gardens	PRH	20/02/2002	0	0	0

Table 41 Statistics of the 2001 AQC Audit for South West Region

Analyst/Group	n	Mean gains	Standard error	Highest no. gains	Mean errors (l+g+o)	Standard error
Cornwall	20	0.10	0.07	1	0.20	0.09
AB	7	0.14	0.14	1	0.29	0.18
JMB	6	0.17	0.17	1	0.17	0.17
LD	1	0	-	0	0	-
TG	6	0	0	0	0.17	0.17
Devon	4	0	0	0	0	0
AD	1	0	-	0	0	-
AG	1	0	-	0	0	-
AH	1	0	-	0	0	-
APH	1	0	-	0	0	-
N. Wessex	10	0.20	0.13	1	0.30	0.15
IH	2	0	0	0	0	0
IN	1	1.00	-	1	1.00	-
JS	3	0.33	0.33	1	0.33	0.33
WO	4	0	0	0	0.25	0.25
S. Wessex	10	0.70	0.21	2	0.70	0.21
PRH	10	0.70	0.21	2	0.70	0.21
S. West Region	44	0.25	0.07	2	0.32	0.08
Whole of Agency	318	0.70	0.05	5	0.87	0.06

Table 42 Net effects of the AQC Audit on BMWP score and number of scoring taxa for South West Region

Analyst/ Group	n	Mean net effect on BMWP score	Standard error of net effect on score	Maximum underestimate of BMWP score	Mean net effect on no. of taxa	Standard error of net effect on no. of taxa	Maximum underestimate of no. of taxa
Cornwall	20	0	0.79	10	0	0.10	1
AB	7	-0.43	1.45	5	0	0.22	1
JMB	6	1.67	1.67	10	0.17	0.17	1
LD	1	0	-	0	0	-	0
TG	6	-1.17	1.17	0	-0.17	0.17	0
Devon	4	0	0	0	0	0	0
AD	1	0	-	0	0	-	0
AG	1	0	-	0	0	-	0
AH	1	0	-	0	0	-	0
APH	1	0	-	0	0	-	0
N. Wessex	10	0.60	1.61	10	0.10	0.18	1
IH	2	0	0	0	0	0	0
IN	1	6.00	-	6	1.00	-	1
JS	3	3.33	3.33	10	0.33	0.33	1
WO	4	-2.50	2.50	0	-0.25	0.25	0
S. Wessex	10	4.50	1.69	16	0.70	0.21	2
PRH	10	4.50	1.69	16	0.70	0.21	2
S. West Region	44	1.16	0.68	16	0.18	0.09	2
Whole of Agency	318	3.50	0.36	30	0.58	0.06	5

Table 43 The families missed in sorting by South West Region's AQC inspectors

Family	n	% of South West Region's missed families in AQC Audit
Lymnaeidae	1	6.25
Argulidae	1	6.25
Caenidae	1	6.25
Capniidae	1	6.25
Goeridae	1	6.25
Hydracarina	1	6.25
Ancylidae (incl. Acroloxidae)	1	6.25
Leptophlebiidae	1	6.25
Stratiomyidae	1	6.25
Perlodidae	1	6.25
Psychodidae	1	6.25
Rhagionidae (incl. Athericidae)	1	6.25
Sciomyzidae	1	6.25
Simuliidae	1	6.25
Sphaeriidae	1	6.25
Hydroptilidae	1	6.25
Total	16	100

Table 44 The species missed in sorting by South West Region's AQC inspectors

Species	n	% of South West Region's missed species in AQC Audit
Leptophlebiidae indet	1	6.25
Beris sp.	1	6.25
Caenis luctuosa group	1	6.25
Capnia bifrons (Newman)	1	6.25
Ferrissia wautieri (Mirolli)	1	6.25
Goera pilosa (Fabricius)	1	6.25
Argulus sp.	1	6.25
Ithytrichia sp.	1	6.25
Simulium (Eusimulium) aureum group	1	6.25
Lymnaea peregra (Muller)	1	6.25
Perlodes microcephala (Pictet)	1	6.25
Pisidium sp.	1	6.25
Psychoda sp.	1	6.25
Rhagionidae indet	1	6.25
Sciomyzidae indet	1	6.25
Hydracarina indet	1	6.25
Total	16	100

AUDIT OF THAMES REGION'S AQC INSPECTORS

Table 45 The 14 samples audited for the Hatfield Laboratory of Thames Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Lee	Hackney Marshes	JE	29/05/2001	0	1	0
Stort	Briggens	JE	30/05/2001	0	0	0
Mimshall Brook	Waterend	JE	01/06/2001	0	1	0
Roding	High Ongar Bridge	JE	18/07/2001	1	0	0
Colne Brook	Wraysbury BR Station	JE	07/08/2001	0	1	0
Colne	London Colney	JE	09/08/2001	0	2	0
Colne	d/s Stanwell Moor	JE	09/08/2001	0	1	0
Gade	Cassiobury Park	JE	03/12/2001	1	1	1
Ascot Road Ditch	d/s Ascot Road	KG	27/11/2001	1	0	0
Pinn	Stratford Bridge	KG	28/11/2001	0	0	0
Cripsey Brook	Moreton Bridge	RHC	26/11/2001	1	0	0
Cripsey Brook	Weald Bridge	RHC	27/11/2001	0	0	0
Brookhouse Brook	d/s Hobbs Cross Farm	RHC	28/11/2001	0	0	0
Lee	Waterhall	RHC	30/11/2001	0	1	0

Table 46 The 20 samples audited for the Frimley Laboratory of Thames Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Ludgershall Brook	u/s Ray	307	12/02/2001	0	1	0
Ravensbourne	Ladywell Park	307	05/04/2001	0	0	0
Lawbrook	Drydown Farm	307	31/07/2001	0	0	0
Wey (S)	Passfield Business Park	307	16/08/2001	0	3	0
Cranleigh Waters	u/s Collins Brook	307	24/01/2002	0	0	0
Cranleigh Waters	Water Bridge	317	17/01/2001	0	0	1
Quaggy	Chinbrook Meadows	317	05/02/2001	0	1	0
Marston Meysey Brook	d/s Marston Meysey	317	22/02/2001	0	2	0
The Cut	Pitts Bridge	317	25/04/2001	0	2	0
Beverley Brook	Richmond Park	317	29/05/2001	1	1	0
The Cut	u/s Lam Brook	317	05/06/2001	0	1	0
Bracknell Mill Pond	Inlet Stream	317	26/06/2001	0	1	0
Gatwick Stream	Tinsley Bridge	317	11/09/2001	0	1	0
Jubilee River	d/s Dorney Footbridge	317	11/10/2001	0	0	0
Cranleigh Waters	Water Bridge	317	24/10/2001	0	2	0
Cranleigh Waters	u/s Collins Brook	317	21/11/2001	0	0	0
Wandle	3 Arch Bridge	MJW	18/04/2001	0	0	0
Ockham Mill Stream	Ockham Mill	MJW	08/05/2001	0	3	0
Ravensbourne	Norman Park	MJW	13/07/2001	0	1	0
Hogsmill	u/s Mill Street	MJW	01/10/2001	0	0	0

Table 47 The 20 samples audited for the Wallingford Laboratory of Thames Region

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Marcham Brook	Mill Road, Marcham	001	04/01/2002	0	1	1
Lambourn	A4, Newbury	001	21/01/2002	0	0	0
Wye	Bassetsbury Lane	001	22/01/2002	0	0	0
Windrush	Worsham Works	001	13/02/2002	0	0	0
Windrush	East Arm @ Cokethorpe	001	14/02/2002	0	0	0
Windrush	Lower Upton Farm	001	15/02/2002	0	1	0
Dikler	Lower Swell	001	15/02/2002	0	1	0
Windrush	Minster Lovell Rec Ground	001	21/02/2002	0	1	0
Cole	Acorn Bridge, Bourton	001	22/02/2002	2	0	0
Mill Brook	Watery Lane	001	22/02/2002	0	0	0
Mill Brook	Mill Brook Cottage	001	25/02/2002	0	0	0
Windrush	G.S. Newbridge	001	26/02/2002	0	0	0
Windrush	Newbridge	001	26/02/2002	0	0	0
Kennet	d/s Sheep Drove Bend	001	26/02/2002	0	0	0
Medley Brook	d/s Stanton Harcourt	001	26/02/2002	0	0	1
Windrush	Harford Ford	001	26/02/2002	0	0	0
Mill Brook	Thatcher Cottage	001	11/03/2002	0	0	0
Churn	u/s A435, Colesbourne	004	07/01/2002	1	0	1
Dikler	Stow Bridge	004	28/01/2002	0	0	0
Kennet	Chilton Foliat	004	29/01/2002	1	1	0

Table 48 Statistics of the 2001 AQC Audit for Thames Region

Analyst/ Group	n	Mean gains	Standard error	Highest no. gains	Mean errors (l+g+o)	Standard error
Hatfield	14	0.57	0.17	2	0.93	0.22
JE	8	0.88	0.23	2	1.25	0.31
KG	2	0	0	0	0.50	0.50
RHC	4	0.25	0.25	1	0.50	0.29
Frimley	20	0.95	0.22	3	1.05	0.22
307	5	0.80	0.58	3	0.80	0.58
317	11	1.00	0.23	2	1.18	0.23
MJW	4	1.00	0.71	3	1.00	0.71
Wallingford	20	0.25	0.10	1	0.60	0.18
001	17	0.24	0.11	1	0.47	0.17
004	3	0.33	0.33	1	1.33	0.67
Thames Region	54	0.59	0.11	3	0.85	0.12
Whole of Agency	318	0.70	0.05	5	0.87	0.06

Table 49 Net effects of the AQC Audit on BMWP score and number of scoring taxa for Thames Region

Analyst/ Group	n	Mean net effect on BMWP score	Standard error of net effect on score	Maximum underestimate of BMWP score	Mean net effect on no. of taxa	Standard error of net effect on no. of taxa	Maximum underestimate of no. of taxa
Hatfield	14	1.43	1.09	9	0.29	0.24	2
JE	8	3.13	1.27	9	0.63	0.32	2
KG	2	-2.50	2.50	0	-0.50	0.50	0
RHC	4	0	2.04	5	0	0.41	1
Frimley	20	4.80	1.37	18	0.90	0.23	3
307	5	4.60	3.49	18	0.80	0.58	3
317	11	4.55	1.49	12	0.91	0.25	2
MJW	4	5.75	4.25	18	1.00	0.71	3
Wallingford	20	0.35	1.00	7	0.05	0.15	1
001	17	0.71	0.95	7	0.12	0.17	1
004	3	-1.67	4.41	5	-0.33	0.33	0
Thames Region	54	2.28	0.73	18	0.43	0.13	3
Whole of Agency	318	3.50	0.36	30	0.58	0.06	5

Table 50 The families missed in sorting by Thames Region's AQC inspectors

Family	n	% of Thames Region's missed families in AQC Audit
Psychodidae	13	16.46
Empididae	11	13.92
Hydracarina	11	13.92
Hydrophilidae (incl. Hydraenidae)	5	6.33
Ceratopogonidae	5	6.33
Caenidae	3	3.80
Ephydriidae	3	3.80
Planorbidae	3	3.80
Dixidae	2	2.53
Hydrobiidae (incl. Bithyniidae)	2	2.53
Limnephilidae	2	2.53
Hydriidae	2	2.53
Psychomyiidae (incl. Ecnomidae)	1	1.27
Baetidae	1	1.27
Beraeidae	1	1.27
Tipulidae	1	1.27
Sericostomatidae	1	1.27
Coenagrionidae	1	1.27
Culicidae	1	1.27
Elmidae	1	1.27

Table 50 continued

Family	n	% of Thames Region's missed families in AQC Audit
Lymnaeidae	1	1.27
Polycentropodidae	1	1.27
Gammaridae (incl. Crangonyctidae & Planariidae (incl. Dugesidae)	1	1.27
Ancylidae (incl. Acroloxidae)	1	1.27
Muscidae	1	1.27
Veliidae	1	1.27
Hydroptilidae	1	1.27
Sciomyzidae	1	1.27
Total	79	100

Table 51 The species missed in sorting by Thames Region's AQC inspectors

Species	n	% of Thames Region's missed species in AQC Audit
Hydracarina indet	11	12.79
Hemerodromia group	7	8.14
Ceratopogonidae indet	5	5.81
Pericoma fallax Eaton	4	4.65
Clinocerinae	4	4.65
Pericoma trivialis group	4	4.65
Peripsychoda fusca (Macquart)	3	3.49
Chelifera group	3	3.49
Caenis luctuosa group	3	3.49
Potamopyrgus antipodarum (Gray)	2	2.33
Hydraena riparia Kugelann	2	2.33
Pericoma sp.	2	2.33
Hydridae indet	2	2.33
Limnephilidae indet	2	2.33
Ephydriidae indet	2	2.33
Dixa maculata complex	1	1.16
Anopheles sp.	1	1.16
Helophorus (Helophorus) obscurus Mulsant	1	1.16
Gyraulus sp.	1	1.16
Gammarus sp.	1	1.16
Dicranota sp.	1	1.16
Dixa sp.	1	1.16
Armiger crista (L.)	1	1.16

Table 51 continued

Species	n	% of Thames Region's missed species in AQC Audit
<i>Baetis rhodani</i> (Pictet)	1	1.16
<i>Beraea pullata</i> (Curtis)	1	1.16
<i>Elmis aenea</i> (Muller)	1	1.16
<i>Lype</i> sp.	1	1.16
<i>Sericostoma personatum</i> (Spence)	1	1.16
Sciomyzidae indet	1	1.16
<i>Pyrrhosoma nymphula</i> (Sulzer)	1	1.16
<i>Psychoda cinerea</i> Banks	1	1.16
<i>Polycentropus flavomaculatus</i> (Pictet)	1	1.16
<i>Polycelis nigra</i> group	1	1.16
<i>Pericoma pulchra</i> Eaton	1	1.16
<i>Hydraena</i> sp.	1	1.16
<i>Ochthebius dilatatus</i> Stephens	1	1.16
<i>Hippeutis complanatus</i> (L.)	1	1.16
<i>Lymnaea</i> sp.	1	1.16
<i>Limnophora</i> sp.	1	1.16
<i>Hydroptila</i> sp.	1	1.16
Hydrophilidae indet	1	1.16
<i>Velia</i> sp.	1	1.16
<i>Hydrellia</i> sp.	1	1.16
<i>Acroloxus lacustris</i> (L.)	1	1.16
<i>Pericoma exquisita</i> Eaton	1	1.16
Total	86	100

AUDIT OF AQC INSPECTORS FOR WALES

Table 52 The 4 samples audited for Northern Area of Wales

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Afon Erch	Glen Afon	359	08/01/2002	0	1	0
Afon Clywedog	Pickhill	359	28/01/2002	0	0	0
Afon Braint	d/s Penhesgyn Tip	377	27/11/2001	0	1	0
Glanfyddion Brook	A547, Dyserth	385	28/02/2002	0	2	0

Table 53 The 7 samples audited for South Eastern Area of Wales

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Yazor Brook	d/s Burghill STW	370	09/08/2001	1	0	0
Cage Brook	u/s Wye	370	09/08/2001	0	4	0
Rhiangoll	Bottom site d/s Rep	370	10/08/2001	0	0	0
Rhyd-y-Meirch	Bottom stretch, mid site	370	29/11/2001	2	0	0
Sirhowy	d/s Sunningdale minewater	370	13/12/2001	1	1	0
Trosnant Brook	u/s Minewater	370	18/12/2001	0	1	0
Stream	Nr Dan y Coed Terrace	370	06/02/2002	1	0	0

Table 54 The 5 samples audited for South Western Area of Wales

River	Site	AQC inspector	AQC date	Losses	Gains	Omissions
Pelenna	u/s Confluence	GR	16/10/2001	0	0	0
Camnant	u/s Hirwaun P/S	GR	21/02/2002	0	0	0
Sutton Brook	d/s Lower SW	JG	Not known	0	0	0
Afan	u/s Lower Cwmafan Bridge	JG	26/07/2001	0	0	0
Blaenpelenna	u/s Garth Tonmawr	JG	19/09/2001	0	0	0

Table 55 Statistics of the 2001 AQC Audit for Wales

Analyst/ Group	n	Mean gains	Standard error	Highest no. gains	Mean errors (l+g+o)	Standard error
Northern	4	1.00	0.41	2	1.00	0.41
359	2	0.50	0.50	1	0.50	0.50
377	1	1.00	-	1	1.00	-
385	1	2.00	-	2	2.00	-
S. Eastern	7	0.86	0.55	4	1.57	0.48
370	7	0.86	0.55	4	1.57	0.48
S. Western	5	0	0	0	0	0
GR	2	0	0	0	0	0
JG	3	0	0	0	0	0
Wales	16	0.63	0.27	4	0.94	0.28
Whole of Agency	318	0.70	0.05	5	0.87	0.06

Table 56 Net effects of the AQC Audit on BMWP score and number of scoring taxa for Wales

Analyst/ Group	n	Mean net effect on BMWP score	Standard error of net effect on score	Maximum underestimate of BMWP score	Mean net effect on no. of taxa	Standard error of net effect on no. of taxa	Maximum underestimate of no. of taxa
Northern	4	7.50	4.33	20	1.00	0.41	2
359	2	2.50	2.50	5	0.50	0.50	1
377	1	5.00	-	5	1.00	-	1
385	1	20.00	-	20	2.00	-	2
S. Eastern	7	3.86	4.04	27	0.14	0.74	4
370	7	3.86	4.04	27	0.14	0.74	4
S. Western	5	0	0	0	0	0	0
GR	2	0	0	0	0	0	0
JG	3	0	0	0	0	0	0
Wales	16	3.56	2.08	27	0.31	0.34	4
Whole of Agency	318	3.50	0.36	30	0.58	0.06	5

Table 57 The families missed in sorting by Wales' AQC inspectors

Family	n	% of Wales' missed families in AQC Audit
Sericostomatidae	1	10.00
Psychodidae	1	10.00
Planariidae (incl. Dugesiiidae)	1	10.00
Nematomorpha	1	10.00
Hydrophilidae (incl. Hydraenidae)	1	10.00
Hydracarina	1	10.00
Haliplidae	1	10.00
Ephemerellidae	1	10.00
Empididae	1	10.00
Ceratopogonidae	1	10.00
Total	10	100

Table 58 The species missed in sorting by Wales' AQC inspectors

Species	n	% of Wales' missed species in AQC Audit
Sericostoma personatum (Spence)	1	10.00
Polycelis felina (Dalyell)	1	10.00
Pericoma trivialis group	1	10.00
Nematomorpha indet	1	10.00
Hydracarina indet	1	10.00
Helophorus (Atracthelophorus) brevipalpis Bedel	1	10.00
Halipus sp.	1	10.00
Ephemerella ignita (Poda)	1	10.00
Chelifera group	1	10.00
Ceratopogonidae indet	1	10.00
Total	10	100

SUMMARY OF AQC AUDIT FOR ENVIRONMENT AGENCY

Table 59 Statistics of the 2001 AQC Audit for each Agency laboratory

Region/Area	n	Mean gains	Standard error	Highest no. gains	Mean errors (l+g+o)	Standard error
Anglian Region	36	1.19	0.19	5	1.36	0.20
Northern	20	0.90	0.19	2	0.95	0.21
Central	5	1.60	0.68	4	2.40	0.51
Eastern	11	1.55	0.43	5	1.64	0.43
Midlands Region	64	1.02	0.14	4	1.19	0.16
U. Severn	10	0.50	0.27	2	1.00	0.37
L. Severn	14	0.71	0.16	2	0.86	0.23
U. Trent	20	1.65	0.32	4	1.80	0.37
L. Trent	20	0.85	0.20	3	0.90	0.20
N. East Region	55	0.60	0.11	3	0.71	0.12
Northumbria	20	0.70	0.18	2	0.80	0.19
Dales	20	0.35	0.17	3	0.40	0.18
Ridings	15	0.80	0.22	2	1.00	0.28
N. West Region	40	0.35	0.12	4	0.60	0.16
Northern	0	-	-	-	-	-
Central	20	0.40	0.21	4	0.55	0.22
Southern	20	0.30	0.11	1	0.65	0.22
Southern Region	9	1.67	0.50	4	1.67	0.50
Hants & IOW	0	-	-	-	-	-
Kent	4	2.25	0.85	4	2.25	0.85
Sussex	5	1.20	0.58	3	1.20	0.58
S. West Region	44	0.25	0.07	2	0.32	0.08
Cornwall	20	0.10	0.07	1	0.20	0.09
Devon	4	0	0	0	0	0
N. Wessex	10	0.20	0.13	1	0.30	0.15
S. Wessex	10	0.70	0.21	2	0.70	0.21
Thames Region	54	0.59	0.11	3	0.85	0.12
Hatfield	14	0.57	0.17	2	0.93	0.22
Frimley	20	0.95	0.22	3	1.05	0.22
Wallingford	20	0.25	0.10	1	0.60	0.18
Wales	16	0.63	0.27	4	0.94	0.28
Northern	4	1.00	0.41	2	1.00	0.41
S. Eastern	7	0.86	0.55	4	1.57	0.48
S. Western	5	0	0	0	0	0
Whole of Agency	318	0.70	0.05	5	0.87	0.06

Table 60 Net effects of the 2001 AQC Audit on BMWP score and no. of scoring taxa for each Agency lab.

Region/Area	n	Mean net effect on BMWP score	Standard error of net effect on score	Maximum underestimate of BMWP score	Mean net effect on no. of taxa	Standard error of net effect on no. of taxa	Maximum underestimate of no. of taxa
Anglian	36	6.72	1.25	26	1.17	0.20	5
Northern	20	5.15	1.24	17	0.90	0.19	2
Central	5	8.20	5.07	26	1.40	0.81	4
Eastern	11	8.91	2.63	26	1.55	0.43	5
Midlands	64	5.55	0.90	30	0.88	0.13	3
U. Severn	10	0.60	1.21	6	0.10	0.23	1
L. Severn	14	3.50	0.98	10	0.57	0.14	1
U. Trent	20	9.65	1.91	24	1.55	0.29	3
L. Trent	20	5.35	1.59	30	0.80	0.20	3
North East	55	2.91	0.69	25	0.49	0.12	3
Northumbria	20	3.15	0.95	10	0.60	0.20	2
Dales	20	2.20	1.37	25	0.30	0.16	3
Ridings	15	3.53	1.29	13	0.60	0.25	2
North West	40	1.28	0.70	15	0.18	0.12	4
Northern	0	-	-	-	-	-	-
Central	20	1.45	1.18	15	0.25	0.23	4
Southern	20	1.10	0.78	10	0.10	0.10	1
Southern	9	8.33	2.54	21	1.67	0.50	4
Hants & IOW	0	-	-	-	-	-	-
Kent	4	10.50	4.41	21	2.25	0.85	4
Sussex	5	6.60	3.16	17	1.20	0.58	3
South West	44	1.16	0.68	16	0.18	0.09	2
Cornwall	20	0	0.79	10	0	0.10	1
Devon	4	0	0	0	0	0	0
N. Wessex	10	0.60	1.61	10	0.10	0.18	1
S. Wessex	10	4.50	1.69	16	0.70	0.21	2
Thames	54	2.28	0.73	18	0.43	0.13	3
Hatfield	14	1.43	1.09	9	0.29	0.24	2
Frimley	20	4.80	1.37	18	0.90	0.23	3
Wallingford	20	0.35	1.00	7	0.05	0.15	1
Wales	16	3.56	2.08	27	0.31	0.34	4
Northern	4	7.50	4.33	20	1.00	0.41	2
S. Eastern	7	3.86	4.04	27	0.14	0.74	4
S. Western	5	.0	0	0	0	0	0
Whole of Agency	318	3.50	0.36	30	0.58	0.06	5

Table 61 The families missed in sorting by the Agency's AQC inspectors

Family	n	% of Agency's missed families in AQC Audit
Empididae	37	10.63
Psychodidae	36	10.34
Hydracarina	33	9.48
Ceratopogonidae	19	5.46
Hydrophilidae (incl. Hydraenidae)	18	5.17
Caenidae	10	2.87
Leptoceridae	9	2.59
Elmidae	9	2.59
Hydroptilidae	9	2.59
Planariidae (incl. Dugesiidae)	9	2.59
Simuliidae	9	2.59
Ephydriidae	8	2.30
Hydrobiidae (incl. Bithyniidae)	8	2.30
Limnephilidae	7	2.01
Lymnaeidae	6	1.72
Psychomyiidae (incl. Ecnomidae)	6	1.72
Ancylidae (incl. Acroloxidae)	5	1.44
Dytiscidae (incl. Noteridae)	5	1.44
Polycentropodidae	5	1.44
Planorbidae	5	1.44
Halplidae	5	1.44
Muscidae	5	1.44
Nemouridae	5	1.44
Ephemerellidae	4	1.15
Sphaeriidae	4	1.15
Hydriidae	3	0.86
Glossiphoniidae	3	0.86
Dendrocoelidae	3	0.86
Tipulidae	3	0.86
Calopterygidae	3	0.86
Goeridae	3	0.86
Veliidae	3	0.86
Sericostomatidae	3	0.86
Gyrinidae	2	0.57
Dolichopodidae	2	0.57
Ephemeridae	2	0.57
Physidae	2	0.57
Chaoboridae	2	0.57
Dixidae	2	0.57
Stratiomyidae	2	0.57
Baetidae	2	0.57
Valvatidae	2	0.57
Lepidostomatidae	2	0.57
Asellidae	2	0.57
Sciomyzidae	2	0.57

Table 61 continued

Family	n	% of Agency's missed families in AQC Audit
Nematomorpha	2	0.57
Leuctridae	2	0.57
Leptophlebiidae	2	0.57
Tabanidae	2	0.57
Rhagionidae (incl. Athericidae)	1	0.29
Capniidae	1	0.29
Beraeidae	1	0.29
Argulidae	1	0.29
Rhyacophilidae (incl. Glossosomatidae)	1	0.29
Coenagrionidae	1	0.29
Culicidae	1	0.29
Pyralidae	1	0.29
Syrphidae	1	0.29
Erpobdellidae	1	0.29
Gammaridae (incl. Crangonyctidae & Niphargidae)	1	0.29
Philopotamidae	1	0.29
Perlodidae	1	0.29
Neritidae	1	0.29
Molannidae	1	0.29
Scirtidae	1	0.29
Total	348	100

Table 62 The species missed in sorting by the Agency's AQC inspectors

Species	n	% of Agency's missed species in AQC Audit
Hydracarina indet	33	8.97
Ceratopogonidae indet	19	5.16
Clinocerinae	18	4.89
Chelifera group	14	3.80
Pericoma trivialis group	13	3.53
Hemerodromia group	12	3.26
Pericoma fallax Eaton	10	2.72
Potamopyrgus antipodarum (Gray)	8	2.17
Caenis luctuosa group	8	2.17
Ephydriidae indet	7	1.90
Hydroptila sp.	6	1.63
Hydraena riparia Kugelann	5	1.36
Elmis aenea (Muller)	5	1.36

Table 62 continued

Species	n	% of Agency's missed species in AQC Audit
Limnephilidae indet	5	1.36
Hydraena gracilis Germar	5	1.36
Limnophora sp.	5	1.36
Ephemerella ignita (Poda)	4	1.09
Mystacides azurea (L.)	4	1.09
Pisidium sp.	4	1.09
Haliphus sp.	4	1.09
Ithytrichia sp.	4	1.09
Lymnaea peregra (Muller)	4	1.09
Polycelis felina (Dalyell)	3	0.82
Pericoma sp.	3	0.82
Peripsychoda fusca (Macquart)	3	0.82
Helophorus (Atrathelophorus) brevipalpis Bedel	3	0.82
Tinodes waeneri (L.)	3	0.82
Hydriidae indet	3	0.82
Dendrocoelum lacteum (Muller)	3	0.82
Simulium sp.	3	0.82
Oulimnius sp.	3	0.82
Calopteryx splendens (Harris)	3	0.82
Sericostoma personatum (Spence)	3	0.82
Orectochilus villosus (Muller)	2	0.54
Lype sp.	2	0.54
Dolichopodidae indet	2	0.54
Hydrophilidae indet	2	0.54
Nemoura avicularis Morton	2	0.54
Nematomorpha indet	2	0.54
Lepidostoma hirtum (Fabricius)	2	0.54
Acroloxus lacustris (L.)	2	0.54
Goera pilosa (Fabricius)	2	0.54
Chrysops sp.	2	0.54
Ephemera sp.	2	0.54
Dicranota sp.	2	0.54
Athripsodes sp.	2	0.54
Velia sp.	2	0.54
Agabus sp.	2	0.54
Valvata cristata Muller	2	0.54
Simulium (Simulium) ornatum group	2	0.54
Armiger crista (L.)	2	0.54
Simulium (Boophthora) erythrocephalum (de Geer)	2	0.54
Asellus aquaticus (L.)	2	0.54
Pericoma exquisita Eaton	2	0.54
Sciomyzidae indet	2	0.54
Caenis rivulorum Eaton	2	0.54
Psychoda gemina Eaton	2	0.54
Psychoda cinerea Banks	2	0.54

Table 62 continued

Species	n	% of Agency's missed species in AQC Audit
<i>Polycentropus flavomaculatus</i> (Pictet)	2	0.54
<i>Polycelis nigra</i> group	2	0.54
<i>Anacaena limbata</i> (Fabricius)	1	0.27
<i>Cyrnus trimaculatus</i> (Curtis)	1	0.27
<i>Argulus</i> sp.	1	0.27
<i>Anopheles</i> sp.	1	0.27
Glossiphoniidae indet	1	0.27
<i>Glyphotaelius pellucidus</i> (Retzius)	1	0.27
<i>Centroptilum luteolum</i> (Muller)	1	0.27
Ancylidae indet	1	0.27
<i>Capnia bifrons</i> (Newman)	1	0.27
<i>Crenobia alpina</i> (Dana)	1	0.27
<i>Gyraulus albus</i> (Muller)	1	0.27
<i>Gyraulus</i> sp.	1	0.27
<i>Ceraclea</i> sp.	1	0.27
<i>Chaoborus</i> (<i>Chaoborus</i>) <i>flavicans</i> (Meigen)	1	0.27
<i>Ancylus fluviatilis</i> Muller	1	0.27
<i>Chaoborus</i> sp.	1	0.27
<i>Dixa</i> sp.	1	0.27
<i>Elodes</i> sp.	1	0.27
<i>Brychius elevatus</i> (Panzer)	1	0.27
Empididae indet	1	0.27
<i>Beris</i> sp.	1	0.27
<i>Cataclysta lemnata</i> (L.)	1	0.27
<i>Baetis rhodani</i> (Pictet)	1	0.27
<i>Athripsodes bilineatus</i> (L.)	1	0.27
<i>Dixa maculata</i> complex	1	0.27
<i>Erpobdella</i> sp.	1	0.27
<i>Ferrissia wautieri</i> (Mirolli)	1	0.27
<i>Gammarus</i> sp.	1	0.27
<i>Dugesia polychroa</i> group	1	0.27
<i>Glossiphonia complanata</i> (L.)	1	0.27
<i>Beraea pullata</i> (Curtis)	1	0.27
<i>Pyrrhosoma nymphula</i> (Sulzer)	1	0.27
<i>Pericoma pulchra</i> Eaton	1	0.27
<i>Perlodes microcephala</i> (Pictet)	1	0.27
<i>Phagocata vitta</i> (Duges)	1	0.27
<i>Physa fontinalis</i> (L.)	1	0.27
<i>Physa</i> sp.	1	0.27
<i>Platambus maculatus</i> (L.)	1	0.27
<i>Plectrocnemia conspersa</i> (Curtis)	1	0.27
<i>Polycelis</i> sp.	1	0.27
<i>Psychoda severini</i> Tonnoir	1	0.27
<i>Psychoda</i> sp.	1	0.27
<i>Leuctra hippopus</i> (Kempny)	1	0.27

Table 62 continued

<i>Psychomyia pusilla</i> (Fabricius)	1	0.27
<i>Paraleptophlebia submarginata</i> (Stephens)	1	0.27
Rhagionidae indet	1	0.27
<i>Rhyacophila dorsalis</i> (Curtis)	1	0.27
<i>Rhyacophila</i> sp.	1	0.27
<i>Silo pallipes</i> (Fabricius)	1	0.27
<i>Simulium</i> (Eusimulium) <i>aureum</i> group	1	0.27
<i>Simulium</i> (Wilhelmia) sp.	1	0.27
Syrphidae indet	1	0.27
<i>Theodoxus fluviatilis</i> (L.)	1	0.27
<i>Theromyzon tessulatum</i> (Muller)	1	0.27
<i>Tipula</i> sp.	1	0.27
<i>Velia</i> (Plesiovelia) sp.	1	0.27
Psychodidae indet	1	0.27
<i>Molanna angustata</i> Curtis	1	0.27
<i>Helophorus</i> (Helophorus) <i>obscurus</i> Mulsant	1	0.27
Hemerodromiinae	1	0.27
<i>Hippeutis complanatus</i> (L.)	1	0.27
<i>Holocentropus picicornis</i> (Stephens)	1	0.27
<i>Hydraena</i> sp.	1	0.27
<i>Hydrellia</i> sp.	1	0.27
Leptophlebiidae indet	1	0.27
<i>Leuctra</i> sp.	1	0.27
<i>Wormaldia</i> sp.	1	0.27
<i>Limnephilus rhombicus</i> group	1	0.27
<i>Limnius volckmari</i> (Panzer)	1	0.27
<i>Pericoma pseudoexquisita</i> Tonnoir	1	0.27
<i>Lymnaea truncatula</i> (Muller)	1	0.27
<i>Pericoma neglecta</i> Eaton	1	0.27
<i>Mystacides nigra</i> (L.)	1	0.27
<i>Nebrioporus elegans</i> (Panzer)	1	0.27
<i>Nemoura cambrica</i> group	1	0.27
Nemouridae indet	1	0.27
<i>Nemurella picteti</i> Klapalek	1	0.27
<i>Ochthebius dilatatus</i> Stephens	1	0.27
<i>Oreodytes sanmarkii</i> (Sahlberg)	1	0.27
<i>Oulimnius tuberculatus</i> (Muller)	1	0.27
<i>Oxycera dives</i> Loew	1	0.27
<i>Oxycera nigricornis</i> Olivier	1	0.27
<i>Helobdella stagnalis</i> (L.)	1	0.27
<i>Lymnaea</i> sp.	1	0.27
Total	368	100

APPENDIX

Analysis dates for the Agency's audited samples

Anglian Region, Northern Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Waring	Belchford	Live/Live	03/09/2001	04/09/2001	10/09/2001	17/10/2001	6	
Lower Witham	Langrick Bridge	Live/Live	03/09/2001	11/09/2001	12/09/2001	17/10/2001	1	
Waithe Beck	Brigsley	Live/Preserved	17/09/2001	18/09/2001	24/09/2001	17/10/2001	6	
Louth Canal	Tetney Lock	Preserved/Preserved	17/09/2001	24/09/2001	26/09/2001	17/10/2001	2	
West Glen	Little Bytham	Live/Live	26/09/2001	02/10/2001	03/10/2001	17/10/2001	1	14
Nettleham Beck	Sudbrooke	Live/Live	04/10/2001	08/10/2001	09/10/2001	17/10/2001	1	
Barlings Eau	Langworth	Live/Live	04/10/2001	10/10/2001	15/10/2001	04/12/2001	5	
North Kelsey Beck	B1434	Live/Live	22/10/2001	23/10/2001	29/10/2001	04/12/2001	6	
East Glen	Edenham	Live/Live	05/11/2001	08/11/2001	09/11/2001	04/12/2001	1	
Lacey Beck	Littlecoats	Live/Preserved	31/10/2001	05/11/2001	15/11/2001	04/12/2001	10	-
Willow Brook	Fotheringhay	Live/Live	20/11/2001	22/11/2001	30/11/2001	23/01/2002	8	
Langton Brook	Thorpe Langton	Live/Preserved	27/11/2001	28/11/2001	03/12/2001	23/01/2002	5	
Welland	Uffington Rd Bridge	Live/Live	12/12/2001	13/12/2001	20/12/2001	23/01/2002	7	
Jordan	Little Bowden	Live/Preserved	27/11/2001	04/12/2001	27/12/2001	23/01/2002	23	
South Drove Drain	Horseshoe Bridge	Live/Preserved	12/12/2001	13/12/2001	27/12/2001	23/01/2002	14	27
Welland	Tallington	Live/Preserved	30/10/2001	31/10/2001	28/12/2001	23/01/2002	58	
Gwash	Gunthorpe	Live/Preserved	26/11/2001	28/11/2001	28/12/2001	23/01/2002	30	
Lacey Beck	Lacey	Live/Preserved	31/10/2001	01/11/2001	02/01/2002	23/01/2002	62	
Nene	Wollaston Mill	Live/Preserved	14/01/2002	16/01/2002	04/02/2002	04/03/2002	19	
Willow Brook	Weldon Lodge	Live/Preserved	07/01/2002	10/01/2002	04/02/2002	04/03/2002	25	-

Average period between primary analysis and AQC inspection = 14.5 days

Maximum period between primary analysis and AQC inspection = 62 days

Anglian Region, Central Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Alconbury Brook	Grindley's Bridge	Live/Live	03/09/2001	05/09/2001	05/09/2001	12/11/2001	0	
Millbridge Brook	B1042, Potton	Live/Preserved	19/09/2001	19/09/2001	02/10/2001	12/11/2001	13	-
Ouse	Bourton Mill Manor Farm	Live/Preserved	29/10/2001	30/10/2001	01/11/2001	08/01/2002	2	
Ouse	W.Q.M.S. Foxcote intake	Live/Live	29/10/2001	02/11/2001	02/11/2001	08/01/2002	0	-
IDB Drain	Welney	Preserved/Preserved	20/12/2001	02/01/2002	11/01/2002	23/01/2002	9	-

Average period between primary analysis and AQC inspection = 4.8 days

Maximum period between primary analysis and AQC inspection = 13 days

Anglian Region, Eastern Area

River	Site	Sort Method
Deben	Glevering Bridge	Live/Live
Deben	Eyke Ford	Live/Live
Colne	u/s Earls Colne STW	Live/Live
Pant	Petches Bridge	Live/Live
Colne	Gt Yeldham Bridge	Live
Colne	Fordstreet	Not stated
Pant	Wethersfield Mill	Live
Brett	Higham Bridge	Live/Preserved
Gipping	Claydon Bridge	Live/Live
Gipping	Sproughton Mill	Live/Live
Blackwater- Chelmer Canal	Heybridge Canal	Live/Live
Blackwater Drain	Gades Mill	Live/Live
Brain	d/s Braintree STW	Live/Live
Gipping	Bramford Mill	Live
Gipping/Rattlesdon	u/s Confluence - ICI	Not stated
Crouch	Wickford Mem Park	Not stated
Tiffey	Chapel Lane Bridge	Live
Burn	Leicester Sq. Farm	Live
Brain	Bulford Mill	Live
Gipping	STW Tributary	Live/Not stated

Average period between primary analysis and AQC inspection =
Maximum period between primary analysis and AQC inspection =

Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
17/09/2001	17/09/2001	18/09/2001	17/10/2001	1	-
01/10/2001	02/10/2001	03/10/2001	12/11/2001	1	-
18/10/2001	22/10/2001	23/10/2001	04/12/2001	1	
05/11/2001	06/11/2001	07/11/2001	04/12/2001	1	
18/10/2001	19/10/2001		04/12/2001		
18/10/2001	22/10/2001		04/12/2001		
05/11/2001	06/11/2001		04/12/2001		-
28/09/2001	01/10/2001	05/10/2001	08/01/2002	4	
14/11/2001	15/11/2001	16/11/2001	08/01/2002	1	
14/11/2001	15/11/2001	16/11/2001	08/01/2002	1	
22/11/2001	23/11/2001	23/11/2001	08/01/2002	0	
28/11/2001	29/11/2001	29/11/2001	08/01/2002	0	40
10/12/2001	11/12/2001	11/12/2001	08/01/2002	0	
14/11/2001	15/11/2001		08/01/2002		
20/11/2001	22/11/2001		08/01/2002		
14/11/2001	15/11/2001		08/01/2002		
28/11/2001	29/11/2001		08/01/2002		
05/12/2001	06/12/2001		08/01/2002		
10/12/2001	11/12/2001		23/01/2002		-
11/02/2002	12/02/2002	14/02/2002	04/03/2002	2	-

1.0 day
= 4 days

Midlands Region, Upper Severn Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Wesley Brook	d/s Manor CSO	Preserved/Preserved	25/07/2001	22/08/2001	31/08/2001	11/10/2001	9	-
Blakedown Brook	Blakedown WRW	Preserved/Preserved	02/08/2001	21/09/2001	22/10/2001	20/12/2001	31	
Rea Brook	u/s Silt pollution	Preserved/Preserved	13/09/2001	09/10/2001	01/11/2001	20/12/2001	23	
Rea Brook	Hanwood	Preserved/Preserved	12/10/2001	23/10/2001	12/11/2001	20/12/2001	20	
Cound	Conover	Live/Preserved	07/11/2001	07/11/2001	28/11/2001	20/12/2001	21	-
Camlad	Shiregrove Bridge	Live/Preserved	18/12/2001	20/12/2001	18/01/2002	12/03/2002	29	
Lyde Brook	d/s Dale End CSO	Preserved/Preserved	01/08/2001	22/11/2001	08/02/2002	12/03/2002	78	
Dulas	d/s Rhydyclaudan	Live/Preserved	21/01/2002	22/01/2002	22/02/2002	12/03/2002	31	
Wordsley Brook	Bevan Rd CSO	Preserved/Preserved	27/09/2001	04/02/2002	22/02/2002	12/03/2002	18	
Smestow Brook	Compton	Preserved/Preserved	15/11/2001	12/02/2002	05/03/2002	12/03/2002	21	7
Martin's Brook	Brookhill	Preserved	25/09/2001	15/02/2002		12/03/2002		
Oswestry Brook	d/s Oswestry CSO	Preserved	19/09/2001			12/03/2002		
Stour	Maypole Hill	Preserved	10/08/2001	29/10/2001		12/03/2002		
Batchcott Trib	u/s Oakley Farm	Preserved	05/11/2001	07/11/2001		12/03/2002		
Lyde Brook	Coalbrookdale	Preserved	19/09/2002	10/01/2002		12/03/2002		
Dulas	Twlch	Preserved	22/01/2002	25/01/2002		12/03/2002		
Wordsley Brook	d/s Brierley Hill CSO	Preserved	27/09/2001	Unknown		12/03/2002		
Quinny Brook	d/s Ch Stretton CSO	Preserved	13/07/2001	23/08/2001		12/03/2002		
Rea Brook	Meole Brace	Preserved	14/09/2001	03/10/2001		12/03/2002		
Quinny Brook	u/s Ch Stretton CSO	Preserved	13/07/2001	23/08/2001		12/03/2002		

Average period between primary analysis and AQC inspection = 28.1 days

Maximum period between primary analysis and AQC inspection = 78 days

Midlands Region, Lower Severn Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Ell Brook Tributary	u/s Springfield Cott	Not stated/Preserved	16/05/2001	17/05/2001	28/09/2001	20/12/2001	134	
Ell Brook Tributary	u/s B4222	Not stated/Preserved	16/05/2001	17/05/2001	01/10/2001	20/12/2001	137	-
Ruscombe Brook	u/s Humphreys End	Preserved/Preserved	03/10/2001	23/10/2001	27/12/2001	12/03/2002	65	
Leam Trib	Midland Oak CSO	Preserved/Preserved	16/10/2001	08/11/2001	27/12/2001	12/03/2002	49	
Cinderford Brook	u/s Lorry Park	Preserved/Preserved	24/10/2001	14/11/2001	28/12/2001	12/03/2002	44	
Isbourne	A46 Road Bridge	Preserved/Preserved	04/10/2001	20/11/2001	22/01/2002	12/03/2002	63	
Leadon	Wedderburn Bridge	Preserved/Preserved	11/09/2001	04/12/2001	22/01/2002	12/03/2002	49	49
Sherbourne	Charterhouse	Preserved/Preserved	11/09/2001	11/12/2001	23/01/2002	12/03/2002	43	
Swift	u/s Kimcote WRW	Preserved/Preserved	11/09/2001	14/12/2001	23/01/2002	12/03/2002	40	
Severn	u/s Netheridge STW	Preserved/Preserved	21/09/2001	20/12/2001	24/01/2002	12/03/2002	35	
Elmley Castle Brook	u/s Cropthorne PS	Preserved/Preserved	07/11/2001	09/01/2002	24/01/2002	12/03/2002	15	
Sow Brook	d/s Paynes Lane PS	Preserved/Preserved	01/11/2001	18/01/2002	24/01/2002	12/03/2002	6	
Frome	d/s Stanley Downton	Preserved/Preserved	02/10/2001	25/01/2002	29/01/2002	12/03/2002	4	
Bushley/Longdon	Queenhill	Preserved/Preserved	11/10/2001	07/02/2002	22/02/2002	12/03/2002	15	
Canop Brook	Lydney Church	Not stated	29/11/2001	Unknown		12/03/2002		
Westbury Brook	u/s Flaxley	Not stated	02/08/2001	Unknown		12/03/2002		
Ell Brook	Brass Mill	Not stated	25/09/2001	Unknown		12/03/2002		
Peacocks Brook	Newent School	Not stated	25/09/2001	Unknown		12/03/2002		
Isbourne Trib	u/s Postlip Mills	Not stated	04/10/2001	Unknown		12/03/2002		
Epney Rhyne	d/s Tributary	Not stated	01/11/2001	Unknown		12/03/2002		

Average period between primary analysis and AQC inspection = 49.9 days

Maximum period between primary analysis and AQC inspection = 137 days

Midlands Region, Upper Trent Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Alders Brook	Combridge	Preserved/Preserved	14/02/2001	06/03/2001	15/03/2001	11/10/2001	9	
Ford Green Brook	Milton	Preserved/Preserved	19/03/2001	27/03/2001	01/06/2001	11/10/2001	66	
Tame (Oldbury)	Holloway Bank	Preserved/Preserved	18/05/2001	23/05/2001	04/06/2001	11/10/2001	12	
Bond Brook Trib	u/s Rowtons Well	Preserved/Preserved	25/06/2001	02/07/2001	30/07/2001	11/10/2001	28	
Bond Brook Trib	Sutton Park	Preserved/Preserved	25/06/2001	02/07/2001	30/07/2001	11/10/2001	28	73
Dove	Beresford Dale	Preserved/Preserved	12/07/2001	19/07/2001	02/08/2001	11/10/2001	14	
Bourn Brook	Grange Road	Preserved/Preserved	20/08/2001	03/09/2001	24/09/2001	20/12/2001	21	
Picknall Brook	Uttoxeter	Preserved/Preserved	05/09/2001	17/09/2001	26/09/2001	20/12/2001	9	
Henmore Brook	Atlow	Preserved/Preserved	20/09/2001	03/10/2001	25/10/2001	20/12/2001	22	
Dove	Milldale	Preserved/Preserved	04/10/2001	11/10/2001	29/10/2001	20/12/2001	18	
Bradley Brook	d/s Roughwood Tributary	Live/Preserved	24/10/2001	25/10/2001	09/11/2001	20/12/2001	15	41
Small Brook	A520 Road Bridge	Preserved/Preserved	02/11/2001	16/11/2001	20/11/2001	12/03/2002	4	
Cole	Colebank Road	Preserved/Preserved	20/11/2001	06/12/2001	11/12/2001	12/03/2002	5	
Kingshurst Brook	Chelmsley Wood	Preserved/Preserved	09/11/2001	12/12/2001	17/12/2001	12/03/2002	5	
Mease	Measham	Preserved/Preserved	26/09/2001	08/01/2002	22/01/2002	12/03/2002	14	
Bourne	Furnace End	Preserved/Preserved	18/12/2001	14/01/2002	23/01/2002	12/03/2002	9	48
Blythe	Ryton End	Preserved/Preserved	07/12/2001	25/01/2002	06/02/2002	12/03/2002	12	
Cran Brook	Widney Manor	Preserved/Preserved	18/12/2001	30/01/2002	07/02/2002	12/03/2002	8	
Walsall Canal	u/s Cerro	Preserved/Preserved	28/01/2002	11/02/2002	04/03/2002	12/03/2002	21	
Walsall Canal	Moors Mill Lane	Preserved/Preserved	28/01/2002	20/02/2002	05/03/2002	12/03/2002	13	

Average period between primary analysis and AQC inspection = 16.7 days

Maximum period between primary analysis and AQC inspection = 66 days

Midlands Region, Lower Trent Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Wood Brook	u/s Nanpantan Res	Preserved/Preserved	12/04/2001	20/04/2001	25/05/2001	11/10/2001	35	
Leas Brook	d/s Culvert	Preserved/Preserved	19/04/2001	26/04/2001	31/05/2001	11/10/2001	35	
Poulter	d/s Langwith Lodge	Preserved/Preserved	03/05/2001	04/05/2001	31/05/2001	11/10/2001	27	
Idle	Bawtry	Preserved/Preserved	03/05/2001	15/05/2001	31/05/2001	11/10/2001	16	
Erewash	Pye Bridge	Preserved/Preserved	24/05/2001	25/05/2001	08/06/2001	11/10/2001	14	125
Dutch Dyke	d/s Pumping station	Preserved/Preserved	21/06/2001	25/06/2001	18/07/2001	11/10/2001	23	
Poulter	Nether Langwith	Preserved/Preserved	03/05/2001	19/07/2001	13/08/2001	11/10/2001	25	
Trent	Winthorpe	Preserved/Preserved	11/05/2001	03/08/2001	24/08/2001	11/10/2001	21	
Dover Beck	Shelt Hill	Preserved/Preserved	16/05/2001	12/09/2001	12/11/2001	20/12/2001	61	
Erewash	u/s Bentinck Colliery	Preserved/Preserved	28/08/2001	20/09/2001	30/11/2001	20/12/2001	71	
Erewash	Ilkeston	Preserved/Preserved	28/08/2001	03/10/2001	30/11/2001	20/12/2001	58	
Grace Dieu Brook	d/s Snarrows STW	Preserved/Preserved	12/10/2001	05/11/2001	03/12/2001	20/12/2001	28	-
Warping Drain Trib	Burringham Road	Preserved/Preserved	31/10/2001	19/12/2001	28/12/2001	12/03/2002	9	
Whissendine Brook	u/s Langham Brook	Preserved/Preserved	30/10/2001	21/11/2001	28/12/2001	12/03/2002	37	
Pickwell Brook	u/s Pickwell CSO	Preserved/Preserved	13/12/2001	14/12/2001	07/01/2002	12/03/2002	24	
Smite	Colston Bassett	Preserved/Preserved	04/10/2001	05/11/2001	08/01/2002	12/03/2002	64	
Cuttle Brook	Reckitt & Colmans	Preserved/Preserved	29/11/2001	19/12/2001	22/01/2002	12/03/2002	34	49
Maun	d/s Mansfield CSO	Preserved/Preserved	26/11/2001	21/01/2002	12/02/2002	12/03/2002	22	
Grace Dieu Brook	Woodlands	Preserved/Preserved	20/11/2001	05/02/2002	05/03/2002	12/03/2002	28	
Thorpe Brook	Chadwell	Preserved/Preserved	30/10/2001	19/02/2002	05/03/2002	12/03/2002	14	

Average period between primary analysis and AQC inspection = 32.3 days

Maximum period between primary analysis and AQC inspection = 71 days

North East Region, Northumbria Area

Harthope Burn	West Shipley Farm	Preserved/Preserved	08/06/2001	12/06/2001	20/06/2001	30/11/2001	8	
Steads Burn	Bullocks Hall	Preserved/Preserved	22/05/2001	29/05/2001	10/07/2001	30/11/2001	42	
Holywell Beck	d/s Brandon	Preserved/Preserved	08/06/2001	13/06/2001	18/07/2001	30/11/2001	35	
Linton Burn	Northumberland F7M 2A	Preserved/Preserved	21/06/2001	20/07/2001	30/07/2001	30/11/2001	10	
Steads Burn	Bullocks Hall	Preserved/Preserved	27/07/2001	03/08/2001	27/11/2001	30/11/2001	116	3
Steads Burn	North Steads	Preserved/Preserved	02/10/2001	03/10/2001	30/11/2001	14/01/2002	58	
Hedleyhope Burn	Cowsley	Preserved/Preserved	07/09/2001	12/09/2001	06/12/2001	14/01/2002	85	
Ouseburn	u/s Airport Trib	Preserved/Preserved	26/01/2001	06/02/2001	06/12/2001	14/01/2002	303	
Hedleyhope Burn	Cowsley	Preserved/Preserved	28/09/2001	04/10/2001	06/12/2001	14/01/2002	63	
Coquet	d/s Hazon Burn	Preserved/Preserved	04/10/2001	16/10/2001	07/12/2001	14/01/2002	52	38
Wear	u/s Gaunless	Preserved/Preserved	14/11/2001	23/11/2001	07/12/2001	14/01/2002	14	
Don	Jarrow Cemetery	Preserved/Preserved	26/11/2001	02/12/2001	07/12/2001	14/01/2002	5	
Hazon Burn	u/s Minewater	Preserved/Preserved	04/10/2001	06/11/2001	17/12/2001	14/01/2002	41	
Airport Tributary	u/s Ouseburn	Preserved/Preserved	26/11/2001	14/01/2002	22/01/2002	27/02/2002	8	
Wear	Shincliffe	Preserved/Preserved	07/11/2001	17/12/2001	02/02/2002	27/02/2002	47	
Tyne	Ovingham	Preserved/Preserved	19/11/2001	25/01/2002	08/02/2002	27/02/2002	14	
Hazon Burn	u/s Minewater	Preserved/Preserved	21/01/2002	22/01/2002	19/02/2002	27/02/2002	28	
Pont	Kirkley Mill	Preserved/Preserved	08/11/2001	20/02/2002	22/02/2002	27/02/2002	2	5
Nent	Alston	Preserved/Preserved	14/11/2001	22/01/2002	22/02/2002	27/02/2002	31	
Derwent	Ebchester	Preserved/Preserved	14/11/2001	05/02/2002	22/02/2002	27/02/2002	17	

Average period between primary analysis and AQC inspection = 49.0 days

Maximum period between primary analysis and AQC inspection = 303 days

North East Region, Dales Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Ouse	Naburn Marina	Preserved/Preserved	14/05/2001	21/05/2001	09/08/2001	18/02/2002	80	
Ouse	u/s York W/Works	Preserved/Preserved	15/05/2001	15/06/2001	16/08/2001	18/02/2002	62	
Ouse	u/s Clifton Bridge	Preserved/Preserved	21/08/2001	06/09/2001	20/09/2001	18/02/2002	14	
Ure	Aldwark Toll Bridge	Preserved/Preserved	10/08/2001	15/08/2001	01/10/2001	18/02/2002	47	
Wharfe	d/s Tadcaster Weir	Preserved/Preserved	26/07/2001	01/08/2001	03/10/2001	18/02/2002	63	140
Ure	Masham	Preserved/Preserved	02/08/2001	17/09/2001	04/10/2001	18/02/2002	17	
Oak Beck	Harrogate	Preserved/Preserved	05/09/2001	15/10/2001	02/01/2002	18/02/2002	79	
Burn	Masham	Preserved/Preserved	05/11/2001	05/12/2001	02/01/2002	18/02/2002	28	
Swale	Thornton Bridge	Preserved/Preserved	06/11/2001	15/11/2001	03/01/2002	18/02/2002	49	
Ure	Aldwark Toll Bridge	Preserved/Preserved	16/11/2001	28/11/2001	04/01/2002	18/02/2002	37	
Swale	Morton-on-Swale	Preserved/Preserved	06/11/2001	27/11/2001	04/01/2002	18/02/2002	38	
Wharfe	Boston Spa	Preserved/Preserved	12/11/2001	12/12/2001	07/01/2002	18/02/2002	26	
Ouse	Beningbrough Hall	Preserved/Preserved	22/08/2001	22/10/2001	07/01/2002	18/02/2002	77	
Greatham Creek	u/s Railway	Preserved/Preserved	02/10/2001	09/10/2001	23/01/2002	18/02/2002	106	
Calais Beck	Site D	Preserved/Preserved	12/12/2001	20/12/2001	24/01/2002	18/02/2002	35	
Pickering Beck	Pickering	Preserved/Preserved	11/09/2001	25/10/2001	25/01/2002	18/02/2002	92	
Ure	West Tanfield	Preserved/Preserved	02/08/2001	03/09/2001	28/01/2002	18/02/2002	147	
Ouse	d/s Nidd Mouth	Preserved/Preserved	22/08/2001	31/10/2001	29/01/2002	18/02/2002	90	
Ouse	Beningbrough Hall	Preserved/Preserved	15/05/2001	30/05/2001	30/01/2002	18/02/2002	245	
Nidd	Walshford Bridge	Preserved/Preserved	29/08/2001	27/09/2001	30/01/2002	18/02/2002	125	

Average period between primary analysis and AQC inspection = 72.9 days

Maximum period between primary analysis and AQC inspection = 245 days

North East Region, Ridings Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Rivelin	u/s Rivelin Dams	Preserved/Preserved	16/05/2001	05/06/2001	20/07/2001	18/12/2001	45	
Worth	Keighley Garforth Road	Preserved/Preserved	22/05/2001	25/06/2001	01/08/2001	18/12/2001	37	
Hebden Water	Hebden Bridge	Preserved/Preserved	24/05/2001	02/07/2001	06/08/2001	18/12/2001	35	
Dearne	d/s Billings Dyke	Preserved/Preserved	16/05/2001	23/07/2001	01/10/2001	18/12/2001	70	
Dearne	Marles Bridge	Preserved/Preserved	16/05/2001	23/07/2001	16/11/2001	18/12/2001	116	32
Black Brook	Penny Hill	Preserved	30/05/2001	20/06/2001		18/12/2001		
Ryburn	Ripponden	Preserved	30/05/2001	04/06/2001		18/12/2001		
Ewden Beck	Ewden Bridge	Preserved	22/05/2001	04/07/2001		18/12/2001		
Turvin Clough	u/s Elphin Brook	Preserved	24/05/2001	27/06/2001		18/12/2001		
Dove	d/s Worsbrough Res	Preserved	16/05/2001	17/07/2001		18/12/2001		
West Beck	Rainbow Springs	Preserved/Preserved	13/11/2001	21/11/2001	12/12/2001	22/02/2002	21	
Little Don	Crookland Wood	Preserved/Preserved	22/05/2001	01/08/2001	04/01/2002	22/02/2002	156	
Crimsworth Dean	u/s Hebden Water	Preserved/Preserved	13/09/2001	28/10/2001	04/01/2002	22/02/2002	68	
Rivelin	u/s Rivelin Dams	Preserved/Preserved	19/09/2001	12/12/2001	07/01/2002	22/02/2002	26	
Wessenden Brook	u/s Mill	Preserved/Preserved	20/09/2001	19/12/2001	07/01/2002	22/02/2002	19	46
Scout Dike	u/s Scout Bridge	Preserved/Preserved	31/05/2001	21/08/2001	07/01/2002	22/02/2002	139	
Dearne	B6098 Bridge	Preserved/Preserved	14/11/2001	26/11/2001	07/01/2002	22/02/2002	42	
Bradshaw Beck	Bradshaw	Preserved/Preserved	20/09/2001	08/01/2002	31/01/2002	22/02/2002	23	
Booth Dean Clough	d/s Reservoir	Preserved/Preserved	26/09/2001	14/01/2002	05/02/2002	22/02/2002	22	
Little Don	Crookland Wood	Preserved/Preserved	03/10/2001	28/01/2002	14/02/2002	22/02/2002	17	

Average period between primary analysis and AQC inspection = 55.7 days

Maximum period between primary analysis and AQC inspection = 156 days

North West Regon, Central Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Colne Water	ptc North Valley Rd Brook	Preserved/Preserved	06/11/2001	05/12/2001	09/01/2002	12/02/2002	35	
Douglas	Wanes Blade Bridge	Preserved/Preserved	21/11/2001	08/01/2002	15/01/2002	12/02/2002	7	
Douglas	Parbold d/s bridge	Preserved/Preserved	16/11/2001	15/01/2002	18/01/2002	12/02/2002	3	
Yellow Brook	ptc R.Douglas	Preserved/Preserved	30/10/2001	23/01/2002	07/02/2002	12/02/2002	15	-
Black Brook	Nr Hospital	Preserved/Preserved	13/11/2001	11/02/2002	13/02/2002	15/02/2002	2	
Yarrow	Limbrick	Preserved/Preserved	21/05/2001	21/05/2001	13/02/2002	15/02/2002	268	
Buckrow Brook	By Tilcon Ltd	Preserved/Preserved	30/10/2001	10/01/2002	14/02/2002	15/02/2002	35	
Douglas	Wigan FC	Preserved/Preserved	30/10/2001	14/01/2002	14/02/2002	15/02/2002	31	-
Wade Brook	ptc Mill Brook	Preserved/Preserved	15/11/2001	17/01/2002	15/02/2002	25/02/2002	29	
Brock	d/s Brock Mill C/P	Preserved/Preserved	14/10/2001	21/01/2002	19/02/2002	25/02/2002	29	
Douglas	d/s M61	Preserved/Preserved	08/11/2001	16/01/2002	19/02/2002	25/02/2002	34	
Smithy Brook	Lady Lane	Preserved/Preserved	15/11/2001	09/01/2002	21/02/2002	25/02/2002	43	
Yarrow	Limbrick	Preserved/Preserved	13/11/2001	13/02/2002	21/02/2002	25/02/2002	8	4
Goit	Site 2, Brinscall	Preserved/Preserved	14/11/2001	02/02/2002	21/02/2002	25/02/2002	19	
Hillylaid Pool	d/s Royles Brook	Preserved/Preserved	28/11/2001	29/11/2001	22/02/2002	28/02/2002	85	
Savick Brook	Grimsargh R/B	Preserved/Preserved	20/11/2001	08/01/2002	22/02/2002	28/02/2002	45	
Barley Water	ptc Pendle Water	Preserved/Preserved	13/11/2001	23/01/2002	22/02/2002	28/02/2002	30	
Dean Brook	ptc R. Douglas	Preserved/Preserved	16/11/2001	04/01/2002	22/02/2002	28/02/2002	49	
Douglas	Longton Brook ptc	Preserved/Preserved	23/10/2001	09/01/2002	25/02/2002	28/02/2002	47	3
Calder	Green Brook ptc	Preserved/Preserved	13/11/2001	10/01/2002	25/02/2002	28/02/2002	46	

Average period between primary analysis and AQC inspection = 43.0 days

Maximum period between primary analysis and AQC inspection = 268 days

North West Regon, Southern Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Medlock	Dawson St	Preserved/Preserved	08/05/2001	01/08/2001	11/10/2001	13/11/2001	71	
Roch	ptc Irwell	Preserved/Preserved	25/05/2001	06/08/2001	17/10/2001	13/11/2001	72	
Irk	u/s Cedar Grove	Preserved/Preserved	12/10/2001	19/10/2001	23/10/2001	13/11/2001	4	-
Mersey	d/s Northenden Weir	Preserved/Preserved	04/09/2001	24/10/2001	11/12/2001	09/01/2002	48	
Beal	ptc Piethorne Brook	Preserved/Preserved	30/10/2001	13/11/2001	11/12/2001	09/01/2002	28	
Moss Brook	ptc Bedford Brook	Preserved/Preserved	06/11/2001	05/12/2001	20/12/2001	09/01/2002	15	-
Astley Brook	ptc Shaw Brook	Preserved/Preserved	14/11/2001	13/12/2001	08/01/2002	26/02/2002	26	
Whittle Brook	Halton's Bridge	Preserved/Preserved	14/11/2001	04/01/2002	09/01/2002	26/02/2002	5	
Bedford Brook	ptc Moss Brook	Preserved/Preserved	06/11/2001	18/12/2001	10/01/2002	26/02/2002	23	
Tong End Brook	ptc R. Spodden	Preserved/Preserved	14/12/2001	21/12/2001	11/01/2002	26/02/2002	21	
Marsh Brook	ptc Hall Lee Brook	Preserved/Preserved	14/11/2001	18/01/2002	06/02/2002	26/02/2002	19	20
Westleigh Brook	ptc Pennington Brk	Preserved/Preserved	14/11/2001	23/01/2002	07/02/2002	26/02/2002	15	
Irk	u/s Collyhurst Weir	Preserved/Preserved	12/10/2001	17/10/2001	20/02/2002	04/03/2002	126	
Irwell	University FB	Preserved/Preserved	02/05/2001	25/09/2001	20/02/2002	04/03/2002	148	
Irwell	u/s Bury ETW	Preserved/Preserved	02/05/2001	03/08/2001	21/02/2002	04/03/2002	202	
Newton Brook	ptc Sankey Brook	Preserved/Preserved	04/10/2001	04/02/2002	25/02/2002	04/03/2002	21	
Diggie Brook	The Wharf	Preserved/Preserved	03/10/2001	06/02/2002	27/02/2002	04/03/2002	21	5
Glaze	Little Woolden Hall	Preserved/Preserved	06/11/2001	27/11/2001	01/03/2002	04/03/2002	94	
Cowpe Brook	u/s Boarsgreave	Preserved/Preserved	11/10/2001	19/10/2001	28/02/2002	08/03/2002	132	
Clough Brook	Peak Park	Preserved/Preserved	07/12/2001	15/02/2002	06/03/2002	08/03/2002	19	

Average period between primary analysis and AQC inspection = 55.5 days

Maximum period between primary analysis and AQC inspection = 202 days

Southern Region, Hants & Isle of Wight Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Test	Lynch	Preserved	21/05/2001	14/11/2001		07/03/2002		
Test	u/s Portal's	Preserved	04/09/2001	15/11/2001		07/03/2002		
Test	Laverstoke	Preserved	21/05/2001	22/11/2001		07/03/2002		
Alver	Kingfisher Caravan Park	Preserved	18/10/2000	19/01/2001		07/03/2002		
Wallington	Newman's Bridge	Preserved	20/10/2000	05/02/2001		07/03/2002		
Test	Broadlands	Preserved	24/05/2001	15/01/2002		07/03/2002		
Sutton Stream	Road Bridge	Preserved	08/11/2001	12/02/2002		07/03/2002		
Blackwater	Wellow Mill	Preserved	20/09/2001	11/01/2002		07/03/2002		
Becton Bunny	Road Bridge	Preserved	10/10/2000	25/01/2001		07/03/2002		
Matley Bog	Matley Passage	Preserved	09/11/2000	05/02/2001		07/03/2002		
Lymington	Millyford Bridge	Preserved	26/09/2001	08/10/2001		07/03/2002		
Lymington	Balmer Lawn	Preserved	19/11/2001	20/11/2001		07/03/2002		
Lymington	Whitley Bridge	Preserved	19/11/2001	07/01/2002		07/03/2002		
Blackwater	Hamptworth Bridge	Preserved	27/09/2001	07/11/2001		07/03/2002		
Sombourne Stream	Horsebridge	Preserved	12/09/2001	14/11/2001		07/03/2002		
Applemore Stream	Rush Bush	Preserved	26/09/2001	21/02/2002		07/03/2002		
Dane's Stream	Lavender Farm	Preserved	30/05/2001	25/02/2002		07/03/2002		
Eastern Yar	Burnt House	Preserved	28/11/2000	22/01/2001		07/03/2002		
Meon	Drayton	Preserved	23/05/2001	26/11/2001		07/03/2002		
Eastern Yar	Burnt House	Preserved	30/05/2001	04/12/2001		07/03/2002		

Average period between primary analysis and AQC inspection = Not applicable

Maximum period between primary analysis and AQC inspection = Not applicable

Southern Region, Kent Area

River	Site	Sort Method	Sample date
Littlestone Sewer	d/s N Romney STW	Preserved/Preserved	19/06/2001
Little Stour	d/s Seaton Mill	Preserved/Preserved	01/06/2001
Rother	Blackwall Bridge	Preserved/Preserved	12/11/2001
Little Stour	White Bridge	Preserved/Preserved	01/06/2001
Darent	u/s Eynesford	Preserved	16/10/2001
Little Stour	Wichambreaux	Preserved	01/06/2001
Little Stour	d/s Seaton House	Preserved	01/11/2001
Darent	Westerham	Preserved	13/09/2001
Dour	Kearsney	Preserved	18/05/2001
Motney Hill SSSI	Site 6, d/s Reed Bed	Preserved	12/12/2001
Len	Mote Park	Preserved	21/11/2001
Darent	Farningham	Preserved	25/05/2001
Darent	Lullingstone	Preserved	25/05/2001
Little Stour	d/s Old STW	Preserved	01/06/2001
Little Stour	Wickhambreaux	Preserved	01/11/2001
Little Stour	Seaton House	Preserved	01/06/2001
Little Stour	Littlebourne Oast Houses	Preserved	01/11/2001
Little Stour	Littlebourne Mill	Preserved	01/11/2001
Great Stour	Whitemill Bridge	Preserved	01/11/2001
Great Stour	Horton	Preserved	02/11/2001

Average period between primary analysis and AQC inspection = 23.8 days

Maximum period between primary analysis and AQC inspection = 33 days

Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
30/08/2001	20/09/2001	22/10/2001	21	-
01/11/2001	28/11/2001	25/01/2002	27	
20/11/2001	04/12/2001	25/01/2002	14	
01/12/2001	03/01/2002	25/01/2002	33	
29/10/2001		25/01/2002		
01/11/2001		25/01/2002		-
21/12/2001		25/01/2002		
17/09/2001		25/01/2002		
22/10/2001		25/01/2002		
20/12/2001		25/01/2002		
22/01/2002		25/01/2002		
Unknown		07/03/2002		
Unknown		07/03/2002		
Unknown		07/03/2002		
Unknown		07/03/2002		
Unknown		07/03/2002		-
Unknown		07/03/2002		
Unknown		07/03/2002		
Unknown		07/03/2002		
Unknown		07/03/2002		
Unknown		07/03/2002		

Southern Region, Sussex Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Barnham Tributary	Site 3	Preserved/Preserved	13/03/2001	16/03/2001	30/10/2001	21/02/2002	228	
Framfield Stream	B2141 Bridge	Preserved/Preserved	15/10/2001	17/10/2001	13/11/2001	21/02/2002	27	
Sheffield Pk Str	North Hall Farm	Preserved/Preserved	31/10/2001	17/12/2001	02/01/2002	21/02/2002	16	
Uck	u/s Tributary	Preserved/Preserved	15/10/2001	13/11/2001	03/01/2002	21/02/2002	51	
Longford Stream	Longford Farm	Preserved/Preserved	31/10/2001	14/02/2002	14/02/2002	21/02/2002	0	7
Goldings Str Trib	d/s Mannings Heath	Preserved	03/08/2001	14/02/2002		05/03/2002		
Ouse	Anchor Weir	Preserved	12/12/2001	22/02/2002		05/03/2002		
Barnham Rife	u/s Elm Grove CSO	Preserved	12/12/2001	01/03/2002		05/03/2002		
Willingdon Upper Sewer	Willingdon Drive Junction	Preserved	13/12/2001	14/02/2002		05/03/2002		
Goldings Str Trib	u/s Mannings Heath	Preserved	03/08/2001	14/02/2002		05/03/2002		
Ouse	Sheffield Park Stn	Preserved	12/12/2001	25/02/2001		05/03/2002		
Barnham Rife Trib	d/s Barnham Lane	Preserved	12/12/2001	27/02/2002		05/03/2002		
Uck	Buxted Bridge	Preserved	31/10/2001	19/02/2002		05/03/2002		
Ouse	Barcombe Mills	Preserved	12/12/2001	27/02/2002		05/03/2002		
Barnham Rife	d/s Elm Grove CSO	Preserved	12/12/2001	28/02/2002		05/03/2002		
Glynde Reach	Beddingham	Preserved	31/10/2001	21/02/2002		05/03/2002		
Ouse	Gold Bridge	Preserved	12/12/2001	26/02/2002		05/03/2002		
Pellingford Brook	Sheffield Park Stn	Preserved	12/12/2001	22/02/2002		05/03/2002		
Goldings Str Trib	d/s Mannings Heath	Preserved	03/08/2001	19/02/2002		05/03/2002		
Ouse	Sharpsbridge	Preserved	12/12/2001	26/02/2002		05/03/2002		

Average period between primary analysis and AQC inspection = 64.4 days

Maximum period between primary analysis and AQC inspection = 228 days

South West Region, Cornwall Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Tehidy Stream	Coombe	Preserved/Preserved	09/03/2000	05/03/2001	09/03/2001	31/01/2002	4	
Plym	u/s Ditsworthy	Preserved/Preserved	23/07/1999	08/03/2001	13/03/2001	31/01/2002	5	
Red	Kieve Bridge	Preserved/Preserved	11/07/2000	14/03/2001	16/03/2001	31/01/2002	2	
Red	Godrevy	Preserved/Preserved	11/07/2000	20/03/2001	22/03/2001	31/01/2002	2	
Wolf	Roadford New Br	Preserved/Preserved	19/07/1999	21/03/2001	30/03/2001	31/01/2002	9	307
Cober	Trenear Bridge	Preserved/Preserved	27/09/1999	02/04/2001	09/04/2001	31/01/2002	7	
Newlyn	Newlyn Bridge	Preserved/Preserved	27/09/1999	10/04/2001	18/04/2001	31/01/2002	8	
Wolf	u/s Thrushel	Preserved/Preserved	04/11/1999	19/04/2001	26/04/2001	31/01/2002	7	
Red	u/s S. Crofty Mine	Preserved/Preserved	09/05/2001	15/05/2001	24/05/2001	31/01/2002	9	
Lyd	Lifton Bridge	Preserved/Preserved	11/11/1999	30/05/2001	01/06/2001	31/01/2002	2	
Trevenen	u/s Tewennack STW	Preserved/Preserved	06/06/2001	08/06/2001	13/07/2001	31/01/2002	35	
Tavy	d/s Willsworthy Leat	Preserved/Preserved	12/05/2000	20/07/2001	15/08/2001	31/01/2002	26	
Warleggan	Temple	Preserved/Preserved	28/03/2000	23/08/2001	30/08/2001	31/01/2002	7	
Reskadinnick Str	Reskadinnick	Preserved/Preserved	24/07/2001	03/09/2001	10/09/2001	31/01/2002	7	
Red	d/s Brea Addit Br	Preserved/Preserved	29/09/2001	27/09/2001	12/10/2001	31/01/2002	15	
Tamar	Buses Bridge	Preserved/Preserved	26/07/2000	04/10/2001	17/10/2001	31/01/2002	13	
Fowey	Draynes Bridge	Preserved/Preserved	18/07/2000	30/10/2001	06/11/2001	31/01/2002	7	
Walkham	Grenofen Bridge	Preserved/Preserved	19/07/2001	05/11/2001	09/11/2001	31/01/2002	4	
Fal	Kernick Bridge	Preserved/Preserved	27/09/2001	12/11/2001	19/11/2001	31/01/2002	7	
Gover Stream	d/s Carrancarrow	Preserved/Preserved	04/10/2001	17/12/2001	20/12/2001	31/01/2002	3	

Average period between primary analysis and AQC inspection = 9.0 days

Maximum period between primary analysis and AQC inspection = 35 days

South West Region, Devon Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Dunkeswell Stream	u/s Madford River	Preserved/Preserved	20/08/2001	07/11/2001	05/12/2001	08/02/2002	28	
Umbur	Combe Martin	Preserved/Preserved	03/05/2001	08/05/2001	06/12/2001	08/02/2002	212	
Barnstable Yeo	d/s Brockham Bridge	Preserved/Preserved	20/07/2001	Unknown	07/12/2001	08/02/2002		
Lemon	u/s South Knighton STW	Preserved/Preserved	19/07/2001	01/08/2001	04/01/2002	08/02/2002	156	-

Average period between primary analysis and AQC inspection = 132.0 days

Maximum period between primary analysis and AQC inspection = 212 days

South West Region, North Wessex Area

River	Site	Sort Method	Sample date
Hillfarrance Brook	Milverton STW	Preserved/Preserved	16/10/2001
Chalfield Brook	Broughton Gifford	Preserved/Preserved	22/10/2001
Hillfarrance Trib	Wiverliscombe STW	Preserved/Preserved	18/10/2001
Tone	Waterrow	Preserved/Preserved	10/10/2001
Durleigh Brook	Albert Street	Preserved/Preserved	21/08/2001
Bristol Avon	Lackham College	Preserved/Preserved	08/11/2001
Tone	Waterrow	Preserved/Preserved	28/08/2001
Buckington Drove	Pinkney Farm	Preserved/Preserved	22/10/2001
Open Brook	Summer Lane	Preserved/Preserved	05/11/2001
South Drain	d/s Peat Discharge	Preserved/Preserved	29/10/2001

Average period between primary analysis and AQC inspection = 34.1 days

Maximum period between primary analysis and AQC inspection = 74 days

Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
15/01/2002	08/02/2002	19/02/2002	24	
17/01/2002	08/02/2002	19/02/2002	22	
17/01/2002	08/02/2002	19/02/2002	22	
14/01/2002	11/02/2002	19/02/2002	28	
09/01/2002	13/02/2002	19/02/2002	35	6
14/01/2002	06/02/2002	07/03/2002	23	
13/12/2001	25/02/2002	07/03/2002	74	
20/01/2002	04/03/2002	07/03/2002	43	
28/01/2002	05/03/2002	07/03/2002	36	
30/01/2002	05/03/2002	07/03/2002	34	2

South West Region, South Wessex Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Nine Mile	Nine Mile Ford	Preserved/Preserved	01/03/2000	23/04/2001	24/04/2001	10/01/2002	1	
Fonthill Brook	Hillground Copse	Preserved/Preserved	17/10/2000	01/05/2001	29/06/2001	10/01/2002	59	
Hooke	d/s Hooke	Preserved/Preserved	26/10/2000	17/05/2001	24/07/2001	10/01/2002	68	
Piddle	White Lackington	Preserved/Preserved	30/03/2000	30/07/2001	05/09/2001	10/01/2002	37	
Devil's Brook	Lower Ansty	Preserved/Preserved	23/03/2000	08/08/2001	24/10/2001	10/01/2002	77	78
Ashfield Water	Burton	Preserved/Preserved	11/10/2000	11/10/2001	21/11/2001	06/03/2002	41	
Tarrant	u/s Preston Farm	Preserved/Preserved	17/07/2001	04/12/2001	24/01/2002	06/03/2002	51	
Bourne Stream	Talbot Heath	Preserved/Preserved	24/03/2000	07/01/2002	01/02/2002	06/03/2002	25	
Devil's Brook	Mill House	Preserved/Preserved	01/11/2000	23/01/2002	12/02/2002	06/03/2002	20	
Bourne Stream	Town Centre Gardens	Preserved/Preserved	18/10/2000	04/02/2002	20/02/2002	06/03/2002	16	14

Average period between primary analysis and AQC inspection = 39.5 days

Maximum period between primary analysis and AQC inspection = 77 days

Thames Region, Hatfield Laboratory

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Lee	Hackney Marshes	Live/Preserved	23/05/2001	25/05/2001	29/05/2001	07/11/2001	4	
Stort	Briggens	Live/Preserved	24/05/2001	25/05/2001	30/05/2001	07/11/2001	5	
Roding	High Ongar Bridge	Preserved/Preserved	23/05/2001	12/07/2001	18/07/2001	07/11/2001	6	
Colne Brook	Wraysbury BR Stn	Preserved/Preserved	29/05/2001	03/08/2001	07/08/2001	07/11/2001	4	
Colne	d/s Stanwell Moor	Preserved/Preserved	29/05/2001	06/08/2001	09/08/2001	07/11/2001	3	90
Colne	London Colney	Preserved/Preserved	29/05/2001	01/08/2001	09/08/2001	07/11/2001	8	
Mimshall Brook	Waterend	Live/Preserved	30/05/2001	31/05/2001	01/06/2001	07/12/2001	1	
Cripsey Brook	Moreton Bridge	Live/Preserved	06/11/2001	09/11/2001	26/11/2001	07/12/2001	17	
Ascot Road Ditch	d/s Ascot Road	Live/Preserved	20/11/2001	20/11/2001	27/11/2001	07/12/2001	7	
Cripsey Brook	Weald Bridge	Live/Preserved	06/11/2001	08/11/2001	27/11/2001	07/12/2001	19	
Pinn	Stratford Bridge	Live/Preserved	18/10/2001	18/10/2001	28/11/2001	07/12/2001	41	
Brookhouse Brook	d/s Hobbs Cross Fm	Live/Preserved	06/11/2001	07/11/2001	28/11/2001	07/12/2001	21	
Lee	Waterhall	Preserved/Preserved	30/05/2001	30/08/2001	30/11/2001	07/12/2001	92	
Gade	Cassiobury Park	Live/Preserved	26/09/2001	27/09/2001	03/12/2001	07/12/2001	67	

Average period between primary analysis and AQC inspection = 21.1 days

Maximum period between primary analysis and AQC inspection = 92 days

Thames Region, Frimley Laboratory

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Cranleigh Waters	Water Bridge	Live/Preserved	08/01/2001	08/01/2001	17/01/2001	14/06/2001	9	
Quaggy	Chinbrook Meadows	Live/Preserved	30/01/2001	31/01/2001	05/02/2001	14/06/2001	5	
Ludgershall Brook	u/s Ray	Preserved/Preserved	28/09/2000	05/02/2001	12/02/2001	14/06/2001	7	
Marston Meysey Br	d/s Marston Meysey	Preserved/Preserved	18/10/2000	16/02/2001	22/02/2001	14/06/2001	6	
Ravensbourne	Ladywell Park	Live/Preserved	02/04/2001	03/04/2001	05/04/2001	14/06/2001	2	70
Wandle	3 Arch Bridge	Live/Preserved	02/04/2001	03/04/2001	18/04/2001	14/06/2001	15	
The Cut	Pitts Bridge	Live/Preserved	17/04/2001	18/04/2001	25/04/2001	14/06/2001	7	
Ockham Mill Str	Ockham Mill	Live/Preserved	24/04/2001	26/04/2001	08/05/2001	14/06/2001	12	
Beverley Brook	Richmond Park	Live/Preserved	22/05/2001	22/05/2001	29/05/2001	14/06/2001	7	
The Cut	u/s Lam Brook	Live/Preserved	23/05/2001	25/05/2001	05/06/2001	14/06/2001	11	
Bracknell Mill Pond	Inlet Stream	Live/Preserved	12/06/2001	13/06/2001	26/06/2001	29/11/2001	13	
Ravensbourne	Norman Park	Live/Preserved	10/07/2001	10/07/2001	13/07/2001	29/11/2001	3	
Lawbrook	Drydown Farm	Preserved/Preserved	04/07/2001	19/07/2001	31/07/2001	29/11/2001	12	
Wey (S)	Passfield Bus. Park	Live/Preserved	31/07/2001	31/07/2001	16/08/2001	29/11/2001	16	
Gatwick Stream	Tinsley Bridge	Live/Preserved	28/08/2001	30/08/2001	11/09/2001	29/11/2001	12	79
Hogsmill	u/s Mill Street	Live/Preserved	25/09/2001	26/09/2001	01/10/2001	29/11/2001	5	
Jubilee River	d/s Dorney F/B	Live/Preserved	27/09/2001	28/09/2001	11/10/2001	29/11/2001	13	
Cranleigh Waters	Water Bridge	Live/Preserved	17/10/2001	19/10/2001	24/10/2001	31/01/2002	5	
Cranleigh Waters	u/s Collins Brook	Preserved/Preserved	13/11/2001	19/11/2001	21/11/2001	31/01/2002	2	
Cranleigh Waters	u/s Collins Brook	Live/Preserved	11/12/2001	12/12/2001	24/01/2002	31/01/2002	43	-

Average period between primary analysis and AQC inspection = 10.3 days

Maximum period between primary analysis and AQC inspection = 43 days

Thames Region, Wallingford Laboratory

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Marcham Brook	Mill Rd, Marcham	Live/Preserved	10/10/2001	10/10/2001	04/01/2002	31/01/2002	86	
Churn	Colesbourne	Live/Preserved	10/10/2001	11/10/2001	07/01/2002	31/01/2002	88	
Lambourn	A4, Newbury	Live/Preserved	30/10/2001	01/11/2001	21/01/2002	31/01/2002	81	
Wye	Bassetsbury Lane	Preserved/Preserved	19/09/2001	09/01/2002	22/01/2002	31/01/2002	13	
Dikler	Stow Bridge	Not stated/Preserved	20/11/2001	08/01/2002	28/01/2002	31/01/2002	20	3
Kennet	Chilton Foliat	Not stated/Preserved	18/09/2001	20/09/2001	29/01/2002	31/01/2002	131	
Windrush	Worsham Works	Preserved/Preserved	20/11/2001	31/01/2002	13/02/2002	06/03/2002	13	
Windrush	East Arm at Cokethorpe	Not stated/Preserved	07/12/2001	06/02/2002	14/02/2002	06/03/2002	8	
Dikler	Lower Swell	Not stated/Preserved	05/12/2001	22/01/2002	15/02/2002	06/03/2002	24	
Windrush	Lower Upton Farm	Not stated/Preserved	05/12/2001	27/01/2002	15/02/2002	06/03/2002	19	
Windrush	Harford Ford	Not stated	05/12/2001	27/01/2002	26/02/2002	06/03/2002	30	8
Windrush	Newbridge	Not stated/Preserved	20/11/2001	04/02/2002	26/02/2002	06/03/2002	22	
Windrush	G.S. Newbridge	Not stated/Preserved	20/11/2001	04/02/2002	26/02/2002	06/03/2002	22	
Kennet	Sheep Drove Bend	Not stated/Preserved	12/09/2001	22/01/2002	26/02/2002	06/03/2002	35	
Windrush	Minster Lovell Rec.	Preserved/Preserved	07/12/2001	18/02/2002	21/02/2002	18/03/2002	3	
Mill Brook	Watery Lane	Preserved/Preserved	19/12/2001	06/02/2002	22/02/2002	18/03/2002	16	
Cole	Acorn Br, Bourton	Preserved/Preserved	08/10/2001	21/02/2002	22/02/2002	18/03/2002	1	
Mill Brook	Mill Brook Cottage	Preserved/Preserved	19/12/2001	20/02/2002	25/02/2002	18/03/2002	5	
Medley Brook	d/s Stanton Harcourt	Preserved/Preserved	07/12/2001	18/02/2002	26/02/2002	18/03/2002	8	20
Mill Brook	Thatcher Cottage	Preserved/Preserved	19/12/2001	05/03/2002	11/03/2002	18/03/2002	6	

Average period between primary analysis and AQC inspection = 31.6 days

Maximum period between primary analysis and AQC inspection = 131 days

Wales, Northern Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Afon Braint	d/s Penhesgyn Tip	Preserved/Preserved	08/05/2001	14/06/2001	27/11/2001	13/02/2002	166	
Afon Erch	Glen Afon	Preserved/Preserved	24/09/2001	09/11/2001	08/01/2002	13/02/2002	60	
Afon Gele	Gors Bridge	Preserved/Preserved	13/06/2001	21/06/2001	Unknown	13/02/2002		
Afon Clywedog	u/s Llwyn Onn	Preserved/Preserved	11/09/2001	31/10/2001	Unknown	13/02/2002		-
Glanfyddion Brook	A547, Dyserth	Preserved/Preserved	26/10/2001	19/12/2001	28/02/2002	08/03/2002	71	
Afon Clywedog	Pickhill	Preserved/Preserved	11/09/2001	28/11/2001	28/01/2002	08/03/2002	61	
Coed Llwybor y Bi	Drain at Road Br	Preserved	30/10/2001	31/01/2002		08/03/2002		
Stanney Brook	d/s Church Lane	Preserved	25/10/2001	29/11/2001		08/03/2002		
Glanfyddion Brook	u/s Trelawnyd STW	Preserved	26/10/2001	01/02/2002		08/03/2002		-
Desach	Wooden Bridge	Preserved	26/09/2001	09/10/2001		25/03/2002		-

Average period between primary analysis and AQC inspection = 89.5 days

Maximum period between primary analysis and AQC inspection = 166 days

Wales, South Eastern Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Cage Brook	u/s Wye	Preserved/Preserved	29/09/2000	07/02/2001	09/08/2001	04/01/2002	183	
Yazor Brook	d/s Burghill STW	Preserved/Preserved	10/08/2000	21/03/2001	09/08/2001	04/01/2002	141	
Rhiangoll	Bottom site d/s Rep	Preserved/Preserved	23/02/2000	21/03/2001	10/08/2001	04/01/2002	142	
Rhyd-y-Meirch	Bottom stretch - mid site	Preserved/Preserved	23/02/2000	31/07/2001	29/11/2001	04/01/2002	121	
Sirhowy	d/s Sunningdale minewater	Preserved/Preserved	22/10/2001	08/11/2001	13/12/2001	04/01/2002	35	22
Trosnant Brook	u/s Minewater	Preserved/Preserved	22/10/2001	20/11/2001	18/12/2001	04/01/2002	28	
Ditch	1st d/s BSW Newbridge	Preserved	28/07/2000	14/03/2001		04/01/2002		
Lamby Way Tip	u/s Bridge 1	Preserved	20/06/2000	20/03/2001		04/01/2002		
Monnow	u/s Habitat improvement	Preserved	20/09/2000	11/07/2001		04/01/2002		
Tarell	Brecon	Preserved	03/09/2001	03/09/2001		04/01/2002		
Sirhowy	Gelligroes Bridge	Preserved	22/10/2001	14/11/2001		04/01/2002		
Taff Bargoed	d/s Minewater	Preserved	22/10/2001	23/11/2001		04/01/2002		
Stream	Nr Dan y Coed Terrace	Preserved/Preserved	30/08/2001	15/01/2002	06/02/2002	26/02/2002	22	
Nant y Gwyddon	Picnic Site	Preserved	30/08/2001	15/01/2002		26/02/2002		-

Average period between primary analysis and AQC inspection = 96.0 days

Maximum period between primary analysis and AQC inspection = 183 days

Wales, South Western Area

River	Site	Sort Method	Sample date	Primary analysis	AQC analysis	Arrived at CEH	Primary to AQC analysis (days)	5th AQC in batch to arrival at CEH (days)
Afan	u/s Lower Cwmafan Bridge	Preserved/Preserved	18/04/2001	27/06/2001	26/07/2001	28/09/2001	29	
Blaenpelenna	u/s Garth Tonmawr	Preserved/Preserved	18/04/2001	11/07/2001	19/09/2001	28/09/2001	70	
Gwenffrwd	u/s Whitworth Lagoon	Preserved	18/04/2001	09/07/2001		28/09/2001		
Afan	Ynysgwas Road Bridge	Preserved	18/07/2001	30/07/2001		28/09/2001		-
Pelenna	u/s Confluence	Preserved/Preserved	18/07/2001	16/08/2001	16/10/2001	04/01/2002	61	
Gwenffrwd	u/s Whitworth No 1	Preserved	18/07/2001	10/08/2001		04/01/2002		-
Camnant	u/s Hirwaun P/S	Preserved/Preserved	19/10/2001	05/02/2002	21/02/2002	26/02/2002	16	
Sutton Brook	d/s Lower SW	Preserved/Preserved	15/08/2001	Unknown	Unknown	26/02/2002		
Syfywy	u/s Rosebush WTW	Preserved	10/08/2001	03/10/2001		26/02/2002		
Sutton Brook	Llandow	Preserved	13/11/2001	16/01/2002		26/02/2002		
Kenfig	d/s Discharge	Preserved	07/09/2001	20/12/2001		25/03/2002		-
Sutton Brook	Sutton Farm	Preserved	13/11/2001	18/01/2002		25/03/2002		
Bow St. Brook	d/s STW	Preserved	14/08/2001	21/01/2002		25/03/2002		
Bow St. Brook	u/s STW	Preserved	14/08/2001	05/02/2002		25/03/2002		
Camnant	u/s STW effluent	Preserved	19/10/2001	07/02/2002		25/03/2002		
Camnant	d/s Hirwaun STW	Preserved	19/10/2001	11/02/2002		25/03/2002		

Average period between primary analysis and AQC inspection = 44.0 days

Maximum period between primary analysis and AQC inspection = 70 days