Rural and Environment Directorate Drinking Water Quality

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Chief Environmental Health Officers All Scottish Local Authorities

Ref: PWS 1/2011 4 February 2011

Dear Colleague

# Regulation 35(6) of the Private Water Supplies (Scotland) Regulations 2006 – Information on Annual DWQR Return on Drinking Water Quality

#### 1. Purpose

The purpose of this Information Letter is to prescribe and provide further guidance on the format of the annual return to the Drinking Water Quality Regulator ("the DWQR"), as required by regulation 35(6) of the Private Water Supplies (Scotland) Regulations 2006 ("the 2006 Regulations"). Please note that regulation 35(6) places a statutory duty on local authorities to provide this information not later than the 31<sup>st</sup> March in each year, in respect of the preceding calendar year.

The Information Letter also provides additional explanation relating to **check and audit monitoring** requirements for Type A supplies to facilitate a better understanding of your monitoring obligations under the 2006 Regulations.

There have been no changes to the data required as part of the annual return.

#### 2. Background

The European Drinking Water Directive 98/83/EC requires the Scottish Ministers to ensure that adequate and up-to-date information on the quality of water intended for human consumption is available to consumers. As part of this commitment, and as a requirement of The Water Industry (Scotland) Act 2002, the DWQR publishes an Annual Report on drinking water quality, covering both public and private supplies. Additionally, an annual statement on the quality of water intended for human consumption is compiled and reported to the European Commission, detailing the measures taken to achieve compliance with the Drinking Water Directive. The report to the Commission is required to include all supplies

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providing  $\geq 10 \text{ m}^3$  of water a day as an average or serving  $\geq 50$  persons or serving a commercial or public activity. The information you provide in terms of regulation 35(6) of the 2006 Regulations informs both the Annual Report and the report to the Commission.

#### 3. Provision of data

#### 3.1 Submission of Annual Data Return

# In accordance with the requirements of the 2006 Regulations, data must be submitted to DWQR NO LATER THAN 31<sup>ST</sup> MARCH EACH YEAR for the preceding calendar year.

Please note that it will not be possible to include data received after this date in the DWQR's Annual Report and nil returns will be recorded in the Annual Report against the offending local authority. It is strongly recommended that you contact the DWQR at the earliest opportunity if you will have difficulty meeting this deadline. DWQR will make arrangements for the supply of information to Scottish Health Boards and the Scottish Environment Protection Agency.

#### 3.2 Tables

The data which you are required to provide for the purposes of the Annual Data Return is captured in two Excel tables. The **Supply Detail Table**, provides details of each supply including, for example, the classification and level of supply, treatment processes and grant information. The **Sample Data Table** provides analytical data about water quality collected from each supply during the preceding calendar year.

For Type A supplies, statutory check and audit samples taken in accordance with Regulations 19 and 20 of the 2006 Regulations must be flagged '**SR**' in the scheduled regulatory sample field in the sample data table. For Type B supplies, any samples taken in accordance with Part VIII of the 2006 Regulations should also be flagged 'SR'. Without the 'SR' flag it is not possible for DWQR to identify repeat samples or samples taken to inform a grant application from statutory check and audit samples required under the 2006 Regulations. It is only statutory samples which are reported to the European Commission in terms of our reporting obligations under the Drinking Water Directive. However, the non-statutory samples are very useful in providing additional information in relation to the supply and are used by DWQR to identify water quality trends etc. since the 2006 Regulations and the Grant Scheme came into force.

The unique 'supply site reference' (SiteRef) for each supply, is made up of the three letter authority code (specified by the DWQR and set out in Annex 2, Table 1 to this letter) and a unique reference indicator (which you will need to specify for each private supply). This unique supply site reference is used to link supply information between the Supply Detail Table and Sample Data Table. It is vital that this unique reference number is recorded consistently for each supply and in relation to both tables. Please note that the supply site reference to the actual private water supply source and not to individual properties (domestic or commercial) which may be served by that supply. It is important that samples taken from individual properties should always have their relevant unique supply site reference; multiple properties served by the same source will have the same supply site reference.

The data in the sample result field must be supplied in the units of measurement specified in Schedule 1 of the 2006 Regulations. For example, if the 2006 Regulations state the units as

mg/l, the sample data must be reported in mg/l. Please ensure that this important check is carried out before submitting your data to DWQR.

#### 3.3 Filenames

The tables should be submitted to DWQR in two files:

# Supply Detail Table: PrivateSiteXXXMar11

#### Sample Data Table: PrivateSampleXXXMar11

Where 'XXX' is the three-letter local authority code specified in Annex 2 Table 1 to this letter (e.g. BRD for Scottish Borders) and Mar11 relates to the report which is due to be submitted by 31 March 2011 for the calendar year ending 31 December 2010. These last two digits will obviously require to be updated for future reports. This consistent approach enables files to be automatically recognised and loaded by the DWQR data system.

#### 3.4 File format

The tables should be submitted to DWQR in **comma separated variable (or \*.CSV) format.** An Excel file can be saved as a \*.CSV file by selecting "Save As" and choosing CSV (Comma Delimited) from the drop-down file type box.

- Dates must be in correct format (DD/MM/YY or DD/MM/YYYY). If the day or month are a single digit, care is needed to ensure that these are preceded by a zero.
- Empty fields must be included in the data return with the correct number of commas to represent the separators of the empty fields. DO NOT USE SPACES TO REPRESENT NIL FIELDS; LEAVE THEM EMPTY
- Do not use comma separators for 000's (e.g. 1000 not 1,000).

If it is not possible to provide the data in \*.CSV format, an Excel spreadsheet will be acceptable provided it meets the format specified in the table definitions In Annex 1 and Annex 3.

#### Please note that hard copy paper data returns cannot be accepted.

#### 4. Monitoring requirements – Type A supplies

# 4.1 Check Monitoring – Regulation 19 and Schedule 2, Table A

Check monitoring parameters are those which, if present in a water supply, have the potential to cause an immediate risk to health.

The requirements for check monitoring and their sampling frequencies are set out in Regulation 19 and Schedule 2, Table A of the 2006 Regulations. All Type A supplies must be sampled for all check parameters with the exception under certain circumstances of *Clostridium perfringens*, aluminium, iron and nitrite. The exceptions are listed in the footnotes to Schedule 2.

Table 1 below, reflects Schedule2 and shows the parameters which must be sampled in order to comply with the 2006 Regulations. All parameters listed in Table 1 must be sampled unless they satisfy the footnoted exemption criteria.

Table 1
Check Monitoring Parameters
Coliforms bacteria
Escherichia coli (E.coli)
Clostridium perfringens <sup>a</sup>
Ammonium
Aluminium <sup>b</sup>
Colony Counts
Colour
Conductivity
рН
Iron <sup>b</sup>
Nitrite <sup>c</sup>
Odour
Taste
Turbidity

<sup>a</sup> – only required if the supply is derived from a surface water supply or is influenced by surface water.

<sup>b</sup> – only required if used as a flocculant.

<sup>c</sup> – only required if chloramination is used a disinfectant.

#### 4.2 Audit Monitoring – Regulation 20 and Schedule 2, Table B

Parameters in the 2006 Regulations subject to audit monitoring, Regulation 20 and Schedule 2, Table B, are those that may have the capacity to impact upon human health if their concentration or value or level were consistently breached. The parameters may do harm, but the effects are likely to be only measureable in human health terms after prolonged exposure to the failing limits, unless they are present at very high levels.

The determination of which parameters should be considered for audit monitoring and the frequency of their monitoring is prescribed in regulation 20 and Schedule 2, Table B of the Regulations. However, the 2006 Regulations provide local authorities with discretionary powers to exempt certain chemical where it can be demonstrated that a parameter is not likely to be present in a given supply in concentrations that could give rise to a risk to human health. Regulation 26 and Schedule 3 of the Regulations are intended to allow you to determine whether there are any parameters that do not need to be monitored because they are unlikely to be present in concentrations that could lead to a risk to human health. In making this determination, you should consider data available from previous monitoring of supplies, completed risk assessments and any other information that you may hold. It should be noted where any audit parameters are not monitored, in accordance with Regulation 26(2), you are required to inform the relevant and responsible persons as described in Regulations 4 and 2, and the appropriate health board.

To date, a number of local authorities have not complied with their obligations under the 2006 Regulations in terms of audit monitoring. You are reminded that audit monitoring is mandatory for Type A supplies. It is strongly advised that you formalise a programme of audit monitoring for all of Type A supplies in accordance with the Regulations and your duty under section 76F of the Water (Scotland) Act 1980 to keep yourself informed about the wholesomeness and sufficiency of water supplies provided to premises in your area, including every private supply to any such premises.

#### 5. Routine Monitoring – Type B supplies

Routine monitoring for Type B supplies is set out in regulation 28 and Schedule 2, Table C and repeated in Table 2 below for ease of reference.

Table 2
Routine Monitoring Parameter
Coliform bacteria
Conductivity
Enterococci
Escherichia coli (E.coli)
Hydrogen ion (pH)
Lead
Nitrate <sup>a</sup>
Odour
Taste
Turbidity

 $a^{a}$  – Samples are only needed if there are reasonable grounds to suspect that levels in the locality are above 25 mg NO<sub>3</sub>/l.

#### 6. Further information and enquiries

If any further advice is required on the interpretation of the Regulations, their application or on the format of the data returns, please do not hesitate to get in touch to discuss further.

Data advice and enquiries:

Contact: David Grzybowski, T: 0131 244 7544. david.grzybowski@scotland.gsi.gov.uk

<u>Technical advice and enquiries:</u> Contact: Colette Robertson Kellie, T: 0131 244 0278, colette.robertson-kellie@scotland.gsi.gov.uk

Policy and Grant enquiries: Contact: Lynne McMinn, T: 0131 244 7474 lynne.mcminn@scotland.gsi.gov.uk

#### 7. Resources

A copy of this information letter and the current version of the data return template can be found at: <u>www.dwqr.org.uk</u>

Additional information relating to all aspects of private water supplies can be found at: <u>www.privatewatersupplies.gov.uk</u>

Yours sincerely

David Grzybowski Data Strategy Manager

#### Table 1: Supply Detail Table

Field Name in Return template	Field Description	Field type	Field size (number of characters)	Example 1	Example 2
StartDate	Reporting period start date in the format DD/MM/YY	Date	8/10	01/01/11	01/01/2011
EndDate	Reporting period end date in the format DD/MM/YY	Date	8/10	31/12/11	31/12/2011
	This is the Unique Site Reference, consisting of: 1) Local Authority prefix – Three letter code supplied by DWQR in Look-up Table 1 2) Your unique identifier for each private supply	Text	up to 50		
SiteRef	Your unique reference should be used for all samples taken from properties supplied by this source.			BRD/Hollybush	BRD0123
	Note: The unique identifier can be the coding/numbering system your LA currently uses. The code should be unique to that source, for the lifetime of the supply.				
SourceName	This is the name of source or location name - the source is the point of abstraction from a watercourse or loch, or the site name where the spring, well or borehole is located.	Text	up to 80	Hollybush Farm	Hollybush Farm
GridReference –Eastings	The X or Easting coordinate location of the source of private supply. Note: Format should be six-figure Easting. 100 km letter should be converted to its number format.	Number	up to 10	348300	348300
	Annex 4 shows a worked ex	kample.			
GridReference -Northings	The Y or Northing coordinate location of the source of private supply.	Number	up to 10	633700	633700
Ĵ	Note: Format should be six-figure Northing. 100 km letter should be converted to its number format.				
Classification	Classification of the private supply: Type A or Type B If Type A, please state its level: A1, A2 or A3.	Text	2	A1	В

Field Name in Return template	Field Description	Field type	Field size (number of characters)	Example 1	Example 2
Regulation 3(1) status	The flag WD should be used to denote supplies that are solely used for crop washing or during distillation of spirits under regulation 3(1). If not applicable, leave blank. - Use letters WD	Text	2	WD	
TypeAReason	<ul> <li>This should be used to provide a brief description stating why the supply has been classified as a Type A.</li> <li>A Type A supply provides ≥10m3 a day, serves ≥ 50 persons or supplies a commercial or public activity (e.g., large population supplied, the source supplies a restaurant, holiday let, etc.).</li> </ul>	Text	up to 3	Supply serves a campsite and farm shop	Supply provides ≥10m³/day
	If not a Type A supply, leave blank. This should be used to show the number of	Number –	3		
TouristAccommodation	properties served by the supply that provide tourist accommodation on a commercial basis (e.g. Guest Houses, B&Bs, Self Catering cottages, campsites).	integer		1	
	If not applicable, leave blank.				
PurposeDomestic	This should be used to show the number of domestic premises served by supply.	Number – integer	up to 3		1
	If not applicable, leave blank.				
PurposeIndustrialFood	This should be used to show the number of properties served by the supply that serve or prepare food on a commercial basis (e.g. inns, cafes, food manufacturers).	Yes / No	up to 3	1	
	If not applicable, leave blank.				
OtherCommercial	This should be used to show the number of commercial premises served by supply not included above.	Number – integer	up to 3	6	
	If not applicable, leave blank.				

Field Name in Return template	Field Description	Field type	Field size (number of characters)	Example 1	Example 2
ReleaseToPublicRecord	This field should be used to indicate sites of a sensitive nature (e.g. Ministry of Defence sites). It can also be used if LA does not want the data released. These sites will not be released to the public record.	Number Yes / No	up to 3	Yes	No
Population	Estimate of the <u>maximum</u> number of persons who <u>may be supplied on any one day</u> . Use estimate of 2.5 people per property, if true number is not known. - Example 1: If supply serves a campsite, what is the maximum capacity if all plots are occupied? (e.g 5 plots that are big enough for one 3-man tent) - Example 2: If supply serves a shop, what is the maximum number of people working at any one time? (e.g. there are three full time staff)	Text	2	15	3
Volume Out	Estimate of the maximum daily average volume of water supplied by private supply in cubic metres per day. Use estimate of 0.2m3/d per person (200 litres), if true volume is not known.	Text	2	3	0.6
Source type	This field is used to state what type the raw water source is. It should be classed as one of the types in the code list supplied in Look-up Table 2 in Annex 2 to this Letter.	Text	2	SB	GW
SWFlag	This field should be completed where a source has water originating from or is influenced by surface water. - Use letters SI	Text	2	SI	
TreatmentPhysicalFilter	Use this field if a source has any form of physical filter present, e.g. sand filter, membrane. - Use letters PF	Text	2	PF	
TreatmentDisinfection	Use this field if a source has any form of disinfection present, e.g. Chlorine, UV. - Use letters DF	Text	2	1	DF

Field Name in Return template	Field Description	Field type	Field size (number of characters)	Example 1	Example 2
TreatmentChemicalFilter	Use this field if a source has any form of chemical filter or equivalent present, e.g. Activated Carbon, Ion Exchange Resin. - Use letters CF	Text	2	CF	
ChloraminationFlag	For sites where Chloramination is practised (at any time in the reporting year), use this field. - Use letters CA	Text	2	CA	
FlocTypeFlag	For sites where a flocculant is used (at any time during the reporting year), complete this field by indicating what type is used (if known). IF = Iron Flocculant AF = Aluminium Flocculant	Text	2	IF	
SilverTreatment	Use this field to indicate if silver is used in treatment process. - Use letters AG Note: If silver is used in the treatment process, a PCV of 80µg/l applies for the supply, instead of 10µg/l (See Schedule 1, Part II: National Requirements).	Date	2		AG
TemporaryDeparture	This field should be completed to indicate if a source is currently under a temporary departure. If so, state whether this is a first, second or third departure. - Use letters GD then departure number (e.g. GD1, GD2 or GD3). If not applicable, leave blank.	Text	3	GD2	
TemporaryDepartureApplication	<ul> <li>This field should be completed to indicate if an application is outstanding for a temporary departure at a source. If so, state whether this is a first, second or third departure.</li> <li>Use letters AD, then departure application number (AD1, AD2 or AD3).</li> <li>If not applicable, leave blank.</li> </ul>	Text	3	AD2	

Field Name in Return template	Field Description	Field type	Field size (number of characters)	Example 1	Example 2
NumberInvestigations	Use this field to indicate the total number of investigations carried out in relation to the supply under parts V or VI of the 2006 Regulations. If not applicable, leave blank.	Number	3	1	
NumberEnforcementNotices	Use this field to indicate the total number of enforcement notices served in relation to the supply under section 76G of the 1980 Act. If not applicable, leave blank.	Text	3	1	
RiskAssessmentComplete	Use this field to indicate whether a risk assessment has been completed, as per the requirements of Regulation 16 (1) and (2) or reviewed as appropriate in accordance with Regulation 16(4) by the local authority. - Use letters RA to denote either an initial risk assessment or risk assessment review; please leave blank if an initial assessment or review has not taken place in the previous calendar year. If not applicable, leave blank.	Text	2	RA	RA
Reg26Exemption- TotalIndicativeDose	Use this field to indicate whether an exemption has been granted for total indicative dose under regulation 26 of the 2006 Regulations for the source. - Use letters TIDX If not applicable, leave blank.	Text	4	TIDX	TIDX
Reg26Exemption-Tritium	Use this field to indicate whether an exemption has been granted for tritium under regulation 26 of the 2006 Regulations for the supply. - Use letters TRIX If not applicable, leave blank.	Text	4	TRIX	TRIX
GrantAppliedDate	If a grant application has been made, provide the date it was submitted to the council. (DD/MM/YY or DD/MM/YYYY) If not applicable, leave blank.	Date	8/10	17/03/10	17/03/2010

Field Name in Return template	Field Description	Field type	Field size (number of characters)	Example 1	Example 2
GrantAmount	If a grant application has been made, provide the amount of the grant awarded in whole pounds. If not applicable, leave blank.	Integer	up to5	1600	800
GrantAwardDate	If a grant application has been made, provide the data the grant awarded. (DD/MM/YY or DD/MM/YYYY) If not applicable, leave blank.	Date	8/10	01/02/11	01/02/2011
GrantNumberProperties	If a grant application has been made, state the number of properties receiving the grant. If not applicable, leave blank.	Integer	up to3	2	1
GrantRefused	If a grant application has been refused: - Use letters GR If not applicable, leave blank.	Text	2	GR	
GrantBreakdown	If a grant application has been completed, provide details of what it was used for. Include a flag for all the categories below that apply. In this field only, separate multiple flags with a ' – '. If not applicable, leave blank.				
	Point of Entry Treatments - use flag PE	Text	2	PE	
	Point if Use Treatments - use flag PU	Text Text	2 2	<u> </u>	PU – SP - NS
	Other Treatment Systems - use flag OT Source Protection Systems - use flag SP	Text	2	 SP	r 0 – 3r - NS
	New Private Supply - use flag NS	Text	2	NS	

#### Annex 2 Look-up table 1 – Local Authority codes

Local Authority	Prefix Codes
Aberdeen City	ABC
Aberdeenshire	ABS
Angus	ANG
Argyll and Bute	AAB
Clackmannanshire	CLK
Dumfries and Galloway	DAG
Dundee City	DUN
East Ayrshire	EAY
East Dunbartonshire	EDB
East Lothian	ELO
East Renfrewshire	ERW
City of Edinburgh	EDH
Comhairle nan Eilan Siar	EIS
Falkirk	FKK
Fife	FFE
Glasgow City	GGW
Highland	HLD
Inverclyde	IVC
Midlothian	MLO
Moray	MRY
North Ayrshire	NAY
North Lanarkshire	NLK
Orkney	ORK
Perth and Kinross	PAK
Renfrewshire	RNW
Scottish Borders	BRD
Shetland	SHT
South Ayrshire	SAY
South Lanarkshire	SLK
Stirling	STG
West Dunbartonshire	WDB
West Lothian	WLO

# Look-up table 2 – Source Codes

Source Type	Codes
Surface - Watercourse	SB
Surface - Loch	SL
Surface - Rainwater	SR
Groundwater - Borehole	GB
Groundwater - Well	GW
Groundwater - Spring	GS

#### Table 2: Sample Data Table

Field Name in Return template	Field Description	Field Type	Field Size (number of characters)	Example
SiteRef	Supply Site Reference. Please see the note in the Site Details table.	Text	up to 50	BRD0123
ParameterCode	State the parameter code for the sample taken. These are listed in "Parameter Codes" worksheet in the Data Return Template.	Text	up to 5	A012
SampleResult	State the result for individual sample, ensuring that the units of measurement are the same as those specified in The 2006 Regulations.	Number	up to 8	54.3
> or < qualifier	Only use if the sample result is greater than or less than Limit of Detection. This will have been indicated on the sample report the council received from the laboratory.	Text (> or <)	1	>
SampleDate	Use this field to state the date the sample was taken. (DD/MM/YY or DD/MM/YYY)	Date	8 or 10	17/03/2011
SampleTime	Use this field to state the time the sample was taken. (HH:MM, 24 hour clock). If unknown, enter midnight, 00:00	Text	5	09:45
	This field should be used to indicate whether the sample was taken to fulfil the sample frequency requirements of the 2006 Regulations. - Use SR	Text	2	
ScheduledRegulatorySampleFlag	Note: Please note that any resamples, investigation samples, grant follow-up samples, should <u><b>not</b></u> have the SR flag.			SR
	For Type B supplies any samples taken in accordance with Part VIII of the 2006 Regulations should also be flagged 'SR'.			
PCVFailFlag	Use this field to indicate if the PCV standard or specification has been exceeded. If this is the case, the sample has failed. - Use letter F	Text	1	F
CustFitFlag	If the failure has clearly been caused by customer fittings (i.e. the domestic distribution system), use this field to show this. - Use letters CT	Text	2	СТ
	If not applicable, leave blank.			

Field Name in Return template	Field Description	Field Type	Field Size (number of characters)	Example
Comments	This field can be used for general comments. For example, it can be used to comment on individual PCV failures. This should include the reason attributed to the failure following investigations and the proposed remedial action together with timescales.	Text	up to 4000	Sample taken for lead exceeds the maximum value of 0.25 µg/l. Consumer advised to replace internal lead pipes.

#### **Ordnance Survey Grid References – Worked examples**



 1
Hollybush
Using the map for the area, the OS grid reference can be defined as NT 483 337.
To convert this to an Easting and Northing:
<ul> <li>Look at Figure 1 and find square NT. Using the numbered axes, read of the two numbers that the square represents. In this case 3 (X axis) and 6 (Y axis).</li> <li>An Easting and Northing is made up of two groups of six numbers (the exception being Orkney and Shetland, here it is a single group of six and a single group of seven),</li> </ul>
- Take the OS grid reference and split the number part into two equal groups. The X axis number goes in front of the first group and the Y axis number goes in front of the second group: (X axis)483 (Y axis)337 = (3)483 (6)337.
- As an Easting and Northing has either a 6-6 or 6-7 format, you will need to add two zeros to the end of the two number groups from the last step: (3)483(00) (6)337(00).
- The Easting and Northing can therefore be defined as – 348300 633700.
A GPS could be used and the resulting Easting and Northing is defined as: 348357 633742.
Little Heog
Using the map for the area, the OS grid reference can be defined as HP 636 109.
<ul> <li><u>To convert this to an Easting and Northing:</u></li> <li>Look at Figure 1 and find square HP. Using the numbered axes, read of the two numbers that the square represents. In this case 4 (X axis) and 12 (Y axis).</li> <li>An Easting and Northing is made up of two groups of six numbers (the exception being Orkney and Shetland, here it is a single group of six and a single group of seven ),</li> </ul>
- Take the OS grid reference and split the number part into two equal groups. The X axis number goes in front of the first group and the Y axis number goes in front of the second group: $(X \text{ axis})636$ (Y axis)109 = (4)636 (12)109.
- As an Easting and Northing has either a 6-6 or 6-7 format, you will need to add two zeros to the end of the two number groups from the last step: (4)636(00)
(12)109(00). - The Easting and Northing can therefore be defined as – 463600 1210900.
A GPS could be used and the resulting Easting and Northing is defined as: 463631 1010911.