

10 August 2011



**Scottish
Water**

Always serving Scotland

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Dear Matthew,

Muirdykes Water Supply Zone - Manganese Exceedances

In accordance with section 76E of the Water (Scotland) Act 1980, please find enclosed the undertaking in respect of the exceedances of the manganese standards in the Muirdykes water supply zone.

As stated previously in addition to the steps committed to in this Undertaking we continue to operate a monthly action group meeting to discuss the water supply from Muirdykes WTW.

If you have any questions concerning this letter and the final draft Undertaking please do not hesitate to contact Peter Brown, Water Quality Regulation Manager on 0141 355 5661.

Yours sincerely

A handwritten signature in black ink that reads "G. Aitkenhead".

Geoff Aitkenhead
Asset Management Director

**SCOTTISH WATER
UNDERTAKING IN TERMS OF SECTION 76E(4)(b) OF
THE WATER (SCOTLAND) ACT 1980, AS AMENDED.**

THIS UNDERTAKING is given by Scottish Water, established by section 20(1) of the Water Industry (Scotland) Act 2002, and having its Head Office at Castle House, 6 Castle Drive, Dunfermline, KY11 8GG.

Whereas:-

- (a) section 6 of the Water (Scotland) Act 1980 ("the 1980 Act") confers duties on Scottish Water to, inter alia, provide a supply of wholesome water to every part of its limits of supply where a supply of water is required for domestic purposes and can be provided at reasonable cost;
- (b) section 8 of the 1980 Act requires Scottish Water to supply a wholesome supply of water sufficient for the domestic purposes of all owners and occupiers of premises within its limits of supply who are entitled to a supply for those purposes;
- (c) regulation 4 of the Water Supply (Water Quality) (Scotland) Regulations 2001, ("the 2001 Regulations"), inter alia, prescribes requirements which require to be met in order that water supplied by Scottish Water in pursuance of its duties under the 1980 Act shall be regarded as wholesome for the purposes of Part VIA of that Act;
- (d) regulation 4(2)(c) of the 2001 Regulations prescribes that the maximum permissible value within consumers' taps for manganese is 50 µgMn/l (item 5 in Part II of Table B in schedule 1 to the 2001 Regulations, "the manganese parameter");
- (e) the Drinking Water Regulator for Scotland has advised Scottish Ministers that he believes that Scottish Water may be at risk of failing to comply with the requirements of regulation 4(1) of the 2001 Regulations and Part VIA of the 1980 Act in respect of the water it supplies to Muirdykes supply zone (supply zone reference Z005000263563) in so far as those requirements concern the manganese parameter; and
- (f) Scottish Water desires to give an undertaking to the Scottish Ministers in terms of Section 76E(4)(b) of the 1980 Act, to take all such steps as it appears to the Scottish Ministers to be appropriate for the time being for Scottish Water to take for the purpose of securing or facilitating compliance with its duties under sections 6(1) and(2) and section 8 of the 1980 Act, and of regulation 4(1) of the 2001 Regulations, as regards the manganese parameter specified in paragraphs (d) and (e) above, respectively.

NOW THEREFORE, SCOTTISH WATER HEREBY UNDERTAKES as follows

1. Subject to the following provisions of this undertaking, Scottish Water shall carry out, or secure the carrying out of, the steps referred to in paragraph 3 of the schedule annexed and signed as relative hereto.
 - a. Scottish Water undertakes to secure that the steps referred to in the said paragraph 4 of the said schedule are complete on or before dates set by DWQR.
2. If, in relation to the zone specified in paragraph 1 of the said Schedule, Scottish Water considers that it is able to demonstrate compliance with the requirements of regulation 4(1) of the 2001 Regulations in so far as that applies to the manganese parameter, it shall notify the Scottish Ministers in writing; and, if satisfied that Scottish Water is in a position to comply with its obligations under the 2001 Regulations and 1980 Act in so far as the manganese parameter applies, and is likely to be in a position to continue to so comply, the Scottish Ministers shall treat this undertaking as ceasing to apply insofar as the zone is concerned, and shall notify Scottish Water accordingly.

SIGNED on behalf of Scottish Water by Geoff Aitkenhead, Asset Management Director

Signature *G. Aitkenhead*

Date 10 August 2011

**SCOTTISH WATER
UNDERTAKING IN TERMS OF SECTION 76E(4)(b) OF
THE WATER (SCOTLAND) ACT 1980, AS AMENDED
Schedule of Information**

Supply Zone Details

1. The undertaking is given in respect of Muirdykes supply zone (supply zone reference Z005000263563). Supply zone Muirdykes supplies a population of 83,708. The zone is served by Muirdykes water treatment works [located at Bowfield Road, Howwood, Renfrewshire, reference T005000008786].

Nature of Contravention

2. The water supply to Muirdykes supply zone is at risk of failing to meet the prescribed level as regards the manganese parameter (item 5 in Part II of Table B in schedule 1 to the 2001 Regulations) of 50 µg/l Mn/l.

Steps to be taken

3.
 - a) Optimisation of Muirdykes water treatment works and modification of equipment, where necessary, to manage reduced output from the works as rezoning takes place, as described in step g);
 - b) Development and implementation of an enhanced monitoring strategy for manganese in raw and final water and at consumers' taps to supplement current regulatory monitoring for the duration of the Undertaking;
 - c) Review and optimise the raw water flows into Muirdykes water treatment works to minimise manganese concentrations entering the Muirdykes distribution supply;
 - d) Review service reservoir cleaning programme in accordance with the risk of supplying non compliant water and amend if necessary;
 - e) Investigate condition of trunk mains in the Muirdykes system. Where necessary identify remedial actions required to prevent water containing a high concentration of manganese entering the distribution supply from Muirdykes trunk mains;
 - f) Complete strategic study and select optimum solution for supplying the Muirdykes zone from the Glasgow water supply system;
 - g) Undertake work to cleanse the distribution system as identified in the DOMS 2 investigation of the supply zone and where possible rezone district metered areas from Blairlinnans water treatment works;
 - h) Complete planning and design works for the optimum strategic solution for the Muirdykes zone;
 - i) Implement optimum strategic solution for the Muirdykes zone.

Completion Dates

4. The steps identified in paragraph 3 above shall be completed on or before 31st March 2017.

The individual step completion dates are as follows:

- a) Steps to ensure optimisation of the treatment works is maintained are complete
- b) Complete
- c) Steps to ensure optimisation of raw water flows is maintained are complete
- d) Complete
- e) 31st March 2012
- f) 31st March 2012
- g) 31st March 2013
- h) 31st March 2015
- i) 31st March 2017

Water Quality Monitoring and Management Programme

5. It is proposed to monitor manganese levels in the raw and final water at the water treatment works at an enhanced frequency of 52 samples per annum.
6. It is proposed to monitor manganese levels in the water supply zone at the current regulatory frequency (72 samples per annum).
7. Scottish Water will manage the distribution system to ensure water quality is maintained in the Muirdykes supply zone in line with the DOMS procedures.
8. Scottish Water will undertake targeted flushing in the distribution network in response to specific water quality complaints and exceedances of regulatory standards for manganese.
9. All manganese events are reported to Renfrewshire Council and the NHS Greater Glasgow & Clyde Health Protection Team, in accordance with agreed event reporting processes.
10. After completion of the mains rehabilitation, Scottish Water will undertake Post Project Appraisal to demonstrate compliance with the standards as set out in the Water Supply (Water Quality) (Scotland) Regulations 2001.

Progress Updates

11. Scottish Water will provide progress reports every six months, from the date of the Undertaking via meetings with, and in writing to, the DWQR. Each report will include:
 - manganese data for raw and final waters and consumer tap samples;
 - progress to review DOMS level 2 investigation of the water supply zone;
 - progress to design a strategy to prevent water containing a high concentration of manganese entering the supply;

- progress to complete work to remove manganese deposits for the distribution system;

SIGNED on Behalf of Scottish Water by Geoff Aitkenhead, Asset Management Director

G. Aitkenhead

Geoff Aitkenhead, Asset Management Director
Date: 10 August 2011