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14 December 2001

## **INTERIM DETERMINATION**

You applied on 14 September 2001 for an interim determination of your company's price limits under Part IV of Condition B of your licence. Your reporter, John Holmes of Montgomery Watson Harza, submitted his report on your application on 19 September 2001.

Your application covers the additional costs and loss of revenue resulting from the following three items:

1. More customers taking up the free meter option than was allowed for in the final determination.
2. Cryptosporidium monitoring requirements placed on your company by the Drinking Water Inspectorate.
3. The effects of the loss of power to disconnect domestic customers for non-payment of charges.

In addition to these changes, we have identified a change to the work your company will undertake to meet the new lead standards.

.../...

We agree that items 1 – 3 qualify for changes in costs and revenues to be considered at an interim determination. We have taken into account the changes to the programme to meet the new lead standards noted above. We sent you our draft decisions on 8 November and corrections to the draft price limits on 20 November. You sent us your representations on 21 November and we discussed these on 28 November. Following your representations and those from others, including the Customer Service Committee, we have looked again at the costs and revenues and made some small changes to our assumptions.

- We have included some additional operating and capital costs associated with cryptosporidium monitoring;
- We have excluded expenditure associated with plumbosolvency treatment at Oerog Springs;
- We have increased slightly capital expenditure associated with plumbosolvency at other treatment works, and increased slightly operating expenditure at Plemstall; and
- We have, for 2000-01, reduced capital expenditure allowances so that they now reflect the actual number of optants recorded between April 2000 and March 2001. For 2000-01 capital and operating expenditure we have now used the proportion of meters installed in existing boundary boxes as set out in your application (details are provided in Annex B).

The net effect of these changes is no change to the draft price determination.

Annex A summarises your estimates of the changes to your costs and revenues, our final view of your costs and revenues and the new price limits. Our decisions are summarised in Annex B. We are sending explanatory notes expanding on Annex B separately.

The total impact of the relevant items on your costs and revenues is sufficient to exceed the materiality threshold set out in Condition B of your licence. These revised price limits will apply from April 2002. The effect of this change for customers is that average household bills will fall by £3 in real terms between 2001-02 and 2004-05 rather than a fall of £8 as anticipated at the final determination in 1999.

In MD169 we indicated that companies seeking an interim determination should expect a licence modification to extend the scope of the notified item to allow for both losses and gains. This means that in future Ofwat can trigger an interim determination if our revised assumptions turn out to be too generous. I attach a copy of the proposed licence modifications at Annex C.

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We are placing this determination in the Ofwat Library and announcing our decision to the London Stock Exchange.

This letter and its enclosures have been copied to John Ballard (DEFRA), Michael Rouse (DWI), Roger Thomas (Environment Agency), John Ford (Chairman of CSC for Wales), to all the members of the Welsh Assembly, your local members of Parliament and members of the European Parliament.

**PHILIP FLETCHER**

## ANNEX A

**DEE VALLEY WATER PLC**  
**INTERIM DETERMINATION – December 2001 – SUMMARY TABLE**

Description		Company's Assessment (September 2001)		Ofwat's Assessment (November 2001)		
<b>Item 1 – Additional meter optants</b>						
1.1	Total <b>additional meter optants</b> in period to 2004-05 (AMP3) over and above the November 1999 assumptions.	+ 4,237 (water)		+ 2,594 (water)		
1.2	Estimated net additional <b>capital expenditure</b> over the AMP3 period	£0.72m		£0.48m		
1.3	Estimated net additional <b>operating expenditure</b> over the AMP3 period	£0.15m		£0.01m		
1.4	Estimated loss in <b>revenues</b> over the AMP3 period	£1.77m		£0.71m		
1.5	<b>Materiality amount (NPV of total net additional costs and losses)</b>			£2.28m		
1.6	Contribution towards <b>materiality threshold</b>			14.0%		
<b>Item 2 – Cryptosporidium – Additional requirements for continuous monitoring.</b>						
2.1	Estimated net change in <b>capital expenditure</b> to 2004-05	£0.13m		£0.09m		
2.2	Estimated net change in <b>operating expenditure</b> to 2004-05	£0.94m		£0.77m		
2.3	<b>Materiality amount (NPV of total net additional costs and losses)</b>			£1.70m		
2.4	Contribution towards <b>materiality threshold</b>			10.4%		
<b>Item 3 – Bad Debt</b>						
3.1	Estimated net change in <b>capital expenditure</b> to 2004-05	£0.00m		£0.00m		
3.2	Estimated net change in <b>operating expenditure over the AMP3 period.</b>	£0.14m		£0.14m		
3.3	<b>Materiality amount (NPV of total net additional costs and losses)</b>			£0.32m		
3.4	Contribution towards <b>materiality threshold</b>			1.9%		
<b>Item 4 – Counter notice – Lead – Changes to the compliance programme</b>						
4.1	Estimated capital expenditure on plumbosolvency control to 2004-05 additional to that assumed in the 1999 final determination	£0.28m		£0.16m		
4.2	Estimated operating expenditure on plumbosolvency control to 2004-05 additional to that assumed in the 1999 final determination	£0.28m		£0.10m		
4.3	<b>Materiality amount (NPV of total net additional costs)</b>			£0.46m		
4.4	Contribution towards <b>materiality threshold</b>			2.8%		
4.5	Reduction in capital expenditure on lead communication pipe replacement compared with that assumed in the 1999 final determination	-£0.94m		-£0.94m		
4.6	<b>Materiality amount (NPV of total net reductions)</b>			-£0.90m		
4.7	Contribution towards <b>materiality threshold</b>			-5.5%		
<b>OVERALL ASSESSMENT</b>						
5	<b>Materiality amount (NPV of total net additional costs and losses)</b>			£3.85m		
6	Dee Valley turnover for 2000-01 used in materiality test			£16.32m		
7	<b>Materiality test</b>			23.6%		
<b>PRICE LIMITS</b>		2000-01	2001-02	2002-03	2003-04	2004-05
8	<b>Current price limits</b> (as set in November 1999)	-10.6	-2.6	-3.0	-3.0	0.0
9	<b>Draft revised price limits</b>	-10.6	-2.6	-0.5	-0.5	-0.5
<b>Notes:</b>						
1. Additional costs and revenue losses shown as positive, savings and revenue gains shown as negative.						
2. The appropriate Discount Rate used is 4.95%.						
3. <b>Materiality Test</b> – Result must be greater than ±10% to trigger a change in price limits.						
4. All monetary values are stated in September 2001 prices. Totals may not add due to rounding.						

**DEE VALLEY WATER PLC  
INTERIM DETERMINATION – 14 December 2001  
SUMMARY OF OFWAT'S INITIAL ASSESSMENT**

1. We have followed a four stage assessment of your application in accordance with the terms of Condition B of your company's licence.
2. You included three changes in your application:
  - a greater number of customers taking up the free meter option;
  - the cryptosporidium monitoring requirements placed on your company by the Drinking Water Inspectorate (DWI); and
  - the effects of the loss of power to disconnect domestic customers for non-payment of charges.
3. We issued a counter notice identifying changes to your lead compliance programme.
4. Our assessment of your application and the counter notice is set out below.

**STAGE 1 – CONFIRMATION THAT THE CHANGED REQUIREMENTS ARE RELEVANT CHANGES IN CIRCUMSTANCE OR ARE COVERED BY SPECIFIC NOTIFIED ITEMS**

**Item 1 – Additional meter optants**

5. The 1999 price determination included a notified item to protect the company from some of the implications of more customers taking up the free meter option than we had assumed.
6. We confirm that the rate of meter uptake is faster than we assumed in the final determination. This has triggered the notified item.

**Item 2 – Cryptosporidium - additional requirements for continuous monitoring**

7. When we set prices in 1999 the extent of the new requirements to deal with the risk from cryptosporidium was uncertain. Only that work which had been identified and received technical support from the DWI was included in price limits. No provision was made in price limits for any requirement to carry out continuous monitoring because the outcome of risk assessments was not known.
8. On 31 July 2000 the DWI issued a notice under regulation 23A of The Water Supply (Water Quality) (Amendment) Regulations 1999. This set out the steps you must take to comply with the requirement of regulation 23B. The

DWI has confirmed that the work set out in your application is necessary to meet your obligations under the cryptosporidium regulations.

9. We confirm that these cryptosporidium requirements qualify as a Relevant Change of Circumstance. The scale of the work set out in your application is appropriate and additional to that assumed in price limits set in 1999.

### **Item 3 – Bad debt**

10. A notified item was set out in the 1999 price limit determination to protect the company from the consequences of increased levels of bad debt and costs of debt recovery arising from the loss of the power to disconnect domestic customers.
11. We confirm that the increases in your bad debt and costs of debt have triggered the notified item.

### **Item 4 – Counter notice – Changes to the lead compliance programmes**

12. In 1999 we allowed in price limits for a work programme to deal with the new lead standards. This assumed a lead communication pipe replacement programme and plumbosolvency control. During the 1999 periodic review the DWI clearly stated that it would review the most effective means of delivering compliance after receiving further information from each company. Plumbosolvency control is now the preferred initial approach.
13. The DWI has confirmed that the provision for lead assumed in the final determination was only for the purpose of setting prices, and that the revised statement of intent dated 30 March 2001 replaces the letter of support provided for the periodic review process. This statement of intent requires you to install plumbosolvency treatment at three sites, and investigate the need for treatment at another three sites.
14. The DWI advises that the effectiveness of plumbosolvency control will need to be assessed before it is possible to determine whether any further lead communication pipe replacement may be required to achieve full compliance with the lead standards.
15. We consider that the change in the lead compliance programme is a Relevant Change of Circumstance.

## **STAGE 2 – ASSESSING THE APPROPRIATE NET ADDITIONAL COSTS/REVENUE LOSSES ATTRIBUTABLE TO EACH CHANGE**

### **Item 1 – Additional meter optants**

16. We have carefully assessed the information contained in your application and, where appropriate, we have requested further clarification from both yourselves and your reporter. We have also considered the points set out in your letter of 22 November 2001, and discussed at the meeting of 28 November.

### *Numbers of optants*

17. In assessing the evidence most weight has been attached to confirmed outturn information and the extent to which this indicates a divergence from the assumptions made in the final determination.
18. In the final determination we assumed that 10% of unmeasured water customers would choose to change to measured charging between April 2000 and March 2005. We also assumed a constant proportion of the remaining unmeasured customer base would take up the free meter option each year.
19. Your application presents evidence relating to free meters installed by the company up to September 2001. Your submission does not contain other evidence to support your projections of future meter optant numbers.
20. For the purpose of this determination we are required to take a forward-looking view of the likely uptake of optional metering for the remainder of the quinquennium. In doing so we have had regard to the high degree of sensitivity of calculations to alternative extrapolations.
21. We accept that the number of optional meters you have installed since April 2000 will have a material impact on the cost and revenue assumptions made for the 1999 periodic review. However, we do not agree with your projections for the future rate of uptake.
22. For the draft interim determination we assumed that, in each year up to 2002-05 when price limits will next be reviewed, 2.7% of your remaining unmeasured customers would take up the free meter option. For this determination we have continued to use this assumption. In reaching this view we have taken account of your experience with a free meter option since 1997, and the apparent downward trend in meter requests.
23. Our projections of revenue also take account of variations between the level of meter optants assumed in the final determination for 1998-99 and 1999-2000 and the outturn numbers of meter optants during that period.

### *Meter optant characteristics*

24. You have presented limited evidence to support your revised assumptions regarding the likely characteristics of meter optants, in terms of average rateable value, and average pre and post-switching consumption. This evidence relates to data collected from existing meter optants.
25. Our assumptions take account of your view on average post switching consumption and average meter optant rateable value to date. However, our projections assume that the average consumption of the remaining unmeasured customers with an incentive to switch will increase over time. This determination assumes that optant's pre-switching water delivered will be 60% of the average unmeasured household water delivered in 2000-01 rising to 68% by 2004-05. In addition, we have continued to use the 1999 periodic

review assumption that those taking the free meter option are unlikely to reduce their consumption by more than 5% on average.

*Meter unit costs*

26. For the capital cost of installing meters, we have used the same industry standard unit costs as at the 1999 final determination.
27. Your submission uses operating unit costs per meter based on a policy of four meter readings per year. We have examined other companies' meter reading policies and found that four readings per year is an outlier in terms of standard practice. We have continued to assume the unit operating costs adopted for the 1999 final determination.

*Meter location*

28. We have considered evidence put forward by the company regarding meter location, and taken account of the Competition Commission's opinion that the level of funding allowed in the 1999 final determination will have the effect of pushing companies towards an internal meter policy. Therefore the capital and operating cost allowances for meters have been calculated assuming that 23% of new meters will be installed in existing boundary boxes, and that 75% of the remaining new meters will be installed externally.
29. For the draft interim determination we calculated 2000-01 meter capex based on optants during the period October 1999 to September 2000. We have corrected the metering capex allowance for 2000-01 so that it is now based on actual numbers of optants for the period April 2000 to March 2001. For this determination, we have also used the proportion installed in existing boundary boxes as set out in your application.
30. For the draft determination we applied the Competition Commission's views regarding the opex savings associated with external meters for opex allowances only from 2001-02 onwards. For this determination we have applied this approach in calculating opex allowances for 2000-01 onwards. Our calculations now also use the proportion of meters installed in existing boundary boxes as set out in your interim determination application.

**Item 2 – Cryptosporidium - additional requirements for continuous monitoring**

31. You have chosen to deal with the requirements at three sites by carrying out continuous monitoring. Your reporter has commented that the decisions you have made are reasonable.
32. We have reviewed your submitted costs for cryptosporidium monitoring and considered your reporter's report. We have also looked at market prices for this type of work reported by other companies. We used this information to develop our view of the reasonable impact of the new requirement.

33. We consider that your estimate of the additional operating costs of carrying out continuous monitoring for cryptosporidium is high in comparison with other companies. The operating costs for cryptosporidium monitoring should be broadly similar for all sites. Therefore our initial assessment was that your costs could match the benchmark.
34. In your response to our initial assessment you argued that the requirement to monitor at only three sites prevents you benefiting from economies of scale that would be available to a company required to monitor at more sites. We have considered your case and consequently increased our assessment. We believe that this is a reasonable reflection of any loss of economies of scale.
35. Continuous monitoring and testing for cryptosporidium is still in its infancy. We expect decreases in the unit costs of materials and increases in efficiency for this labour intensive procedure as experience develops. We judge that a continuing efficiency of 2.5% per annum is a reasonable and conservative expectation.
36. In our assessment we reduced your submitted additional capital investment associated with cryptosporidium monitoring to reflect the refund you received in the 'up-front' contribution for laboratory equipment.
37. We excluded the 'up-front' contribution from the additional capital expenditure that we compared with the benchmark for on site continuous monitoring equipment. After this adjustment the residual additional capital costs were higher than the benchmark. The costs of installing cryptosporidium monitoring equipment should be broadly similar for all sites. In reaching our view of reasonable costs we reduced your on site monitoring expenditure by 75% of the difference between the adjusted company capital expenditure and the benchmark.
38. In response to our initial assessment you expressed the view that the benchmark cost is very low and could be an outlier. We acknowledge the possibility of some site specific costs and that some economies of scale may not be available to you, and so have increased our assessment.

### **Item 3 – Bad debt**

39. We have carefully assessed the information submitted in your application. Where appropriate we have requested further clarification from yourselves and your reporter.
40. We accept your evidence that the level of debt and the operating costs of collecting debt have increased since the implementation of the Water Industry Act 1999.

41. You set out the changes to the company's procedures for recovering debt from customers. Before the Water Industry Act 1999 you used the threat of your power to disconnect domestic customers widely. You established contact with many non-paying customers as a result and obtained payment. Having lost this power, you now make increased use of other court procedures which do not secure payment or contact as quickly.
42. We accept that as a result of these changes it now takes the company longer to recover customer debt and that a financing cost arises from this.
43. You also set out that changes in your procedures have caused your operating costs to rise. This is largely through the necessity for an additional debt counsellor and the wider use of third party agencies. We also accept that these costs have increased.
44. We have compared your costs and the level of debt which you have outstanding as a proportion of household revenue with figures for the rest of the industry. As both your costs and debt levels are low, we have not applied any benchmarking adjustments to your figures.
45. You have not claimed for any increase in capital expenditure.
46. You assessed the difference between your operating costs and financing of outstanding debt in 1998-99 and in 2000-01 to be £0.03m. We accept this calculation and assess the net present value over 15 years of the increased operating costs of collecting debt from customers and financing higher levels of outstanding debt as £0.32m in 2001 prices. The 15 year period begins in 2000-01 when the notified item took effect.

#### **Item 4 – Counter notice – Changes to the lead compliance programmes**

47. The letter of support from the DWI for the purpose of price setting, dated 10 March 1999, set down that provision should be made for the replacement of 1,797 lead communication pipes, and plumbosolvency control at Boughton, Llwyn Onn and Oerog Springs.
48. The 1999 final determination included an allowance for this indicative programme. Since then you have completed investigations to confirm that plumbosolvency control is required at Boughton, Llwyn Onn and Plemstall. We have reviewed the financial provision made in 1999. We believe that the assumptions on capital expenditure and operating costs linked to plumbosolvency control are sufficient to treat the volume of water assumed at the last price setting. We have therefore included in our assessment only the costs associated with the additional volume.
49. In your response to the lead counter notice, you included the costs of plumbosolvency treatment at Boughton and Llwyn Onn, and at Plemstall where investigations revealed the need to install first time treatment.

50. At the time of our initial assessment you had not confirmed the need for treatment at Oerog Springs. We therefore based our initial assessment on the expenditure necessary to treat the additional volume requirements for Boughton, Llwyn Onn and Oerog Springs, and on the additional expenditure associated with the new requirement for plumbosolvency treatment at Plemstall.
51. The additional expenditure associated with Plemstall was based on the assumption that treatment at Oerog Springs would be required. You have since informed us that plumbosolvency treatment is not required at this works. Consequently our final assessment is based on the expenditure needed to treat the additional volume requirements at Boughton, Llwyn Onn and Plemstall.
52. We consider that your additional operating costs for plumbosolvency are high in comparison with other companies. Sufficient information is available to compare your estimate of the cost for plumbosolvency treatment with those reported by other companies. We have compared your cost estimate with cost information from other companies likely to have similar qualities of water to Dee Valley. As a result we have reduced your costs by 75% of the difference between your estimate and the benchmark.
53. In your response to our initial assessment you argued that operating costs at Plemstall should not be compared with a benchmark because it is small and can not benefit from economies of scale. We have accepted this point and amended our assessment accordingly.
54. We have assumed that future efficiencies of 1.4% a year are reasonable for plumbosolvency control operating costs.
55. In our initial assessment we judged there to be uncertainty in the additional capital investment required to install plumbosolvency treatment and reduced your estimate by 10%. In your response to our initial assessment you challenged this assumption on the grounds that over half has already been spent. In recognising the greater confidence in your submitted capital costs for installing plumbosolvency treatment we applied a 5% reduction in our final assessment.
56. We have applied the same future efficiency assumption of 1.4% to capital expenditure.
57. The DWI has confirmed that the formal statement of intent has replaced the letter of support which was provided only for the purposes of the periodic review. The final determination in 1999 included financial provision for dealing with the lead standards, some of it linked for the purpose of the review to a programme of lead communication pipe replacement. No lead communication pipe replacement has yet been confirmed by the DWI, and the timescale and extent of any such replacement is not yet known. For the

purpose of calculating materiality we have considered the changes to the lead programme separately, as additional costs and as savings. This satisfies the requirements of your licence.

**STAGE 3 – MATERIALITY TEST – IN AGGREGATE DOES THE SUM OF ALL THE CHANGES EXCEED THE MATERIALITY THRESHOLD SET DOWN IN THE LICENCE?**

58. Condition B of the licence sets a materiality threshold for consideration of interim determinations. A revision of price limits is triggered if the present value of the net additional costs and revenue losses arising from the changes is greater than 10% of the turnover of the Appointed Business in the latest financial year for which accounting statements have been delivered to Ofwat. For the purpose of this calculation, capital costs are calculated up to the start of the next charging period and operating costs and revenue losses are calculated over 15 years.
59. The results of our analysis, based on the revised assumptions set out above, are summarised in Annex A. This shows that the materiality threshold has been satisfied.

**STAGE 4 – IMPLICATIONS FOR PRICE LIMITS IF THE MATERIALITY THRESHOLD IS EXCEEDED**

60. Because the materiality threshold is exceeded we are required by Condition B of your licence to review and revise your price limits. Our provisional assessment of your company's application is that the price limits for the charging years 2002-03 to 2004-05 should be revised as set out in the table in Annex A.
61. We propose to adopt the symmetrical notified item model used by the Competition Commission, together with the new projections of meter optants as amended by the numbers set out in Annex A. The licence modification and revised notified item are attached at Annex C.



## NOTIFIED ITEM

For the purpose of this determination Ofwat has assumed that the cumulative increase in the numbers of measured household customers arising from the exercise of the free meter entitlement under s.144A(1) of the Water Industry Act 1991 will be as specified for each year in the following table.

<b>Numbers of Household Meter Optants between 1 October 2001 and 30 September in the Year</b>		
<b>2002</b>	<b>2003</b>	<b>2004</b>
2,007	3,958	5,857

Any difference between the assumed cumulative number and the actual, cumulative number at 30 September in the year in question is a notified item.

The costs attributable to the notified item shall be interpreted to comprise:

- (i) the difference in capital expenditure to be attributed to the provisions and installation of a different number of meters;
- (ii) the difference in annual operating expenditure to be attributed to the provision of measured charging for a different number of customers;
- (iii) the extent to which annual revenues accruing to the company from standard charges are different as a result of the cumulative number of household optants varying from the numbers specified above.

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