

## Lomond Hills Supply Zone Pesticides Failure 14 October 2014

DWQR Inspector:  
William Byers

Event No. 6501, 6514, 6641

### Event Category: Serious

### Summary of Incident

On 14 October 2014, a routine sample taken within the Lomond Hills supply zone showed a failure of the standards for individual pesticides with a level of 0.641µg/l of 2,4-D and 0.504µg/l MCPA. The standard for individual pesticides is 0.1µg/l. On awareness of these results on 1 November, additional sampling was instigated on the raw waters supplying the Lomond Hills treatment works and within the distribution system. At the same time, investigations were initiated into any possible point-source contamination or spraying activity within the catchment areas. As these were progressing, further failures of the same pesticides in another routine regulation sample were reported on 6 November, indicating their likely presence in the wider supply zone.

The catchment inspection found no obvious point source contamination from spillage or discarded containers but it became clear through discussions with farmers and land users that spraying of weed killer had taken place in some fields on 2 October. The chemicals found in the drinking water samples were consistent with those in the herbicide. Rainfall records show that there was extremely heavy rainfall in the area on the day following application of the herbicide and a recently cleaned ditch through these fields, which discharges to Holl Reservoir, would have provided an easy route for surface run-off to reach the reservoir.

Discussions were held with the Consultant in Public Health medicine (CPHM) on 7 November and a monitoring regime and number of mitigating actions were agreed. Scottish Water took steps to dilute the levels of pesticides in the distribution system by introducing supply from the adjacent Glenfarg and Glendevon supply area and from the Freuchie boreholes, allowing the output from Lomond Hills treatment works to be reduced. They also increased the flow from the unaffected Ballo Reservoir into Holl, to reduce the levels of pesticides in the raw water entering the treatment works. These measures saw a marked reduction of the levels in distribution bringing it within the standard for Total Pesticides of 0.5µg/l by 17 November. At this time, the individual pesticide levels were around 0.3µg/l and it was not until mid-December, that these reduced to below the standard for individual pesticides.

### DWQR Assessment of Cause of Incident

DWQR is satisfied that the cause of this incident is the contamination of Holl reservoir as a consequence of herbicide spraying activity in the catchment.

## DWQR Assessment of Actions Taken by Scottish Water

DWQR is satisfied that Scottish Water took the necessary actions on becoming aware of the presence of pesticides in the water supply to minimise the levels of the substances in the supply to consumers. It is however, an unusual situation for this supply to record failures against the pesticides standards and it is a concern that some 18 days passed before results of the routine sample in which this was initially detected, were reported from the laboratory. This is unacceptable and DWQR expects Scottish Water to adhere to industry best practice standards in their analysis and reporting timescales.

Lomond Hills treatment works does not have a specific process to deal with pesticides and given the history of minor levels detected in sampling, DWQR acknowledges catchment management measures are the most suitable means for control of the risks. Scottish Water engaged with the CPHM to discuss the health impacts of the levels of pesticides being found and a range of measures that might be taken. The steps taken by Scottish Water are considered by DWQR in these circumstances, to have been the most effective and expeditious in reducing the impact on the wider distribution system and consumers' water supply.

DWQR considers appropriate action to have been taken with the local farmer and spraying contractor and that there will be continued engagement to ensure any further similar event is avoided.

The event has been categorised as serious. Scottish Water has identified a number of actions and DWQR accepts that these are appropriate. Additionally, DWQR has made one recommendation and will be monitoring to ensure it is completed prior to signing off the incident.

