

CASE STUDY 2 – DRINKING WATER QUALITY

Organization context: The water industry provides treated drinking water to residential, commercial, and industrial sectors of the economy and treats the wastewater collected from these sectors, releasing the treated water back into the environment. The provision of treated drinking water involves several processes to remove any organisms that could be harmful to health.

Describe the event: Over a three-week period, customers of a water company contacted the company's customer service centre to report an unpleasant taste in their drinking water which made the water undrinkable. The customer service team logged these complaints on their system and the appropriate manager was informed to review these complaints. The water quality team within the company were mobilized and attended the customer houses to collect samples. The water quality team also attended the water treatment works producing the drinking water for the affected community to take samples and assess the potential cause of the bad taste in the water. The sampling detected iodinated compounds in the supply from the Granular Activated Carbon (GAC) adsorber at the water treatment works.

The water company promptly removed the water treatment works and a service reservoir from supply and undertook extensive flushing and sampling of the affected area. Although there was no direct health risk to customers from the iodinated compounds in the water, the water company supplied bottled water to its customers on receipt of their request.

Since the event, the company has taken action to strengthen its internal procedures on the maintenance and return to service of GAC filters.

Explain the consequence: The water regulatory body, which is responsible for ensuring water companies provide quality drinking water to their customers, brought criminal charges against the water company, citing that the company had experienced similar GAC related events within their operating region and had not learned from these events. The company pleaded guilty to supplying water that was unfit for human consumption and they were fined a six-figure sum which included a victim surcharge.

What were the root causes: Following a routine maintenance where a Granular Activated Carbon (GAC) filter media was removed and regenerated, it was identified that the company personnel did not correctly follow their own internal procedure, which required certain tests to be completed which would have identified the presence of the iodinated compounds.

What can be learned from this case study (good and bad): This case study highlights the benefits of conducting a lesson learned process after an incident and implementing the findings from this process. The water company had a structured process for dealing with customer complaints and raising investigation tasks to resolve the customer issues, but they were not improving their working practices to ensure the same or similar incident does not occur again.