



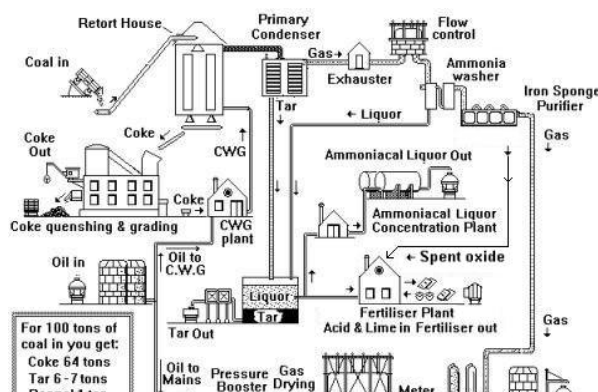
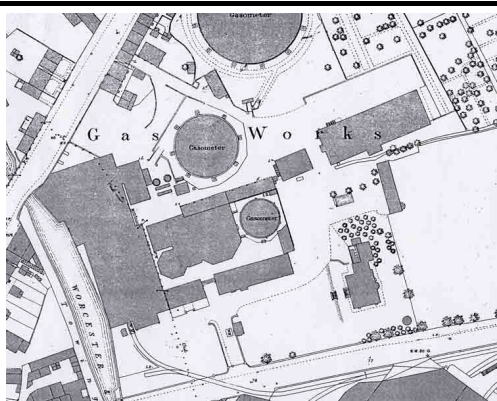
The
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North West Regional Group Meeting

Thursday 17 January 2013

The British Gas Industry – Considerations for the use of Environmental Forensics *Presented by Dr Russell Thomas*



Gasworks otherwise known as Manufactured Gas Plants (MGP) in America were a common feature across the UK, present in every city, town and many villages. There were over 4000 Gasworks in the UK and many more worldwide.

With the development of isotopic and state of the art GCxGC ToF MS methods to compliment traditional approaches to site investigation, former MGP sites are now a suitable subject for the application of environmental forensics. Whilst the importance of these analytical methods cannot be underestimated an understanding of the complex 200 year development the coal carbonisation industry is just as important.

Most credit for the discovery of commercial gas manufacture goes to William Murdoch a genius Scottish engineer. Murdoch developed a scientific curiosity into a practical reality for commercial exploitation. From the first demonstration of gas lighting of Murdoch's house and office in Redruth in 1792 to the eventual demise of the manufactured gas industry in the 1970's, continuous development was undertaken to improve the manufacture of gas. When this is combined with the changing demands the UK gas industry faced, from its original purpose primarily for street lighting to its eventual use for domestic and commercial heating purposes, this has lead to a very wide diversity of gas manufacturing processes being used across the UK.

These former MGPs have left an environmental legacy, for which the application of accurate environmental forensic methods may help provide a greater degree of understanding than that currently provided by standard analytical methods. Within this presentation we review the development of this industry and the technologies used and try to demonstrate how this industry's evolution may impact on how environmental forensics techniques are used in the UK and abroad.

The land ownership issues posed by the former MGPs in the UK are complex and this greatly effects how forensics may be used in the UK. When this is combined with the range of different processes used, the different by-products formed, how these were handled, used and disposed of and the potential impacts other nearby historic industries, it creates a very complex picture.

CPD: These events may be considered for contributing to a recognised Continuing Professional Development (CPD) scheme as part of personal development. Delegates should check their individual scheme requirements.

Images from: <http://www.miac.org.uk/worcestergas.htm>
<http://www.igg.org.uk/gansg/12-linind/gasworks.htm>
<http://www.gasarchive.org/Photographic.htm>

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Dr Russell Thomas is a Technical Director with wide ranging interests, including contaminated land, gas industries, waste management, innovation, sustainability and university collaboration. He provides high quality technical advice across his interest areas and manages a contaminated land site investigation team in the Bristol office. He is best known internationally for his knowledge of the coal carbonization and gasification industries, see: <http://independent.academia.edu/RussellThomas>

Following his Biotechnology degree, he studied a PhD in the application of bioremediation to the nuclear industry at the University of Birmingham, he later took a position at the Gas Research Centre working on the development of remediation of gasworks contaminants.

He later moved to Parsons Brinckerhoff as a consultant. Through the past 12 years he has been undertaking a program of research dedicated to understanding the environmental legacy of the gas industry, work supported by PB and National Grid. Through this work and personal interest, he has built up a deep understanding of this incredibly interesting industry, writing papers and giving lectures. This knowledge has spurred his interest in industrial archaeology and an understanding of other associated industries, valuable when undertaking site investigations.

Russell is a chartered member of the Society of Biology, the Society of the Chemical Industry, the Society of the Environment (CEnv). He is a member of the IGEM and a member of their Panel for the History of the (Gas) Industry and works closely with the National Gas Archive.

Organised by the North West Regional Group of the Geological Society of London

For further information please visit:

www.geolsoc.org.uk/nwrg

or email the Group Secretary, Nik Reynolds at:

geologicalsociety.northwest@gmail.com

Meeting: 6:15pm for 6:30pm prompt start.

Venue: The Centre, Birchwood, Warrington, WA3 6YN

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