# My Memories of Octel: Neil Summers

I started my career in July 1979 as an experimental officer based at the Octel site at Ellesmere Port, Cheshire which was the company's main production site.

This was my first job out of Swansea University where I had obtained a degree in Chemistry. To get the job I had taken part in a number of "Milk Round" interviews while still at University. The milk round was when prospective employees came around the university to interview students who were about to graduate that summer. I remember that I received 3 job offers from different company's, but decided to take up the role at Octel because the starting pay was £4142 pa with most others offers only around £3500. This is would be equivalent to £21K for todays graduates.

I had managed to find "digs" in Liverpool road in Chester and had persuaded my father that he should really get a new car and sell his old mark 3 Cortina ,registration number RAA 964G, to me.

So on the Sunday evening I took a drive out to the Octel site at Ellesmere Port to make sure I knew where to go on the Monday morning. The only issue was that being from the countryside I had completely under-estimated the amount of traffic which would be on the roads the following Monday morning and I was late in on my first day!

As an experimental office I was based in the companies' R&D department which was managed by Dr John Grove. I shared an office with Paul Roberts who had joined Octel as an experimental officer the year before and also Dr Paul Ashworth who was our boss. The Head of R&D was John Grove

At the time Octel had only just started to take on research chemistry graduates and so we felt as if we were an elite crew. As the name suggests the role of the experimental officer was to carry out small scale experiments on some chemical process normally under the direction of a senior officer. The first couple of months I spent time looking at the oxidation of lead particles which was to assist in the recovery of lead from the companies lead sludge pit used as part of the production process. To be honest it was a very boring time as I would set up an experiment in the morning and then hang around all day until I got the results back from an analyst later in the afternoon.

However it was a good time in other ways. I well remember the old sage Wally Towers, who had worked in the R&D for many years and was the font of all knowledge about the chemistry of Octel's products. I also remember the long Friday lunch time session's held in "The Rake" hotel a few miles from the works. The year after I joined there was also another influx of new employees including Janet Chetland, Steve Wooley, Chandra Patel, the guitar playing Andy Kyte and Helen Burrows. I also remember a mountain walking holiday with Andy, Paul Ashworth and myself to the Pyrenees, in 1987 the first time I had been abroad.

It was about this time that the debate about the removal of lead from petrol was just starting. Lead was added to petrol in the form of Anti Knock Compound (AKC) to improve the Octane rating. The compounds used Tetra Ethyl Lead (TEL) and Tetra Methyl Lead (TML) were the main reason for Octel's existence and where produced on site. However the lead had a tendency to stick to the valve stems of the engine's cylinder, leading to clogging and diminished performance. To counteract this a

compound called DiBromoEthane (DBE) was added to the antiknock compound mix. The DBE reacted with the deposits in the engine converting the lead to a lead bromide, which being volatile was removed via the exhaust fumes. This worked great for the engine but meant that significant lead deposits had built up on the side of roads and in urban areas over the previous 50 years.

In the 1980s the campaign against lead in petrol had stared to gain momentum following research by Derek Bryce-Smith of Reading University and a PR campaigner called Des Wilson and his Campaign for Lead Free Air (CLEAR). To try and reduce the amount of lead which was emitted from car exhaust, Octel started to look at the design of a lead filter. This was basically a stainless steel mesh coated with active clay which was placed in the exhaust pipe, much like the catalytic convertors now used. The idea was that the activated clay would mop up the lead particles and reduce emissions. I was involved with the research into the efficiency of this filter working with Dr Lee. This was much more interesting work than that on the lead sludge pits. I felt as if I was contributing to a project which was producing new knowledge and would benefit others. I also remember a number of work related trips to Octel's engine laboratory at Bletchley to study the effect of the filter on engine performance.

However although the activated clay system worked, you were left with a significant amount of lead inside the filter which was then a hazard when the filter had to be changed. This and the continual campaign against lead in petrol eventually killed the project as it was recognised that the removal of lead from petrol was inevitable.

Although the technical argument may have been won, the research came to an end around 1983 when a political decision was taken to remove lead from petrol prior to the general election. The eventual removal of lead from petrol produced other environmental consequences due to the amount of volatile materials which needed to be added to retain the octane rating. Without the removal of lead the later development of Exhaust catalytic convertors would not have been possible.

In 1982 I moved from studying lead based materials to chemistry based on bromine. This was a change as up until that time very little work on bromine chemistry had been carried out at Octel Ellesmere port. I would receive samples of bromide containing wastes from various customers and my job was to see if pure Bromine could be recovered from them using steam distillation. This involved injecting steam into the liquids together with chlorine gas which would oxidise the bromide to bromine. The bromine was then condensed, collected and analysed for purity. The equipment I used took up the whole of a walk in fume cupboard but in essence was just a larger version of a school distillation set.

The hazards involved with handling Bromine were different from that of lead and I well remember having to wear a fully protective neoprene chemical suit, wellingtons and a full face chemical mask. This certainly created some funny looks as I walked through the R&D building.

It was around this time that I realised that, as well as Chemistry which I had been taught at school, there was another related discipline called Chemical Engineering. This seemed to be chemistry using much larger equipment as used on chemical plants rather than in the lab. The results from my fume cupboard experiments were handed over to the chemical engineers to allow them to design full scale steam distillation equipment to be used in a work environment. The design eventually became the Bromine Liquid Recovery plant (BLR) based at the Amlwch works.

The work of the plant based chemical engineer seemed much more interesting than that of a lab based chemist and I began to make enquires as to how I could get involved with their much larger experiments. I was sent to Edinburgh on a "Chemical engineering for chemists" conversion course and learnt many new skills. This enabled me to become involved with larger scale projects and a move from working in the laboratory to the larger scale Pilot plant.

Here I was involved with projects in attempts to react Bromine and Hydrogen together to produce HBr gas. This was done by initially igniting a hydrogen gas stream and then slowing introducing bromine gas until the reaction took place. In the pilot plant this gas was then dissolved in water to produce HBr acid. The issues were getting the correct ratio of $H_2$ and $Br_2$ to ignite in the burner to produce HBr acid which was $Br_2$ free. Steve Woolley and Mike Cross were the lead chemical engineers on this project which eventually resulted in the building of the HBr gas, acid and liquid plants at Amlwch.

Another project that I worked with Mike Cross at Ellesmere Port was on the recovery of organic vapours from tail gases. Again this involved the use of a pilot plant sized distillation plant which for the first time was being controlled by one of those new-fangled computers which none of us had seen before. Between experiments I remember going back to the office to try and get my head around how to write up a report using a new BBC B computer which we had just received. After many days pecking at a keyboard I finally got the hang of it and was able to produce a passable report. Also working with Mike Cross were John Roberts and Brian Lee, both of who spent some time later at the Amlwch plant.

This was also the time of industrial unrest. On at least one occasion the site process workers decided to go on strike. One of the areas which they were responsible for was the operation of the Down cell sodium plant. These were large vessels into which common salt (Sodium Chloride) was poured. The salt was heated until molten (600 C) and then electricity was passed through the cell resulting in the production of both Chlorine gas and Sodium metal. Although the process operators were on strike it was realised that the sodium cells could not be allowed to go cold and it was agreed that "Staff" could operate the cells during the day of the strike.

Volunteers were asked for, and being young, foolish, and I though fit, I was one of them. I remember going to the Ellesmere Port main site gate and having to pass, for the first time a picket line. Then being escorted to a part of the works I had never been to before. Here it was complete change of clothes, even underwear, a donkey jacket, thick gloves, visor, dust mask and ear muffs. I was sweating even standing there, but worse was yet to come. We were taken up to the sodium cell hall, which I can only describe as being like a scene from hell. About 30 of these gigantic cells each about the size of a large van were in two rows. The cells were full of molten sodium chloride through which electricity was passed to produce a flammable metal called sodium and a toxic gas called chlorine. The electricity was introduced to the cell via "live" Buzz bars. We were told, do not touch the buzz bars, do not get molten sodium on your skin, do not breath the chlorine vapour, and do not let the cells cool down. With these warnings ringing in our ears we guided by the sodium plant foremen to stand atop the cells with 6 foot iron stirring rods basically bashing any sign of solids forming back into the molten pot. We were only allowed to work like this for 20 minutes before we had to take a 10 min break to rehydrate with lime juice before getting back on the cells. It was the hardest work I had ever done and after a morning working I had already decided that the Octel should pay the

workers whatever they were asking for. The workers knew what they were doing and within a couple of days they returned to work with their increase.

Although I was involved with the pilot plant trails I also continued some laboratory based chemical research. One area which was becoming important was to find alternative products which could use the bromine from the Amlwch works, which were no longer going into leaded petrol antiknock compound. We needed to diversify into brominated intermediates. Around 1985 we began to look at the use of Bromine as a flame retardant. In the lab we tried to produce a range of compounds such as Polybrominateddipheylethers (PBDE), Hexabromocyclododecane (HBCD), Tetrabromobisphenol A (BPA). This was an exciting time in the Chemistry lab, with us having to learn about many new techniques, Mass spectrometry, Gas Liquid Chromatography (GLC) and the new High Pressure Liquid Chromatography (HPLC) were introduced to the labs as was thermal analysis techniques.

We even contributed to an international publication about brominated flame retardants. However it seemed as if the history of CLEAR would be repeated as environmental concerns about the build-up of bromine in the environment began to emerge.

During the research into bromine compound I began to become more involved with Amlwch works, often travelling to site to obtain information or to discuss results especially with the BLR plant.

In August 1989 I was given the opportunity to permanently transfer to Amlwch as a Process Technologist, working for Peter Hope the Assistant Process Manager who reported to the Process Manager Tony Waite who in turn reported to Bob Young the Works Manager. On the engineering side Stan Jones was the electrical engineer who reported to Bruce Gibson the maintenance manager who himself reported to Ben Sealey the works engineer. The Day process foreman was Jabas Francis and later Emlyn Williams.

The process operation side of the works was run with a 3 shift pattern, each shift working 8 hours. The shift foremen I remember were Gwynfor Owen, Hughie Roberts, Idwal Owen, Islwyn Jones and Dennys Lightfoot.

The process lab was run by Ken Edwards with Lorna Murry and Carl Wannop. The operators would take various process samples during their shift and bring them to the process lab for analysis to determine how the production process needed to be adjusted to stay within agreed boundaries. Process records where kept by Steve Mathews.

I had been learning Welsh for a number of years prior to this and decided that this was the opportunity to really improve my language skills. In at the deep end with some people for who English was a second language. It took a little while for my ear to get use to the language used by the operators and for them to become use to an engineer who spoke their language. I well remember the strained initial conversations I had with “JC” and some of the older BOT operators but through persistence on both sides the language eventually became easier.

By the time I got to Amlwch the HBr plant which I had worked on in the Ellesmere Port pilot plant had become a reality and was producing HBr gas. One of my first roles as Amlwch in 1989 was assisting Brian Lee with the commissioning of the DBM plant followed by training of the operators. This plant was one of the first to produce brominated derivatives and was viewed with a more than a

little suspicion by the operators of the "proper plants" at the BOTs and SOTs. These plants had been the bread and butter of Amlwch and were run by experienced operators who had been onsite for many years. They viewed the new plant with its program logic controllers, use of PC display screens for operation and only low production volumes as a toy.

The DBM plant consisted of a glass lined steel reactor into which Dichloromethane (DCM) was pumped. This reacted with HBr gas using Aluminium Chloride as a catalyst to produce a mixture of Bromochloromethane (BCM) and Dibromochloromethane (DBM). This mixture was evaporated from the reactor and cooled by scrubbing with fresh water to produce an aqueous mixture. Steam was then introduced to the mixture to remove any remaining DCM which was dried before being returned to the reactor for further reaction. The remaining BCM and DBM were then distilled in two other columns to separate the pure products which were run off in to stock tanks for drumming or tanker loading. The plant was operated with automatic values and a set of temperature and volume sensors which were relayed back to the control room and displayed on PC screens, from where the operator could monitor and control the plant. I spent many a night shift with operators like Garry and Alfie Williams, Chucks, Arwel and others commissioning the plant, sorting out issues and working out how to operate it in such a manner that would allow us to determine the ration of final products. Richard Cowell was also a member of the team. He was normally office based but had some experience of commissioning in a previous employment so was roped in.

One of my tasks was to learn and apply Statistical Process Control (SPC) techniques to process operations. This involved taking a series of samples from the plant, changing one or more operating parameters and seeing how the plant operation had changed. The aim was to determine which parameters were important in driving the plant to produce either more DBM or BCM. Initially the plant had been designed to produce around 2 tpd DBM and 0.5 tpd of BCM. However the demand and sales price for BCM had increased and using SPC methods we were able to increase the BCM production to over 0.75 tpd when required.

In 1989 the Octel Bromine business was sold to Great Lakes Chemical Company (GLCC) of the USA. This was seen as a good news for the Octel Amlwch site as it was hoped GLCC would help support the site in the production of more downstream bromine products. When the Works Manager, Bob Young retired a few year later GLCC brought in a works Manager called Mike Bick, who was also works manager at GLCC Newton Aycliffe.

The next major project involved working with Mike Cross to study the distribution of sea water in the Blowing Out Tower no 1 (BOT1). Sea water mixed with strong sulphuric acid and chlorine was pumped into the top of the BOT. The sea water then flowed into large wooden coffins and fell through randomly distributed ceramic packing. As it flowed through the packing, air from large fans was used to "Blow out" bromine vapour, which was fixed with Sulphur Dioxide to produce Primary Acid liquor (PAL) which was later used in the Steaming out Towers (SOT). The distribution boxes and ceramic packing had been in use since the BOT were first built and were known to be inefficient. Mike Cross's project was to study the process in detail and to improve the efficiency of the extraction process. This eventually resulted in the removal of ceramic packing from the BOT and its replacement with PVC structured packing which was more efficient. The wooden distribution boxes were also replaced with a mechanical spray system. Mike had an engineer called Alan Bryant working with him. I recall one occasion where Mike Cross wanted to be inside the BOT to observe

the distribution of the sea water spray in the wooden coffins and up from the ceramic packing. Mike wanted the sea water pumps and fans to be on but no chemicals in the plant. He eventually pursued the works Manager that this would be a safe operation and was allowed to run the experiment. Much of the design calculations were based on the work of Dave Schubert a theoretical engineer from America who spent some time with Mike on site doing calculations.

On 15th July 1995 in the middle of the BOT1 repack project rubber and adhesive being used in the BOT caught fire resulting in a fire and a large plum of black smoke. I was not working on that Saturday afternoon, but I remember driving from Benllech towards Amlwch with some family visitors in the car. As we left Benllech we saw a large black cloud starting to rise from the North of the island. As I got to Dulas I was more and more convinced that the cloud was coming from the Amlwch area and my fears about the BOT became real. By the time we got to Parys mountain there was no doubt in my mind as the road was lined with cars and people looking at the flames and black smoke coming from the Amlwch plant. The radio was also warning people to stay clear because of toxic fumes. I dropped my family off at home and immediately went into site. The first person I saw was Stan Jones who confirmed that the BOT had caught fire but the sea water pumps had now been started to put the fire out. A number of day process operators had had lucky escaped but there had been no serious injuries.

The BOT repack was delayed due to the fire investigations and need to obtain new packing materials etc. When it was eventually finished the new design was proved to be successful and bromine extraction efficiency had increased.

With BOT1 showing an increase in efficiency due to the new PVC structured packing a similar repack project was carried out on BOT2.

Following these significant projects the next few years were mainly about consolidation of the work of the site. I was promoted to Assistant Process Manager and was allocated the " top end" new plants (BLR, HBr, DBM) while Peter Hope retained control of the " bottom end" traditional plants (BOT, SAP, SOT).

Further attempts to increase efficiency of the plants also meant that I was given the opportunity to travel to visit some of the other Great Lakes sites. I remember being sent to the Great Lakes Site at Newton Aycliffe in County Durham to look at the operation of their bromine liquor recycling plant. I was also lucky enough to be sent to the Great Lakes brine plant in Little Rock,Arkansas USA to study their HBr burner. I was surprised at how little instrumentation and how few safety features the GLCC plant had compared to our plant at Amlwch. I also recall being picked up from the Motel and being taken to the GLCC plant by the Site manager called Greg ??. The journey was memorable as there was a loaded rifle sitting on the back seat of the 4*4 truck we were travelling in, just in case!

Around this time I was asked to become one of the "Duty Managers" for the site. These were senior managers who were on 24 hr call each week to assist the Shift Foreman in case of emergencies. The "on call" period started at 08:00 on a Friday morning when you took control of the Duty Managers case and phone from the previous carrier. You were then on call 24/7 until 8 am the following Friday when you could pass on the baton to someone else. During that period you had to be available to get to the Octel site within 30 minutes of a phone call.

I remember the first occasion I was on call and got handed a mobile phone which, with its battery, was the size of a small suitcase and weighed a couple of kilos. At the time I was a Scout Leader with the local Amlwch group and at the weekend had taken the Scouts to a practise session at RAF valley. Having just arrived at the camp the car phone rang and the Scouts marvelled at this new technology.

Most of the Shift foreman were very good with the duty managers and only called them during the night if there was a real need. Often the calls were mundane with the foreman asking for permission to call out crafts men for repair work or operators to cover sickness etc. On occasions a more pressing problem might arise. I recall one phone call in the early hours of the morning from Hugh Roberts about a small leak in the acid plant. As I was at home which was only 3 miles from the site I decided to go into site to investigate further. I can remember Hugh's surprise that a Duty Manager would actually turn up to site at that time of the morning.

On more than one occasion I got called out to road tanker incidents on a local steep hill. Bromine and DBE are very heavy liquids and road and rail tankers have to have internal compartments which help stop the liquid "sloshing" about during breaking etc. Drivers carrying these materials away from the site had to negotiate a long steep, 3 lane, uphill section just outside Moelfre. On occasions other vehicles would try and overtake the road tanker at this point, cut in and force the tanker to slowdown or miss a gear and stop. Once stopped on the hill the heavy liquid would fall toward the rear of the tanker leaving the front tractor wheels with insufficient grip to pull away. If there was any ice on the hill then a local heavy recovery firm would need to be called to help drag the tanker off the hill.

Some drivers also tried to gain sufficient speed on the previous downhill section to enable then to get up and over the uphill section without changing down the gears. This could also lead to a tanker stick on the hill. After a number of such incidents we had to issue instruction to the tanker drivers that they had to slow down and select low gear at the bottom of the hill which would then allow them to crawl up the hill without incident.

Another common call was from local residents who accused the tanker drivers of speeding either to or from the Octel site. I investigated a number of such reports and after checking with the drivers tachograph in the cab normally found the chemical tanker drivers were very careful about observing the speed limits all along the North wales coast and on Anglesey.

One unusual call I received was from the local fire brigade who had been called to an incident at Bull Bay beach. Many of the retained firemen were also Octel workers. Some divers had been working on a local wreck and had recovered some material which had started to smoke and give off fumes once it had dried out on the beach. They were concerned about a chemical incident and so had called Octel who had contacted me. I turned up to the beach to see if all cordoned off. The small amount of material may well have been phosphorous which had been used in the shells in ships guns. We just let it smoke away until nothing was left.

One of the other reasons for calling the duty manager was if there had been a chemical leak on site. The site had a number of leak detection and alarm systems. The two main ones were the site gas alarm and the offsite emergency alarm. The site gas alarm was to be sounded whenever a vapour leak, normally either chlorine or bromine, was detected and was to warn people on site about the leak. This alarm could be activated from a number of locations on site. Further information was

broadcast over the site portable radio system which most operators and site managers carried. If there was a possibility of a leak effecting people off site then a louder “off-site” emergency alarm system was activated from the SOT. In response to either of these alarms the shift leader would either despatch employees in full emergency kit to deal with the leak or if required would activate the off-site emergency plan and notify external agencies such as police and fire. These alarms were tested on a regular basis and on occasions the external agencies would be invited to take part in an emergency exercise.

The external response and exercise often included fire crews from the local stations who hence became familiar with the hazards on site. The main hazards were from the flammable gas in the ethylene store and the amount of chlorine which we had to hold in stock tanks for normal process operations. The amount of material we held meant that we had to be registered as a Control of Major Accident Hazards (COMAH) site which followed on from the Seveso II Directive.

Around 1995 work started to design, build and commission a new Multi Product Bromination Plant (MPBF) at the Amlwch site. This was a new departure for Amlwch for a number of reasons. Most of the existing products were made in a continuous process while these products were made using a batch processing technique in a glass lined reactor. Once a particular product campaign had finished the plant was designed so that it could be reconfigured to allow a second product to be made using a different selection of plant equipment. Most of the products made on the plant were sold to be used in the production of pharmaceuticals, fire retardants and brine well fluids. Some of the products made on the plant included, Calcium Bromide, BromoCholroPropane (BCP) and Methyl Bromide.

Some of the products which were made on the MPBF had health hazards different from that which we were used to dealing with. It was decided that younger men should be excluded from operating the plant because of potential fertility issues. This caused a number of industrial relationship issues which needed to be sorted.

One major process operational change at around this time was from a 8 Hr shift pattern to a 12 hour pattern. The Shift crew worked two 12 hour day shifts followed by two 12 hour night shifts and then 6 days off. The advantage for the company was that the same shift operators were often responsible for both the shut down and start-up of a plant for maintenance. From an operators point of view it meant less journeys to work and more days when you were not on call. At the same time as the change in shift pattern a change to the management structure was attempted. Rather than foremen who had been promoted from the operators ranks an attempt was made to bring in experienced

process engineers of degree level to act as Shift Process Managers (SPM). The SPM had more authority that the foreman had and depended less on the Duty Manager system. This was to my mind was only partially successful.

My role as SPM meant that I was spending 12 hours shift working with the operators. Hence you got to know more about them. It was a fact in Octel that a lot of the workers were in some way related to each other. The tradition was that “sons’ followed fathers into the same job. Brothers may be working on different plants on the same shift and may be related to someone else who worked for the maintenance crew. You always had to keep your wits about you when talking about other members of staff in case you had forgotten how they were related.

While working as SPM I was in charge of first B and then C shift. In an attempt to get to know the operators better we used to all meet at midnight on our first night shift to discuss what was going on around the plant and what needed doing. These discussions which I used to call “Toolbox talks” often lead to heated discussions and became known as “the parliament”. Often discussion and argument used to continue long after I had left the room. However they severed the purpose of breaking down some of the barriers which had previously existed. The operators I recall from this time include, Alan and Gareth Parry, Alun Hughes, Steve Owen, Garry Williams, Gary Wedlock, Roy Thomas and Alfie Williams, John Roberts, Hefin Williams and Paul Cross. The other SPMs were Ken

Another major incident which happed one Saturday afternoon in July 1997 was the release of a significant quantity liquid bromine from a stock tank into the Dilute Acid Tank (DAT) due to a faulty valve. The bromine evaporated resulting in a cloud of bromine vapour over the site. Local residents were advised to stay indoors as emergency service were called to site to deal with the incident.

Associated Octel was prosecuted jointly by the HSE and Environment Agency. The investigation by HSE and EA inspectors found that the parts of the plant were not using the required 'best available techniques not entailing excessive cost' (in BATNEEC). The company was charged with breaches of Sections 2 and 3 of HSWA and Section 23 of the Environmental Protection Act 1990. The total fine amounted to £180,000 and Associated Octel was also ordered to pay the HSE's and Environment Agency's costs of £80,000.

On 31st December 1999 a complete planned shutdown of the site was required to be completed before 12 pm midnight. This was due to fears about the possible implications of the "Millennium

Bug" on process instruments. In the early days of computers only the last 2 digits were used to record the year. ie 99 instead of 1999. Despite much work in the previous few years no-one could predict exactly what would happen to some electronic instruments as the year ticked over from 1999 to 2000. As a precaution the plant was shut down just before the end of the millennium and restarted a few minutes into the new millennium. As I was the Shift Process Manager that evening I well remember the eerily silence as we waited for the clock to tick over. As everyone else started to welcome in the new millennium with fireworks, we went around checking the time clocks on all instruments and then slowly restarting the plant.

When Great lakes (Europe) had taken over OCTEL in 1989 we had all felt that this would be good for the bromine business and the investment in increased bromine production and intermediates in the intervening year had been important to Octel. However we were all aware that Octel Amlwch was only a small Bromine producer in the world wide picture. We produced around 30000 tpa and at a price which was comparable to the bromine wells in the USA which had much higher initial starting feed stock.

However the Dead Sea Bromine (DSB) company had facilities based in Israel which had a much larger capacity and could produce bromine at a much lower cost due to the concentration of bromine in the Dead Sea brines. In fact the production cost was so low that DSB could deliver bromine to the UK and sell it at a price comparable with that Amlwch bromine was sold for. The competition for markets in the UK between DSB and GLCC was intense. To illustrate this the PEBOC factory at Llangefni which was only 10 miles from the Amlwch site used to purchase bromine produced by DSB and not GLCC.

GLCC senior managers from the USA visited the site in early 2003 and told local managers that the site was under threat of closure because of the financial situation. However a decision was taken to retain the Amlwch site while closing the Newton Aycliffe site in County Durham.

In September 2003 GLCC announced that it had entered a long term strategic sourcing agreement from Dead Sea Bromine Ltd in Israel. Octel Amlwch Works manager Brian Macconnachie said bromine was present in sea water off Amlwch at only 65 parts per million but in the Dead Sea it is present at 14,000 parts per million and that this agreement further threatened the site.

In October of that year I had just finished a night shift and received a call from Bruce Gibson to attend an important meeting on site the following day. At that meeting it was announced that GLCC had decided to close the Amlwch site.

Production continued at the site until March 2004 when most of the shift men, including myself were made redundant. A small number of people were retained to assist in the decontamination and decommissioning work.

Some people had been at Octel all their working lives and were ready to retire so the redundancy came a nice bonus for them. The rest of us needed to find new work. Some of the process operators went to work as process operators PEBOC in Llangefi, which itself later closed down in 2008. Other went to Anglesey Aluminium which also closed a few years later. Perhaps some of the luckier ones went to work at the Wylfa nuclear power station where they are were still employed in 2015.

Most of the engineers at the plant took up contracting in some form or another, often having to move around the country to find suitable jobs. I had decided that after 25 years in the chemical industry it was a time for a change. I took the opportunity to retrain and obtained new qualifications in IT. A week after leaving Octel I was given the chance to start work in the ICT department at Anglesey County Council. Over the next 10 years I was lucky to be able to receive additional training and responsibility until today I am the head of ICT for the Council.

I consider myself lucky that I have been continuously employed since leaving University over 36 years ago. I have had to adapt from Chemistry to Chemical Engineer to IT manager. But in all that that time I consider the time as SPM at Amlwch as the most enjoyable.

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Gwalchmai March 2015.