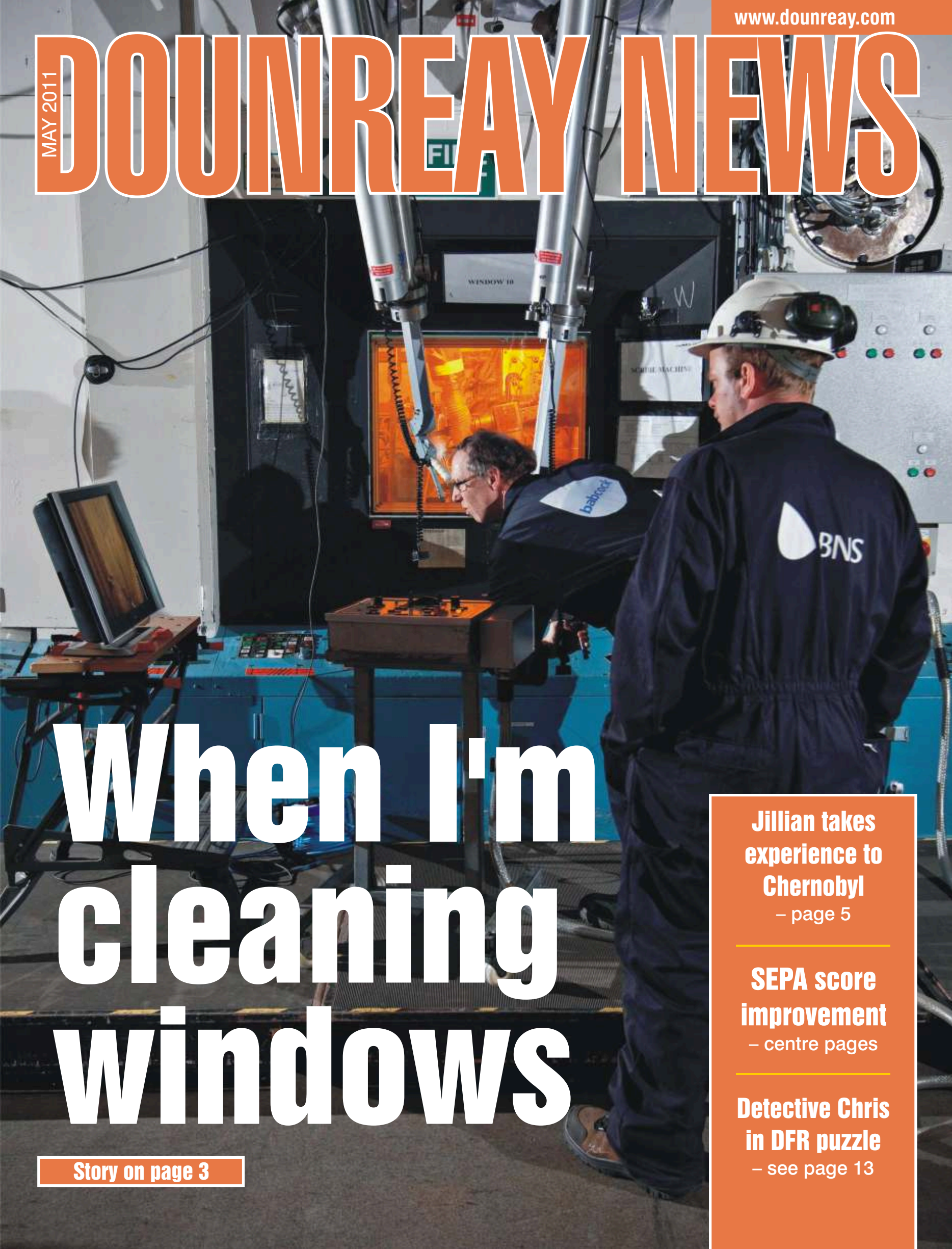


MAY 2011

DOUNREAY NEWS



When I'm cleaning windows

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Jillian takes
experience to
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Detective Chris
in DFR puzzle
– see page 13

ON THE RECORD

by **Simon Middlemas**
DSRL Managing Director

Events elsewhere are a reminder of just how important our work is to dismantle Dounreay.

The accident at Fukushima, a few weeks before the 25th anniversary of the explosion at Chernobyl, is a stark reminder of the hazard.

We have our own major hazards here. Decommissioning is a priority, not just for us but the Nuclear Decommissioning Authority, regulators and the UK Government, too.

One of the biggest is liquid metal. A few years ago we had some 1800 tonnes. Now we are down to the last 30 tonnes or so.

Every second, 20 million becquerels of the hazard flows out of the experimental fast reactor and into the chemical destruction process.

Next year it should be gone, opening up a new phase in dismantling the reactor itself and getting out the last of the nuclear material.

That is real hazard reduction we can be proud of.

Our performance measures this year – and the financial rewards that go with them – are firmly centred on reducing the hazards further.

My job, everyone's job, is to make sure we deliver that without harm to people or the environment.

None of us can afford to get this wrong.

The hazards here may be different, but the consequences of getting it wrong are just as severe.

We're working the programme as hard as we can to decommission even more of these hazards sooner. The more these hazards are reduced, the safer this site becomes. ○

Particles barge due to return

The clocks have gone forward, and the daffodils are in bloom, which means that summer is on its way. It also means the resumption of DSRL's work to detect and remove radioactive particles from the seabed off the coast of Dounreay.

Senior project manager **Bill Thomson** explained: "The offshore retrieval programme for 2011 is expected to begin in May. The company that carried out the work last year, Land & Marine, will return to the Pentland Firth and resume working during the summer months.

"I expect that at least a further 16.5 hectares of the seabed will be covered. The areas we intend to cover this year have been discussed with the Particles Retrieval Advisory Group and

include an area at the eastern edge of the fishing exclusion zone.

The monitoring and particle retrieval equipment are mounted on a tracked vehicle operated from a 60m long barge moored offshore from the site.

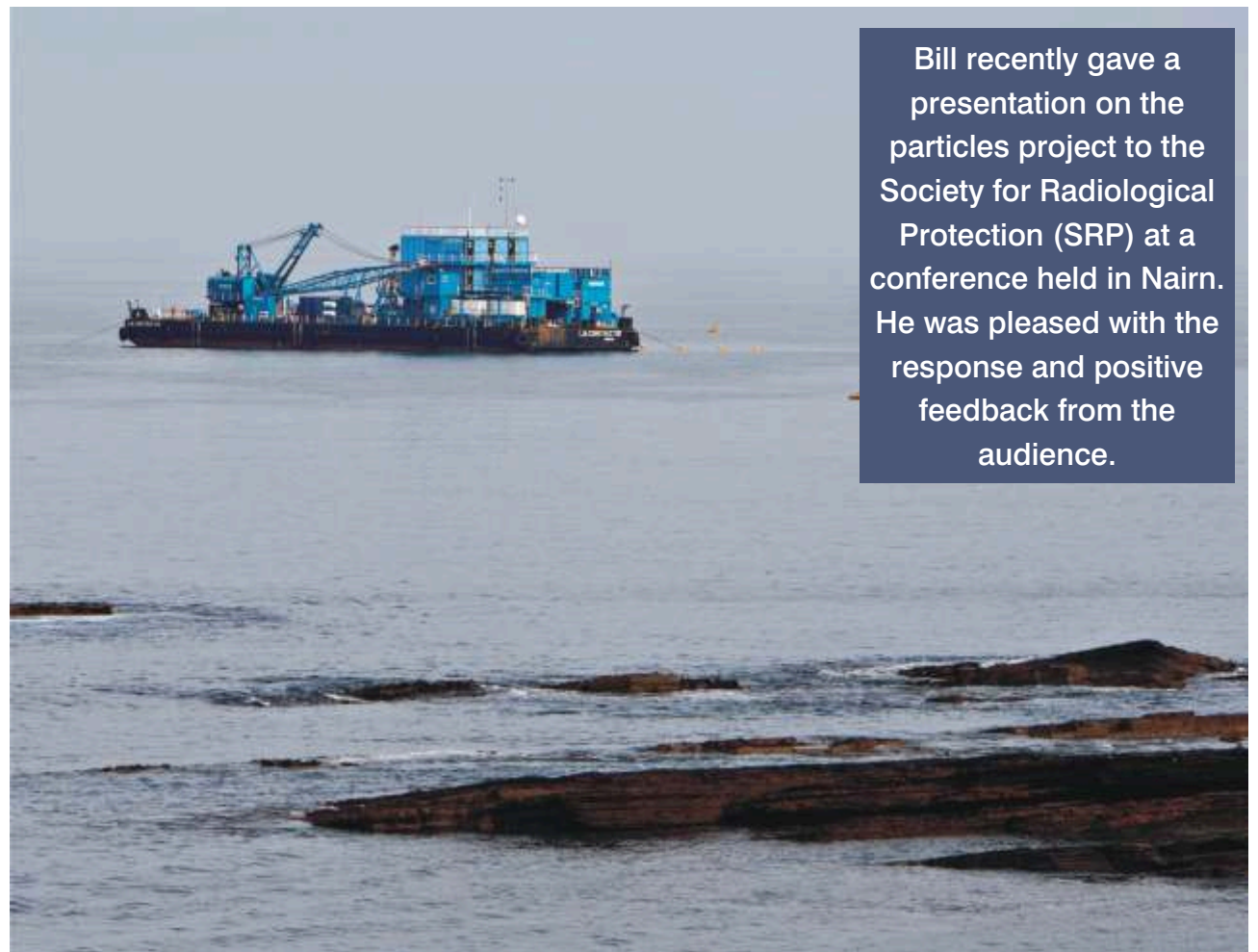
The barge is moved by a tug which will remain on station at all times for safety reasons and to relocate the anchors that hold the barge during the monitoring and retrieval operations.

At times the barge may return to Scrabster Harbour, if bad

weather is forecast or if required by operational issues.

Last year's campaign started later than intended, at the end of July, but the weather remained favourable into October and a total of 429 particles were retrieved.

The particles are fragments of nuclear fuel from reprocessing operations, which were discharged to sea during the 1960s and '70s. The majority of the most active particles lie within an area of seabed approximately 60 hectares in size. ○



Bill recently gave a presentation on the particles project to the Society for Radiological Protection (SRP) at a conference held in Nairn. He was pleased with the response and positive feedback from the audience.

Send your stories to the editor at:



sue.thompson@dounreay.com

"I expect that at least a further 16.5 hectares of the seabed will be covered."

Robots cleaning windows

Although still using a bog standard 'chamois' and a bit of elbow grease, this is far from your normal day to day window cleaning job.



Norman Arrowsmith manipulates the squeegee to get the window sparkling again

For the first time in over thirty years the double glazed shielded glass of the PFR irradiated fuel caves is being wiped clean of thick layers of dust and oxides from highly reactive sodium metal with the help of remotely controlled robotic arms.

The long line of imposing glass fronted caves are used for preparation and handling of redundant radioactive components for storage or disposal as waste.

The double glazed units have built up dust and sodium deposits over the years, prompting some thought into a cleaning technique that would allow the heavy $\frac{3}{4}$ tonne inner window pane to be lifted and wiped clean whilst maintaining the safe radiologically controlled atmosphere inside.

The thick dirty coating is simply being wiped off using a household chamois cloth attached to a specially designed and purpose built lifting arm controlled with a robotic manipulator operated by trained

operators.

Alex Potts, DSRL senior project manager, explained: 'The difference in the glass is striking and what was a hazy reflection is now a clear shining view through the window into the cell.'

"After some innovative thinking

and design planning the results speak for themselves. The project team are doing a great job with this seemingly simple task, not without its challenges, that will make the decommissioning programme for PFR easier to carry out as the plant is pulled apart." ○



Before cleaning operations began

"What was a hazy reflection is now a clear shining view through the window into the cell"

News in brief

Dounreay responds to Japan aid request

At the request of the NDA, Dounreay has participated in sending radiological measurement and protection equipment to assist the Japanese authorities at Fukushima.

The NDA was approached by the Department of Energy and Climate Change after the Japanese Embassy asked for assistance with the supply of specialist equipment.

Sellafield Sites Ltd co-ordinated the collection of available stock from UK sites on behalf of the NDA. They approached DSRL on Saturday with a 'shopping list' of equipment.

A van carrying surplus respirators, hand-held radiation survey equipment, personal dosimeters, dust masks and Tyvek suits from Dounreay arrived at Sellafield on Sunday March 20.

DSRL continues to retain sufficient stocks to meet its own equipment requirements and the site's emergency response capability.

Tony Fountain, NDA chief executive said: "I would like to thank and congratulate those who worked throughout the weekend at Sellafield, Dounreay, Magnox and INS to harness their resources and provide assistance to our colleagues in the Japanese nuclear industry at this very challenging time."

NDA publishes business plan

The Nuclear Decommissioning Authority has published its annual business plan, setting out the clean-up priorities at sites such as Dounreay over the next 12 months and beyond.

NDA chief executive **Tony Fountain** said that the plan represented a solid year of activity across the estate, with some real challenges for their contractors to meet.

Key tasks at Dounreay highlighted in the report include the demolition of D1207, progressing the decommissioning of the DFR fuel pond, the start of construction of the new LLW disposal facility and supporting the competition to find a new PBO for DSRL.

The site's budget for 2011/12 will be up to £159 million.

"The business plan sets us real challenges to build on the solid progress we've made already to reduce the major hazards at Dounreay," said DSRL managing director **Simon Middlemas**.

"I'm confident we will continue to deliver hazard reduction safely to the NDA and move ever closer to the day when this site is safe for future generations."

Pay claim dismissed

DSRL has successfully defended an equal pay claim raised by a former worker. The case was heard in Wick by an employment tribunal which issued its verdict last month.

Michael Dunnett, the company's head of human resources, said: "DSRL believes it is a fair employer committed to equal treatment of all employees.

"We strive to keep our policies and pay systems compliant with ever-changing employment law developments and have recently introduced improved pay and grading arrangements that further strengthen our arrangements on equal pay for the future." ○

Getting on with the job

There are lots of big, important jobs going on all around the site.

Then there are those jobs that may be less visual, but are equally important in terms of getting the site gone.

Dounreay News sent its roving reporter out with a camera to get some photos of people quietly getting on with the job. ○



JCL mechanical technician **Jason Orton** extends the downpipe drain at the shaft.



James Swan (left) of JGC and **Leslie Watt** of Babcock moving redundant electrical equipment from the 33ft level at PFR.



Jimmy McAdie of JCL unblocking a drain at PFR.



Tam Stewart (left) and **Donnie Mackay** of JCL finishing off the new fence at the D3200 site.



Dave Carrahar of Doosan Babcock getting ready to enter the sludge solidification plant at the PFR effluent facility.

Dounreay trainer takes experience to Chernobyl

DSRL's **Jillian Bundy** has returned from a three-day visit to Ukraine where she joined other international experts at a workshop on training to decommission the Chernobyl nuclear power plant.

The training and development manager was one of four foreign speakers invited by the International Atomic Energy Agency to share their experience of decommissioning nuclear sites with their hosts.

The conference explored the training and development programmes needed to decommission a nuclear power plant.

"Decommissioning isn't so much about reskilling – the skills needed to decommission a nuclear plant are pretty similar to those need to operate it. It's about the mindset that goes with it," explained Jillian.

"It can be difficult for people to make the adjustment, to become enthusiastic about dismantling something they may have spent their life building up.

"This can be especially true in areas where the plant is the economic mainstay. People can become fearful of what decommissioning will mean economically and socially to their families and neighbourhood.

"So it's essential to develop a culture that sees decommissioning as a long-term opportunity to develop new expertise and the prospect of prosperity beyond the clean-up.

"Dounreay has been through the transition from operations to decommissioning.

"The mindset today is different from what it was a decade or so ago when the first proper decommissioning plan was published.

"There is a real sense of purpose around a clear vision – of reducing and destroying major chemical and radiological hazards that pose a risk to the community and leaving the site in a condition that will be safe for

future generations.

"We've destroyed more than 1.6 million litres of liquid metal, demolished over 160 facilities and processed thousands of tonnes of scrap as radioactive waste.


"We set ourselves a goal of becoming the best-performing site closure company in the UK by making every pound work harder to reduce the hazard faster."

The next transition is from decommissioning to site closure.

"I explained how we are supporting local development agencies to put in place the infrastructure needed to regenerate the local economy and sustain the area when the site has closed," added Jillian.

"We've put in place programmes to help workers begin planning now for their eventual exit.


"There is a confidence, both in your own ability and the marketability of the area to inward investors, that comes from successfully taking apart a complex site like this.

"My message to the people at Chernobyl was to be inspired by the opportunities that come with decommissioning, not to be afraid of them." 

Four reactors were built at Chernobyl. Reactor no. 4 exploded in April 1986. The other three reactors were shut down between 1991 and 2000 and efforts are now focussed on preparing for their decommissioning.



Site News in brief

- On March 31, the site had recorded 293 days, or 2.81 million man-hours, without a lost time accident.
- Three spent fuel cans have been removed from the PFR buffer store, completing the PBI for this project. Equipment is currently being developed to allow the irradiated fuel cell crash glass windows to be removed and cleaned, to improve visibility into the cell.
- The DFR pond has been successfully drained and five tonnes of sludge removed, earning a PBI for the project.
- DSRL started to measure iodine 131 in the local environment, arising from the Fukushima accident in Japan. DSRL reported to the NII on the site's seismic and tsunami resilience.
- Dounreay has hosted a number of visits associated with the Department of Energy and Climate Change's requirement for improved security within the civil nuclear estate.
- The Dounreay Cementation Plant cemented 514 drums of raffinate during the financial year ending March 31.
- The failed 11kV cable has now been replaced.
- The site's new half-height ISO container loading facility is now operational.
- In D2001 a total of 366 ILW flask moves were carried out during the financial year ending March 31.
- The DFR Nak disposal plant processed 35.2 tonnes of primary NaK, leaving just over 18 tonnes to complete.
- The PFR sodium inventory disposal facility has cleaned up over six tonnes of material contaminated with radioactive sodium, to enable it to be consigned as low level waste.
- In March, the site hosted a familiarisation visit by Councillor **Robbie Rowantree**, Lib Dem candidate for Caithness, Sutherland and Ross, and a familiarisation visit by **Dave Moodie** and **Andy Rintoul** of HM Inspectorate of Constabulary. 

"There is a confidence, both in your own ability and the marketability of the area to inward investors, that comes from successfully taking apart a complex site like this."

NDA director “impressed” with site

The NDA's new delivery executive director **Mark Lesinski** visited Dounreay for the first time since taking on his new role.

He was attending the presentation of DSRL's lifetime plan, and also took the opportunity to visit the reactors, and share with the management shared his views on how the NDA will work with the site contractors following its organisational review.

“How we achieve our goals is just as important as what we do,” he said.

“The NDA has adopted a set of values and behaviours that permeates the organisation and provides the foundation for a culture of collaboration and working together. We expect the same behaviours from our SLC's and PBO's as we do for our own people.

“The NDA site facing teams act as a conduit for all NDA requirements and are crucial to making sure we are all on the same page.”

Clearly stated requirements and incentives will be key to ensuring continued delivery over this financial year, Mark stressed.

“We employ world-leading contractors to accomplish our mission,” he said.

“The NDA will be clear about our desired outcomes and how we want to see them delivered, providing the right contract

structure and incentives.

“We will continue to drive performance using methods which reward good performance and do not reward poor performance.”

On his tour of the site, Mark commented favourably on the work being carried out at Dounreay, stressing that performance has been good over the past year.

“I was impressed with the physical works going on in DFR and the progress being made. It is an example of the quality of the work going on here in the north of Scotland.

“Decommissioning work at Dounreay is of the highest standard in international terms. I have been very pleased to experience this first hand, and to speak to those carrying out the work and seeing how proud they are of their achievements.

“The plans presented for the coming year prior to transition to a new PBO looks appropriate and sound.

“You've got a good team here, good leadership, and you're doing a good job. I'm looking forward to hearing of continued progress at Dounreay over the forthcoming year.” ○



Mark Lesinski on his first visit to Dounreay as NDA's Delivery Executive Director, on a tour of DFR with Mike Brown, Reactors Decommissioning Manager, DSRL.



trusted to deliver™

Nuclear Insight

The internal newsletter for Nuclear Business Unit employees



Nuclear Insight published

The Spring issue of Babcock's Nuclear Business Unit quarterly publication, Nuclear Insight, has been published, and is on the intranet in PDF form. Printed copies are also available around the site, in the Welcome Break, in

Communications, and from the managing director's office. Babcock would be interested in what you think of the newsletter – please let **Sue Thompson** have any feedback which will be passed on. ○

Giant tanks installed for reactor dismantling

Installation of two new twenty-seven tonne nitrogen tanks for the Dounreay Fast Reactor breeder building marks another notable step forward in preparation for taking apart the redundant reactor.

The breeder removal requires nitrogen gas as part of the process to dismantle the elements and package the slugs.

The existing nitrogen plant at DFR could not supply sufficient gas to the new purpose built building and following a review of the options a decision was taken to install new equipment.

Once a suitable position was agreed which allowed access for road tankers the planning, design and excavation works began.

Installation of the tanks was completed by DSRL and contractors BOC, MTDS and Barnies on behalf of the NDA, in time to meet a performance target for the £160k project.

Its an essential element of the breeder removal process as it provides an inert atmosphere for the process cells and NaK cleaning process.

The next phase of work will be the installation and commissioning of the Magnox flask leak testing equipment.

This is a £250K contract and involves installation of specialist equipment and commissioning with a "real" Magnox flask with support from Magnox to design a flask specifically for the breeder removal process.

Following this DSRL will be gearing up for the testing and commissioning phase of the breeder removal. ○



Archives review shreds 17 tons of paper

When Dounreay's Archive Manager, **Ian Pearson** announced to his staff that he was introducing a new "keep fit" strategy for the department they had no idea what it was.

But three months and nearly seventeen tons of paperwork later they are all feeling fitter.

It seemed a simple task to rearrange some of the 27,000 archive boxes full of records dating back to the 1970's but then the "domino" factor came into effect. As the archive facility is so close to capacity, moving just one box meant moving another and another, then another, and another, then another...

The key to freeing up valuable space was reviewing the contents of 1600 boxes which had arrived at Dounreay in 1994 from Risley when their archive department closed.

What seemed like an act of generosity then materialised into a "legacy of redundant old smelly papers of a fast diminishing value", says Ian.

Following a review by Ian in

consultation with DSRL's second reviewer, **Rachel Coghill**, the conclusion was to despatch the majority of records to that great archives in the sky. In other words, the bin.

By their nature of subject matter this wasn't any old bin however and each record was securely deposited in classified waste sacks for shredding and recycling.

Ian acknowledges that the job could not have been completed without valuable support from JCL.

He said: "Archiving is much like gardening and benefits from thinning out with a little weeding sometimes."

The Archives team regularly discover records inaccurately listed by their owners or just plain wrong.

Ian pointed out that it is not the actually the record that is important but the information contained within

the record.

"The real danger of losing information is the fact that we as a society create too much and are frightened of disposing of any."

After Ian and his staff finished moving the huge mound of paperwork they are confident in having met this fear and overcome it. The bonus of course is that to get this amount of exercise they would all have had to sign up at the gym. ○



SEPA score shows environmental improvement

Every year, Scotland's environmental regulator reviews how well companies have managed radioactive substances under their control and produces an "operator performance assessment".

Last year, SEPA scored DSRL at 21 out of a possible 30 marks, an improvement on previous assessments and a "satisfactory" report card.

Dounreay News talked to the people involved in three projects whose performance made a real difference to the assessment.



Andy Swan (left) pores over the results with Andy MacInnes, manager of the liquid metal destruction plant.

Andy Swan is responsible for one of the most toxic waste-streams in Scotland, not just at Dounreay.

He's the senior facilities manager at DFR where one of the most important decommissioning jobs is destroying the liquid metal in the primary cooling circuit.

The alloy of sodium and potassium is a serious health hazard chemically. Add the contents of a burst fuel pin and it becomes a major radiological hazard as well, making its destruction one of the site's biggest priorities.

"When we were designing the plant to destroy this material, we thought we could get the level of radioactivity in the effluent discharge down to 1200 or so becquerels per millilitre," explained Andy.

"SEPA thought this was a reasonable, too, and set our discharge limits around this.

"Our performance has been much better than anyone could have anticipated. The actual level of radioactivity in the effluent is down to less than five becquerels per millilitre, which is a phenomenal improvement on the design calculation.

"The clean-up process is working so well that we are near the limits of detection for radioactivity in the effluent. The research effort that went into the design of this plant really has paid off."

SEPA is now expected to tighten up the limits on the effluent discharge to reflect the actual performance of the plant.



SEPA score shows environmental improvement

Graham Beaven



There's dozens of ventilation systems across site that extract air from areas where radioactive material is held.

Debris can accumulate in these systems if they are not maintained, making them less efficient and increasing the risk of radioactive particulate escaping.

SEPA became concerned about their condition several years ago, so the site carried out a thorough inspection of the end sections beyond the last filters.

Some were in a very poor condition. At PFR, workers removed 3.5 tonnes of bird droppings from the base of the main stack. Some ducts had corroded and were replaced.

It was a major piece of work that took more than three years to complete.

The ventilation system is now in a much better condition and there's a schedule for its maintenance to make sure it stays that way.

"The site had got itself into an unsatisfactory position where the regulator was unhappy," said **Graham Beaven**, who was in charge of the work.

"It was a big piece of work that took several years to complete, but the results should give everyone more confidence in future about the standard of the ventilation systems across the site."

Elizabeth Irwin



It's not enough for someone in charge of a hazardous plant to comply with environmental regulations – they have to be able to demonstrate it, too.

There was quite a variation between plants, so three years ago work started on a project to install a standard system in the management of every hazardous facility.

It's known as the environmental support file and does for environmental compliance what safety cases do for nuclear compliance.

DSRL promised to have support files ready for each of the 29 hazardous facilities by June 2010. This was achieved. Since

then, more and more of them have gone "live" and are now used routinely as tools to monitor and drive compliance.

The files make internal and external inspections easier, providing reassurance about compliance with environmental conditions in a much more transparent way.

"The problem wasn't that facility managers weren't compliant with the authorisation, the problem was the ease with which they could demonstrate that," explained **Elizabeth Irwin**, an environmental adviser.

"The ESFs make a real difference." ○



Nuvia achieves RoSPA Gold for 14th year

Nuvia are delighted to announce that it has been awarded its 14th consecutive RoSPA Gold Award and its 4th President's Award.

David Rawlins, RoSPA's awards manager, said: "RoSPA firmly believes that organisations that have demonstrated their commitment to continuous improvement in accident and ill health prevention deserve recognition.

"Nuvia Limited has shown that it is committed to striving for such continuous improvement and we are delighted to honour it through the presentation of an award."

Nuvia's Head of Assurance **Mike Lewis** thanked the staff for their hard work "in planning for safety, which has given us the excellent record we currently have."

He added: "Next year, should we be successful, we will qualify for the RoSPA Order of Distinction so there can be no letting up in our efforts." ○



Training at Naver

To arrange your training please check the training event calendar and SAP for dates, or call us at Naver on 01847 804735. ○

May	Course Title	Venue
1	Basic criticality	Dounreay
4	MEWP scissor	Ormlie
5	Site induction	Dounreay
5	Operational monitoring theory training	Naver
5	MEWP boom	Ormlie
6	Confined space operator	Dounreay
6	Basic radiological induction	Dounreay
6	Overhead crane refresher	Ormlie
7-8	Alkali metals handling training	Dounreay
8	Manual handling	Naver
11	Confined space management	Naver
11	MEWP scissor	Ormlie
12	Site induction	Dounreay
12	MEWP boom	Ormlie
13	Mobile towers (PASMA)	Ormlie
14	RPS refresher	Dounreay
14	Mobile towers (PASMA)	Ormlie
15	Emergency first aid	Dounreay
18	Banksman	Ormlie
19	Site induction	Dounreay
19	Rider pallet truck (Bagnal)	Ormlie
20	Basic radiological induction	Dounreay
26-27	Windmills	Naver
26	Site induction	Dounreay

Arrow Word

Pointed Projectile	Type Of Dinosaur	Control Of	Brush	Clear Speech	Paw	Footwear
▶		▼	Next After Seven	▶		
Senseless	Water Holes	▶			Female Inheritor	Beam Of Light
▶			Opposite One Of Two	▶		▼
Sullen	A Blockbuster	▶		Seed	Entire	
▶			Accent	Oneness	▶	
Very Masculine	Height	▶				Utter
▶				Units	▶	▼
Small Fruit	Entering	▶			Watering Place	
▶				Beady	▶	

This is a variation on the crossword, with the clues contained in the puzzle itself. Arrows are used to indicate which run the clue applies to, so you should follow the direction of the arrows when putting in your answers.

Answers in next months issue

+ OHD BULLETIN +

There is no doubt that a little sunshine, warmth and light makes things a lot more pleasant. Good weather, however, brings its own problems.

People may believe they become 'hardened' to the sun or that the weather in the North of Scotland is not hot enough to present a health risk, especially since the past few summers have not had prolonged periods of hot dry weather. But over-exposure to the sun can increase the risk of outdoor workers becoming burnt or even developing skin cancers.

Small amount of sun shine on a regular basis can be beneficial. However, everyone should avoid prolonged exposure.

The sun rays are at their strongest between 11am and 3pm. A sun screen of at least SPF 15 or higher is recommended. Site stores stock SPF 30 and should be applied as directed on the product.

Hay fever is another consequence of the warmer months. It's a common condition affecting around 20% of people in the UK. It occurs in spring and summer, when there is more pollen in the air. Trees, grass and plants release pollen as part of their reproductive process.

Allergic rhinitis is a collection of symptoms, mostly in the nose and eyes, which occurs when you breathe in something you are allergic to, such as dust or pollen, making the inside of your nose inflamed.

People with hay fever can experience their symptoms at different times of the year, depending on which pollens or spores they are allergic to. It cannot be cured completely, but a number of treatments are available to relieve the symptoms.

Symptoms vary in severity and you may experience some years worse than others, depending on the weather conditions and the pollen count. Common symptoms include:

- frequent sneezing
- runny or blocked nose
- itchy, red or watery eyes
- itchy throat, mouth, nose and ears.



The weather has a huge effect on hay fever. The amount of sunshine, rain or wind affects how much pollen is spread around. On humid and windy days, pollen spreads easily. But on rainy days, it may be cleared from the air, causing levels to fall.

A range of products are available to treat the symptoms or hay fever. Some may be prescribed by your GP, but others are available over the counter in most pharmacies. The best way to decide what treatment is most appropriate for you is to speak to your GP. This is particularly important if you have asthma as well, because hay fever often makes asthma symptoms worse.

OHD stocks a range of antihistamine tablets, eye drops and inhalations suitable for unpleasant hay fever symptoms. If you have forgotten your antihistamines we can tide you over until you get home or if you are feeling miserable and blocked up we can help ease your symptoms with a refreshing menthol inhalation (Nelson's inhaler) or soothing eye drops.

If you require any further help or advice please contact a member of the OHD team on extension 2187. ☎

Tips for protecting yourself in the sunshine:

- clothing forms a barrier to the sun's harmful rays
- wear a hat that covers the ears and the back of the neck
- stay in the shade whenever possible, especially at lunch times
- use a high factor sunscreen
- drink plenty of water to avoid dehydration
- check your skin regularly for any unusual moles or spots



It is very difficult to completely avoid pollen or spores. However, reducing your exposure to the substances that trigger your hay fever should ease the severity of your symptoms:

- Avoid cutting grass, playing or walking in grassy areas, and camping
- Wear wraparound sun glasses to stop pollen getting into your eyes
- Change your clothes and take a shower are being outdoors
- Try to stay indoors when the pollen count is high
- Keep windows and doors shut in the house
- Do not keep fresh flowers in the house
- Vacuum & damp dust regularly

Caithness Chamber at centre of new initiative

Caithness Chamber of Commerce CEO **Trudy Morris** reports on the recent activities at the Chamber.

CCC has taken on an additional office, moving its head office to 66 Princes Street in Thurso. Two new staff have also joined the team with another two due to start shortly.

Nicola Dreaves took up her appointment as business development manager at the beginning of March. She has a diverse background of skills and a knowledge of business management and marketing.

Alan Steven has been appointed as our town centre development officer. He will be responsible for taking forward a two-year programme to revitalise the town centres in Wick and Thurso. The £120K project will look to stimulate new opportunities for the local retail sector, promote the areas to tourists and encourage inward investment.

Alan, a native of Wick, has experience of working in partnership with others to successfully deliver funded projects as well as experience of the retail sector.

During the latter part of last year and the beginning of this year the chamber has secured funding amounting to £2.6m from various

agencies to deliver ambitious projects in Caithness and north Sutherland. The projects will help deliver a multi-agency action plan for the area. The bulk of the funding is for an ambitious skills transition programme to equip Caithness and north Sutherland workers with the skills to move into jobs due to come on stream in emerging industries as moves to diversify the far north economy gather momentum.

The £1,148,875 grant from the European Structural Fund, confirmed in March, completed the funding package. Due to benefit 400 people a year, the £2.3 million initiative, 'Make the Right Connections' is a three-year programme put together by agencies involved in efforts to combat the rundown of Dounreay.

The initiative is being led by CCC with support and matched funding from the NDA, DSRL and Skills Development Scotland.

Working through the Caithness & North Sutherland Regeneration Partnership, the chamber will match up existing working with the emerging new job opportunities. A key part of this is to quantify the area's current skills base and



establish how this needs to adapt to fill openings in growth areas in energy and business services.

This programme will minimise the socio-economic impact of decommissioning on the local community by re-defining the skills mixes within the workforce to benefit, enable and create a sustainable community across the north Highlands. It will harness unique skills mixes within the Dounreay workforce and the local supply chain to retain skills in the area, adapt the workforce's capabilities, boost employment

and generate new enterprises. It can play a key role in diversifying the economy into non-nuclear sectors such as marine energy, engineering, manufacturing and business support services.

This is an excellent example of partnership working for a common goal – private and public sector working together. The chamber is delighted to lead this ambitious programme which it believes can be a blueprint for others and help shape the way both private and public sector look at skills transition in the future. ○

Charity Fund helps local groups

Dounreay Employees Charity Fund recently donated money to two local groups.

Mount Pleasant P7's received £400 towards their forthcoming school trip to Fairburn and Wick Model Yacht Club received £200 towards their recently-held annual open competition.

Dounreay Employees Charity Fund is funded by staff who work at Dounreay with a monthly deduction from their salary. A committee, formed by members meets every two months to review applications from local charities and non-profit making organisations.

Should you wish to apply to the fund then please contact either the chair, **John Deighan** or secretary, **Marie Mackay** at dounreay.com, Traill House, 7 Olrig Street, Thurso, KW14 7BJ for further information. ○



Committee member Gill Perry (back row, 2nd left) is pictured here presenting the cheque to Mount Pleasant P7's who are accompanied by their teacher Mrs Firth.



Committee member Donald McWilliam is pictured here presenting the cheque to Fional Miller of Wick Model Yacht Club.

Chris turns detective in DFR valve puzzle

Design engineer **Chris Shaw** turned to detective work when he needed vital information for a DFR project.

He was part of the Reactors project investigating the practicalities of cleaning and removing the permanent cold trap loop (PCTL), and his brief was to investigate the long length liquid metal valves.

Digging through the old drawings proved almost useless as they were such poor copies. However, they did show the name of the company responsible for designing and manufacturing the valves.

Chris reveals: "An internet

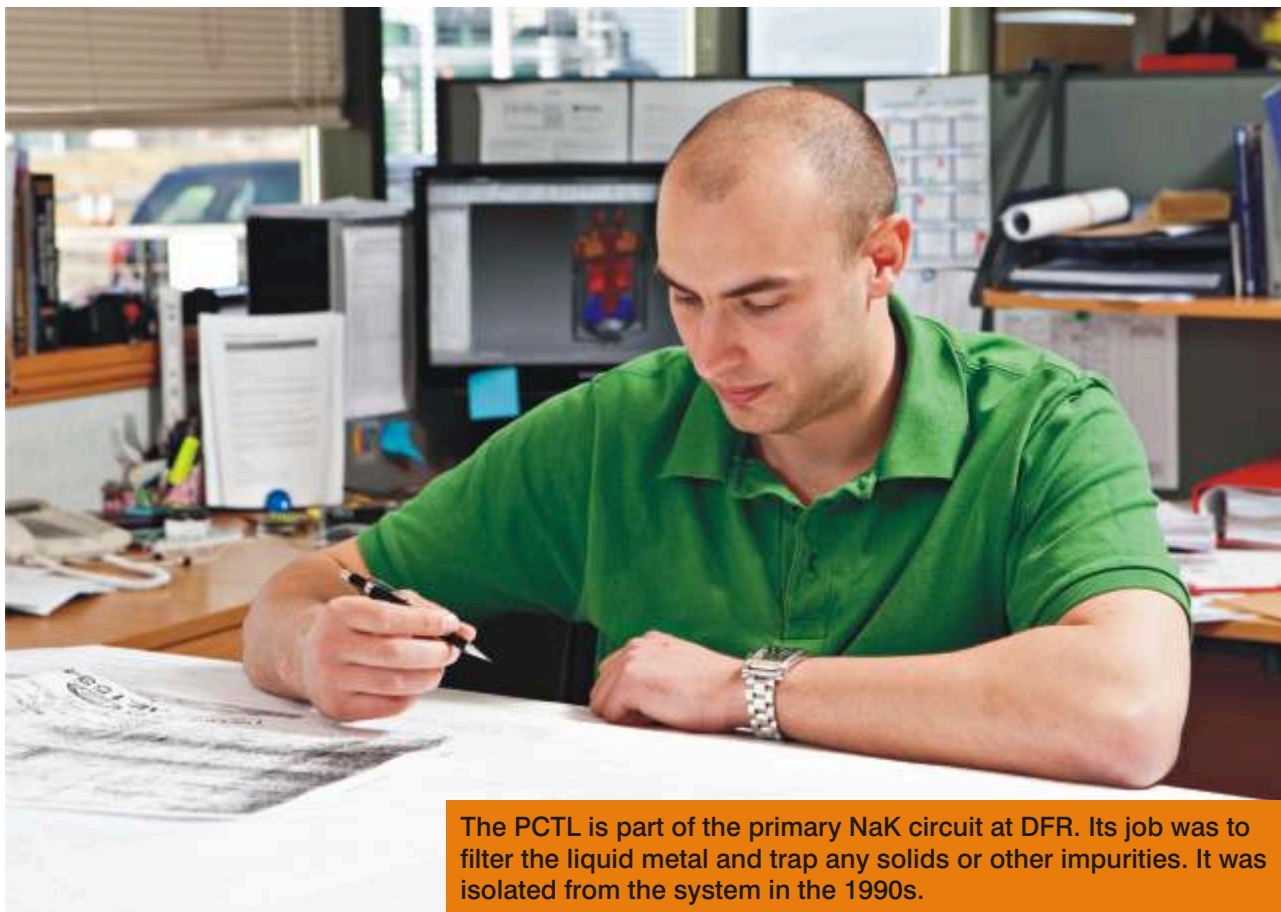
search showed that a company with a similar name – Palatine Tool & Engineering Company, now Palatine Precision – was still in existence in England. I checked their company history and found details of their original work on the valves.

"I gave them a ring to see if they still had the original drawings. I thought it was a bit of a long shot as they were drawn in 1961, but lo and behold they did have copies, which they sent me."

Having good quality copies

enabled Chris to build a 3-dimensional animated image of the five-foot valve. Its the starting point from which to build a full-size mock-up for workers to practice dismantling.

"Having the plans helps to take the guess work out of the job," Chris says. "Its been a good technical engineering job to get my teeth into, and there has been a lot of interesting work finding out the information I needed to build the animation." ○



The PCTL is part of the primary NaK circuit at DFR. Its job was to filter the liquid metal and trap any solids or other impurities. It was isolated from the system in the 1990s.

OFF THE RECORD

by **Jamie Stone**
former MSP for Caithness,
Sutherland and Easter Ross

It seems like yesterday, when I first set foot in Dounreay. But in fact it was in the early 1990s.

Before I was a Highland councillor, let alone the MSP for this constituency, I made ends meet by writing a column for the Press & Journal.

I wrote about all manner of things – from collecting mushrooms to riding the jump seat in an airliner – and one thing about the column was that it could get me into places that were interesting and different. Hence my telephone call to **Derrick Milnes**.

Derrick was the site's deputy press officer – and having always wanted to visit Dounreay, he was my first port of call. Could he fix a visit that I could write about? Yes!

Now, to tell the truth it was a wee bit of a scam – in that driving up to Caithness on the day, I took along my wife, my eldest daughter and a young friend. Taking full advantage of Derrick's helpful answer, I made a family outing of it.

We were not disappointed. Standing directly above the PFR reactor core is a very vivid memory. So too is the turbine hall. The sense of all that electricity being generated – and then surging down the lines that run south along the Causewaymire was quite tangible. I was saddened to know that soon this would all be coming to a stop. It seemed crazy then: it seems crazy now.

Dounreay was a working example of 'can do', a concept that this country seems to have moved increasingly further away from. Indeed you almost wonder if we can make very much at all these days.

But we have the skills at Dounreay yet. Just as we do around the Nigg yard in my part of the world.

The mission has to be to use these skills – to return to the confident 'made in the UK' 'can do' approach. This is the crucial test for our politicians. I may have stood down from Holyrood – but this is something that I shall not be silent about during the years ahead.

Thank you Derrick for a great day. I hope that the piece I wrote about in the P & J was to your taste. I do remember that you enjoyed my crack about **Lorraine Mann** and her filofax being more Clapham Common than Greenham Common... ○

“Quotable Quotes”

“The only countries in the world pursuing a new nuclear programme are ones without the advantages of alternative energy resources that we have.”

Scotland's First Minister Alex Salmond (Herald)

“This business plan represents a challenging year of activity right across our estate and we look forward to seeing our contracting partners deliver strong performance while meeting efficiency targets.”

NDA Chairman Tony Fountain, on the publication of the NDA's business plan (North-West Evening Mail)

“It was never a really well-put-together structure. There's large openings in it the size of picture windows with small mammals going in and out, and birds going in and out.”

Laurin Dodd, managing director of the Shelter Implementation Plan on building a new containment structure over the crumbling sarcophagus covering the Chernobyl reactor (Bloomberg Businessweek)

“We are confident that the decisions were rightly and properly made. The safety of our nuclear power stations is the government's number one priority and the UK has one of the most rigorous and robust regulatory systems anywhere in the world.”

DECC spokesman rejecting the allegation that the government has failed to make proper estimates of health risks to people living near nuclear facilities (BBC News)

“We must admit that we represent a technology that has frightened a great many people. But the industry can explain the unfounded nature of this fear, and provide the data to prove it is so.”

Richard Myers, vice president of policy development at US trade group the Nuclear Energy Institute (World Nuclear News)

To see these and more visit the communications homepage at: <http://dnotes6.ukaea.org.uk/dsrl/external-headlines.asp>

Finding your way through security: help for contractors coming on site

If you are a contractor, and new to the Dounreay site you may be overwhelmed by the amount of paperwork you need to complete just to get onto site. Luckily, help is at hand from your DSRL project sponsor and the security department. The following paragraphs will provide you with some helpful security tips.

Getting started

Before you can start work on site, you will almost certainly need security clearance.

The security clearance procedure should be started as soon as possible so as to minimise any possible delays with obtaining a site pass. Its purpose is to ensure that everyone who works on site can be trusted to have access to information and areas which may be sensitive to the national interest.

Security have a vetting administrator, **Wilma Gray**, who can help you.

Site Passes

A personal site pass will be issued to you by the security department pass administrator, Gill Perry, once you have completed the site induction and hold the relevant security clearance.

Your DSRL project sponsor is responsible for completing and submitting the pass application form to security.

The pass is an official document and is for your use only. Do not try to gain entry to site with an out of date pass. You must notify the security department if you change contracting company.

Visitors

Details of the visitor process will be explained during your site induction but it is worthy of note that in most cases visitors will require security clearance before they can enter the FCA.

Foreign Travel

Anyone travelling to a security risk country must advise the DSRL security department.

Sensitive information

The Anti-terrorism Crime and Security Act 2001 makes it an offence to disclose (intentionally or recklessly) any information which might put the security of a nuclear site or nuclear material at risk. If you are unsure about what information can and cannot be released then you need to speak to your sponsor or a security department manager for further advice.

The transmission of DSRL data to external organisations must follow prescribed routes and will be included in contractual agreements.

Photography

The use of image recording equipment such as digital cameras are allowed on the DSRL site but cameras must be registered and the user must carry an authority to take photographs. The CNC or anyone else has the right to check your authority for

taking photographs.

If you need to send DSRL photos off-site, they will have to be approved by your DSRL project sponsor and possibly a DSRL security manager, such as **Malcolm Clark**.

The use of mobile phone cameras or any other image capture device that is not registered is strictly forbidden.

Emergencies or security concerns

If you see anything suspicious please report it to the CNC immediately or a DSRL security department manager if it is less urgent.

Help

The DSRL security Department are here to help you and ensure that your stay complies with the site regulations; we are happy to help you at any stage. The team can be found in D1300. ○



TOPIC OF THE MONTH

Root cause analysis



Why do we investigate UNORs?

UNORs are investigated to allow DSRL to learn from minor incidents and prevent more significant incidents in the future. When an item is dropped from height there is the potential for many outcomes; it could hit the ground; it could damage equipment; it could seriously injure someone. We want to investigate the item hitting the ground rather than the serious injury.

What is Root Cause Analysis?

When investigating a UNOR it is easy to identify an action to deal with the incident; for example if a pump fails the action could be to replace it. However asking why the pump failed may lead to a system failure; eg inadequate maintenance; that could prevent numerous similar incidents. When an investigator continues to ask why then they are starting to identify the root causes; this is Root Cause Analysis.

The Immediate Cause is the cause that directly caused the incident and would be a sub standard act or condition. An example would be failure of an operator to follow a procedure or a component failure.

The Basic Cause, if corrected, would prevent recurrence of this and similar incidents. There may be a series of causes that can be identified; one leading to another; the series should be pursued until the fundamental Basic Cause is corrected. An example of identifying the Basic Cause is:

- Person cuts hand on machine; why?

- Persons hand was in danger area; why?
- The guard was open; why?
- It was quicker to do the maintenance if the guard was open. Why did the operator do this?
- Operator not trained? Poor supervision? Pressure to get machine operational?

This process is known as "The Five Whys"; keep asking why to get to the bottom level Basic Cause.

At DSRL, SPEC 0001 is used to identify causes.

Issues

There are a number of issues that need to be addressed by investigation teams, and thought about by persons being interviewed or dealing with actions:

- Management causes are only being identified in 20% of Level 1 investigations but amount to 80% of causes in L2 investigations.

- Most causes should be management or system issues not individual failings; both investigation teams and those being investigated need to think about why something was done to identify the Basic Cause.
- Too many causes are being identified by some investigation teams; only the key causes are required. An investigation needs to concentrate on no more than six causes. Each cause requires a recommendation to deal with the cause.
- Some actions not effective and are not dealing with the issue or cause identified in the Investigation Report and Action Review Meeting minutes. Actionees need to read the report and Action Review Meeting minutes to understand what action is required to deal with a particular cause. ○



Nuclear news

Robots detect high levels of radiation at damaged reactors

Two robots working inside Japan's stricken nuclear reactors at Fukushima have detected radiation levels too high for workers to enter.

The remotely controlled PackBots, built by a US company, recorded the high levels of radiation in Units 1 and 3. They also discovered searing heat in Unit 2, although radiation levels were lower.

The Tokyo Electric Power Company hopes to reduce the level of radiation leaking from the plant over the next three months, and achieve a cold shutdown of the reactors by the end of the year.

(Daily Mail)

Algae and natural products could help clean up radioactive accidents

Researchers in the US have identified a type of algae that could help clean up radioactivity following nuclear accidents.

Closterium moniliferum, a common kind of algae, is able to remove the radioactive isotope strontium-90 from the environment, preventing it from being absorbed into bones, bone marrow and teeth.

Meanwhile, researchers from North Carolina State University have found that a mixture of forest materials and crustacean shells can remove radioactivity from drinking water.

The materials form a solid foam, and filter out toxins from the water such as heavy metals and arsenic.

(Fox News and Environmental Expert)

Scotland needs new nuclear power – business groups

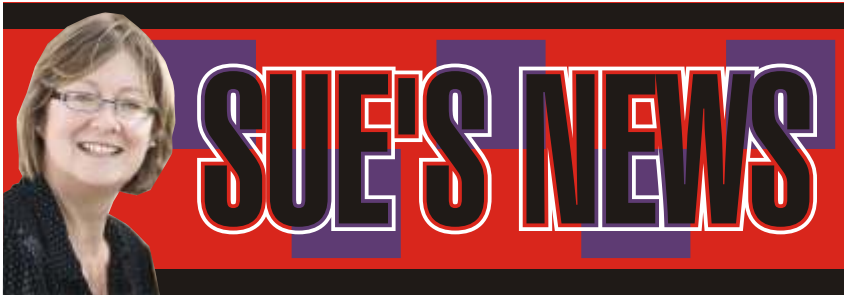
The Scottish Chamber of Commerce has warned that the country may face a shortage of power in the next twenty years when many of its large power stations are due to be shut down.

CBI Scotland has also warned that the Scottish Government's suggested target of 100% of energy from renewable sources is unrealistic.

The CEO of the Scottish Chamber of Commerce, **Liz Cameron**, said that solutions needed to be found that to ensure that Scotland developed a balanced energy policy that would be able to meet the future demands of its economy.

"We believe that the decade between 2020 and 2030 will be crucial, as most of our large power stations are scheduled to be decommissioned," she added.

(Scotsman) ○



In March/April, Dounreay said goodbye to:

- **Jacqui Newman** after 30 years on site;
- **Kay Mann**, after 11 years on site;
- **Michael Macaulay**, leaving for 'pastures new';
- **Chris Shaw**, moving to work down in England;
- **Jim McCafferty**
- **Donald Skea**
- **John McArthur**, after 33 years on site;

Congratulations to **Fiona** and **David Stockan** on the birth of their daughter, **Beth Iona**, born on March 28.



DSRL chairman **Stephen White** is pictured in DFR on his final visit to site before his retirement from Babcock. From left, **Mike Brown**, **Stephen**, and fellow DSRL directors **Charles Curtis** and **Leslie Mitchell**.

One of **Jim McCafferty's** last tasks on site was to take IMechE inspector **Phiroze Mehta** on a tour of the reactors. They are pictured in PFR with reactors project manager **Billy Husband**.



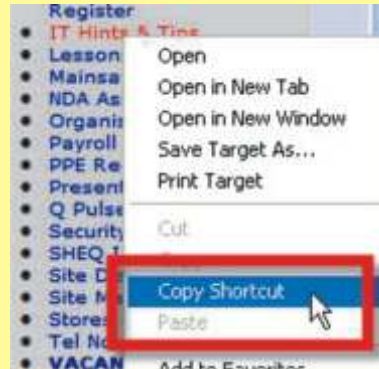
DSRL heritage officer and keen amateur photographer **James Gunn** came runner-up in the Sports Photographer of the Year at the Scottish Press Awards. He was up against professional photographers from the Daily Record and The Scotsman. ○



At the request of decom engineer **Alistair Mackay**, **Duncan McLachlan** took some photos of scaffolder **Bertie Macleod's** 'Stairway to Heaven', and of the stunning sky. Look out for an article and more photos next month.

DSRL IT Services Tip of the Month

Make short work of shortcuts



Most of us have a need to copy links on a website (or the Intranet) for sending to someone else – but how do you do it?

Traditionally we tend to go to that web page, highlight the address in the address bar, copy the address and then paste the address.

A quicker method is to right-click on the source link (that takes you to where you want to go) and just select "copy shortcut". You can then just paste the address anywhere you like, in a document or email.

The right-click menu also gives you other useful options, such as how to open the target page, printing it and adding it to your list of favourites. ○

Apology



In last month's paper, I wrote a story about the history of the Director's SHE Awards. Unfortunately, I forgot to mention that Nuvia staff were a valued part of the Pulsed Column Lab team, and contributed hugely to the success of the project, and I apologise for the oversight. ○

Answer to Sudoku puzzle

5	9	3	2	4	7	1	8	6
1	2	8	9	3	6	5	7	4
4	7	6	5	1	8	2	9	3
6	5	7	3	2	9	8	4	1
3	1	9	8	7	4	6	5	2
2	8	4	1	6	5	7	3	9
7	6	2	4	8	3	9	1	5
8	4	5	6	9	1	3	2	7
9	3	1	7	5	2	4	6	8

