

**SITE DIRECTOR'S REPORT  
DUNGENESS A SITE**

**January 2011 – December 2011**





The last 12 months have seen a significant step-change in our way of thinking and our progress in getting Dungeness A to the Interim Care and Maintenance stage. This time last year I still had reservations about whether or not we could complete defuelling by the end of March 2012 because of the on-going problems with flask availability. Since then, I have seen a co-ordinated effort by my teams here at Dungeness with strong support from the central team to ensure maximum effort in processing flasks to Sellafield. It's a major enabling milestone for the site and I am confident that with Reactor 1 very nearly defuelled we will complete Reactor 2 to plan, a great job by all involved.

In parallel with this, the Magnox Dissolution Plant has steadily been working and the last batch of Dungeness Fuel Element Debris is currently being processed. However, I am disappointed that we are not yet in a position to start processing the FED from Trawsfynydd but options are being considered.

Decommissioning will become our main focus over the next 12 months once we have verified we are fuel free and this has been accepted by the Office of Nuclear Regulation. However plans are progressing well and a number of buildings have already been demolished under the Magnox £304million framework contract recently issued. With more enabling works planned before the end of the financial year to clear certain areas in order to facilitate larger demolition projects in the future, the site is rapidly taking on the look of a site in serious decommissioning.

With a significant project workload and the acceleration of a number of work packages from the out-years the 2011/12 financial year has seen a significant increase in the expenditure for the site. Current forecast expenditure for the remaining three periods of the financial year is £16.3m which brings the year end forecast out turn to £45.6m an increase of £9.3m over the final outturn of £36.3m in 2010/11.

Transition from a defuelling site to a decommissioning site is still on-going with several months of counselling having been undertaken to support staff in their aspirations and address the needs of the business. Initial estimates in numbers leaving Dungeness A was nearly 100 people but our current expectation is that between 40 and 50 staff will leave on Selected Voluntary Severance over the next six months or so. The remainder have either moved into other roles, transferred to other sites or are scheduled for re-training.

Overall Dungeness A has had a successful 12 months, with my teams working hard to hit their targets overcoming numerous challenges and tight timescales. Throughout this very busy and changing period at Dungeness, safety had always been and will remain my priority and I look forward to delivering another successful year of progress at Dungeness A.

A handwritten signature in black ink, appearing to read 'Ray Jepps'.

**Ray Jepps**  
**Site Director**

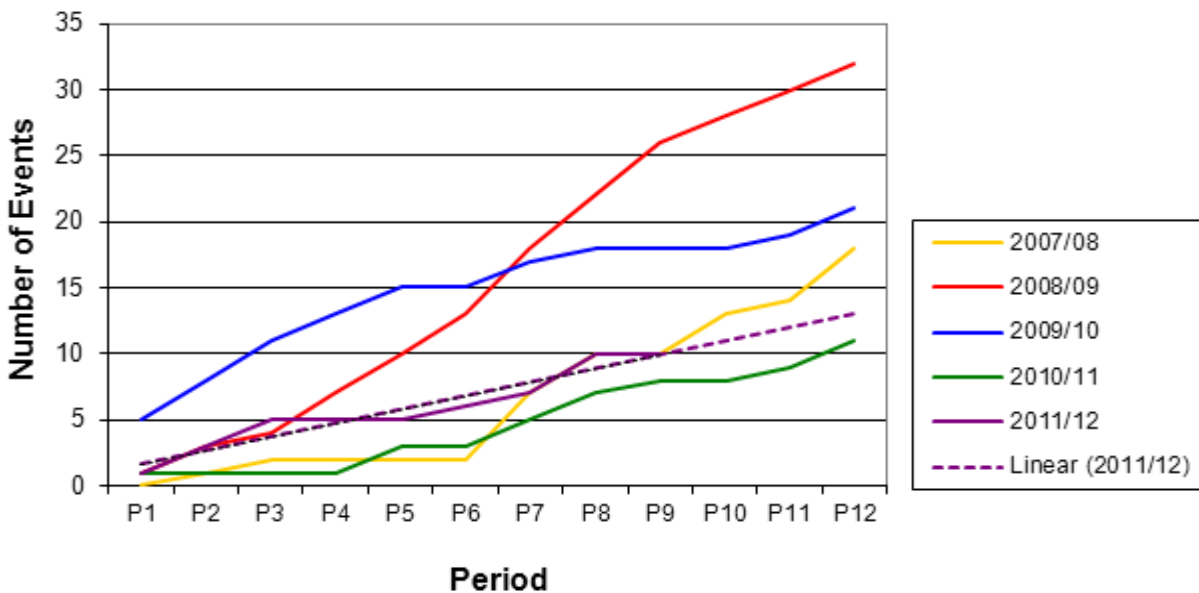
# 1. SAFETY AND THE ENVIRONMENT

## SAFETY

Dungeness A had a mostly positive year in terms of safety apart from the unfortunate start to 2011 with a first aid treatment resulting in a loss time accident when the individual significantly damaged the top of their thumb. This was a harsh reminder to us all that we cannot be complacent and reinforced the importance of ensuring that the Safety Improvement Plan was a necessary and important part to improving our safety performance. The Safety Improvement Plan has since been enhanced and refocused as the 3P Plan which now includes not only People but the Processes we use and the Plant we work with, hence the 3 P's. This ensures that we look at all aspects that can impact on our safety performance. The delivery of the 3P Plan for 2011/2012 is on target for completion in March 2012.

A number of recent events across the Magnox sites and at Dungeness A relating to working at height have resulted in a review of how we manage this type of work to ensure that the workers and those working in the immediate vicinity remain safe. These events, coupled with recent high winds, remind us all how dangerous items falling from height can be.

**Events Requiring First Aid Treatment**



It is pleasing to report that there has not been a Lost Time Accident at Dungeness A for over 340 days. The number of first aid related events reported remains good, although, the number is now approaching the final figure for last year, there is an increased amount of physical activities on site. It again reminds us that we must continue to have a proactive approach to safety and ensure that we benefit from investigating and trending all events to prevent further events from occurring.

The roll out of "Human Performance" at Dungeness A continues to gather pace with training being delivered to the site management team to observe activities on site and the training of "Champions" to reinforce the Human Performance techniques. This training will continue to be rolled out to all staff and long term contractors on site, allowing everyone to challenge actions and spot potential human errors before they occur.

We are proud of our safety record and to receive external recognition with the prestigious Royal Society for the Prevention of Accidents Occupational Health and Safety Award 2011 coupled with our continued compliance with ISO 9001 (Quality), ISO14001 (Environment) and OHSAS 18001 (Safety) Standards is an important acknowledgement of our performance.



## ENVIRONMENT

The environment team at Dungeness A continue to improve our performance in this area and minimise the impact that the site has on the environment.

Following changes to legislation which regulates our impact on the environment, the team has undertaken a wholesale review of our processes and successfully introduced a number of alterations to secure our new permit from the Environment Agency. The team have significantly reduced the water usage on site and are working with Natural England to ensure that impact on the local environment is minimised and the flora and fauna are maintained.

## 2. DEFUELLING

Since 1 January 2011, de-fuelling at Dungeness A site has substantially increased and maintained a significant momentum such that bulk defuelling of Reactor 1 and the dispatch of all the irradiated fuel from its respective pond is expected to be completed by the end of January this year. Bulk defuelling of Reactor 2 has also increased and exceeded the pace set by Reactor 1. This means that the last dispatch of irradiated fuel from Dungeness A is anticipated to be the end of March or during April 2012.



Fuel flask loaded on transporter ready for despatch

1507 Channels of Fuel (approximately 10,550 Fuel Elements) have been removed from R1 and 70 Flasks despatched to Sellafield from R1 Ponds. 99.1% of the fuel elements have been removed from Reactor 1.

1794 Channels of Fuel (approximately 12,560 Fuel Elements) have been removed from R2 and 80 Flasks despatched to Sellafield from R2 Ponds. 90% of the fuel elements have been removed from Reactor Two.

A total of 276.25 tonnes of spent fuel elements (24,900 in total) have been sent to Sellafield from site this calendar year.

In April and May last year we were unable to dispatch fuel to Sellafield due to a number of constraints. During this period and again during the later Road Transport Flask Railhead Outage, advantage was taken to release and remove stuck fuel elements from the reactors. This down-time was utilised to

remove over 500 stuck elements therefore allowing the verification process to be completed on numerous standpipes.

Also during this time, various fuel route plant statutory inspections and maintenance routines were taken ahead of schedule to enable a steady run of de-fuelling operations to take place to complete the de-fuelling process.

To ensure that de-fuelling could be completed during 2012 a revised Safety Case Paper to allow for the continued use of Fuel Route Cranes beyond December 2011 was developed before being approved by the Nuclear Safety Committee. This will ensure that the site will be declared fuel free before the Safety Case requires review again.

### **3. TRANSITION UPDATE**

#### **Company Re-organisation**

During 2011/12 Magnox South was integrated with Magnox North to form Magnox Ltd. resulting in a more efficient and streamlined central organisation with reduced costs, this in turn has increased the funding available for decommissioning work across the company. This re-organisation had minimal effect at Dungeness A resulting in only handful of severances.

#### **Transition to Fuel-free Status**

Following defuelling and the detailed fuel-free verification has been completed and confirmed by the Office of Nuclear Regulations, the site will go through a significant transition to become a decommissioning only site.

Preparations for this transition have been taking place throughout the year. This includes a review of the safety case resulting in reduced maintenance work requirements under the Nuclear Maintenance Schedule as well as a simplification of the operational requirements for the site. New emergency arrangements will also be introduced with less reliance on shift operations personnel. As a result of these technical reviews the site will implement a new staff structure as it goes through the transition.

The new structure shows an increase in the decommissioning projects organisation and a significant decrease in operations and maintenance staffing. Staff have been part of a comprehensive counselling process and significant union consultation during this time. In the new structure some staff will take up different posts with a number re-skilling into project engineering and management roles and a small number of staff have also taken up positions at Dungeness B. Between 40 to 50 staff will leave the company on selected voluntary severance

### **4. SITE NEWS AND PROJECTS**

#### **Magnox Dissolution**

The final transfer of Fuel Element Debris for dissolution was completed in December 2011. This method of managing waste has been a tremendous success in dealing with legacy waste. Clean-up of the last vault continues. This work has:

- Dissolved a total of 107te of FED
- Realised drastic volume reduction of 250m<sup>3</sup> down to 5m<sup>3</sup> (down by 98%)
- Not had a Lost Time Accident (LTA) or significant event during the 100,000 man-hours worked
- Removed around 1,000 insoluble Intermediate Level Waste items during sorting
- Accounted for less than 1% of station discharges during its operation

The transfer of FED from Trawsfynydd was expected to start in January 2012. Acceptance for this unique transfer process was underpinned by the principal that safety would not be compromised and therefore until we and the regulators are agreed that all relevant processes and procedures are

in place, the transfer had been delayed. The company are however actively reviewing the situation and hope to agree a resolution in the coming months.

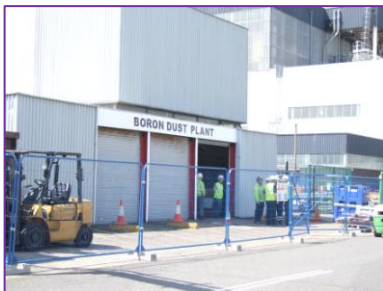


Ray Jepps, Site Director  
Stephen Price, FED Programme Director  
Carl Welsh, Dungeness MXD Team  
Leader tipping the last Dungeness FED  
into the vessel for dissolution

### Managed Retreat (Accelerations)

The NDA approved the business cases for an addition £2.4m of funding to support the acceleration of following:

- **Characterisation (the process for determining the chemical and radiological classification of materials and waste)** - To date Site Sampling & Analysis Plans (SSAPs) and asbestos demolition surveys have been produced for the buildings to be demolished as part of the accelerations.
- **National Grid road and Clearance & Recycling Centre apron improvements** – This is a new section of road to enable access to the 275kV substation and a new hard standing area to enable efficient management of waste.
- **Replace the existing contractors' compound and provide a new Occupational Health Facility.**
  - This will accommodate the increase in contractor numbers on site with the OH services being relocated due to planned demolition of current building.
- **Demolish ancillary buildings** – These include the Boron Dust Building, the General Services (GS) buildings, the Safety Management buildings and the Flocculation tanks.
  - The Boron Dust Building and the Safety Management buildings have already been demolished and the demolition of the GS buildings is well under way.



Boron Dust Plant  
demolition

General Services  
Buildings demolition





Safety Management Building demolition

- **Demolish the Administration building, Administration Annex and Canteen.**
  - To date the buildings have been de-cabled and isolated from all site systems by site staff and handed over to the demolition contractor. This was a significant amount of work as there were a number of systems which interfaced with the rest of the site and adjacent B Station. The demolition contractor has mobilised, internal soft strip and asbestos removal has commenced and the demolition is forecast to be completed before the end of the financial year.
- **Install new Gate Post monitor** - This involved removal of the existing gate post monitor and installation of a new one near the Electrical Overlay Scheme Substation 3 to ensure all items leaving site are checked and clear of radiation before being allowed to leave site.
- **Design Low Level Active Waste (LLAW) Plant upgrade** – Assessment of the existing LLAW Plant structure and developing the design for providing an enclosed working area for carrying out waste operations.
  - To date the design consultant has been appointed and is commencing the design works.
- **Demolish Electro-Chlorination (ECN) Plant** - As demolition works are progressing well arrangements are also being made to demolish this building.

**Systems & Structural Preservation Project (S2P2)**

The Systems and Structural Preservation Project will examine those systems and buildings required for future site operations to determine the best practicable means of implementing a programme of replacement, refurbishment or accelerated decommissioning as appropriate. The projects are as follows:

- **Turbine Hall Roof Glazing** – The defective glass is being replaced by translucent glass reinforced plastic (GRP) – to be completed in February 2012
- **Site Roof Repairs** – A number of roofs on site are being repaired in defective areas or replaced – work to be completed in March 2012
- **Active Effluent Water Treatment Plant (AEWTP) Floor Refurbishment** – A new floor is being installed in this plant area, two of the floors are nearing completion with final floor to be completed in early March 2012.
- **Low Level Active Waste (LLAW) Plant – Oil Collection Tanks Refurbishment** – New valves have been installed on a number of oil storage tanks and the fire system refurbished. Painting of the tanks about to commence and due for completion by the middle of March 2012.
- **Turbine and Reactor Unit Transformers oil removal** - transformer oil has been removed from eight redundant transformers and appropriately disposed of.
- **Water Spray Fire System Replacement** - the old water spray fire system valves located on the conventional side of the site have been replaced with new valves.
- **Review of Electrical Boards** - Over 900 electrical boards are being inspected and tested as part of Electrical Regulation requirements. Work is due to be completed by 2013
- **Towns Water Main Inspection/Survey** – The site’s towns water system was been surveyed and defects identified and repaired.
- **Air Sampler Enclosures** – Enclosures have been designed and manufactured to house delicate air monitoring equipment and are now available on site for installation. Work to complete in February 2012
- **Pond Water Filtration and Caesium Removal Inlet Vent Heater** – heater to be replaced with a new design heater. Work to be completed in July 2012.

- **110V Battery Removal** – One of the site’s redundant 110V battery systems has been removed and appropriately disposed of.
- **Lighting** – A number of defective street lights have been removed with some being replaced with latest standards of lights, others have been replaced with illuminated bollards.
- **Boiler annexe cladding** – new fixings have been installed to the translucent sheeting on 1B and 2B boiler annexes.

### Intermediate Level Waste and Sludge Projects

#### Sludge

The project to dispose of 40m<sup>3</sup> of active sludge, accumulated over the operating lifetime of the station, is progressing well. The sludge has been fully characterised and approval gained from the Low Level Waste Repository in Cumbria for acceptance of the final waste packages.

Retrieval and encapsulation equipment has been designed, manufactured and factory acceptance tested and is now being installed on site. Site testing started in January and it is expected that all of the sludge will be despatched by the end of June 2012.

#### Intermediate Level Waste (ILW)

The conceptual design is progressing for the Intermediate Storage Facility (ISF) in which the ILW MiniStores will be stored on site until the national ILW Disposal Facility becomes available.

### Electrical overlay scheme (EOS) Site reconfiguration

Progress last year included:

1. Following a strategy review in March 2011 the scope of the project was reduced by eliminating all works associated with the Turbine Hall (due to the potential for early acceleration of deplant and demolition of this building and by retaining, rather than replacing, existing electrical equipment in other areas.
2. The tender process was repeated with the new scope of work and a preferred Contractor selected.
3. AMCO were awarded the contract to complete the design of the works and provide, install and commission the new equipment in July 2011. They have:
  - mobilised to site
  - developed the detail design along with their specialist subcontractor AECOM.
  - Installed access scaffold along three sides of the Reactor buildings.
  - Installed cable containment along the south side of the reactor buildings and internally in the electrical switch rooms.
4. Preliminary work on Plant Item Operating Instructions (PIOIs) and Maintenance Instructions (MIs) are being progressed.



Erection of cable containment is progressing well

## Electrical Overlay Scheme (EOS) Switchhouse and cables

Progress last year:

The final commissioning of the new Station Transformer 4 and EOS substation 4 were completed in Spring 2011.

The remaining EOS site reconfiguration works will include extension and connection of the 6.6kV supplies into key transformers around the site. The existing standby support and distribution system will be modified to use the new supplies and will be compliant with the safety case being prepared for the project. Works include:

- Extending the 6.6kV supply installed under previous works on the Electrical Overlay Scheme to key points around the site.
- Reconfiguration of 415V supplies to key points around the site
- Supply and install alternative supplies to 3.3kV Essential Supplies and associated transformers.
- Supply 6.6kV to Reactor Service Building and the National Grid's 275kV building.
- Modify the existing electrical standby support and distribution system to use the new supplies and reconfiguration of the 415V supplies across the site.

## **5. EMERGENCY EXERCISES**

### Matter of Interest arising from the EPCC

- At the time of writing this report the EPCC had not met (next meeting 19<sup>th</sup> January 2012).

### Emergency Plans and Handbook

- The sites Emergency Plan has been reviewed and amended in preparation for decommissioning and has been submitted to the Nuclear Safety Committee for assessment, when the assessment has been completed it will be sent to the ONR for formal approval.
- The Handbook is being reviewed by the company in preparation for decommissioning.
- The site has started to train its Emergency Scheme personnel in preparation for implementation of the new arrangements.

### Emergency Exercises

#### Dungeness A

- On 26 October the site conducted the Level 1 Demonstration Exercise, unfortunately there were some aspects of the exercise that the site was not happy with, and will conduct a partial re-demonstration of these aspects.

### Next Planned Exercises

#### Dungeness A

- On Wednesday 22 February 2012 – the site will conduct a 'Witnessed Exercise' of the proposed New Emergency Scheme arrangements to ensure that the ONR are satisfied with the plan. This exercise will also include the aspects of the previous Demonstration Exercise that the site was not happy with.
- During the week commencing 20 August 2012 the site will conduct its annual Level 1 Exercise

## Emergency Facilities

- Due to the continuing degradation of the Old Administration Building, the site's Emergency Control Centre has been relocated to available space within the Central Control Room.

Revamping  
R1 control  
desk for  
relocation



Completed  
Emergency  
Control  
Centre



## 7. STAFFING

As of 26 November 2011 there were 317.8 Full Time members of staff (including 1 Trainee) at Dungeness A. There are also 14 agency supplied workers and 19 contract supplied workers with the number of contractors fluctuating according to the works being undertaken.

Since September 2011 thirteen members of staff have left the company through a combination of resignation, retirement and voluntary severance. Most of those who have resigned have taken up positions on B Site. Several other members of staff have taken up central positions within the company but will still be based and Dungeness.

In 2012 Dungeness hopes to have up to four Engineering graduates who will have completed the company graduate scheme. It is also anticipated that Dungeness will be actively recruiting several graduates from the Magnox Graduate Scheme during 2012.

## 8. COMMUNITY RELATIONS

### Socio-Economic funding

Under the Magnox South Socio-economic fund four applications were submitted with two of these being successful:

#### **Kent Wildlife Trust - The Marsh Community Garden (second year of funding)**

**Requesting: £37,000 over two years (£18,500 year one)**

**Total project cost: £80,000 over two years**

Following funding from Magnox last year to develop a training and volunteering programme for members of the local community at the Marsh Community Garden, the ambition now is to develop this further into a social enterprise and a hub for sustainable socio-economic development for the whole Marsh area.

#### **RR2K – Romney Marsh Skills**

**£15,700 – continued funding from last year**

Offers advice on careers, access to skills, employment and qualifications. This is the second part of funding to cover costs for several new courses to be set up and run by the project.

## Sponsorship and Donations 2011 – 2012

The monies distributed by Dungeness A have been provided by EnergySolutions which manages the site on behalf of the NDA. Below is a list of how the monies have been distributed so far this financial year



Shepway Careers Fair - £500

- The Marsh Has Got Talent - £400
- Lydd Club Day - £650
- Romney Marsh Bowmen - £250
- Rye Arts Festival - £250

New Romney Country Fair - £655



- Romney Marsh Countryside Project - £1,250
- Rye Bonfire (advert) - £70
- New Romney Christmas Lights - £500
- Shepway Citizens Advice Bureau - £2000
- Romney Marsh Inter-schools Quiz - £520
- New Romney Counselling Services - £470
- Dymchurch Day of Syn - £450
- Rye Christmas Festival - £500
- 1<sup>st</sup> St. Mary's Bay Scout Group Pantomime Outing - £510
- Friends of Lydd - £500
- Lydd House Playgroup - £500

### The staff charity for 2011/12 is Pilgrim's Hospice, Ashford.

So far over £1,500 has been raised by staff and contractors through raffles other fundraising activities.

