



ExxonMobil
Chemical

**A newsletter from the
Fawley Site**

March 2013 Issue 32

www.exxonmobil.co.uk

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Community Matters online at:
www.fawleyonline.org.uk

COMMUNITY MATTERS



Waste heat recovery brings operational savings

The Waste Heat Recovery Project is located on a live "Powerformer" operating unit within the refinery. The purpose of the Powerformer Unit (PH-2) is to process low octane hydrocarbon feed, and by catalytic conversion, produce a high octane and low benzene petrol blending component. Additionally, PH-2 supplies the refinery with hydrogen produced by the conversion reactions. The PH-2 furnace provides radiant and convection heat for the conversion reactor feed. The furnace flue gases then pass into ducting and straight into a chimney.

The purpose of this energy saving project was to produce steam by utilising hot flue gases from the furnace, which would otherwise be emitted through the chimney. The new waste heat boiler will produce a superheated steam which will be routed to the steam system. The ability to generate steam on the unit has several benefits:

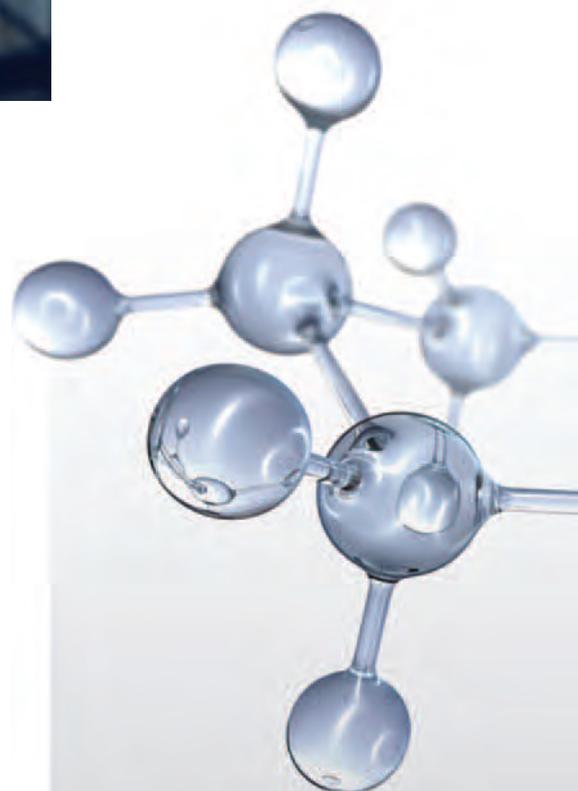
- A further environmental reduction in CO2 emissions from the chimney.

- **Cost saving:** The completed project will supply a third of the steam required to operate the plant therefore reducing costs of generating steam from other plants within the refinery.

Project execution overview

The project was complex, with some specific constraints that affected the work. Project Engineer, Chris John, explains: "Working within a live operational unit close to critical equipment required a well planned and measured approach. There were significant existing underground services within the foundation area, including live cables, concrete furnace air ducts and piping, so extensive manual excavation was required for the foundations."

Following construction, the new boiler was chemically cleaned using a three-stage process, followed by steam blowing. This careful preparation led to a highly successful start-up without any issues.



**WELCOME TO OUR MARCH 2013
EDITION OF COMMUNITY MATTERS.**

**If you would like to know more about us
or have any queries, please ring 023 8089 2511
and ask for Community Affairs**

Photography by Ian Jackson & ExxonMobil Employees
Produced by Christina Riddell
Designed by New Forest District Council
Printed by Cedar Colour LTD

The Fawley Biopile: embracing nature to save money

Many of us have compost heaps in our garden, but how can a pile of usable soil be produced from oily sludge collected in the refinery? The answer is the Fawley Biopile operation.

The biopile uses a bioremediation technology in which 'soil sludge' from Process units is treated in a two-stage procedure to produce soil that is sufficiently pure to be re-used on site for landscaping. This soil purification process is driven by bacteria that occur naturally within the soil. Fawley uses a specialist company, Bio-Genie, which operates under a special licence granted by the Environment Agency for the biopile.

The first stage of the treatment involves gathering the soil sludge from the Dissolved Air Flotation water treatment bay and from cleaning out tanks across the site. These contain oil contamination of up to 20%. The pile goes into a special, concreted area where the soil sludge is mixed with woodchip. The woodchip aids aeration within the sludge and initiates bio-treatment. The pile is regularly turned to keep the aeration levels high and to ensure that the temperature within the pile stays within the optimum conditions for bioremediation.

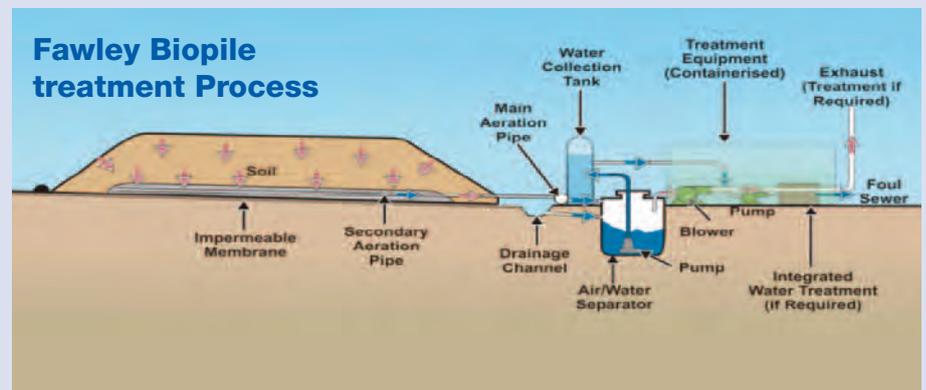
The soil is then transferred to the second stage of the process, shown in the diagram below. The biopile is about ten feet high and covers the area of a tennis court. This stage features an aeration system buried under the soil, which sucks air through the soil, which in turn controls the soil temperature. The soil is turned at two to four-week intervals depending on the soil temperature, to ensure that this doesn't exceed the levels that are harmful to bacteria within the soil.

So far, 21,000 tonnes of soil sludge has been treated using the biopile. The second phase of the process takes six months. After bioremediation, the soil must pass all of the relevant environmental soil quality tests in order to be used for landscaping former tankage areas.

Energy and cost savings

Before this biopile technology was introduced, Fawley Refinery would send all of the soil sludge offsite for treatment and incineration, which is an energy-intensive process. The biopile technology has reduced the energy footprint of transporting and treating this waste whilst also saving some 70% of the disposal price for soil sludge.

Fawley is the only refinery in the UK to use this technology. However, our determination to do the right thing for the environment has produced significant benefits for the company.



Safety on site

At the Fawley site safety is our primary consideration. All of our employees and contractors are encouraged to think of their personal safety and the safety of their colleagues at all times. They are trained to assess their surroundings, identify potential risks and take action necessary to ensure all activities are carried out as safely as possible.

The safety culture that is embedded in all Fawley employees does not stop at

the gates when they leave work, the ideas we use on site are designed so they can be implemented in all activities on site and in everyday life. This was evident in the recent actions of Peter Grimes (pictured), an employee on Butyl Polymers. When riding home from work he spotted a local resident trying to cross the A326, near the Forest Home Pub, on a mobility scooter. The scooter was barely visible from the side and the lady was wearing dark clothing meaning she was not easily visible to other road users. Peter stopped and held up the traffic, allowing the lady to cross the road safely. He asked the



lady if he were to give her a fluorescent waist coat if she would consider wearing it. She said she would love one and so he gave her his extra fluorescent waist coat that he usually wears around his backpack.

Christmas raffle donations

Proceeds from the refinery's 2012 Christmas Dance were donated to two nominated charities: **Canine Partners** and **PEDS (Ponies Educating Diabetics and Siblings)**. Each of the charities received a cheque for **£1,100**, presented by **Refinery Manager, John Blowers**.

Canine Partners was nominated by Sarah Godfrey, whose husband Chris works for the Turnaround Group. The charity trains assistance dogs for people with physical disabilities. They help with everyday tasks, such as opening and shutting doors, unloading the washing machine, pressing buttons and switches and getting help in an emergency. The charity relies solely on public donations. The money that was donated will go towards training a yellow Labrador called Odessa.



Left to right: Alison Jones, Val Macdonald, Alison Bailey, Sarah Godfrey, John Blowers, Kerie Coutes, David Leriche, Christina Hill, Phil Horrocks, Karen Waters.



PEDS was nominated by Nikki Coleman, whose husband Chris also works at the Fawley site. This charity is run by diabetics for diabetics. So far, it has helped 65 children and has a waiting list of over 20 more. The money raised by the refinery will go towards more therapy sessions and will help to reduce the waiting list.

Safely raising cash for kids

Workers on the Fawley site were offered a novel opportunity to raise money for Wave 105's 'Cash for Kids' simply by not dropping their ear plugs on the ground. Both employees and contractors working on a major maintenance project joined in the unique effort and raised £1,568 for the worthy cause.

Workers were encouraged to dispose of their ear plugs in special containers instead of throwing them on the ground. In turn, ExxonMobil at Fawley donated £100 to charity for every filled container. Over the course

of the six-week project, workers filled up 14 containers, raising an amazing £1,400!

When people saw the sums adding up the charity bug spread fast, prompting new ideas to raise even more money. Additionally, individuals working on the six-week project were awarded drinks or chocolate vouchers for working safely. Many workers opted to part with their sugary treats and instead donated the monetary value to the charity fund. This raised a further £168, bringing the grand total up to £1,568... from simply working safely!

A cheque for the total amount was presented to Wave 105's 'Cash for Kids' appeal and radio presenter, Simon Clark went along to the Fawley site to interview Bob Mitchell, Process Training Leader and Rob Smith, Lead Planner who were both involved in the event.

Bob explains: "Before the maintenance project started, we had a discussion about possible charities. We all decided that we wanted any money raised to go to a local charity helping children."



Left to right: Andy Niven, Bob Mitchell and Rob Smith of ExxonMobil are pictured handing over the cheque to Simon Clark of Wave 105.

Rob Smith, adds: "A lot of people working on-site are local people who listen to Wave 105. They therefore know about the Cash for Kids appeal and it's close to their hearts. From a majority vote, we chose to donate any funds raised to the charity."

Wave 105 Cash for Kids was set up to support local children under the age of 18 who are financially, socially, emotionally or physically disadvantaged. The charity also encourages healthy lifestyle options by promoting the physical and mental well-being of youngsters within the Wave 105 region.



Come visit us!

If you live in the Community Matters distribution area and would like to learn more about the history of the refinery or find out more about what we do then come along to one of our Community Tours.

Each visit starts with an introductory talk about the refinery in which Dave Dando, a former head of the Environment Group at Fawley, will talk about how the refinery works, and answer your questions.

The talk is followed by a coach tour of the site (please note that visitors aren't allowed to leave the coach during the tour). All tours take place on weekdays, between 1.30pm and 4.00pm.

If you would like to join one, email christina.riddell@exxonmobil.com or send the application form at the bottom of this page to:

Christina Riddell
Community Affairs MP16
Esso Refinery, Fawley
Southampton SO45 1TX

We will then post an application form to you. Individuals and groups are welcome!



Send an application form to...

Full name:

Address:

Postcode:

Telephone:

Email:

Objective in visiting Fawley Refinery:

Does anyone in your party have mobility problems?

Do you have a passport or photographic driving licence?

Yes No

For office use only

The visit will consist of an introductory talk followed by a coach tour of the site. Visitors will not be permitted to get off the coach at any time during the visit. Security searches may occur through bag searches therefore it is recommended that visitors do not bring bags on the tour with them. Only person(s) named on the letter of confirmation will be able to attend the tour. Photographic ID will need to be produced in order to gain entry into the site.