

ENVIRONMENTAL

A COMPREHENSIVE
RESOURCE TO SAFEGUARD
THE ENVIRONMENT

resultsdelivered™

 opus

*WHEN THE WORLD'S ENERGY
COMPANIES REQUIRE HIGH-QUALITY
SERVICES TO ASCERTAIN THEIR
ENVIRONMENTAL IMPACT IT'S OPUS
THEY TRUST TO DELIVER RESULTS*



**RELIABLE, INDEPENDENT
AND FLEXIBLE**

We have established ourselves as one of the world's leading laboratories offering ecotoxicology and environmental services of the highest quality. Working to the standards of Good Laboratory Practice (GLP) and ISO 9001 accreditation, our clients gain added value from considerable experience with chemical testing and regulation. With our active membership of EOSCA we also keep at the forefront of industry developments.

From our laboratories in Orkney, Scotland, our highly skilled team of scientists offer a reliable and independent ecotoxicology and environmental service. Our experience in cultivating marine and freshwater organisms together with our large-scale water treatment systems, ensures a consistent supply of species. This self-sufficiency allows us to be flexible according to our clients' needs. Lead times are reduced and our clients gain from our assured and consistent service.

With Opus environmental services you receive a personal service born out of experience and high standards giving you support and guidance throughout the regulatory process. Our experience also brings added value as we liaise with regulators on your behalf to ensure environmental standards are met.

MARINE ECOTOXICOLOGY

LABORATORY SERVICES

With a growing reputation for consistency and reliability in marine ecotoxicology, chemical companies around the world are using our comprehensive range of laboratory services.

TOXICITY

We supply the full range of aquatic toxicity studies for the completion of your HOCNF submission according to the requirements of the Harmonised Mandatory Control System (HMCS). Our studies are also performed in accordance with Good Laboratory Practice (GLP) and to OSPAR/OECD, ISO and ASTM (USA) guidelines.

BIOACCUMULATION

Chemicals are commonly screened for their bioaccumulation potential using OECD Test Guideline 117 (2004). This test measures the potential for a chemical to break through an organism's skin membrane and accumulate in the body.

Should further analysis be required after the initial screening, then we guide our clients through the range of options ensuring a smooth registration process. Our expert staff are also happy to advise on the best testing strategy for any particular substance.

BIODEGRADATION

Biodegradation testing determines the extent to which a chemical will naturally break down in the environment. With this service our clients require a degree of flexibility with the capacity to run a large number of studies simultaneously. Our laboratories not only meet these demands but also offer the highest standards of quality control and consistency available.

Using natural seawater alongside our dedicated temperature control facilities ensures that we have an abundant supply of raw materials for testing. Studies can be extended beyond the standard 28 days, if required.

We understand the requirements for registration and offer flexible testing services and expert advice for navigating the registration process.

REGULATORY SUPPORT

CHARM

Our years of experience ranking chemicals according to the CHARM model means we excel in our knowledge of the process. We provide the testing, model the impact and can complete the registration process on our clients' behalf.

HOCNF COMPLETION

For companies seeking assistance with HOCNF completion we make the process effortless by liaising with the regulators on our clients' behalf. HOCNF is used by all the OSPAR North Sea countries and with our understanding of the unique requirements of the UK, Norwegian, Dutch and Danish regulatory authorities we can guide our clients through the many complexities involved.

TRAINING SERVICES

We provide training services for clients wishing to know more about North Sea chemicals regulation, ecotoxicology, HOCNF completion, PON15 and CHARM calculations. Our membership of the European Offshore Specialist Chemicals Association (EOSCA) means that we stay up to date with the latest regulatory developments. This then feeds into our training services which are tailored to our clients' specific requirements.



FRESHWATER ECOTOXICOLOGY



OUR LONG-ESTABLISHED ECOTOXICOLOGY SERVICES HAVE PROVIDED A FIRM FOUNDATION FOR THE MOVE INTO FRESHWATER ECOTOXICOLOGY, MEANING OUR EXPERIENCE WITH, AND KNOWLEDGE OF, REGULATORY REQUIREMENTS AND SPECIES CULTIVATION REMAINS CENTRAL TO THE QUALITY OF SERVICE WE OFFER OUR CLIENTS.

LABORATORY SERVICES

We maintain stocks of freshwater species to ensure testing can be carried out quickly and efficiently and under the same stringent quality standards applicable to our marine testing. Our firm grasp of regulations extending to and beyond the REACH directive, brings added value for clients seeking freshwater ecotoxicology.

ECOTOXICITY

We offer a range of ecotoxicity studies for freshwater species under the internationally recognised OECD standards which are approved by the majority of regulatory bodies worldwide. All our studies are carried out according to the standards of Good Laboratory Practice.

BIOACCUMULATION

Freshwater bioaccumulation requires the same OECD 117 screening study required for marine ecotoxicology. Our experience in this area means that we can offer comprehensive support in all areas of testing and regulation requirements.

BIODEGRADATION

There are numerous freshwater biodegradation studies and choosing the most suitable can be complicated. Our knowledgeable staff offer guidance on each test type to ensure an appropriate study is used.

CHEMISTRY

We offer a broad range of chemical analysis in support of the ecotoxicology services we provide. From our chemistry support laboratory, experienced chemists use recognised methods and instrumentation to provide measured analysis.

THEORETICAL CALCULATIONS & QSAR

Theoretical studies can be a robust and efficient way of managing chemicals through the regulatory process, offering reduced time where a full testing regime may not be necessary.

We provide theoretical calculations to estimate biodegradability, bioaccumulation and ecotoxicity, meaning that tests may not be necessary – an approach that regulators are increasingly supportive of as a means for submission. We also offer a variety of theoretical calculations using the principals of Quantitative Structure-Activity Relationship (QSAR) applicable to regulatory guidelines.

REGULATORY SUPPORT

REACH

We provide companies with testing strategies for a number of regulatory regimes including REACH. Our thorough knowledge of this complex registration process, working to Good Laboratory Practice (GLP) standards, enables us to provide data that meets the stringent requirements of the regulators. This in turn helps our clients avoid the unnecessary complications that may arise from the REACH directive.

OTHER DIRECTIVES

Our wide-ranging knowledge of environmental regulations means we are well placed to advise companies on the directives necessary for the approval of chemical products. Our global awareness means we can offer consultancy to businesses seeking expansion into other regions, as well as those unfamiliar with the intricacies of local directives.

WHOLE EFFLUENT ASSESSMENT

OFFSHORE ECOTOXICITY

We have been at the forefront of developing ecotoxicology services that provide significant benefits for clients who require testing on offshore platforms and other environments where real-time analysis and rapid results are required.

Opus are uniquely positioned to offer services to the offshore industry combining our experience in fluids characterisation, separations technologies, chemistry and ecotoxicity and our offshore staff are ready to apply their expertise to any produced water issues.

Our mobile ecotoxicology service allows us to carry out testing of produced water in our clients' environment, bringing a number of advantages for those who need fast and reliable results in difficult circumstances.



ONSHORE ECOTOXICITY

Our onshore facilities offer the full extensive ecotoxicity service. As well as conducting ecotoxicity studies on produced water we can combine our test hall facilities to conduct studies to look at the impacts on produced water quality. Our facilities can be used to assess the performance of different chemical packages, separator efficiency and the effects of engineering modifications before these changes are tried offshore.

We also offer chronic studies to look at the non-lethal, long-term effects of effluents on the environment. Chronic studies are often suggested so that a more detailed picture of environmental impact can be modelled.



OUR UNIQUE COMBINATION OF SERVICES MAKE US AN IDEAL PARTNER THROUGHOUT THE DECOMMISSIONING PROCESS.

DECOMMISSIONING

Oilfield installation decommissioning requires the assessment of many potentially hazardous materials including sludges, effluents and other waste materials. A number of tests are required for the effective analysis of sludge and other decommissioning by-products. Our broad scope of expertise and wide range of testing experience means we are uniquely placed to assist our clients with decommissioning.

Our expertise in engineering combined with chemistry, ecotoxicology and our knowledge of project management, impact assessment, environmental regulation and hazardous waste make us an ideal partner throughout the decommissioning process.



BEST AVAILABLE TECHNIQUES

BEST ENVIRONMENTAL PRACTICE

(BAT/BEP)

OPERATORS IN THE OIL AND GAS INDUSTRY HAVE SET AMBITIOUS TARGETS FOR THE PREVENTION AND ELIMINATION OF ENVIRONMENTAL EMISSIONS.



Companies are required to provide evidence to the Department of Energy & Climate Change (DECC) that they operate to standards defined by Best Available Techniques (BAT) and Best Environmental Practice (BEP) principles, to support Offshore Pollution & Prevention Control (OPPC) permit applications.

Opus methodology ensures companies gain the full benefit of utilising BAT/BEP principles for produced water management, to help operators achieve optimal environmental performance, with maximum efficiency and enhanced production.

Opus is unique in its ability to provide the tools and expertise to deliver the whole BAT/BEP solution by providing a comprehensive resource that considers the system as a whole. With the intimate relationship between primary separation, produced water and environmental compliance, Opus can offer a highly specialist service in this area.

BENEFITS

- > Achieve enhanced production
- > Ensure optimum environmental performance
- > Understand the system (as a whole)
- > Maintain the existing footprint
- > Reduce CAPEX and OPEX
- > Capitalise on existing investment
- > Achieve asset-specific solutions
- > Meet environmental targets
- > Reduce downtime



ENVIRONMENTAL SERVICES

ENVIRONMENTAL IMPACT ASSESSMENTS

Our experience in all areas of environmental media allows us to integrate our resources to provide comprehensive Environmental Impact Assessments (EIAs).

Our expertise in biology, chemistry and engineering enables us to consider the full scope of impact potentials and provide EIA reports that are thorough and founded on our expertise and experience. With this knowledge we can help our clients avoid the potential pitfalls of a one-dimensional approach, reducing the environmental impact of their developments in the most cost-effective way possible.



WATER POLLUTION CONTROL

We have a wealth of experience in water treatment technology and regulatory controls and assist our clients at every stage of water treatment technology development.

Our expert staff analyse a range of effluents, leachates and environmental samples which, coupled with our ecotoxicology services, means we are ideally placed to help our clients decide on the best water treatment technology, founded on the same principles as our BAT/BEP studies.

From planning the treatment options and consulting with regulatory bodies, through to monitoring and aftercare, we are well placed to support clients wanting to develop innovative water treatment technology.



WE OFFER A HIGH-QUALITY, INTEGRATED APPROACH WHICH ENABLES COMPANIES TO MEET THEIR ENVIRONMENTAL GOALS.

AIR POLLUTION CONTROL

We deal with a variety of industry sectors looking at point source emission, fugitive emission, odour, regulatory application and air-quality monitoring.

Alongside physical monitoring we model the impact of various emissions such as Hydrogen Sulphide, Nitrogen Oxide, Sulphur Dioxide and other potential pollutants using ADMS which is recognised by UK environmental regulatory bodies.



WASTE MANAGEMENT CONSULTANCY

Our clients know that effective waste management can benefit the environment and lead to greater efficiency, reducing the costs of disposal to landfill. We offer consultancy services for waste management using our expertise to provide an integrated approach to finding solutions.

Our monitoring team assesses the impact of waste disposal sites, whether it be leachate/effluent monitoring, air emissions or other aspects of waste regulation. Furthermore, our knowledge of the UK and European markets means we can be trusted to deliver results in all areas of waste management consultancy to maximise resource efficiency.



*OUR CLIENTS STICK WITH
US BECAUSE WE ACHIEVE
WHAT WE SAY WE WILL
ACHIEVE, WE RESPECT
THEIR WISHES & WE ARE
**EASY TO WORK WITH
AT ALL LEVELS***

MAKING A DIFFERENCE

We welcome any opportunity to discuss how Opus can be involved in delivering results for you and your business.

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