



orano

# Sampling Strategy for Environment & Waste

© Orano-Hesly, Cedric

## Decades of experience

Adopting the US Environmental Protection Agency's 7-Step Data Quality Objectives (DQO) methodology, Orano Projects offers a fast, cost-effective approach to meeting regulatory and client requirements, whilst minimising the time spent gathering data and assessing information. DQO is based on a scientific method, requiring clear objectives from the outset of a project, and a demonstration of acceptable results. The methodology promotes communication between all departments and individuals involved in the decision-making process.

We have 15 years' experience in using the DQO methodology and have worked on projects ranging from a single tank through to a whole facility. Our team has produced a range of detailed reports and dose justifications, guidance and policy documentation for de-licensing, sampling and analysis plans, along with data processing and assessment. We also attend and participate in a number of regulatory meetings, academic conferences and UK CBRN activities.

## Specialist training

Orano Projects delivers a number of training courses in DQO and VSP for clients across the private and government sector. This includes a 5-day DQO and VSP course and a 2½ day DQO methodology course; other courses are available on request. The training is delivered by experts in the field and comprises both detailed presentation and case studies alongside interactive, hands-on exercises.

Orano Projects offers unique support to waste management, using established tools and methods for accurate data sampling. Applied to a range of projects across the industry, including waste characterisation, site de-licensing and UK CBRN (Chemical, Biological, Radiological, Nuclear) exercises, we give our clients confidence to make decisions based on reliable and defensible data.

## Systematic planning for data collection

At the cornerstone of any sampling or data collection project, systematic planning facilitates a comprehensive investigation that allocates project time and resources in a pertinent and appropriate way. The process establishes robust acceptance criteria for the collection, evaluation, or use of data, to ensure it is of the correct type, quality and quantity and that data is appropriately assessed, accounting for inherent uncertainties. Our planning methods fit the requirements of current UK industry regulations and are a concrete and transparent way to demonstrate compliance.

# What do we offer?

To support the DQO process, our team uses Visual Sample Plan (VSP software). This allows sites to be visualised and displays proposed sample locations. Statistical parameters and sampling regimes can easily be changed and re-visualised, allowing comparison of a number of sample plan designs in order to achieve the optimal solution. The trade-off between costs and effort with the level of confidence in the decision making can be clearly displayed in line with the need for transparency. The software is particularly suited to geographically complex scenarios such as:

- Delicensing of nuclear licensed sites;
- Decommissioning of industrial sites;
- Remediation of contaminated land;
- Response and Recovery of Chemical/Biological/Radiation Terrorist Event
- Footprint Reduction and Remediation of Unexploded Ordnance (UXO) sites

With the use of DQO and VSP, Orano's systematic planning team can offer a defensible and unambiguous approach to clients' data collection and evaluation activities.



© Orano - Zummstein, Michael

## Why choose

# Orano Projects?

With a member of our team appointed by Pacific Northwest National Laboratory (PNNL) as the only UK based beta tester for VSP, Orano Projects is at the forefront of its development in line with UK usage and requirements. We have recognised expertise in the DQO methodology and VSP support tool and are experienced in communicating with the full range of stakeholders, from the collection operatives to regulators.

Orano Projects delivers a professional service working in line with time and cost parameters, with skills and capabilities across radioactive waste management, waste characterisation, statistical analysis, radiochemistry, radiation protection and conventional hazards.

We can offer further complimentary services in the field of compliance, waste strategy, waste led decommissioning operations through to expert advice on packaging and logistics resulting in the removal of waste from your site.



**Orano Projects Limited is a wholly owned subsidiary of Orano, providing specialist technical consultancy and expert engineering services to the UK nuclear industry. With a track record of over 40 years operating in the UK, we combine unique knowledge and experience to offer the best value**

### Contact your local office

Abingdon: +44(0)1235 555755

Warrington: +44(0)1925 816851

Kendal: +44 (0)1539 722311

Whitehaven: +44(0)1946 67377

Thurso: +44(0)1847 890345

Head office: Suite 7, Hitching Court, Abingdon Business Park, Abingdon, Oxfordshire, OX14 1RA, United Kingdom



# orano

Giving nuclear energy its full value

[www.oranoprojects.uk](http://www.oranoprojects.uk)

[www.orano.group](http://www.orano.group)