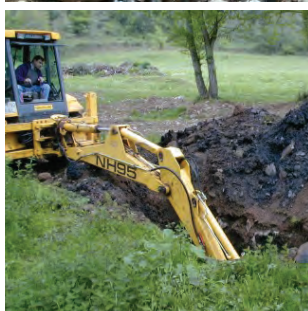
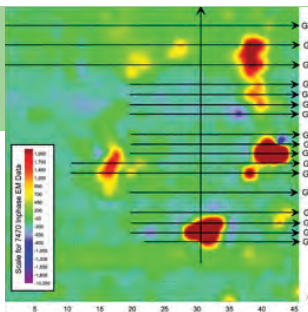


Remediation of Biological Waste



CONTACT US

For more information please visit our website at www.obg.com or e-mail info@obg.com

O'Brien & Gere maintains a group of technical professionals dedicated to projects dealing with the investigation, assessment, and remediation of biological waste.

The firm is aware of the sensitive nature of environmental issues surrounding the historical disposal of potentially infectious biological material. Across the United States and internationally, the public's perception of the potential health risks associated with discarded infectious disease organisms is significant. Therefore, a clear and unambiguous project management and public communication strategy is a vital component of any investigation/remediation project that cannot be overlooked.

Successful project completion starts with establishing program goals tailored to meet the needs and objectives of the client, regulators, and surrounding community.

O'Brien & Gere has successfully utilized the following phased approach to investigating and remediating chemical and biological hazards at a number of sites:

PHASE I: ASSEMBLY OF PROJECT TEAM

Teams comprising experts in environmental and infectious disease microbiology, technical professionals with a clear understanding of the site-specific issues, key employees associated with the disposal site, and a public relations professional, are all a part of O'Brien & Gere's successful project management approach.

PHASE IIA: SCOPING

The next phase involves review of historical site activity information, a regulatory review, documentation and categorization of production processes, identification of waste disposal locations, and review and documentation of waste treatment protocols.

PHASE IIB: HAZARD ASSESSMENT

The objective of this phase is to evaluate potential public health and environmental hazards of the waste materials that may not have been sterilized prior to disposal. The hazard assessment qualitatively integrates information concerning the disposed agents, with data on the virulence, environmental survival and transport, and potential human and ecological receptors. The results of the hazard assessment are used to assess the need for, and focus of, potential sampling and analysis programs; as a tool for internal, regulatory, and public communications; and to evaluate potential remedial or risk management strategies.

PHASE III: REMOTE SENSING SURVEY

Ground penetrating radar (GPR), magnetic, and electromagnetic techniques are proven geophysical methods for identifying and estimating the location and extent of subsurface disposal areas.

PHASE IV: FIELD INVESTIGATION

This phase assesses the nature and extent of waste at the site. Depending on site-specific considerations, this may involve the placement of soil borings, trenches, and monitoring wells, as well as the collection of waste materials, soil, and ground water samples. Information compiled during these activities forms the foundation for the assessment of remediation strategies, and potential public health and environmental risks.

Remediation of Biological Waste

PHASE V: ASSESSMENT OF REMEDIATION STRATEGIES

Innovative solutions are an O'Brien & Gere specialty. Utilizing knowledge gained from experience, O'Brien & Gere provides clients with remedial options and future land use possibilities.

PHASE VI: IMPLEMENTATION OF SELECTED REMEDY

O'Brien & Gere assists clients in making well-informed decisions based on quality information. There are many options available to address chemical or biological wastes. Successful solutions are selected based on the project goals and objectives and the data collected on site.

The firm offers value-added services through the entire project life cycle, from conception, to implementation, to completion. Not only do we have the capabilities to investigate and offer cost-effective strategic remediation alternatives, but we utilize our in-house capabilities to implement the selected solution and bring the project to successful completion. Currently, O'Brien & Gere is assisting clients in addressing issues related to the remediation of biological waste on a global basis. The firm was selected to provide these services based on our demonstrated achievements in this field.

REPRESENTATIVE PROJECTS

O'Brien & Gere has acquired a wealth of experience performing projects at facilities where production operations utilized a variety of infectious biological agents and materials including bacteria, viruses, and large and small animals. Some of these projects have included:

SITE INVESTIGATION

200-ACRE FORMER BIOLOGICAL LABORATORY FACILITY

Developed and manufactured health care biological products, including human and veterinary viral vaccines, bacterial vaccines, and blood fractionation products. Waste materials included disposed vaccine vials and production wastes such as animal carcasses, embryonated eggs, animal tissue, syringes, needles, wastewater sludge, laboratory glassware, and other production wastes.

SITE INVESTIGATION & REMEDIAL ASSESSMENT

DEBRIS FIELD AT A PHARMACEUTICAL FACILITY

Potential waste materials included disposed vaccine vials and pharmaceutical products, syringes, needles, animal remains, and other production wastes.

COMPLETE TURNKEY SERVICES FOR BIOLOGICAL & CHEMICAL INVESTIGATION ASSESSMENT & REMEDIATION

VACCINE DISPOSAL SITE IN SPAIN

Included a site investigation using GPR and electromagnetic techniques, followed by an intrusive investigation with chemical and biological sampling and analysis for soils and groundwater, as well as a qualitative risk assessment. The site contains infectious process waste, lab waste, construction rubble, and wastewater treatment sludge. Remedial alternatives were evaluated and a remedy was selected and approved by the regulatory agency and third party validation. The site is currently in remediation with O'Brien & Gere providing construction management services.

SITE INVESTIGATION

WASTE AREA IN ITALY CONTAINING PHARMACEUTICAL & ANIMAL HEALTH WASTE

Services to date include a geophysical investigation along with sampling and analysis of soils and groundwater. A qualitative risk assessment and development of remedial alternatives will be performed in the near future.

