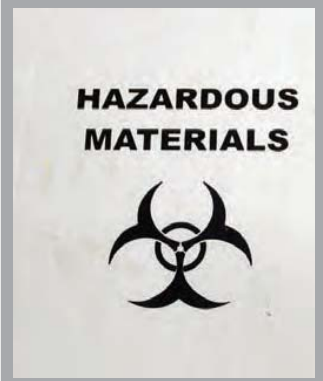


PHILOTECHNICS



Our People - Your Resources

Philotechnics' services are delivered to you by the nation's premier group of radioactive materials management experts. Our professional staff has started up, operated, and managed waste processing and disposal facilities and successfully managed some of the most challenging decommissioning projects in the nation.

We provide fully qualified personnel to plan and perform your work. We interface with your on-site personnel to get the job done right the first time. We are responsive to your needs, apply our unique knowledge and expertise to meet them, and go the extra mile to ensure that you receive the greatest value for every dollar spent.

Our people are what sets us apart. We maintain a simplified organization, staffed with working managers who have the demonstrated ability to meet even your most difficult challenges.

Our personnel are fully trained and possess the appropriate credentials to help you accomplish your project goals and objectives. We enhance our staff with in-house training programs, including Radiological Control Technicians (RCT's), OSHA compliant HAZWOPER, and numerous Health and Safety Programs. In addition to the training provided to our own personnel, we provide these services to our clients as a cost-effective alternative to developing their own in-house training capability. To date, we have trained more than 2,500 individuals at numerous facilities.

Supplemental Information

NAICS Codes in which we provide services:

NAICS #	Title:
562910	Remediation Services
562112	Hazardous Waste Collection
562211	Hazardous Waste Treatment & Disposal
541330	Engineering Services
238990	All Other Specialty Trade Contractors
561210	Facilities Support Services

Administrative Information

Tax ID	23-2893108
Duns	09-096-9346
Cage Code	1D6V5
Bonding Aggregate	\$3,000,000.00

DOE FOCI Certification
Multiple Licensed Radiation Facilities
Licensed Radiological & Hazardous
Waste Transporters



Philotechnics Philosophy

At the very core of our philosophy is our commitment to being the most responsive, broad-spectrum radiological services provider in the nation – dedicated to advising you on the most appropriate method to accomplish your objectives. We do this by offering the following services:

Mixed and Radioactive Waste Brokerage Services: to provide RCRA, TSCA, Asbestos, NORM, TENORM and Radioactive Waste Disposal Services.

Decontamination & Decommissioning: to support license termination or modification.

Health Physics Services: to support your needs in areas such as Decommissioning Funding Estimates and Updates, Radioactive Material License and Amendments, Emergency Response and Facility Recovery Operations and many other Health Physics support needs.

Fleet Services: We are a private carrier licensed in 48 states.

History

Philotechnics, Ltd., is a full-scope radiological services company headquartered in Oak Ridge, Tennessee; home of one of the three secret cities chosen to be part of the Manhattan project in WWII.

In 1942, the United States federal government chose the area as a site for developing materials for the Manhattan Project due to its geography and abundant resources. 60,000 Acres of Oak Ridge quickly became a secret government project. The town was dubbed 'The Secret City' as workers and residents alike did not know the full scope of the project nor what it was intended for.

The K-25 (Gaseous Diffusion), S-50 (Liquid Thermal Separation) and Y-12 (Electromagnetic Separation) plants were each built in Oak Ridge to separate the fissile isotope uranium-235 from natural uranium, which consists almost entirely of the isotope uranium-238.

The news of the use of the first atomic bomb ("Little Boy") against Japan on August 6, 1945, revealed to the people at Oak Ridge what they had been working on.

Perhaps Alvin Weinberg, administrator at the Oak Ridge National Laboratory during and after the Manhattan Project, said it best: "Nuclear energy offers a Faustian bargain. It offers the World an inexhaustible source of energy. But in return, it demands a vigilance and longevity of our social sciences to which we are quite unaccustomed." Philotechnics is dedicated to not just our customers, but the constant pursuit of knowledge and love of science.

Locations

Corporate Office:

201 Renovare Blvd.
Oak Ridge, TN 37830

Main Line: 868-483-1551
Fax: 865-483-1530

San Diego Office:

7945 Dunbrook Rd,
Suite H
San Diego, CA 92126

Main Line: 858-586-2580
Fax: 858-586-2599



Representative Contracts

Department of Energy, Mound Facility: CH2M Hill Mound; Miamisburg, OH-
Providing Health Physics technicians and Radiological Engineering personnel

Department of Energy, Bettis Atomic Power Laboratory; Bechtel Bettis, ID-
Radiological Decontamination and Decommissioning Services, Radiological Laundry

Department of Energy, East Tennessee Technology Park, Miller Drilling and M&W Drilling, Oak Ridge, TN-
Program Management, Safety, Health, and Radiological oversight personnel

ICN, CA -
Decontamination and decommissioning of 35,000 sq. ft. radioisotope production facility requiring the removal of 13 Million pounds of contaminated soil.

DOE Knolls Atomic Power Laboratory, NY-
Performed audits and assessments of the reactor program for DOE Order compliance

Dominion Nuclear Connecticut, Inc.-
Mixed-waste characterization and disposal

Environmental Protection Agency, Energy Solutions, Concord, MA Superfund Site (Starmet NMI) -
Performed as Site Radiation Safety Officer and Site Safety Officer for remedial action to remove Depleted Uranium waste and contaminated chemicals

Bettis Marine Propulsion, ID-
D&D Services, site operations pursuant to Naval Reactors Program requirements

Valeant Pharmaceuticals, CA-
D&D of the ICN facility for unrestricted site release. Waste management activities included characterization, profiling, manifesting, transportation and disposal.

Shaw Infrastructure and Environment, CA-
Emergency Response Radiological Program Naval Station Treasure Island

Perkin Elmer Life and Analytical Sciences, MA-
D&D of Building 100 and 120, safety, industrial hygiene, and HP personnel supporting the emergency response and license termination of multiple buildings of radiological laboratory partially destroyed by fire.

Global Tungsten & Powers Corp, PA-
Provided radiation and contamination surveying for waste removal, radiological engineering a DOT packaging plan, brokering, transportation and disposal to meet waste acceptance criteria for bulk waste shipments for disposal at US Ecology's Grandview, ID facility as exempt waste.

Pfizer High Level Labs D&D Pfizer Inc., MI-
Conducted D&D of the 10 high-level radio synthesis pharmaceutical research laboratories in. Decontaminated laboratories/equipment to levels below Reg. Guide 1.86 criteria. The labs had a total area of ~ 4600 square feet and included the building ventilation systems, drains and containment systems.

M&W Drilling, LLC, TN-
Philotechnics, Ltd. performed ES&H and waste management activities/oversight for an environmental restoration

Sabia, ID-
Decontamination and remedial action survey of Sabia's Idaho manufacturing facility after a Sr-90 sealed source leak.

Sigma-Aldrich, MO-
Fort Mims Facility Decommissioning

Scope of Services



Radiological & Health Physics Services

- Decommissioning Funding Estimates and Updates
- Radioactive Material Licensing and Amendment Assistance
- Emergency Response and Facility Recovery Operations
- Facility Vulnerability / Liability Analysis
- Dose Assessment and Reconstruction
- Field Consolidation/Characterization of Unknown Chemical/Radioactive Waste
- Radiation Protection Training
- Annual Radiation Protection Program Assessments
- Specializing in NRC and California Regulations
- Subject Matter Experts in NRC and California Radiological Health Branch D&D, MARSSIM, Characterization, Final Status Surveys and License Terminations
- Decontamination Utilizing Strippable Coatings, Chemical Decontamination, CO2 Blasting, Ice Blasting, Scabbling, Scarifying, Mechanical Decontamination of Materials (Steel, Concrete, Brick) and Systems (Ventilation, Drains, Vacuum, Hot Cells), Soil Excavation and Complete Building Dismantlement

NORM & TENORM

- Waste Management Considerations for NORM
- TENORM Management Solutions
- TENORM Disposal Solutions
- TENORM Decontamination Solutions

Site Assessment

- Soil Excavation and Disposal
- Contaminated Soil Management

Training

- Health and Safety Training
- Basic Radiation Worker Training
- Provide Homeland Security and First Responder Training Exercises



Scope of Services



Waste Brokerage, Management and Removal:

- Dry Active Waste (DAW)
- Metals/Equipment
- Animal Carcasses/Biological Materials
- Sealed and Check Sources
- Nuclear Gauges
- Thorium and Uranium Compounds
- Aqueous Solutions, Liquid Scintillation Vials and Media
- Organic Liquids and other Mixed Wastes
- High Curie Content Materials
- Classification of Unknowns
- Source Processing and Macro-encapsulation
- Quarterly Waste Pick-Ups a.k.a Milk Runs
- Direct Disposal
- Waste Characterization
- Waste Volume Reduction
- Solidification and Stabilization



Site Assessment



Site Assessments are an integral part of the decision making process. Philotechnics is an expert in understanding the needs of our customers and providing custom tailored solutions. Philotechnics utilizes its vast experience, coupled with its technical knowledge base, insight and flexibility, to aid our customers in the identification of any potential issues and liabilities. This helps alleviate our customers' future financial risk associated with real estate transactions or satisfying certain regulatory requirements. Philotechnics has designed and performed a variety of Site Assessments for hundreds of industrial, commercial and governmental sites nation-wide, obtaining sufficient information to develop third party independent professional verification of the actual or potential radiological/environmental status of the site. Assessments include site inspections, thorough review of records, personnel interviews, radioactive/hazardous materials inventories, review of current and historical operations and scoping surveys. Working in conjunction with its customer, Philotechnics will use this information to design and perform the most cost effective approach to characterize the site and accurately determine potential, likely or known, sources of contaminated structures, systems, equipment, and surface and subsurface soils. This information will be compiled in a clear, concise, comprehensive and technically defensible report custom tailored to meet the needs of the customer.

Soil Excavation, Management and Disposal

Philotechnics is a full-scope radiological services company that performs radiological remediation, decontamination and decommissioning, radioactive and hazardous materials waste management, packaging and disposal services throughout the United States. We encompass three primary stand-alone product lines: mixed and radioactive waste brokerage, decontamination and decommissioning (D&D), and health physics services. As a premier waste management group and independent broker, Philotechnics has the ability to access all licensed disposal outlets, ensuring our customers choice, continuity of service and convenience. Philotechnics has performed characterization, D&D and waste disposal services for more than 1,000 commercial facilities and generators, and our broad spectrum of services has allows us to offer custom turn-key solutions for the removal, disposal and release of dozens of customer contaminated soil, sediment or tailing sites.

Philotechnics utilizes its innate ability to manage projects from "cradle to grave", to offer the most flexible and cost effective solution for its customers, using best management practices. From the design and acceptance of necessary documents, release criteria and regulatory interface, to the management of on-site activities and controls, segregation, packing, transportation and disposal of all associated wastes; Philotechnics has the experience, capabilities and personnel to manage it all.

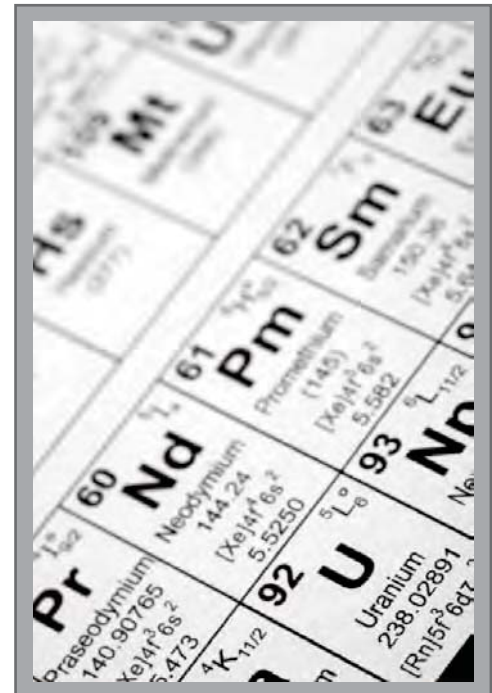


Quality Assurance Program



The American Society for Quality Assurance defines quality assurance as “the planned and systematic activities implemented in a quality requirement for a product of service will be fulfilled.” Every product and service we provide includes quality requirements, whether imposed by federal or state organizations, industry standards, or customer-imposed. Philotechnics’ Quality Assurance Program was developed and is based on quality standards of “Quality Assurance Requirements for Nuclear Facility Applications” (NQA-1), the American Society of Mechanical Engineers (ASME), the American National Standards Institute (ANSI) and 10 CFR Part 830.120 for the Department of Energy.

We use a graded approach to quality assurance, meaning that the application of quality requirements must be done in a manner consistent with the relative importance of the item or activity. The degree of control for a process should be proportional to the degree of risk associated with the process, the likelihood of a problem associated with the process and the impact of such a problem. This helps us to maintain a high level of compliance while also allowing work to be conducted with maximum efficiency. It is not practical or reasonable to comply with all aspects of all governing regulations in all quality applications, and regulatory agencies recognize this. Therefore, Philotechnics develops a project specific Quality Assurance Project Plan (QAPP) for projects as appropriate.



NORM & TENORM



With States now proposing, adopting and instituting, either wholly or in part, the Conference of Radiation Control Program Directors (CRCPD) suggested State Regulations to establish radiation protection standards for TENORM, licensing and releasing of facilities/sites for unrestricted use; Philotechnics supplies comprehensive solutions to minimize your risks by providing you with the very best value in radiological services.

Philotechnics is one of the nation's largest, most experienced full service contractors of Decontamination and Decommissioning (D&D)/License Termination Service Subject Matter Experts (SMEs). We custom design the plans, approach, methods and techniques, and perform all activities in accordance with the requirements listed on in NUREG 1757, "Consolidated NMSS Decommissioning Guidance"; and NUREG 1575, "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM) to ensure technically defensible data is generated to release the facility/site for unrestricted use in accordance with the criterion of 10 CFR 20.1402.

Philotechnics maintains access to all available disposal facilities throughout the nation giving you the most cost effective outlet for your radioactive material and decontamination needs. We ensure the following are always met:

- Protect the radiological health, safety and welfare of all workers on site.
- Manage all radioactive materials safely and compliantly.
- Protect the public from exposure to radiation.
- Protect the environment from radioactive contamination.

NORM/ TENORM Turnkey Solutions:

- Disposal / Reuse
- Hydrocarbon and Liquid Waste Solidification
- Handling and Transportation
- Facility/ Site Reclamation, D&D / License Termination for unrestricted use

Nuclear Gauge Services:

- Source Inspections
- Leak Checks
- Calibration
- Source Recovery & Controls

Evaluation and Measurement:

- Isotope & Activity Assessments
- Gamma Walkover Surveys
- Release Surveys
- Site Assessments

Training and Program Audits:

- Radiation Worker/ Supervisor, ALARA and NORM/TENORM awareness training
- Inspections & Reviews
- ALARA Evaluations



NORM & TENORM



Philotechnics is a radiological services industry leader and maintains a highly qualified team of diverse and experienced professionals. Our teams' ability to facilitate turnkey services, utilizing cross trained staff to perform all work from cradle to grave. We provide the most efficient and safe environment for project success; utilizing our D&D/License Termination and Radiological Service Experience, Radioactive Waste Management and Disposal Experience, and nearby trained workforce; benefits our customers by virtue of the fact that one contractor is held accountable for all facets, whereby project schedules are compressed, waste volumes are reduced, possibility of cross and/or recontamination of clean areas are mitigated, make this team your best option. Philotechnics custom designs solutions for every customer, not the one size fits all approach many use.

Philotechnics maintains RML's in several states including California, Massachusetts, Pennsylvania, and Tennessee for use nation-wide at customer facilities and sites. Philotechnics also has the ability, through its mobile licenses, to obtain reciprocity in order to perform mobile on-site decontamination. By doing so we can manage the accumulation of TENORM scales and sludges in piping and tank systems affecting oil and gas production, this allows us to present you with the most cost effective solution for your NORM/TENORM waste needs.

We minimize costs for your radioactive disposal requirements through radiologically engineering a solution customized to your waste stream. In doing so, we use real time analysis of the isotope dispersion and activity measures to identify material suitable for disposal as TENORM. This is a lower cost option than processing and disposal as Low-Level Radioactive Waste (LLRW).

We use an In Situ Counting System (ISOCs) technique for real-time Non-Destructive Analysis (NDA) and verification to demonstrate compliance with NORM disposal facilities waste acceptance criteria. This method identifies activities and isotopes and allows your waste to be manifested at the point of pick-up for NORM disposal – avoiding costly LLRW processing and disposal costs. Direct disposal also eliminates 'double transportation' costs associated with using LLRW processing and disposal facilities.

Our approach maximizes the amount of your waste that is eligible for disposal as TENORM, reduces LLRW disposal and overall cost. If our analysis does identify LLRW, this material can be segregated and designated for an alternative method of disposal.

As a licensed services contractor, Philotechnics will ensure that the proper industry standard work practices and exposure/ contamination controls are followed; such as, the construction of temporary containments and the use of HEPA filtered negative air machines to control and remove fugitive dusts, particles and airborne contaminants during decontamination and to prevent the spread of contamination from the area designated for the decontamination work.

Philotechnics can package any waste streams generated during decontamination and arrange for disposal at a licensed and suitable disposal facility.

Philotechnics is your first choice for all NORM/TENORM waste disposal and decontamination solutions for the Oil & Gas E&P industry.



Waste Brokerage



Since the formation of our brokerage group in 1997, Philotechnics has grown to be one of the largest and most reliable waste management providers in the nation. We maintain contractual relationships with every commercial disposal site to ensure you have an identified outlet for your waste. We provide the following Waste Management Services:

- Waste Management Planning
- Assessment and Application of Changing Regulatory Requirements
- On-Site Waste Management Services
- Waste Characterization
- Processor Selection and Price Negotiation
- Manifesting, Documentation and Quality Assurance
- Marking, Labeling, Packaging and Container Inspection
- Waste Pick-up and Transportation
- Source Processing and Macro-encapsulation
- Disposal

As an independent broker, we carefully evaluate each customer's waste stream(s) and provide them with the various options that may be available. We can assist in the efficient and effective disposal of the following waste streams:

- Dry Active Waste (DAW)
- Metals/Equipment
- Soils and Asbestos
- Animal Carcasses/Biological Materials
- Smoke Detectors and Exit Signs
- Sealed and Check Sources
- Nuclear Gauges
- Thorium and Uranium Compounds
- Aqueous Solutions, Liquid Scintillation Vials and Media
- Organic Liquids and Mixed Wastes
- High Curie Content Materials
- Classification of Unknowns

One size does not fit all. After our highly trained staff evaluates your waste stream(s), we are able to assist in selecting the best disposal option that suits your fiscal and desired needs.

If a processing option becomes unavailable or cost-prohibitive, we have the flexibility to re-route your materials to another waste processor.

Philotechnics offers routine scheduled pick-ups (Milk Runs) throughout the United States to ensure our clients do not exceed regulatory holding limits and offer reduced transportation costs. Our turnkey services include manifesting, packaging assistance, proper marking and labeling, transportation, processing and disposal.



Waste Brokerage



Philotechnics offers specific advantages over other providers:

- As an independent provider of broad-spectrum waste management services, we are not exclusively limited to one processor, have no machines to feed, disposal cells to fill or quotas to meet.
- We are experts at managing all types of waste: from solid and liquid radioactive waste to RCRA & TSCA hazardous radioactive materials.
- We own our transportation vehicles and provide fully trained and qualified drivers to complete waste shipments from your site to designated waste processing or disposal facilities.

With our extensive experience we integrate all of the factors that complicate waste management operations into one service provider. We have evaluated and characterized thousands of waste streams for treatment and disposal. This provides you with the broadest range of options, while lowering your risk, controlling cost and managing the waste life cycle.

- Philotechnics provides project specific evaluations of waste processing and disposal options, including on-site treatment under the EPA's Subpart N regulations.
- Mixed and radioactive waste management support services, including waste characterization, packaging, transportation, processing and disposal.
- Fielding highly qualified professionals and technicians to sample, survey, package, manifest and track your waste to its destination.
- Providing licensed and insured DOT-compliant waste transportation services.

When you identify a specific need for waste management services, regardless of size, we evaluate all options and provide you with a plan that is concise, convenient and cost effective. We consider the following variables:

- Current regulatory requirements for treatment of your waste.
- The availability and reliability of treatment technologies and licensed processing facilities.
- Treatment and disposal facility waste acceptance criteria.
- Methods to consolidate waste shipments to achieve cost savings during transport.

Once we complete our evaluation, we outline your options so that you can make an informed decision regarding the disposition of your waste. This approach provides you with the maximum control over your operations, allows you to make decisions based on full disclosure of your options, and gives you access to the nation's premier group of waste management professionals.



Radiological & Health Physics Services



Philotechnics has been an industry leader in the application of the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) for facility decommissioning projects. Our group continues this leadership role in utilizing NUREG 1757 Consolidated NMSS Decommissioning and California Department of Public Health Radiologic Health Branch Guidance for highly complex sites.

The full scope of our D&D/HP capabilities includes:

- Developing conceptual work plans.
- Preparing cost estimates.
- Developing detailed project schedules including man-loading requirements.
- Developing radiological work procedures.
- Performing comprehensive pre-work surveys.
- Developing site conceptual models that have with stood extensive regulatory scrutiny.
- Generating health and safety plans.
- Investigating work areas and system histories.
- Sampling environmentally hazardous constituents.
- Developing detailed technical work documents.
- Providing fully qualified personnel to perform the work, and managing all wastes from D&D.

Our comprehensive experience and capabilities provide an end product focus through all phases of D&D projects.

We have removed thousands of feet of buried underground radioactive piping and thousands of cubic yards of soil: including under active existing building structures, exhaust stacks from buildings, heavy ventilation plenums and associated mechanical equipment from high bay overheads; excavated radioactive tanks; solidified contaminated liquids; performed complete decontamination and entire facility dismantlement of, multiple buildings, conducted post decontamination and facility release surveys; and successfully terminated hundreds of licenses.

We provide all personnel, equipment, materials and other resources needed for D&D operations. Our personnel apply an array of specialized decontamination techniques, such as CO₂ blasting and remotely controlled machinery. We apply the necessary methods to efficiently complete your D&D project while minimizing the volume of waste generated and controlling the spread of contamination. We also have the capability to deploy our own mobile D radioactive materials license to un-licensed or under-licensed sites.

- Pre-Planning for license termination of amendment
- Waste management
- Preparation of survey plans
- Pre- and Post-decontamination surveys and facility characterization
- Final status survey reports
- Site safety/IH oversight and/or monitoring support

Our value lies in our understanding of the special needs of each project while leveraging the lessons we have learned from other successful projects; our programmatic approach to planning the work, and our common focus on safety, quality, time-lines and cost control.



Radiological & Health Physics Services



Health Physics Services:

- Consulting and Training
- Radioactive Materials License Applications, Amendments and Transfers
- Weekly, Monthly and Annual Routine and Non-Routine Surveys
- Decommissioning Funding Plans
- Annual and/or License Required Radiation Safety Program Assessments, Audits and Reviews
- Removal and Disposal of Radioactive and Hazardous Materials, Facility Decontamination & Decommissioning (D&D), License Termination and all necessary regulatory support Program Assessments

Decommissioning Funding Plans:

- Licensee's are required to provide funding mechanisms and submit applicable certifications that demonstrate financial assurance for decommissioning, in accordance with regulatory criteria, have been provided to guarantee that a proper facility closure can occur.
- At the time of license issuance, and at intervals not to exceed 3 years, periodic evaluations must be made to assess and adjust closure budgets as necessary to account for any changes in costs and extent of contamination.
- Realistic assessments ensure an appropriate and acceptable level of financial assurance without tying up unnecessary and valuable finances.

Program Assessments and Audits:

- Many licenses require an annual assessment of the licensee's radiation protection program.
- Assessments conducted by an independent third party ensure license compliance while providing Recommendations to improve practices.
- It behooves a licensee to self-identify program deficiencies, make corrections and institute program controls prior to regulatory authority discovery and possible issuance of a notice of violation.

License Termination:

- The State of California imposes some of the most stringent closure standards in the country; very few licensed service providers possess the technical expertise (subject matter experts) or resources to efficiently navigate the regulatory arena and conduct an effective and successful license termination. Philotechnics has successfully decommissioned and attained facility release for unrestricted use at over 50 facilities in California.

Philotechnics' Industry Leading Life Cycle Approach:

- Company's focus is on the primary mission, i.e. power generation, research, production, etc.
- Forethought and proper planning, along with implementing subtle changes to processes and procedures can dramatically impact operational, disposal, decommissioning time and costs.
- Regulators have no obligation to correct license oversight. They will only inspect, evaluate, investigate and enforce regulatory requirements.
- Philotechnics aids the development and maintenance of your program with an end point in mind, to save time, money and man-rem.
- This approach ensures regulatory compliance and final decommissioning are at the forefront.

