



**ASPEN** Resources Limited, Inc. an SBA **WOSB** (FAR §19.15) offers innovative real time solutions to complex operational and management issues in environmental and radioactive waste management, processing, engineering, quality assurance and quality control (QA/QC), data management and information technology (IT). Aspen also provides support in the areas of: safeguards and security; transportation, and program and project management. Our award winning staff provides results that work, are cost efficient, and are program-ready integrable.



With nearly 20 years in-depth experience, Aspen has a proven track record in identifying innovative approaches to environmental and radioactive waste management challenges that have resulted in recognized schedule and cost savings, waste volume reductions, and reductions in personnel exposure. Many of the management practices developed by Aspen personnel are being actively deployed throughout the DOE Complex.

Aspen professionals actively work on challenging waste management issues (often referred to as orphan, problematic or difficult wastes) employing their over-30 years experience. We have received both U.S. patents and DOE awards for developing functional solutions to these difficult waste issues. Aspen's broadly based and deeply grounded expertise provides excellence in perception with enhanced insight to identify and implement productive strategies for the minimization and disposition of new-gen and legacy radioactive wastes.

Aspen provides our clients with a broad base of expertise, which includes:



- Acceptable Knowledge (AK) assessments and reviews
- Package testing; multi-agency approval functions
- Feasibility assessments of processes & programs for treatment, packaging & transportation of radioactive wastes; and sensitivity and options analyses of treatment and management options for problematic waste streams
- Evaluation of NDA and RTR equipment and instrumentation to determine effectiveness.
- Proven ability to establish relationships and work with state & federal agencies to reach essential, mutual agreements
- Assessment of waste per acceptance criteria for processing, packaging, and transport
- Process engineering and QA/QC controls for waste reprocessing and repackaging
- Improve process operations and waste minimization
- Categorization and classification of radioactive wastes and materials before and after remediation/packaging
- Risk assessments / analyses for LLW and TRU waste

Aspen developed and established radioactive waste treatment processes and systems at Hanford, LANL (2<sup>nd</sup> Quick-to-WIPP), LLNL, Rocky Flats, Oak Ridge, Savannah River and General Services Administration at the Denver Federal Center. Aspen designed award winning innovative approaches to hazardous and radioactive waste permitting, processing, sampling and waste designation issues. Aspen developed several new waste sampling and characterization approaches for in-field and process line sampling, including design and real time sampling.

### **Development of Revised Response Plan Back to TCEQ for Type II & III LANL Wastes at WCS**

- Develop overall Revised Response Plan (RRP) outline in conjunction with Key Stakeholders
- Write summary narratives for each option
- Identify required assumptions for options analysis
- Provide schedule and flow diagrams including major milestones
- Assess with Sandia National Laboratory Transportation group packages that have the ability to transport unremediated Type II and/or Type III wastes
- Aspen in conjunction with Sandia transportation group will conduct an initial assessment of possible packages and then work with NRC to determine ability to implement use of such package(s)
- Sandia has the quantitative abilities to assess package design against probable transportation risks
- Aspen currently has contracts with Sandia under which specific Sandia scope for this work would fit
- Subcontract work with cognizant outside SMEs, e.g., David Moody
- Establish basic components for Response Plan – see below:
- Develop the RRP deliverables

**Overall schedule** – due dates to EM-LA and WCS

**Cost evaluations** – as detailed as necessary for overall options assessment

**Regulatory matters/issues** – run-to-ground as much as possible outstanding matters/issues with states, federal agencies, stakeholders

**Probability & Consequence evaluations** – provide documented analyses

**Worker/Public impacts** – review and assessment of substantive impacts for evaluated options

**Provide more-in depth analysis of options and down-select of options** – tier off initial analysis for subsequent evaluations

**Assessment of optimal processing and disposal methods** – clear evaluation with defined specifications regarding calculations and valuations

**Define specific criteria used for Execution Difficulty Score** – define scoring parameters used and computation made to arrive at scores

## Recent Applicable Contracts

| Contact Information  | Scope Of Work  |
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| DOE Environmental Management<br>Consolidated Business Center (EMCBC)<br>Cincinnati, OH 45202<br>Support to LAFO<br>Contact: Mr. Dave Nickless<br>David.Nickless@em.doe.gov | Evaluate and prepare Draft Assessment Report on LANS completion of corrective actions in response to the Office of Enforcement, Inspector General, Technical Assessment Team (TAT) and DOE AIB Phase 2 Report JONs. Evaluation and assessment of the LANS legacy waste operations and implementation. Technical expert support to the DOE HQ EM organization with the update and implementation of DOE Order 435.1, <i>Radioactive Waste Management</i> , and with the management of the Low-Level Waste Disposal Facility Federal Review Group. Provided technical expert support with the design review of the Waste Treatment and Immobilization Plant, focused primarily on the pretreatment facility and its "black cells".   |
| Sandia National Laboratories<br>Sandia National Laboratory<br>1515 Eubank SE<br>Albuquerque, N.M. 87183<br>Contact: Dr. Doug Ammerman<br>djammer@sandia.gov                | Quality assurance oversight of the Holtec HI-STAR ATB 1T drop testing at Sandia National Laboratories, including review of test procedures, and witnessing of installation of certain installations, inspections and assemblies.   |
| Portage, Inc. for DOE-CBFO<br>Carlsbad, NM<br><br>Contact: Vernon Daub,<br>575-234-7160  | Expert-level technical specialization in the area of waste certification to the Carlsbad Field Office (CBFO) Technical Assistance Contractor (CTAC). Services are in direct support of the CBFO National Transuranic waste [TRU] Program (NTP). Development of criteria and requirements for TRU waste characterization program, implementation of program requirements, and solutions for prospective problems.   |
| Portage, Inc for Fluor Idaho, LLC<br>Contact: Kirk Thorngren<br>1075 South Utah Ave., Suite 200 Idaho<br>Falls, ID 83402   | Development of Acceptable Knowledge documentation for orphaned TRU waste streams and strategic planning for the processing and dispositioning of these problematic waste streams. \$Aspen facilitates discussions with off-site generators and WIPP to correctly establish clear path-forward for these waste streams.   |
| Washington River Protection Solutions,<br>LLC<br>P.O. Box 850<br>Richland, WA 99352  | Providing technical expertise as part of the multi-disciplinary team which will support ORP by performing the following activities: <ul style="list-style-type: none"> <li>• Conduct the HLW Facility Design and Operability Reviews</li> <li>• Determine if the system and associated components will meet their functional and design requirements.</li> <li>• Identify design shortcomings and specific issues that would either prevent these HLW Systems from operating or impact design throughput.</li> <li>• Make recommendations to improve or correct the design based upon the issues found during the reviews</li> </ul> Prepare a summary reports that documents the design review, reviewed systems, issues and recommendations for design improvement/correction. |
| West Valley Demonstration Site<br>CH2M-Hill B&W<br>West Valley, NY 14171   | Subject matter experts on the development of a proposal for the disposition of remote-handled (RH) and contact-handled (CH) TRU waste containers stored and generated at the West Valley Decommissioning Site. Determinations are based on a detailed review of characterization data of the TRU component of the remote- and contact-handled waste containers. Identification of the most efficient methods of treatment of the waste (if necessary to meet the WIPP WAC) and packaging of the waste, and to assist with the development of packaging equivalences to be submitted to DOE EM-30 and CBFO, if required   |
| CH2M-Hill Plateau Remediation<br>Company (CHPRC)<br>PO Box 1600 H7-30  | Specialized technical support to the Sludge Treatment Project (STP), which is responsible for the management and disposition of the highly radioactive K-Basin sludge waste, within the areas of remote-handled TRU management, onsite transportation, and alternative   |

| Contact Information  | Scope Of Work   |
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| Richland, WA 99352   | treatment options. Initial support is focused on the development of an alternatives analysis and conceptual design. The STP is CH2M-Hill's number one priority under the new CHPRC contract.  |
| Sandia National Laboratory<br>1515 Eubank SE<br>Albuquerque, N.M. 87183                              | Providing quality assurance/quality control support for the testing of a new nuclear material air transport package and Nuclear Navy spent fuel cask. Also providing support to the development and submittal to the Nuclear Regulatory Commission of a Safety Analysis Report for this new package.  |
| CH2M-Hill - WG Idaho<br>PO Box 1625<br>Idaho Falls, ID 83415   | Assisting the low-level and TRU waste programs with the development and approval a novel process to disposition problematic low-level mixed and TRU radioactive mixed waste to WIPP. Interfacing with WIPP and the Advanced Mixed Waste Treatment Project (AMWTP) with the development of this new packaging and disposition approach.  |
| DOE - Office of River Protection (ORP)/PAC<br>2440 Stevens Center Place, H660<br>Richland, WA, 99353 | By request of the DOE-ORP Manager, provided technical experts to perform assessment. Perform independent engineering reviews of the Waste Treatment and Immobilization Plant and Tank Farms projects on behalf of the ORP Manager's Office. The assessments will ensure the proper technical solutions and project effectiveness will be applied.   |
| BBWI<br>850 Energy Place<br>Idaho Falls, ID 83401  | Provide general technical support primarily in the areas TRU, low-level, and mixed low-level waste; treatment; packaging; and disposal. Primary focus is to assist AMWTP with the determination and implementation of alternative approaches to resolve problematic waste issues.   |
| North Wind Inc.<br>507 Knight Street<br>Richland, WA 99352   | Provide Acceptable Knowledge Data and Data Quality Technical support and Waste Certification support to the Fluor-Hanford TRU program. Assisted in the development and implementation of plans and responses for mandates, directives, initiatives, and recommendations of regulatory or oversight agencies, such as DOE and the DNFSB. Assisted the client address findings from external inspections, audits, and assessments.  |
| DOE/Richland Field Office<br>2440 Stevens Center Place, H660<br>Richland, WA, 99353                  | Evaluate and develop basis for declaring processed K-Basin sludges as "Defense" TRU wastes acceptable for disposal at WIPP. Developed test guidance document to demonstrate WIPP acceptability of treated K-Basin sludges.<br><br>Provided assessment of contractor's proposed treatment strategy for disposition of the highly contentious K-Basin sludge, including validation of proposed treatment process and identification of alternative treatment options.               |
| CH2M-HILL Hanford Group<br>Richland, WA<br>Mike Jennings, 509-272-1502                               | <ul style="list-style-type: none"> <li>Assessment of contractor's proposed treatment strategy for disposition of highly radioactive tank sludge, including validation of proposed treatment process &amp; identification of alternative treatments.</li> <li>Scope also includes development of waste sampling and visual examination/verification approaches.</li> </ul>   |
| Kaiser-Hill, LLC –<br>Rocky Flats<br>Golden, CO  | <p>Provided Environmental and Waste Management support, including RCRA, CERCLA and NEPA program support.</p> <ul style="list-style-type: none"> <li>Provided TRU Waste Program support, including Orphan Wastes Program, infrastructure (electrical engineering), information technology, &amp; data management support.</li> <li>Specialty support to Residue and 3013 SNM Programs., including safeguards &amp; security risk management, vulnerability evaluations.</li> </ul> |