# REQUEST FOR INFORMATION

## Chemical Management Services

**Notice Number:** RFI-CM2022

**Issue Date:** July 19, 2022

**Response Due Date:** August 17, 2022, by 10:00 AM Eastern Time

**E-mail:** Correspond directly with Rian Lewis at lewisgr@ornl.gov. Questions submitted by a method other than email will not be accepted or answered. Please ensure your email response has RFI-CM2022 in the subject line.

**Issued by:** This Request for Information (RFI) is being issued by UT-Battelle, LLC management and operating contractor of the Oak Ridge National Laboratory (ORNL) for the US Dept. of Energy (DOE).

### Oak Ridge National Laboratory – About Us

ORNL is a DOE research and development laboratory in Oak Ridge, TN. ORNL is operated by UT-Battelle, LLC (the Company) for DOE under a management and operating contract. ORNL delivers scientific discoveries and technical breakthroughs needed to realize solutions in energy and national security and provide economic benefit to the nation. We address national needs through impactful research and world-leading research centers. Our wide range of partnerships with other DOE laboratories and programs, universities, and industry allows us to pair our strengths with others for outstanding contributions to science. These critical research missions are underpinned by world class facilities and equipment. Additionally, ORNL is the equivalent of a small city and provides many services that support the research mission, including janitorial, maintenance, construction, medical, ambulance, fire, cafeteria, construction, vehicle and equipment maintenance, fabrication, sewage treatment, water distribution, power distribution, steam generation, etc.

### Chemical Management – Current State

As both a world class research lab and a small city, ORNL purchases and manages thousands of chemicals in a very wide variety, from common cleaning chemicals to those that are rare and highly specialized. Because ORNL is a government installation with unique facilities, including nuclear operations, many requirements apply to the management, use and disposal of

chemicals. Today chemicals are purchased in an ad hoc manner without formal analysis of usage or demand. Purchases are primarily executed via e-commerce catalogs where the orders are placed directly with the supplier by staff. Some chemicals are purchased via P-Card or via "manual" purchase orders issued by Procurement staff. Inventory cycle counts are decentralized and conducted by a Chemical Custodian for a specific area. The Chemical Custodian role is an additional duty and fulfilled by many classifications of staff, from administrative to research staff. Chemical reuse and redeployment to other demand areas is informal. Preparation for chemical disposal is managed at the chemical area level and is also decentralized. Disposal is managed via a formal, compliance driven process.

In an analysis of current quantities of chemicals at ORNL, the laboratory has:

1. 156,730 unique chemicals characterized and maintained in our home-grown chemical management system, called HMMIS (Hazardous Material Management Information System)

2. 532 stock-keeping locations (known as HMMIS control areas) across the laboratory footprint

3. 62,276 individual chemical containers in active inventory/trackable in HMMIS (does not include inventory maintained for additional projects)

4. 210,474 associated Safety Data Sheets associated with chemicals at time of purchase

Internal procedures require that inventory is taken annually and the information is used to inform compliance with fire protection and emergency response requirements. The goal for annual inventory is 100%.

Chemical classifications include (with some appearing in multiple classifications):

| Number of Chemical RecIDs | NFPA Classification |
|---|---|
| 991 | Compressed Gas |
| 7191 | Corrosive |
| 11 | Corrosive Liquefied Gas |
| 8 | Cryogenic Flammable |
| 19 | Cryogenic Liquid |
| 3 | Cryogenic Oxidizing |
| 63 | Explosive |
| 30 | Explosives by Rating |
| 247 | Flammable Gas |
| 105 | Flammable Liquefied Gas |
| 17 | Flammable Liquefied Petroleum Gas |
| 377 | Flammable Solid |
| 1017 | Highly Toxic |
| 3 | Highly Toxic Liquefied Gas |
| 650 | Inert Gas |

| | |
|---|---|
| 9129 | Irritant |
| 70 | Organic Peroxide |
| 1576 | Oxidizer |
| 49 | Oxidizing Gas |
| 5 | Oxidizing Liquefied Gas |
| 124 | Pyrophoric |
| 346 | Radioactive |
| 4030 | Sensitizer |
| 3139 | Toxic |
| 1 | Toxic Chlorine Gas |
| 11 | Toxic Liquefied Gas |
| 2610 | Unstable Reactive |
| 1 | Unstable Reactive Liquefied Gas |
| 4376 | Water Reactivity |

**RFI Purpose:**

This RFI is a market survey to identify potential sources that are capable of providing a turnkey solution for chemical management services and to obtain industry input on a potential future program at ORNL. The program would have the following objectives:

1. Provides the following services:
    a. Purchasing
    b. Receiving
    c. Labeling
    d. Distribution
    e. Inventory / Cycle counting
2. Provides a comprehensive and responsive program for chemical management
3. Ensures compliance with company and regulatory requirements
4. Provides timely delivery of chemicals to the point of use
5. Demonstrates a positive Return on Investment, operational efficiency, risk reduction, etc.

Note: The Company is aware that many software solutions for chemical management are available on the market. The purpose of this RFI is to evaluate available chemical management services, not software offerings.

**High Level Requirements for Chemical Management Program**

**Demand / Point of Use**

1. A specific set of chemicals should be readily available, on hand

2. Ordered chemicals should be available within a reasonable time

**Procurement**

1. An SDS must be on file for each chemical prior to purchase
2. Maximum levels by hazard and chemical family must be tracked per facility and system controls. A system control must ensure limits are not exceeded prior to purchase

**Receiving**

1. Receive into an inventory tracking and reporting system
2. Label for inventory tracking and hazards communication

**Distribution**

1. Transport to inventory area in vehicle with appropriate safety placards
2. Place chemicals into correct inventory location
3. Ensure chemicals are placed into correct storage conditions in correct inventory location

**Inventory Management / Cycle Counting**

1. Complete an inventory of all chemicals annually
2. Identify unused or excess chemicals as part of the inventory process
3. Identify and segregate chemicals that are:
    a. Expired
    b. Excess to demand
    c. Used / end of life

**Disposition**

1. Identify and segregate chemicals that are
    a. expired
    b. excess to demand
    c. used / end of life

2. Facilitate recycling / sharing of excess chemicals OR manage the turnover of excess chemicals to our waste services group.

**Reporting**

1. Flammability / fire loading information must be available for Emergency Management / fire response. Information must be available to Emergency Management at all times, by building number.

**Responses to this RFI should answer the following questions:**

**Contracting Strategy**

1. What type of contract does your firm typically recommend for this type of service? Single, fixed price for the entire operation, fixed unit price by service rendered, cost reimbursement, etc.

2. If you work under several types of contracts, what do you feel works best? Why?

3. Have you worked under a performance-based contract where fee/profit is paid based on your performance? Do you feel this works well and is fair to both parties?

4. What functions and/or resources do you envision ORNL providing as part of a contractual agreement?

5. What is a typical contractual period of performance?

6. How are Chemical Management programs typically priced? Management fee? Built into the price of chemical sales, full cost reimbursement, etc.? Please describe.

7. How are chemicals typically priced? Discount from list, dynamic pricing? How are sourced chemicals priced?

**Rough Order of Magnitude (ROM) Estimate**

1. Based on your firm's experience and information provided here, what is your ROM estimate for annual operating costs for a program that would satisfy our requirements (excluding the price of chemicals)?

2. What is your ROM estimate for transition costs, if any?

**Approaches to Chemical Management**

1. Based on your experience, does a single, turnkey contract work better than several contracts for major pieces of the scope? (For example, procurement and receiving is performed by one contractor, labelling by another, inventory/cycle counts by another, etc.)

2. What is your typical staffing model for a program of similar scope and complexity to ORNL's?
   What services are typically provided on-site for a typical chemical management program?

3. What questions or comments do you have regarding our draft requirements document? For example, are major components missing?

**Transition Time**

1. What is a typical timeline to stand up a chemical management program for a scope of similar size and complexity to ORNL?

**Barriers to Participation**

1. List any assumptions, conditions, or limitations that would impact your company's interest in this effort. For example, it's too complex, too small, too large, too much risk, etc. Please explain.

**Risks and Concerns**

Based on market research to-date, the company considers the Seller's use of its own proprietary chemical management software to be a risk in the event the contract ends for any reason.

1. In your experience, what is the best approach to chemical management software? Should ORNL provide software to the chemical management firm, or rely on the firm's software solution?

2. In your experience how is transition from one software to another handled, either in the case of your firm parting ways with a client or acquiring a new client?

**Disclaimer**

This RFI neither constitutes a solicitation, Request for Proposal (RFP), Invitation for Bid, or promise to issue an RFP in the future, nor does it restrict UT-Battelle to an ultimate acquisition

approach. This RFI is issued solely for information and planning purposes and should not be construed as a commitment of any kind.