



U.S. NRC Region IV  
1600 East Lamar Boulevard  
Arlington, TX 76011-4511

Attn: Heather Gepford, Chief NMSB-B

**Executive License Application Summary:**

The attached new license application and supporting documents are in response to Qal-Tek Associates, LLC's (QTA) business relationship with U.S. Ecology, Inc. (USE) in support of a competitive market solution for managing low level radioactive waste (LLRW), specifically bulk waste and specific categories of sealed sources. The business relationship, consists of no shared ownership or legal partnership, but creates a teaming arrangement between two established companies capable of delivering a regulatory compliant market solution for qualification, verification, processing and safe disposition of radioactive waste (LLRW) and materials. Specifically, QTA will be the Licensee and therefore responsible to own, manage and ultimately be responsible for all licensed activities under the license and associated operations. This relationship and licensed program intends to utilize the U.S. Ecology - Idaho (USEI) Rail Transfer Facility (RTF) and adjacent East Building, identified as the Mayfield Verification Facility (MVF), to perform waste processing licensed activities within. All of these elements are collectively referred to herein as the Mayfield Verification Facility (MVF) Program.

Specifically, the MVF Program will receive radioactive materials from NRC and Agreement State licensees as well as US DOE generators for verification, processing and re-packaging (if necessary), and preparation for shipment for ultimate disposal. The anticipated receipt streams for this license include but are not limited to operational wastes in very low activity bulk waste and other unwanted materials, such as sealed sources from; U.S. nuclear power, research and accelerator facilities, and other commercial licensees as well as cleanup and decommissioning wastes from commercial federal cleanup projects.

**Background:**

This teaming arrangement brings together two organizations with complimentary experience to fulfill the responsibilities and obligations contained within this application. USE brings the experience of being the Nation's oldest radioactive waste disposal operator with rail and road corridor access and facilities for large volume waste characterization and repackaging operations. Qal-Tek's innovative NRC service license with over 20 years of calibration, source management, training and licensee consulting experience brings operational and regulatory awareness to fulfill the radiological compliance program and safety components. QTA and USE are confident that the collective resources and experience between these organizations will ensure a high level of safety and compliance in delivering a market solution supporting the industry in efficient and cost effective disposal solutions. Through proper implementation and responsible management our process will not allow for any adverse impact to human health and the environment.

**Requested authorization:**

- This license intends to provide Qal-Tek with authorization to receive, process, verify, package, and ship LLRW and exempt radioactive materials for offsite recycling or disposal.
- Financial Assurance will be met in an amount commensurate with the Decommission Funding Plan estimate in accordance with 10CFR30.35(c)(5) as a waste processor

What this license application does not require:

- Environmental assessment or impact statement because this application is categorically excluded in 10 CFR 51.22 (c) (14) (xii).

**Licensed Operations:**

The licensed operations identified in this license are specifically for the purposes of receiving, processing, verifying, disposition and potentially storing radioactive materials at the MVF for less than 180 days. It is anticipated that a majority of operations will be executed with the materials in the original generator 49 CFR compliant packaging. The MVF program will store packages until activity and waste profile verification is complete and waste or material is consolidated for ultimate disposal. The processing and repackaging of waste is only intended to be performed when individual bulk waste packages received do not meet a disposal facility's waste acceptance criteria (WAC) or when it is advantageous to combine wastes, when allowed, into a larger package prior to shipment for disposal.

As a separate part of the licensed operations not associated with the bulk LLRW program, the MVF is seeking to receive package(s) containing low activity sealed sources and devices for consolidation and appropriate disposition.

**License Type:**

Based on the description of the MVF program above, this application is submitted in accordance with NUREG 1556, Vol. 18 material use license. More specifically, a Service Provider License

application for Waste Management Services (Packaging, repackaging or radioactive waste, Transportation of radioactive waste and non-destructive testing (NDT) to show that all disposal characterization and packaging requirements are met, Program Code-03234, Fee Code-4B in support of Qal-Tek Associates future operations at the MVF, located within the boundaries of US Ecology's RTF in Mayfield, ID.

The radiation control program office and documents will be located at this address.

Qal-Tek Associates  
17355 Northwest  
Mayfield, ID 83716

**Security and Public Dose controls around LLRW packages:**

Incoming LLRW and material shipments, including rail cars, received at the MVF, will be stored in compliance with Part 20 security and dose requirements.

**Enclosures:**

The following documents are attached to support our proposed licensed operations:

- Enclosure 1
  - Form 313 and required documents
  - Items 5-11 Explanation Pages
  - SP-PRO-008 MVF (Radiation Safety Program Manual)
  - EP-PRO-003 MVF (Emergency Procedure)
  - OP-PRO-607 MVF (Waste Receipt, Verification and Disposition Services at Mayfield Verification Facility (MVF))
  - US Ecology Authorization Letter
  - Facility Diagrams
  - Key personnel resumes/CV
  - RSO Delegation of Authority Letter
  - Decommission Cost Estimate and Financial Insurance Instrument

Thank you for your consideration in this matter,

Qal-Tek Associates, LLC  
Michael Albanese  
Radiation Safety Officer (RSO)

Qal-Tek Associates, LLC  
Bryce Rich, CHP  
Radiation Safety Committee Chair

Qal-Tek Associates, LLC  
Travis Snowder  
Chief Executive Officer (CEO)

Enclosures



Enclosure 1

**NRC Form 313 Application, Items 5-11**

**Item 5: Radioactive Material**

*Radioisotope:*

- 1) Waste as defined in 10 CFR 20.1003 containing (by-product, source material and SNM) atomic numbers 1-98 whose maximum activity does not exceed 40 Ci and whose sum of ratios does not exceed unity.
- 2) Above ground possession of diffuse special nuclear material in the form described below not to exceed a total average fissile density of [REDACTED]
- 3) Sealed Sources containing (by-product and source material) atomic numbers 1-98 whose total activity cannot exceed 10Ci.

*Form of Material:*

- 1 & 2) Any Form: bulk soils, debris, and miscellaneous equipment containing low concentrations of radioactive materials (low activity radioactive waste). Wastes may also contain hazardous materials that require treatment for Resource Conservation and Recovery Act (RCRA) hazardous constituents (low-activity mixed waste).
- 3) Sealed sources, sorting and repackaging for disposal

*Total Radioactivity:*

- 1) Not to exceed 40 Ci total radioactivity of by-product, source material and SNM at any one time.
- 2) Not to exceed a fissile density of [REDACTED]
- 3) Not to exceed 10 Ci in total activity,



## Enclosure 1

### **Item 6: Purpose for Licensed Material Use**

#### *Authorized Use:*

- Form 1 & 2) Receipt of Waste or material for recycling from other persons including; receiving, processing, verification and disposition services to an authorized licensee, RCRA-permitted facility for NRC exempt materials or returned to generator.
- Form 3) Receipt of material from other persons for waste disposition services to licensed recipients.

### **Item 7: Individuals Responsible for RSP**

Qal-Tek Associates Corporate operates under a Radiation Safety Committee Chaired by Bryce Rich, CHP under license 11-27610-01 condition 20. Qal-Tek requests under this license application the same authorization for the QTA MVF with the oversight performed by a corporate radiation safety committee similar in members and content, to ensure adequate safety controls and freedom of process improvement. The RSC will meet at least every 6 months or more frequent based on operational need.

RSC Chairman: Bryce Rich, CHP  
See attached Resume/CV

RSC Members: See RSPM Figure 1

Corporate RSO: Michael Albanese

Individual designated as the Radiation Safety Officer for activities covered by this license is Michael Albanese (Temporary). [See attached Resume/CV and training certs.]  
(208)532-5557  
[malbanese@qaltek.com](mailto:malbanese@qaltek.com)

### **Item 8: Training for Authorized Users in Controlled Areas**

Individuals performing licensed activities under this license will be authorized users approved by Qal-Tek Associates Radiation Safety Committee.

Authorized User training will consist of training defined in Chapter 6 of the Radiation Safety Program Manual (RSPM).



## Enclosure 1

### **Item 9: Facilities and Equipment**

The facility and adjoining property where license activities will be performed are at:

US Ecology Rail Transfer Facility (RTF)  
17355 Northwest  
Mayfield, ID 83716

#### *Facility diagrams:*

See attached: showing unrestricted, controlled areas

The RTF is located on 96 acres of property owned by USE. The RTF consists of two waste handling/verification buildings (East and West), container lay down areas, over 10,000 feet of rail track for rail car storage and movement, and administrative support facilities. The East verification building, herein referred to as Mayfield Verification Facility (MVF), will house QTA radioactive material operations. The QTA Verification facility is an enclosed facility with security fencing to restrict access. The MVF is equipped with an air handling system, including particulate filtration, adjacent to where the unloading activities are performed to capture any potential airborne suspension of materials. The MVF also has a rail right of way through one side of the building and a vehicle right of way down the other side. Access to both right of way passages is controlled using motorized, lockable roll-up doors. Attached to the MVF are trailer offices for equipment and personnel.

The USE RTF is located in a rural part of Elmore County approximately 4.75 miles off of Interstate 84 (GPS Coordinates: 43.287229, -115.966127). The surrounding area can be characterized as a dry high desert landscape. Ground water sits 476 feet below the surface of the site. The nearest resident is about 1 mile to the northwest of the facility. Approximately 3 miles south of the RTF sits a large active dairy. Agricultural farmland can be found to the East and South of the Dairy. There are other minor businesses within an approximate 1.5 mile radius of the RTF. The two closest major cities are Boise and Mountain Home which are approximately 25 miles to the West and 20 miles to the East from the site, respectively.

#### *Equipment List to perform licensed activities:*

WB Johnson or Thermo-Scientific microRem or Ludlum RemBall or equivalent for container or area dose monitoring in urem/hr or mrem/hr for beta, gamma and neutron

Mirion Germanium Detection System(s) for waste concentration verification and characterization. Systems will be portable with In-Situ Object Counting System (ISOCs) capability for non-destructive assay of waste containers in pCi/g for gamma and neutron



## Enclosure 1

Ludlum 3030 dual channel scaler, Tennelec LB5100 or WB Johnson equivalent for contamination monitoring in cpm of alpha and beta

Ludlum Model 2224/43-93 or WB Johnson equivalent for personnel contamination monitoring in cpm of alpha, beta and gamma

Hi-Q CF-901, CF-903 and 3300 BRL or equivalent for workspace monitoring cpm/ml and material handling for alpha, beta, gamma

Fixed Facility High Volume Particulate Filter Air Exhaust System

Excavator for bulk waste unloading activities

Tractor and Rail Engine to move trailers and rail cars around the facility

Heavy lift equipment (i.e. fork trucks, cranes) to remove containers of waste from truck trailers

NOTE: Radiation detections systems will be calibrated by a licensed service provider (Qal-Tek Associates Lic. #11-27610-01 or equivalent)

**Item 10: See Attached RSPM (SP-PRO-008 MVF)**

**Item 11: See Attached RSPM (SP-PRO-008 MVF)**