



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION I  
2100 RENAISSANCE BLVD.  
KING OF PRUSSIA, PA 19406-2713

March 30, 2020

Denny Jorgenson, Senior Vice President  
AECOM Technical Services  
10 Patewood Drive  
Building 6, Suite 500  
Greenville, South Carolina 29615

**SUBJECT: AECOM TECHNICAL SERVICES, REQUEST FOR ADDITIONAL  
INFORMATION, MAIL CONTROL NO. 618165**

Dear Mr. Jorgenson:

This is in reference to your application dated February 10, 2020, requesting a new NRC license. In order to continue our review, we need the following additional information:

1. Confirm the name of the licensee to be listed on the license. Also, please state if you hold other licenses under either NRC or Agreement State jurisdiction, because we identified currently active licenses issued by the NRC under similar names (AECOM Technical Services, or AECOM Technical Services, Inc., or AECOM Technical Services of Michigan).
2. In Section 5 of your application, you listed uranium-234 (U-234) as special nuclear material rather than source material. The NRC defines special nuclear material (SNM) as U-233, U-235 or any plutonium. Confirm if U-234 should be requested under the source material category.
3. In Section 5 of your application, you requested very small quantities of materials. It appears that you may be limiting the types and quantities requested in order to eliminate the requirement to provide financial assurance (FA). Please note that the following license conditions are standard on licenses for site remediation services:
  - *The licensee does not take possession of the radioactive materials and/or sealed sources while at the customer's facility [insert as needed - for example "except for analytical samples"].*
  - *Except for calibration sources, reference standards, and radioactively contaminated equipment owned by the licensee, receipt, storage, and use incidental to any activity of licensed material at each temporary job site shall be limited to material originating from each site. This material must either be transferred to an authorized recipient or remain at the site after licensee activities are completed.*

These conditions limit the site remediation licenses to the use of the radioactive materials for activities authorized on the license at temporary job sites only, and do not authorize possession of the material other than calibration and check sources, or

analytical samples. Therefore, you will not be required to provide financial assurance regardless of the license limits. Possession of the material remains under the financial assurance and other regulatory requirements of the site at which you are working. Confirm that you wish to be authorized only for the materials requested in the application or propose additional materials and quantities.

4. The authorized activities requested did not include the use of portable gauges. However, several procedures referred to training for gauge use, and transportation of portable gauges. Please confirm if portable gauge will be used under this license, or if the activities with portable gauges will be performed under another AECOM license. If activities with portable gauges will be authorized under this license, you need to request the materials and provide the information requested in NUREG-1556, Volume 1, Revision 2, "Consolidated Guidance About Materials Licenses Program-Specific Guidance About Portable Gauges." Please note that this activity falls under a different fee category and an additional fee will be assessed.
5. The activities and the materials requested in Item 5 are authorized under different program codes in two fee categories. The application fee for each fee category can be found in 10 CFR 170.31 and the annual fee in 10 CFR 171.16. NRC regulations may be found at <https://www.nrc.gov/reading-rm/doc-collections/cfr/>. Your total fees will be the sum of all fee categories.

For each of the following, confirm that you do, or do not, wish to be authorized for the materials and/or activity. Where applicable, provide the additional information requested.

- Program code 03219 is applicable to site characterization surveys and sampling; decontamination, decommissioning and remediation of facilities, grounds and equipment decontamination services (described as 'decontamination and decommissioning services' in NUREG-1556, Vol. 18., rev.1), under fee category 3.N. This program code applies only to byproduct material, so activities with source and special nuclear material would fall under separate program codes and fee categories.
  - The source material you requested falls under program code 11300, source material, other, more than 150 kilograms. This is in fee category 2.F.
6. Item 6 refers to solidification and stabilization of waste at temporary locations. If you plan to perform such waste treatment as a service for customers separately from decontamination and decommissioning services, these activities could be in several program codes, all of which include byproduct and source materials (03232, waste disposal service, prepackaged only in fee category 4.C.; 03234 waste disposal service, processing and/or repackaging, in fee category 4.B; 03233 waste disposal service, incineration and 03236 waste treatment service other than compaction, both in fee category 4.A.)

Based on your application, it appears that you plan to handle only wastes generated by the decontamination and decommissioning activities you perform for a customer. If this is correct, please state, "We will limit waste handling activities to those wastes generated by decontamination and decommissioning services we provide. We will NOT take possession of waste generated by the customer as would a commercial waste service

provider, or handle wastes we did not generate.”

If this is not correct, please describe the specific waste service(s) you are providing associated with handling customer’s waste. NUREG-1556, Vol. 18, Rev. 1 describes commercial waste management to include activities such as incineration, compaction, solidification, vitrification, packaging, repackaging, or transportation of waste for customers. Provide a statement that: “We will use the model waste procedures published in Appendix M of NUREG– 556, Volume 18, Revision 1, ‘Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses,” or provide the procedures for each commercial waste service you will be providing at customer facilities.

7. Authorized users proposed in the application are Stephen Shafer and Christopher Higgins, and the RSO, Kevin Taylor. Your procedures primarily refer to Authorized Users in the context of portable gauge users, and site RSOs as those implementing the Radiation Protection Programs (RPP) and being responsible for project radiation safety. Specifically, “The Site RSO receives radiation safety technical guidance from the AECOM Business Group RSO.” In accordance with NUREG 1556, Volume 18, “Program Specific Guidance About Service Provider Licenses,” Revision 1 (NUREG 1556, Vol. 18, Rev. 1), Section 8.7.1, “Radiation Safety Officer,” please provide the following:
  - a. An explanation of the roles and responsibilities of the authorized users (those named above to be listed on the license) at the temporary job sites for site remediation activities. Explain the relationship between RSO to be listed on the license, the Business Group RSO, the license/site RSO, the License/Program/Site, and the authorized users.
  - b. Confirmation that the RSO will be available for emergencies and can be on-site at temporary job sites within 24-48 hours, if applicable.
  - c. Demonstration that the RSO has sufficient independence and direct communication with responsible management officials by providing a copy of an organizational chart by position and demonstrating day-to-day oversight of the radiation safety activities.
8. The application states, “Emergency procedure for a project or program shall be provided in or referenced in the applicable RPP.” In accordance with NUREG 1556, Vol. 18, Rev.1, Section 8.10.1 “Operating and Emergency Procedures,” please submit a description of your emergency procedures for radiological conditions that might be encountered as part of your license application. The description does not have to be at the level of detail in an RPP but should be sufficient to understand the types of emergencies that could occur and your actions for such emergencies.
9. Please provide more specific information regarding the types of activities you expect to perform related to site characterization, decontamination and decommissioning of facilities. In particular, Item 6 described activities to include remediation of groundwater, process water, soil and soil-like materials but did not include procedures for such activities.

- Specify if procedures will be limited to surveys and routine cleaning activities of indoor facilities and equipment, or if you expect to use aggressive methods that could include grinding, cutting, scabbling or other activities that could generate airborne radioactivity; chemical methods that could result in generation of mixed wastes; or other methods that could require use of specialized protective clothing or equipment such as respirators. If more aggressive procedures will be used, please provide them. If such procedures are site-specific, provide example procedures used on sites where such activities were performed.
  - Specify if you will be performing remediation activities in outdoor areas. One of your procedures referred to moving soil or digging soil. Specify if activities outdoors will be limited to surveys and limited soil sampling in the top 15 centimeters, or if you expect to perform activities such as core sampling, soil removal, sampling and remediation below 15 centimeters, ground water and surface water sampling, or other similar activities that may require additional radiation or other safety precautions. If such procedures are site-specific, provide example procedures used on sites where such activities were performed.
10. Item 9 contains information about proposed facilities and equipment. Note that NUREG-1556, Volume 18, Section 9 states that equipment used at temporary job sites will be discussed in Section 8.10.1 "Operating and Emergency Procedures." RS-TPG SOP 010 identifies equipment including:
- Appropriate LLRW containers
  - Container labels
  - Packaging materials
  - Radioactive waste bags
  - Swipes
  - Removable contamination sample counter
  - Micro-R meter
  - Surface contamination meter (Ludlum Model 3/Ludlum 44-9 GM-Pancake
  - Detector or Ludlum Model 2360/Ludlum 43-93 Alpha/Beta Scintillation
  - Detector or equivalent)

We note that some of the procedures refer to work that involves remediation of contaminated water or soils, waste stabilization, use of portable gauges, moving soil or digging. Please specify if any additional special equipment will be needed for such activities, or for aggressive remediation activities indoors or outdoors, as described in the previous item.

11. The SOP "License/Site Radiation Protection Program", Attachment 3, contains a table "ANSI/HPS N13.12-2013, Table 1 Screening levels for clearance." Please confirm that you understand that the NRC does not accept these screening levels for clearance of materials. The NRC published screening values for building surfaces and soil which may be used to meet license termination criteria. Release criteria other than the NRC screening criteria must be approved by the NRC prior to implementation. Confirm that you or your client in NRC jurisdiction will use NRC screening values for license termination or release of facilities; or will amend the client's license to obtain approval for alternate criteria for release of facilities, or release of volumetrically contaminated materials.

12. Please note that the following is a standard condition for site remediation service providers, which will be placed on your license. The limits requested in your application to not exceed those in the regulations for which emergency plans are required. No response to this item is required.

*Notwithstanding the requirements in 10 CFR 30.32(i), 40.31(j), and 70.22(i), the licensee is not required to establish an emergency plan. Before taking possession of licensed material at a temporary job site in quantities requiring an emergency plan, the licensee shall either:*

- a) *Obtain U.S. Nuclear Regulatory Commission approval of an evaluation demonstrating that an emergency plan is not required pursuant to 10 CFR [30.32(i), 40.31(j), and 70.22(i)], or*
  - b) *Submit written confirmation to the U.S. Nuclear Regulatory Commission in accordance with Appendix D of 10 CFR part 20, that licensee personnel have been trained and will follow the provisions of an existing emergency plan approved by the U.S. Nuclear Regulatory Commission or an Agreement State for the temporary job site.*
13. Please confirm that you will meet the requirements of the following standard license condition for site remediation service providers. This condition ensures that sites for which an environmental assessment is required will be identified appropriately.
- a. *Except as provided for in paragraph B of this license condition, any activity performed by the licensee at a temporary job site related to site characterization or the decontamination and decommissioning of facilities, equipment, and containers, including any waste packaging incidental to these activities, must be performed in accordance with the customer licensee's NRC-approved decommissioning plan that pertains to that temporary job site.*
  - b. *If the customer licensee is not required to submit a decommissioning plan to the NRC and if the customer licensee's operations at a temporary job site have been limited to the use of: 1) small quantities of short-lived radioactive materials, or 2) radioactive materials in sealed sources provided there is no evidence of leakage of radioactive material from these sealed sources, then any activity performed by the licensee at that temporary job site related to site characterization or the decontamination and decommissioning of facilities, equipment, and containers, including any waste packaging incidental to these activities, must be performed in accordance with the licensee's decommissioning procedures approved by the NRC under this license.*
  - c. *Any activity proposed to be performed by the licensee at a temporary job site that is not covered by either paragraph A or B of this license condition must be approved by the NRC through a site-specific license amendment or exemption request.*

14. Confirm that you will obtain agreements as described in the following license condition which is standard for site remediation licenses:

*This license does not authorize the use of licensed material at temporary job sites for uses already specifically authorized by a customer's license. If a*

*customer also holds a license issued by the U.S. Nuclear Regulatory Commission or an Agreement State, the licensee shall establish a written agreement between the licensee and the customer specifying which licensee activities shall be performed under the customer's license and supervision, and which licensee activities shall be performed under the licensee's supervision pursuant to this license. The agreement shall include a commitment by the licensee and the customer to ensure safety, and any commitments by the licensee to help the customer clean up the temporary job site if there is an accident. A copy of this agreement shall be included in the notification required by license condition [insert number].*

15. Confirm that you will abide by the following license conditions that are standard for site remediation service providers:

- *The licensee shall notify the U.S. Nuclear Regulatory Commission in accordance with Appendix D of 10 CFR Part 20, in writing at least 14 days before initiating activities under this license at a temporary job site, excluding routine packaging or repackaging for purposes of transporting and not requiring a job or site specific work package, and characterization and/or final surveys where radioactive materials and/or radiation are not likely to be detected. This notification shall include: (1) The estimated type, quantity, and physical/chemical forms of licensed material to be used, (2) The specific site location, (3) A description of planned activities including waste management and disposition, (4) The estimated start date and completion date for the job, and (5) The name and title of a point of contact for the job, including information on how to contact the individual.*
- *Within 30 days of completing activities at each job site location, the licensee shall notify the U.S. Nuclear Regulatory Commission in accordance with Appendix D of 10 CFR Part 20, in writing, of the temporary job site status and the disposition of any licensed material used.*
- *The licensee shall maintain records of information important to decommissioning for each temporary job site pursuant to 10 CFR [30.35(g) and 40.36(f)]. The records shall be made available to the customer upon request. At the completion of activities at a temporary job site, the licensee shall transfer these records to the customer for retention.*
- *If approved by a Radiation Safety Officer specifically identified in this license, the licensee may take reasonable action in an emergency that departs from conditions in this license when the action is immediately needed to protect public health and safety and no action consistent with all license conditions that can provide adequate or equivalent protection is immediately apparent. The licensee shall notify the U.S. Nuclear Regulatory Commission Headquarters Operations Center at 301-816-5100 and the U.S. Nuclear Regulatory Commission Regional contact before, if practicable, and in any case immediately after taking such emergency action using the reporting procedure specified in Appendix D of 10 CFR Part 20.*

We will continue our review upon receipt of this information. Please reply to my attention at:

Betsy Ullrich  
Mail Control No. 618165  
USNRC, Region I  
Division of Nuclear Materials Safety  
2100 Renaissance Boulevard  
King of Prussia, PA 19406

*Or*

[R1DNMSMail.Resource@nrc.gov](mailto:R1DNMSMail.Resource@nrc.gov)

*Reference – Betsy Ullrich*

*Mail Control No. 618165*

In order to continue prompt review of your application, we request that you submit your response to this letter within 30 calendar days from the date of this letter.

An electronic version of the NRC's regulations is available on the NRC Web Site at: [www.nrc.gov](http://www.nrc.gov). Additional information regarding use of radioactive materials may be obtained on the NRC Web Site at: <http://www.nrc.gov/materials/miau/mat-toolkits.html>. This site also provides the link to the toolbox for updated information on the revised regulations for naturally-occurring and accelerator-produced radioactive materials (NARM).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at: <http://www.nrc.gov/reading-rm/adams.html>. Please be aware that you may request that certain portions of your submittal to NRC be withheld from public disclosure as proprietary information. To do this, you must execute an affidavit as specified in 10 CFR 2.390. You must list all portions that you wish to be held proprietary, along with your reasoning as to why that is appropriate. While it is allowable, please refrain from submitting proprietary information in support of a license unless necessary. Keep in mind that all NRC licenses are considered to be in the public domain, and therefore may be viewed by any member of the public who requests to see them.

D. Jorgenson

8

If you have any questions regarding this request for additional information, please contact me at (610) 337-5040 or via electronic mail at [Elizabeth.Ullrich@nrc.gov](mailto:Elizabeth.Ullrich@nrc.gov).

Thank you for your cooperation.

Sincerely,

Betsy Ullrich  
Commercial, Industrial, R&D  
and Academic Branch  
Division of Nuclear Materials Safety  
Region I

License No. 39-35587-01  
Docket No. 03039219  
Mail Control No. 618165

cc: K. Taylor, CHP, Manager, Radiological Services



AECOM TECHNICAL SERVICES, REQUEST FOR ADDITIONAL INFORMATION, MAIL CONTROL NO. 618165 DATED MARCH 30, 3030

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**SUNSI Review Complete:** Betsy Ullrich

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