



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

January 7, 2019

Daryl R. DeLong, Radiation Safety Officer  
Up-Side Radiological Services, LLC  
324 East Third Street  
Jacksonville, FL 32206

SUBJECT: UP-SIDE RADIOLOGICAL SERVICES, LLC, REQUEST FOR ADDITIONAL  
INFORMATION, MAIL CONTROL NO. 610686

Dear Mr. DeLong:

This is in reference to your application dated November 15, 2018, requesting the renewal of NRC License No. 09-29309-01. In order to continue our review, we need the following additional information:

1. Please have the response to this request for information (and future amendments) signed by a management representative rather than the Radiation Safety Officer. The NRC views a letter signed by a management representative as indication that management has reviewed the application and concurs in the statements and representations contained therein.
2. Section 2 of the application provides the same mailing address as listed for a new license application by Up-Side Management Company. We usually do not have multiple licensees at the same address. Please clarify the relationship between the two companies that are sharing a mailing address for separate NRC licenses.
3. Section 3 of the application requests locations of use only at Department of Defense locations. However, Sections 1, 6, and 7 of your application indicate that you perform work at other locations. Please clarify the locations of use requested for this license.
4. In Section 5 of your application, you requested large quantities of materials. Confirm if you need such large quantities. In particular, explain the need for 1000 curies of thorium-232 optical coatings on lenses, and why this is separate line item from the quantities of source material already requested.
5. Section 5 of your application does not include information about calibration and check sources as described in Sections 9 and 10. NUREG-1556, Volume 18, Rev 1, "Consolidated Guidance About Materials Licenses Program-Specific Guidance About Service Provider Licenses," Section 8.5.1, states that you should identify each radionuclide that will be possessed in each sealed source or device, and specify the maximum activity per source. Also, you should specify the maximum number of sources or the total activity for each radionuclide. Identify the manufacturer or distributor and model number of each type of sealed source and device requested, or provide the Sealed Source and Device (SSD) registration certificate number. Confirm that each sealed source, device, and source and device combination is registered as an approved sealed source or device by the NRC or an Agreement State. Confirm that the activity per source and maximum activity per device will

not exceed the maximum activity listed on the approved certificate of registration issued by the NRC or by an Agreement State. Identify the special circumstances under which sealed sources and devices that are not registered by the NRC or an Agreement State may be possessed, used, or serviced.

6. The materials and activities you requested fall into several fee categories. Confirm if you wish to be authorized for the following activities and materials:
  - a. Program code 03219 is for decontamination services, and falls into fee category 3.N. This program code applies only to byproduct material, which you requested in Section 5, items A and B. Activities with source and special nuclear material are under separate program codes and fee categories.
  - b. The source material you requested in Section 5, Items C and E, is under program code 11300, source material, other, more than 150 kilograms. Both are in fee category 2.F and a single fee would be assessed.
  - c. The special nuclear material you requested could belong to several program codes: 22110, SNM-plutonium, unsealed, less than critical mass; 22111 SNM-uranium-235, unsealed, less than critical mass; 22120 SNM plutonium, sealed neutron sources less than 200 grams; SNM plutonium, sealed sources in devices; 22150 SNM plutonium, sealed sources less than critical mass; and 22151 SNM uranium 235, sealed sources less than critical mass. All of these program codes are in fee category 1.D and a single fee would be assessed.
  - d. Radioactive waste management services include byproduct, source and special nuclear materials. These activities could also be in several program codes:
    - 03232, waste disposal service, acceptance of prepackaged waste only, in fee category 4.C.;
    - 03234 waste disposal service, processing and/or repackaging, in fee category 4.B;
    - 03233 waste disposal service, incineration, in fee category 4.A; and
    - 03236 waste treatment service other than compaction, in fee category 4.A.
7. As a result of a review of all licenses and program codes over the past 2 years, the NRC identified that activities under program codes 03219, as well as 03233, 03234 and 03236 may require that an environmental assessment be performed. Confirm if you ever were requested to provide information to support an environmental assessment by the NRC, or if an environmental assessment was performed for your license. If so, please provide a copy of that environmental assessment. Confirm that you understand that the renewal of your license may be delayed until a determination is made regarding the need for an environmental assessment for these activities. Your current license is in "timely renewal" and you may continue to work under the existing license.
8. In Section 5, you state the use of all materials to be the receipt, storage, and use incident to any of the six activities listed in the footnotes. However, Section 6 lists only three uses of licensed materials.
  - a. Confirm that Section 5 footnote activities 2 [waste characterization] and 3 [packaging and re-packaging of waste] are combined in Section 6 as Item 2.

- b. Confirm if you are requesting Section 5 footnote activities 5 [training and instruction] and 6 [environmental sample analysis] to be authorized as a use at temporary job sites, and should have been listed in Section 6.
9. It is unclear if you plan to be handling only wastes of those generated by the remediation activities you were performing for the customer.
  - a. If so, then please state, "We will limit waste handling activities to those wastes generated by remediation 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."
  - b. Alternately, please describe what specific service(s) you are providing associated with handling customer's waste. In particular, NUREG-1556, Volume 18, Rev 1 describes commercial waste management to include activities such as incineration, compaction, solidification, vitrification, packaging, repackaging, or transportation of waste for customers as waste processing activities; please specify the activities you plan to perform as a service to customers.
10. Explain the activity you describe as transport in containers approved under the provision of 10 CFR Part 71, and if this is related to, or separate from, the activities of decommissioning services or commercial waste management services. In addition, please confirm that you understand that you must register as a user of a Type B package and obtain approval of your QA program for the Type B package from the NRC prior to making shipments.
11. Explain the activities you expect to perform when you will use authorized materials in radiation protection or health physics training and instruction at temporary job sites. Describe if this training is related only to your remediation and decommissioning services, or if this training is for other purposes, such as providing basic radiation safety training to employees of customers as a service separate from your decommissioning or waste activities.
12. You also requested to perform environmental sample analysis. Confirm that this is an activity that you expect to perform only at temporary job sites under this license. If so, provide more detail as to the type of samples you expect to analyze and the equipment that you expect to use at the temporary job sites.
13. Section 7 of your application does not include information requested in NUREG-1556, Volume 18, Revision 1, Section 7, "Individuals Responsible for Radiation Safety Program and Their Training and Experience." In accordance with Section 8.7.1, provide the following:
  - a. Demonstrate 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;
  - b. Confirm that the RSO will be available for emergencies and can be on-site within 24-48 hours, if applicable;

- c. Confirm that the duties of the RSO will include those described in Appendix C of NUREG-1556, Volume 18, Revision 1, in addition to those duties listed in Section 7 of the application.
14. Section 7, "Management" of your application states that the RSO works with the Radioactive Waste Broker to ensure radiological controls during waste management operations. Explain who the Radioactive Waste Broker is, and how this relates to the activities you requested to perform with customer radioactive wastes.
15. Section 7, "Radiation Safety Committee" of your application does not provide sufficient information regarding the purpose of the Radiation Safety Committee (RSC) or the required activities, operations, and membership. Your current license is NOT considered a Type A license of broad scope, and you are not currently assessed a fee as a license of broad scope. Licenses of broad scope are authorized under 10 CFR Part 33, and using the guidance in NUREG-1556, Volume 11, "Consolidated Guidance About Materials Licensees: Program-Specific Guidance about Licenses of Broad Scope." Confirm that are requesting a limited scope license. State if you plan to use a Radiation Safety Committee (RSC) for some management oversight activities in preparation for becoming a license of broad scope. Please note, however, that a license of broad scope will add another annual fee.
16. If you do wish to use the RSC in management oversight in preparation for becoming a broad scope license, additional information is required as follows:
  - a. The application states that the RSC "may be composed of members from the following activities are areas...". This is not sufficient. Provide minimum required membership for the RSC and the criteria for selecting members of the RSC. The NRC considers minimum membership to include the RSO, a member of executive management, persons trained and experienced in safe uses of radioactive material, and representatives of each area of use under the license (in your case: decommissioning activities, waste characterization, packaging and repackaging of waste for transport, transportation in Type B packages authorized under 10 CFR Part 71, training and instruction, and environmental sample analysis.)
  - b. The application states that the RSC Chairperson will be Daryl DeLong, and that the RSC Chairperson and the RSO will constitute quorum. This is not acceptable. The NRC considers as acceptable the following: a quorum consisting of the chairperson, the RSO, the executive management representative, a representative from each area of use that will be discussed at the RSC meeting, and any other member whose field of expertise is necessary for the discussion of the business at that meeting. Submit your minimum criteria for quorum at your RSC meetings.
  - c. In Section 7 of the application, you state that the RSC duties include evaluation of new users and new uses; however, this section does not establish the criteria and procedure describing the approval process that the RSC will use for review and approval of new users and new uses. If you are intending to operate as a broad scope license or in preparation to be a broad scope license, Section 8.7.2 of NUREG-1556, Vol. 11, Rev 1. states that you should provide the criteria and procedure describing the approval process used by the RSC and RSO for authorizing new users and new uses. Please provide the criteria and procedure

describing the approval process used by the RSC for authorizing new users and new uses.

- d. In Section 7 of the application, you requested to make changes to procedures without notifying the NRC. This is an authority granted to broad scope licenses. Confirm that you will not make changes to procedures in the areas of radiation safety and handling of radioactive materials without notifying the NRC.

17. Section 8 of your application did not address NUREG-1556, Volume 18, Section 8.7.2 "Authorized Users and Radiation Workers".

- a. Provide a statement that "Before using licensed material, authorized users will receive the training described in Appendix D of NUREG-1556, Volume 18, Revision 1, "Consolidated Guidance About Materials Licensees: Program Specific Guidance About Service Provider Licenses." Alternately, you should provide a description of the training and experience for any proposed authorized users you wish to have named on the license. Although section 8 of your application provides some information associated with training, it does not distinguish between "authorized users", "radiation workers" and "users" training, nor does it describe the minimum training for different groups of workers, or specific training for some workers performing specialized tasks. NUREG-1556, Vol. 18, Rev. 1, Section 8.7.2, 8.8, and Appendix D provide examples and what an application should provide. Please provide the additional information.
- b. Provide a description of the radiation safety training involving the use of licensed material that will be provided as a service to customers, if training is provided by you to customers.
- c. Section 8 of your application states that persons will be trained in accordance with 10 CFR 19.12. This regulation applies to persons likely to receive more than 100 millirem in a year. Your work involves unsealed radioactive material in which workers should have some basic level of training or be escorted even if the expected dose is below 100 mrem. Confirm that, prior to performing licensed activities under your license, all persons will receive training in radiation safety, security, regulations and license conditions commensurate with their duties.
- d. Section 8 states that temporary or contract employees will be selected based on ANSI 3.1. The NRC regulations and guidance do not reference this document. Please provide the minimum criteria for persons working under this license. Explain which workers would be considered authorized users as discussed in Item 17.a. above, and which employees would be working under their supervision.
- e. Confirm that training will be provided as required under Department of Transportation regulations for employees performing jobs related to shipment of licensed materials.
- f. You stated that refresher training would be provided at intervals not to exceed 24 months. NUREG-1556, Vol. 18, Revision 1 states that annual refresher training should be provided. Please justify why refresher training is only needed every 24

months.

18. Section 9, in the paragraph "Equipment", states that you will use instruments that meet the radiation monitoring instrument specifications in Appendix J of NUREG-1556, Volume 18, dated August 2017. Although Revision 1 of that NUREG is dated August 2017, Appendix J describes Department of Transportation requirements. Confirm that you will have equipment that meet the minimum specifications in Appendix F of NUREG-1556, Volume 18, Revision 1.
19. NUREG-1556, Volume 18, considers decommissioning services and waste services to be "high risk" activities. Therefore, in accordance with Section 8.10.1, operating procedures should be submitted with the application. Operating procedures should provide personnel with specific guidance for all operations they will perform, and include topics important to safe operations as applicable to the materials and uses proposed in the application. NUREG-1556, Volume 18 further states that emergency procedures should be submitted with all license applications, and should address all likely scenarios that may be encountered. Please provide your operating and emergency procedures for the types of activities you expect to perform under this license. In particular,
  - a. Specify if procedures will be limited to 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 protective clothing such as use of respirators. Please submit the applicable operating and emergency procedures.
  - b. Specify if the procedures you expect to perform in outdoor areas will be limited to surveys and limited to 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, and use of other specialized equipment. Please submit the applicable operating and emergency procedures.
20. Specify the waste characterization and packaging activities you plan to perform, which could include activities such as incineration, compaction, solidification, vitrification, packaging, repackaging, or transportation of waste for customers. Provide the applicable operating and emergency procedures for the waste services activities you plan to perform.
21. Provide operating and emergency procedures for transport in containers approved under the provision of 10 CFR Part 71.
22. Provide the operating and emergency procedures you expect to use if actual radioactive materials will be used in the radiation safety and health physics training and instruction at temporary job sites for customers.
23. Provide the operating and emergency procedures for environmental sample analysis performed at temporary job sites.

24. The quantities of special nuclear material (SNM) you requested to be authorized on the license could include SNM of low strategic significance and/or strategic SNM. Provide your procedure for determining if you will be working with SNM of strategic or low strategic significance, and implementing the physical protection requirements of 10 CFR Parts 73 and 74, if applicable.
25. Provide operating and emergency procedures for other basic radiation safety activities related to the authorized uses under the license, such as procedures for proper use of protective clothing and equipment; respirator use; air sampling and air monitoring; radiation and contamination surveys; scanning surveys and static measurements for total contamination; removable contamination (wipe) surveys; handling of samples and chain-of-custody, issuance of radioactive work permits or equivalent procedures, etcetera.

Section 10 of your license application refers to the Radiation Protection Program Manual (RPPM), and Standard Operating Procedures. Relevant sections of the RPPM and SOPs may be submitted in response.

26. Section 10 of your application, "Radiation Protection Program" states that work in fields of 1 rad per hour (gamma) or 100 millirem per hour (neutron) will be planned in advance. Explain why special consideration is given only for such high dose rates, without consideration to the total dose expected. In particular, work in lower dose rate areas for long periods of time could result in doses exceeding the annual dose limit of 5 rem. This also does not consider potential internal dose issues, or doses in areas with significant alpha or high energy beta contamination. Please revise this section to require review of total dose expected, in addition to dose rate, as well as any other unusual radiological conditions you may encounter.
27. Section 10 of your application, "Radiological Health Program Organization", refers to the organizational framework described in Section 4. Other than the name of the RSO on the NRC Form 313 in Section 4, there is no other Section 4 in the application. Please provide this information.
28. Section 10 of your application, "Personnel Dosimetry" states that initial pre-placement and termination bioassays will be performed of persons likely to receive 10% or more of the annual limit of intake (ALI). Confirm that internal dose assessment, including bioassay if applicable, will be performed for any workers assigned to a given project that could result in an internal dose greater than 10% of the annual limit.
29. In section 10 of your application in the Personnel Dosimetry section, you state that you will provide dosimetry for who are likely to be exposed to levels greater than 10% of 10 CFR 20.1201. NUREG-1556, Vol. 18, Rev. 1. Section 8.10.6 states for those who are not likely to be exposed to levels greater than 10 CFR 20.1201, state: "We will maintain, for inspection by the NRC, documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of the limits in 10 CFR 20.1502," Please make this statement.
30. Your application is not clear if you plan to perform leak tests under your license or have another authorized facility perform leak testing. NUREG-1556, Vol. 18, Rev. 1. Section 8.10.5 states to provide either
- a. "Leak tests sample collection or analysis will be performed by an organization authorized



by NRC or an Agreement State to provide leak testing services to other licensees. Leak tests may be collected by the licensee using a leak test kit supplier's instructions. Such leak test kits will be supplied by an organization authorized by the NRC or an Agreement State to provide leak testing services." Or,

- b. "Leak testing and analysis will be done by the applicant." Provide the information in Appendix G of this NUREG supporting a request to perform leak testing and sample analysis and either (1) state that the applicant will follow the model procedures in Appendix G of NUREG-1556, Volume 18, Revision 1 "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses," or (2) submit alternative procedures.
31. Section 10, "Contamination," states that surface contamination levels for unrestricted use will meet the Regulatory Guide 1.86 criteria and provides those limits in Table 2. These limits are outdated, and have not been used for release of facilities for unrestricted use since 1997 when the NRC issued 10 CFR 20, Subpart E, "Radiological Criteria for License Termination." NUREG-1757, Volume 2, Revision 1, discusses how facilities can demonstrate they meet 10 CFR Part 20, Subpart E criteria for release of facilities for unrestricted use. The values in your Table 2 do not meet the criteria for Subpart E for alpha emitters, and may not meet it for some beta and gamma emitters. (We note, however, that your Table 2 is similar to Appendix L of NUREG-1556, Volume 11, Revision 1 for acceptable contamination levels of items but not building surfaces.)
- a. Please confirm your understanding that this table is to be used only for individual item release and not for release of facilities.
  - b. Confirm that your criteria for release of facilities will meet 10 CFR Part 20, Subpart E, "Radiological Criteria for License Termination", and that you will develop and implement appropriate release criteria, and site remediation and decommissioning activities using guidance acceptable to the NRC. In addition, state, "We will conduct surveys and maintain contamination levels in accordance with the survey frequencies and contamination levels published in Section 8.10.4 of NUREG-1556, Volume 18, Revision 1, "Consolidated Guidance About Materials Licensees: Program-Specific Guidance about Service Provider Licenses."
32. Section 11, "Waste Management," states that you will meet the guidance in Appendix N of NUREG-1556, Volume 18, dated August 2017. Although Revision 1 of that NUREG is dated August 2017, Appendix N is the NRC's Safety Culture Statement of Policy.
- a. Please state "We will use the model waste procedures published in Appendix M of NUREG-1556, Volume 18, Revision 1, Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Service Provider Licenses". Alternately, you may refer to selected procedures within Appendix M.
  - b. If you wish to compact or incinerate radioactive wastes at your temporary job sites under this license, provide the requested information concerning these activities in Appendix M.
  - c. If you wish to obtain approval for method(s) of waste disposal other than those listed in Appendix M, provide procedures for those additional methods.



- d. Section 11 of your application refers to long-term storage of waste. If you are requesting to oversee extended interim storage of waste at temporary job sites under this license, you should submit the information required by Information Notice 90-09, Regulatory Issue Summary (RIS) 2008-12 and RIS 2011-09, all of which are listed in the References section of NUREG-1556, Volume 18, Revision, and can be found online in the NRC's Document Library section or in ADAMS.

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

Betsy Ullrich, Senior Health Physicist  
Mail Control No. 610686  
USNRC, Region I  
Division of Nuclear Materials Safety  
2100 Renaissance Boulevard  
King of Prussia, PA 19406

Alternatively, the letter may be scanned and submitted as a pdf document attached to an email; or it may be transmitted by facsimile to (610) 337-5269.

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.

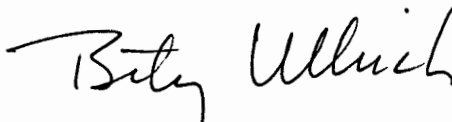
An electronic version of the NRC's regulations is available on the NRC Web Site at: [www.nrc.gov](http://www.nrc.gov). Additional information regarding use of radioactive materials may be obtained on the NRC Web Site at: <http://www.nrc.gov/materials/miau/mat-toolkits.html>. This site also provides the 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.

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, Senior Health Physicist  
Commercial, Industrial, R&D  
and Academic Branch  
Division of Nuclear Materials Safety

License No. 09-29309-01  
Docket No. 030-38878  
Mail Control No. 610686

UP-SIDE RADIOLOGICAL SERVICES, LLC, REQUEST FOR ADDITIONAL INFORMATION,  
MAIL CONTROL NO. 610686 DATED JANUARY 7, 2019

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