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

April 30, 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 and your April 10, 2019 response to our letter dated January 7, 2019, requesting additional information. In order to continue our review, we need the following additional information:

1. You stated that you are currently authorized for 1000 curies of thorium-232 as coatings on optical lenses. Please note that 1000 curies of thorium-232 is equivalent to 9.1 E+6 kilograms (approximately 10,000 tons) of thorium-232. This seems excessive, particularly for optical coatings on lenses as the mass of thorium-232 does not include the glass and other components of the lenses. Provide a basis for the need for this quantity, and why this is separate line item from the quantities of source material already requested. Alternately, provide a more reasonable estimate of the amount of thorium-232 required to be authorized.

2. In response to Items 5, 11, 22 and 30 of our letter dated January 7, 2019, you stated that the calibration and check sources you plan to possess are "exempt quantity sources". Please note that the quantities in 10 CFR Part 30, Schedule A – Exempt Concentrations, and in Schedule B, are not automatically exempt from the requirements of a license. In accordance with 10 CFR 30.14, exempt concentrations of material must be distributed by persons holding a license pursuant to 10 CFR 32.11; in accordance with 10 CFR 30.18, exempt quantities may only be distributed by persons licensed pursuant to 10 CFR 32.18. Confirm that the calibration and check sources you will possess at temporary job sites under this license will be received from persons authorized by a license from the NRC or an Agreement State to distribute those items to persons who do not require a specific license to possess them. Alternately, provide the information requested in the January 7 letter.

3. In response to Item 6 of out letter dated January 7, 2019, you stated that it is not clear if USRS needs to have source material, or special nuclear material, on the license. Please make that determination and confirm the materials to be authorized on your license.

4. The response to Item 9 of our letter dated January 7, 2019, stated that USRS inspects, packages, marks, labels, samples, manifests, loads and transports radioactive waste. Your response to Item 20 also refers to packaging and re-packaging of wastes. Attachment 2, the "Corporate Brokerage Procedures" appears to be limited to waste handling related to loading and shipment of pre-packaged radioactive wastes at temporary job sites. It does not

appear to include procedures for packaging wastes or re-packaging wastes at temporary job sites. If you will be packaging or re-packaging radioactive wastes at temporary job sites, please provide the radiation safety procedures for those activities.

5. Your response to Item 12 of our letter dates January 7, 2019, did not describe the equipment that you expect to use for analysis of removable contamination and air sampling analysis at the temporary job sites. Please provide that information.

6. Your response to Items 15 and 16 of our January 7, 2019, letter states that you are requesting a limited scope license, not a license of broad scope, and the Radiation Safety Committee (RSC) is not necessary and will be used only for those details listed in the application. It includes the statement that you confirm you "...will not make changes to procedures in the areas of radiation safety and handling of radioactive materials without notifying the NRC." However, that statement remains in your "Radiological Protection Program Manual" dated October 2019, Revision 0 (RPPM Rev.0), that was included as Attachment 3 to your response.

    a. Confirm that you will revise Section 3.4, "Radiation Safety Committee" of the RPPM Rev. 0 to remove the section that states the RSC is authorized to make program changes and changes to procedures specifically identified in the license application. Confirm that you will submit an amendment request for any changes that affect the radiation safety program and procedures committed to in the license application, prior to implementation of those changes.

    b. Confirm that you will revise the Section 3.4 of the RPPM Rev. 0 on page 13 that begins "The RSC mal also authorize changes in the following without notifying the NRC" to require that changes in training and in surveys may only be made if those changes are more restrictive than those in the program and procedures committed to in the license application; and that other changes will require amendment of the applicable commitments in your license.

    c. We note that Section 3.5, "RSC Membership and Qualifications" of your RPPM Rev. 0 does not specify the minimum number of persons on the RSC, and your organization chart identifies only 3 full-time employees of the company. This appears to be then, at best, a 3 person committee. In addition, you define the RSC quorum to be the RSO and Chairman of the RSO; according to your organization chart, that is the same person. A single person is not acceptable as quorum for an RSC. No response to this is necessary, because you are not authorized as a broad scope license and do not have the authority granted to an RSC under 10 CFR Part 33.

7. Your response to Item 17 of our letter dated January 7, 2019, did not respond to sub-items d through f. Please submit that information, which is addressed in NUREG-1556, Volume 18, Section 8.7.2 "Authorized Users and Radiation Workers".

    a. Provided.
    b. Provided.
    c. Provided.

    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.

8. In response to Item 19 of our letter dated January 7, 2019, you stated that, if remediation work is required at depths more than 15 centimeters, work instructions would be drafted and approved by the RASO prior to work being performed. The RASO is not an appropriate management level for work that is beyond the scope of the procedures committed to in your application. In addition, because such work may require the site to have site-specific derived concentration guideline levels (DCGL) approved by the NRC at such depths, and/or an environmental assessment could be required, confirm that work procedures at depths exceeding 15 centimeters will be submitted for review and approval to the NRC prior to implementation.

9. Your response to Item 21 of our January 7, 2019, letter states that you are limited to providing waste brokerage serviced for the DoD. This does not respond to the request to provide operating and emergency procedures for transport in containers approved under the provision of 10 CFR Part 71. Part 71 regulates Type B containers. The "Corporate Brokerage Procedures" provided as Attachment 2 did not contain any emergency procedures for incidents involving packaging and shipment activities. Please provide this information.

10. Your response to Item 23 of our January 7, 2019, letter stated that you do not conduct analysis, only collect samples at temporary job sites. This contradicts your response to Item 12. Please clarify if you will analyze samples at temporary job sites.

11. In response to Item 25 of our letter date January 7, 2019, you submitted Attachment 3, the RPPM Rev. 0.
    a. Revisions are required to Section 3.4, "Radiation Safety Committee," as stated in Item 6 above.

    b. Confirm that you will revise Section 5.7, "Contamination Control Levels" in the second paragraph and in Table 2, to meet the release limit requirements discussed in Item 12 below.

    c. Section 13.1, "Radiological Monitoring of Work Areas" refers to Regulatory Guide 8.20, "Applications for Bioassay of I-125 and I-131" (RG 8.20). Please note that RG 8.20, Revision 2, "Applications of Bioassay for Radioiodine" was issued in September 2014 and supersedes Revision1 that is referenced in your attachment.

12. Your response to Item 31 of our letter dated January 7, 2019, discusses surface contamination level limits for unrestricted use that will meet the Regulatory Guide 1.86 (RG 1.86) criteria and provides limits in Table 2.

    a. Confirm that the release limits in RG 1.86 and your Table 2 will be used only for equipment or items, not for building surfaces.

    b. Confirm that you understand that you may use NRC screening values, or DCGL values derived using the NRC's "DandD" code, without prior approval by the NRC.

    c. Confirm that you understand that, DCGL values derived using RESRAD codes must be submitted for approval to the NRC prior to implementation. Submission of proposed DCGLs should include input information for all variables, output results, and results of sensitivity testing for the variable parameters.

    d. Confirm that you understand that, although the NRC screening values for most beta/gamma emitters are less restrictive than those in RG 1.86, the screening values for alpha emitters are far more restrictive that RG 1.86 or your Table 2. Please confirm your understanding that the values for alpha contamination may not be acceptable, depending on the radionuclide.

13. The following procedures were submitted as Attachment 1 of your letter, and are labeled as "Company Confidential Information" and "Copyright 2018 by USRS, LLC, Distribution limited to employees with need to know access, and government clients upon request. This confidential procedures will not be disseminated without the express permission of USRS. All other rights reserved."

    Bioassay Procedure 000-BAP-01, Rev. 0
    Radiological Non-conformance Report 000-NCR-01, Rev. 0
    Audits, Assessments, and Oversight 100-AP-101, Rev. 0
    Radiological Records 100-AP-103, Rev. 0
    Quality Control for Health Physics Counting Equipment and Systems 200-IP-200, Rev. 0
    Operation of Ludlum Model 19 Survey Meter 200-IP-201 Rev. 0
    Operation and Calibration of Ludlum Model 2929 Scaler 200-IP-202 Rev 0.
    Preparation of Portable Radiation and Contamination Survey Meters and Instruments for Field Use 200-IP-203 Rev. 0.
    Operation of Low Volume Air Samples 200-IP-204, Rev. 0
    Operation of High Volume Air Samples 200-IP-205, Rev. 0
    Open Window Gamma Scanning Using Ludlum Model 2350-1 With Ludlum Model 44-10 Detector 200-IP-206, Rev. 0
    Radiation & Contamination Surveys 300-SP-301, Rev. 0
    Air Sampling and Analysis 300-SP-302, Rev. 0
    General Sampling 300-SP-303, Rev. 0
    Surface Soil Sampling 300-SP-304, Rev. 0
    Sediment Sampling 300-SP-305, Rev. 0
    Water Sampling 300-SP-306, Rev. 0
    Issue and Use of Radiation Work Permits 400-CP-40, Rev. 0
    Release of Materials from Controlled Areas 400-CP-403, Rev. 0
    Control of Radioactive Material 400-CP-04, Rev. 0
    Dosimetry 400-CP-405, Rev. 0
    Radiological Posting and Access Control 400-CP-409 Rev. 0

Radiological Incident Response 400-EP-501, Rev. 0
Decontamination of Equipment and Tools, 600-CP-601, Rev. 0.
ALARA Program 700-AP-701, Rev. 0

The NRC regulation governing withholding of documents from public disclosure are in 10 CFR 2.390. If you wish information in to be considered for withholding from public disclosure, you should follow the requirements for withholding information and submit an affidavit containing all of the information required by 10 CFR 2.390(b)(1). If you plan to submit an application for withholding, please review the information in 10 CFR 2.390(a) for the type of information that the NRC normally withholds from the public, and 10 CFR 2.390(b)(4) for the information the NRC uses to determine if the information should be withheld. Based on an initial review of the procedures submitted in Attachment 1, the procedures in Attachment 1 do not appear to be eligible for withholding. Much of the information appears to be common health physics practices, some of the information is publicly available from manufacturers, and some information is publicly available such as that from NRC guidance documents and ANSI standards. Such information in your application would not be withheld. Alternately, you may state that we may publish these publically or request these documents to be returned.

An application for withholding will be reviewed by the NRC in accordance with 10 CFR 2.390(b)(3) through (b)(6). If the request for withholding is denied, the NRC will notify you and you may request to withdraw the documents as described in 10 CFR 2.390(c) prior to the decision on your license. The NRC will also notify you if the request for withholding is approved. If you request withdrawal of these documents, the NRC may be not be able to process your request to amend your license.

Please note that 10 CFR 2.390 requires that

- the affidavit be executed by an officer or upper-level management official who has specifically been delegated the function of reviewing information to be withheld and is authorized to request withholding of information on behalf of the company;
- the affidavit be executed by the owner of the information;
- the application and affidavit be submitted at the same time of filing the information to be withheld;
- the information to be withheld should be in a document or paper that is easily separated from any associated licensing or inspection activities involving that information, unless there are circumstances which may require withholding the entire document;
- The information to be withheld as trade secret, or confidential, or privileged commercial information, or financial information must be marked with the appropriate designation and must meet the definitions in 10 CFR 9.17

  Your submittal should include the affidavit, a clean copy of the procedures, a redacted version of each procedure with an indication or required marking which explains why that section is redacted.

14. Below are specific comments to the procedures submitted as Attachment 1:

    a. Section 2.5.1.3 of the bioassay procedure states that, if contamination is a pure alpha or beta emitter, a 10 milliliter sample of urine would be collected. For such alpha and beta

emitters, 10 milliliters may not be a sufficient sample size, and for compounds that are not eliminated through the bladder, a fecal sample or breath sample may be required instead of urine. Confirm that you will revise your bioassay procedures to consider appropriate sample types and quantities for collection, and will distinguish between grab samples used to determine if an uptake may have occurred, and sufficient samples required to determine dose.

b. The non-conformance procedure is mainly a restatement of regulations and the table is directly copied from NRC guidance; this information is publicly available and likely not eligible for withholding.

c. The records procedures refers to records required by 10 CFR Part 20 only; there are also recordkeeping requirements in Parts 30, 40, 70 and other applicable regulations. In addition, no statement was made that records important to decommissioning would be maintained for work at temporary job sites, and turned over to the site owner at the time of project completion for their records.

d. Several procedures refer to Regulatory Guide 10.8, Rev. 2, which is a 1987 NRC document for medical uses of radionuclides that was superseded many years ago. More recent NRC guidance applicable to decommissioning should be used.

e. Section 6.1.3 of the procedure for operating a Ludlum 2929 scalar is titled "Preform King of smears and air samples." This is unclear or perhaps incorrect.

f. In the radiation and contamination survey procedure
- the definition of exposure is not technically correct; if you are using this definition for the purposes only of this procedure, it should so state.
- it states that fixed contamination levels are measured directly. This is not correct; the total contamination can be measured directly but not the fixed contamination. In addition, this is different than the definition of "Fixed contamination" used in other procedures.
- Section 5.2.4.2 and the survey supplement record gamma survey results in CPM instead of DPM which is used for alpha and beta surveys. Explain why gamma survey results are not in DPM.

g. The air sampling and analysis procedure does not indicate if different media is used for sampling of tritium compared to sampling of C-14. Also, the ALI by definition is a limit to an adult worker, not a value of reference man.

h. The procedure for release of materials from controlled areas
- is unclear if this refers only to items and equipment rather than building surfaces; it may be acceptable for items and equipment but not for building surfaces.
- Section 4.1.12 states that the release of materials from controlled areas shall be performed in accordance with the provisions and directives of References 3.1.1 (a DOE Order for protection of the public and the environment), 3.1.2 (a DOE Order for protection of workers) and 3.1.3 (10 CFR Part 20 Standards for Protection Against Radiation). However, 10 CFR Part 20 does not contain explicit criteria for release of items and equipment from controlled areas, and the definition of controlled area in Part 20 is different than that used in most of the submitted procedures. If DOE has such explicit criteria, please provide that information.
- Table 6.1 is labeled as being regulatory limits for release based on gross alpha

contamination measurements. Please provide the regulatory reference for this table.

i. The control of radioactive material procedures
- contains multiple references to radiography. Your license does not authorize activities with radiography equipment. Radiography activities have specific requirements in 10 CFR Part 34 that would need to be addressed in your license application, and security requirement pursuant to 10 CFR Part 37. This should be explained or deleted.
- Section 3.2.1 defines accountable material, and uses Schedule B of 10 CFR Part 20 as quantities that do not require accounting. As stated earlier in this letter, the quantities in the table are specific to those manufacturers who are authorized pursuant to 10 CFR Parts 30 and 32 to distribute materials to person who do not require a specific license. Such quantities resulting from activities performed under a specific license are required to be accounted for and disposed of or transferred in accordance with NRC regulations.
- the definition of byproduct material needs to be updated to include all the byproduct material as defined in 10 CFR Part 20 and 30. The definition was revised in 2008.
- Section 6.1.2 is not sufficient for security of radiography equipment
- the contamination limits in Table 6.2 are not current for release of facilities and therefore not acceptable.
- Section 6.2.5 states that you will post a radiation area at 2 mR/h; the NRC requires posting at 5 mR/h. This must to be corrected.

j. The dosimetry procedure refers to the use only of TLD or pocket ion chamber (and some other procedures, when discussing dosimetry, refer to use of TLD or film badges). This will not allow you to use OSL dosimeters, or digital/electronic dosimetry equipment.

k. The posting and access control procedures
- section 6.3.4.1 uses 2 mR/h as the criteria for posting a radiation area; the NRC used 5 mR/h. This must be corrected.
- Section 6.3.6.1 and 6.3.6.3 states that a Very High Radiation Area has a dose equivalent of 5 rem in 1 hour. The NRC defines a Very High Radiation Area to be one in excess of 500 rad (5 grays); if the quality factor is 1, this would be 500 rem, not 5 rem. This must be corrected.
- Section 6.3.6.3 states that the posting can say "Danger, Very High Radiation Area". 10 CFR 20.1902(c) requires the posting to state "Grave Danger, Very High Radiation Area". This must be corrected.
- section 6.3.7 requires posting of airborne radioactivity areas if the airborne concentrations exceed 10% of the DAC. The NRC definition in 10 CFR 20.1002 of "airborne radioactivity area" is an area in which airborne concentrations (1) exceed a DAC, or (2) in which an individual could have an intake of 0.6 percent of the ALI (12 DAC-hours) without the use of respiratory protective equipment. Your procedure, although more restrictive than the NRC requirements, would cause over-posting of airborne radioactivity areas in the first case, and could result in lack of posting in the latter. This needs to be corrected.

l. The procedure for decontamination of tools
- refers to the use of respirators. If you plan to use respirators, you should confirm that you will meet the requirements of 10 CFR Part 290, Subpart H.
- table 5.1 labeled as being regulatory limits for release based on gross alpha contamination measurements. Please provide the regulatory reference for this table.

m. There was no procedure for chain-of-custody of samples. This should be established.

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. Please contact is if more time is needed.

An electronic version of the NRC's regulations is available on the NRC Web Site at: 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 form 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 .

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 April 30, 2019

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SUNSI Review Complete: Betsy Ullrich

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