

**From:** [Tran, Frank](mailto:Tran.Frank)  
**To:** [A.Doan@hotshotsnm.com](mailto:A.Doan@hotshotsnm.com)  
**Subject:** Request for additional information for NRC License No. 21-32812-01MD  
**Date:** Friday, February 19, 2021 2:02:00 PM

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Dear Mr. Doan:

This refers to the license amendment request dated January 19, 2021 for Hot Shots Nuclear Medicine, NRC License No. 21-32812-01MD. Specifically, Hot Shots Nuclear Medicine requests authorization for use licensed material at a new facility located at 3145 Wright Street, Marquette, Michigan 49855. We reviewed the application in accordance with NUREG-1556, Volume 13, Revision 2 and Volume 20, Revision 1 and will need the following.

1. The licensee provides that it will maintain a flow rate at a minimum of 30 CFM at the arm holes of the glove box. In addition, there may be other gaps on the glove box such as around the front swing door which may potentially help to increase the exhaust flow rate from the glove box.

Based on Attachment 7, the iodine retention efficiency for the charcoal filter will be lower when the flow rate increases. Based on the test data, it showed that the iodine retention efficiency for a charcoal filter in the test dropped down from around 99% for a flow rate of 0.5 CFM to around 62% for a flow rate of 4 CFM.

Based on the above we concern that the charcoal filters in place may not trap 99% of I-131 if released in the glove box. Therefore, we would like to know: a) the highest estimated I-131 concentration at the exit of the stack; b) any potential that the building air intake will take in the effluent release from the exhaust stack; c) the height of the stack from the roof and from the ground; d) the location of the blower, if the blower is located inside the building please describe any potential release to the inside of the building after the blower; and e) the minimum distance from the building to a nearby business or residence.

2. In page 12, the licensee stated that it will check the exhaust cabinet to ensure it is operating to satisfy the requirements in 10 CFR 20.1301. Please note that, in addition to the requirements in 10 CFR 20.1301 the NRC requires the licensee to limit the dose from air effluent release to a total effective dose equivalent of 10 mrem (0.1 mSv) per year for members of the public. Please confirm that Hot Shots Nuclear Medicine will follow the requirements in 10 CFR 20.1101(d).
3. Provide a diagram showing the ventilation system overlaying the facility diagram (i.e., Attachment 3 or 4).
4. Provide a confirmation that preparation of I-131 capsules and solution will only be performed in the glove box when the ventilation system is operable and is running.

To continue review of your application, we request that you submit your response with date and authorized signature to this correspondence within 30 calendar days from the date of this correspondence. In your response, please refer the license number, docket number

and Mail Control No. 624430. We will assume that you do not wish to further pursue this licensing action if we do not receive a reply within the specified timeframe noted above.

If you have questions, require additional time to respond, or require clarification on any of the information stated above, please contact me at 630-829-9623 or reply to this email.

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this correspondence will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <https://www.nrc.gov/reading-rm/adams.html>.

Best regards,

*Frank Tran*

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