



Materials Inspection Record

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| 1. Licensee Name: Niowave, Inc. | | 2. Docket Number(s): 040-38369 | | 3. License Number(s) 21-35145-01 | |
| 4. Report Number(s): 2021-001 | | | 5. Date(s) of Inspection: 10/27/21 with in-office review through 12/28/21 | | |
| 6. Inspector(s): Ryan Craffey | | 7. Program Code(s): 11300 | 8. Priority: 5 | 9. Inspection Guidance Used: IP 87126 | |
| 10. Licensee Contact Name(s): Bill Peters, PhD - RSO | | 11. Licensee E-mail Address: peters@niowaveinc.com | | 12. Licensee Telephone Number(s): 517-999-3475 | |
| 13. Inspection Type: <input type="checkbox"/> Initial | | 14. Locations Inspected: | | 15. Next Inspection Date (MM/DD/YYYY): | |
| <input checked="" type="checkbox"/> Routine <input checked="" type="checkbox"/> Announced | | <input checked="" type="checkbox"/> Main Office <input type="checkbox"/> Field Office | | 10/27/2026 <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Extended | |
| <input type="checkbox"/> Non-Routine <input type="checkbox"/> Unannounced | | <input type="checkbox"/> Temporary Job Site <input type="checkbox"/> Remote | | <input type="checkbox"/> Reduced <input type="checkbox"/> No change | |

16. Scope and Observations:

This was an announced routine inspection of an accelerator and radionuclide manufacturer in Lansing, Michigan, authorized by a source material license (among other NRC licenses) to fabrication and transfer DU as accelerator parts to authorized recipients and to use it for R&D as defined in 10 CFR 30.4. At the time of the inspection, the licensee possessed several bricks of DU in storage. The licensee had not machined, transferred, or used these bricks for R&D since receiving them, however it did intend to use them in future as accelerator shielding for its own devices as it ramps up production and beam output.

The inspector toured the licensee's facility in Lansing. All areas of source material storage were adequately posted and secured. The inspector interviewed the staff to discuss safe handling practices, reviewed and discussed established procedures for machining DU, confirmed that the licensee still maintained calibrated and operable air sampling instrumentation for these procedures, and would handle any residual waste generated from this work (including coolant) appropriately. The inspector reviewed records and tracking mechanisms for physical inventories of DU. The inspector visually confirmed the licensee's inventory of DU, and performed independent surveys in the vicinity. No unusual readings were noted.

The inspector identified one SLIV violation of 10 CFR 40.42(d)(3). In April 2017, this license was revised to transfer authorization for natural uranium and thorium-232 to Niowave's byproduct material license (no. 21-35145-02, docket no. 030-38770). This left only the DU and its authorized uses of R&D, fabrication, and transfer. Since then, the licensee has performed none of these principal activities. By April 2019, none had been performed for a period of 24 months, however the licensee never notified the NRC of this occurrence.

The root cause of this violation was a lack of understanding of NRC requirements; the licensee did not know that this requirement existed. As corrective action, the staff reviewed the relevant requirements with the inspector and submitted a notification of no principal activities to Region III MLB on December 28, 2021. Included with this notification was a request to transfer all remaining DU authorizations to the byproduct material license and to thereafter terminate the source material license.