



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001**

May 16, 2019

EA-19-024

Mr. Eric Brand
Mirion Technologies Corporation
300 IST Center
315 Daniel Zenker Drive
Horseheads, NY 14845

SUBJECT: MIRION TECHNOLOGIES CORPORATION - NOTICE OF VIOLATION

Dear Mr. Brand:

This letter refers to a review of information relating to the export of a nuclear reactor component (fission chamber), under the U.S. Nuclear Regulatory Commission's (NRC's) licensing authority, by Mirion Technologies Corporation (Mirion). On February 22, 2019, during a review of Nuclear Materials Management and Safeguards System (NMMSS) activities, the NRC staff identified an open transaction related to the November 30, 2018, export of a nuclear reactor component to the Petten research test reactor (RTR), located in the Netherlands. Specifically, Mirion reported the export on the NRC Form 741, "Nuclear Materials Transaction Report," and cited a general license authorizing the export of two grams of high-enriched uranium contained in a fission chamber. A general license does not authorize the export of components for research reactors capable of continuous operation above 5 mega-watt (MW) thermal. The Petten RTR has a capacity of 45 MW continuous operation. Mirion was not in possession of a specific export license for the fission chamber.

The NRC discussed its preliminary findings with you on April 18, 2019, in a telephone conversation with Ms. Andrea R. Jones, Senior Licensing Officer, Export Controls & Nonproliferation Branch, Office of International Programs. During the telephone conversation, Ms. Jones informed you that the NRC determined that an apparent violation of NRC requirements occurred and that the apparent violation was being considered for escalated enforcement in accordance with NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. Ms. Jones also informed you that Mirion provided a detailed account of the export and the NRC believed that it had sufficient information regarding the apparent violation and your corrective actions (Agencywide Documents Access and Management System (ADAMS) Accession Numbers ML19109A107 and ML19109A092) to make an informed enforcement decision without the need for a predecisional enforcement conference (PEC) or a written response from you. You indicated that Mirion also did not believe that a PEC or written response was needed.

Based on its review of information provided in the April 3, 2019, electronic communications and subsequent discussion with you, the NRC has determined that a violation of NRC requirements occurred. The violation cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it is described in detail in the enclosed Summary of Issues (Enclosure 1). The apparent violation involves Mirion's export of a nuclear reactor component for use at the Petten RTR without a specific license authorizing the export. The fission chamber is designed to measure thermal neutron radiation at research reactors capable of continuous operation above 5MW thermal and the export licensing criteria in Title 10 of the *Code of Federal Regulations* (10 CFR) 110.26(c) applies. The failure to obtain a specific license before exporting the components raises significant regulatory concerns. Specifically, the NRC considers the violation to be significant because it impacted the NRC's ability to perform its regulatory oversight function and wherein the U.S. Government would have requested assurances from Euratom confirming that the component met all Nuclear Suppliers Group assurances. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III.

In accordance with the NRC Enforcement Policy, a base civil penalty in the amount of \$14,000 is considered for a Severity Level III violation. Because your facility has not been the subject of escalated enforcement actions within the last 2 years, the NRC considered whether credit was warranted for *Corrective Action* in accordance with the civil penalty assessment process in Section 2.3.4 of the Enforcement Policy. The corrective actions included Mirion's initiation of a Corrective Action Request in accordance with its internal Quality Assurance Program and implementation of a checklist to document future export requirement decisions for each customer order. For this reason, credit is given for the *Corrective Action* factor considered for escalated enforcement.

Therefore, to encourage prompt identification and comprehensive correction of violations and in recognition of the absence of previous escalated enforcement action, I have decided not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty. In addition, issuance of this SLIII violation constitutes escalated enforcement action that may subject you to increased inspection effort.

The NRC has concluded that information regarding: (1) the reason for the violation; (2) the corrective actions that have been taken and the results achieved; and (3) the date when full compliance was achieved is already adequately addressed on the docket in the electronic communications dated April 3, 2019. Therefore, you are not required to respond to this letter unless the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosures and your response will be made available electronically for public inspection in the Public Document Room or from the NRC's Agencywide Documents Access and Management System accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy or proprietary information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such information, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your

claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information).

Please contact Ms. Andrea R. Jones at (404) 997-4443, if you have any questions regarding this matter.

Sincerely,

/RA/

George A. Wilson, Director
Office of Enforcement

Enclosures:

1. Summary of Issues
2. Notice of Violation

SUBJECT: MIRION TECHNOLOGIES CORPORATION - NOTICE OF VIOLATION

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*concurrence via e-mail

ADAMS Accession No.: ML19115A098

OFFICE	OIP/ECNP	BC:ECNP/OIP	DD:OIP	OE/EB	D:OE
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DATE	04/29/19	04/29/19	04/30/19	05/14/19	05/16/19

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SUMMARY OF ISSUES

On February 22, 2019, during a review of the Nuclear Materials Management and Safeguards System (NMMSS) activities, staff identified an open transaction related to the November 30, 2019, export of a nuclear reactor component to the Petten research test reactor (RTR), located in the Netherlands. Specifically, Mirion reported the export on the NRC Form 741, "Nuclear Materials Transaction Report," and cited a general-license for authorizing the export of two grams of

high-enriched uranium contained in a fission chamber. While the quantity of special nuclear material met the criteria for reporting the transaction to NMMSS under a general export license, the system generated an alert for U.S. Nuclear Regulatory Commission to confirm whether any other specific license is required. A general license does not authorize the export of components for research reactors capable of continuous operation above 5 mega-watt (MW) thermal. The Petten RTR has a capacity of 45 MW continuous operation. Mirion had not acquired a specific license for the export of the fission chamber. In electronic communications dated April 3, 2019, Mirion provided corrective actions associated with the export (Agencywide Documents Access and Management System Accession (ADAMS) Numbers ML19109A107 and ML19109A092).

NOTICE OF VIOLATION

Mirion Technologies Corporation
Horseheads, NY 14845

EA-19-024

During an NRC review of information relating to the export of a nuclear reactor component by Mirion Technologies Corporation (Mirion), to the Netherlands, conducted in February 22, 2019, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Title 10 of the *Code of Federal Regulations* (10 CFR), Section 110.5 states, in part, that no person may export any nuclear equipment listed in 10 CFR 110.8 unless authorized by a general or specific license issued under 10 CFR Part 110.

10 CFR 110.20(a) of 10 CFR states that a person may use an NRC general license as authority to export or import nuclear equipment or material, if the nuclear equipment or material to be exported or imported is covered by the NRC general licenses described in Sections 110.21 through 110.27. If an export or import is not covered by an NRC general license, a person must file an application for a specific license in accordance with 10 CFR 110.31 through 110.32.

10 CFR 110.26(c) states, a general license does not authorize the export of components, for research reactors capable of continuous operation above 5MW thermal.

Contrary to the above, on November 30, 2019, Mirion exported under an NRC general license a fission chamber to the Petten research reactor, a research test reactor capable of continuous operation above 5MW, without filing an application for a specific license in accordance with 10 CFR 110.31 through 110.32. Specifically, Mirion reported the export on the NRC Form 741, "Nuclear Materials Transaction Report," and cited a general-license authorizing the export of two grams of high-enriched uranium contained in a fission chamber without filing an application for a specific license in accordance with 10 CFR 110.5 and 110.20(a). This export was not covered by an NRC general license because 10 CFR 110.26, "General license for the export of nuclear reactor components," does not authorize export of components for research reactors capable of continuous operation above 5MW thermal.

This is a Severity Level III violation (NRC Enforcement Policy, Section 6.15.)

The NRC has concluded that information regarding the reason for the violation, the corrective actions taken and planned to correct the violation and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in electronic communications from Mirion dated April 3, 2019. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, EA-19-024," and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Director, Office of International Programs, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you choose to respond, your response will be made available electronically for public inspection in the NRC Public Document Room or in the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 16th day of May 2019.