September 8, 2022

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References:
(1) SHINE Medical Technologies, LLC letter to the NRC, "SHINE Medical Technologies, LLC Application for an Operating License," dated July 17, 2019 (ML19211C143)
(2) NRC letter to SHINE Medical Technologies, LLC, "SHINE Medical Technologies, LLC – Request for Additional Information Related to the Neutron Flux Detection System (EPID No. L-2019-NEW-0004)," dated January 27, 2022 (ML22012A203)
(3) SHINE Technologies, LLC letter to the NRC, "SHINE Technologies, LLC Application for an Operating License Supplement No. 20 and Response to Request for Additional Information," dated March 18, 2022 (ML22077A086)

SHINE Technologies, LLC Application for an Operating License
Revision 1 of SHINE Response to Requests for Additional Information 7-38, 7-40, and 7-48

Pursuant to 10 CFR Part 50.30, SHINE Technologies, LLC (SHINE) submitted an application for an operating license for a medical isotope production facility to be located in Janesville, Wisconsin (Reference 1). The NRC staff determined that additional information was required to enable the staff's continued review of the SHINE operating license application (Reference 2). SHINE responded to the staff's request for additional information (RAI) via Reference 3.

SHINE has determined that the SHINE Responses to RAI 7-38, RAI 7-40, and RAI 7-48, provided via Reference 3, require revision.

Enclosure 1 provides Revision 1 of the SHINE Responses to RAI 7-38, RAI 7-40, and RAI 7-48. Revision 1 of these responses supersede the previously provided SHINE Responses to RAI 7-38, RAI 7-40, and RAI 7-48, provided via Reference 3, in their entirety.

If you have any questions, please contact Mr. Jeff Bartelme, Director of Licensing, at 608/210-1735.

I declare under the penalty of perjury that the foregoing is true and correct.
Executed on September 8, 2022.

Very truly yours,

DocuSigned by:
Jim Costedio
F52DB96989224FF...

James Costedio
Vice President of Regulatory Affairs and Quality
SHINE Technologies, LLC
Docket No. 50-608

Enclosure

cc: Project Manager, USNRC
SHINE General Counsel
Supervisor, Radioactive Materials Program, Wisconsin Division of Public Health

ENCLOSURE 1

SHINE TECHNOLOGIES, LLC

SHINE TECHNOLOGIES, LLC APPLICATION FOR AN OPERATING LICENSE REVISION 1 OF SHINE RESPONSE TO REQUESTS FOR ADDITIONAL INFORMATION 7-38, 7-40, AND 7-48

The NRC staff determined that additional information was required to enable the staff's continued review of the SHINE Technologies, LLC (SHINE) operating license application (Reference 1). SHINE provided the response to the NRC staff's request for additional information (RAI) via Reference 2. SHINE has determined that the SHINE Response to RAI 7-38, RAI 7-40, and RAI 7-48, provided via Reference 2, requires revision to accurately reflect a design change in the type of source range neutron detector utilized. Revision 1 of the SHINE Response to RAIs 7-38, RAI 7-40, and RAI 7-48 is provided below.

RAI 38

NUREG-1537, Part 2, Section 7.4, describes that descriptive information, including system logic and schematic diagrams, showing all instruments, computer hardware and software, electrical, and electromechanical equipment used in detecting conditions requiring protective action and in initiating the action should be provided and the logic, schematic, and circuit diagrams should show independence of detector channels and trip circuits. Therefore, the NFDS should be designed to automatically initiate the operation of appropriate systems to assure that specified design limits are not exceeded.

SHINE FSAR Chapter 3, Table 3.1-3, states SHINE Criterion 14, "Protection system functions," as follows:

The protection systems are designed to:

1) initiate, automatically, the operation of appropriate systems to ensure that specified acceptable target solution design limits are not exceeded as a result of anticipated transients; and

2) sense accident conditions and to initiate the operation of safety-related systems and components."

SHINE FSAR Section 7.8.2.2.1, states, in part, the following NFDS criterion:

NFDS Criterion 6 – The location and sensitivity of at least one NFDS detector in the source range channel, along with the location and emission rate of the subcritical multiplication source, shall be designed to ensure that changes in reactivity will be reliably indicated even with the TSV shut down.

NFDS Criterion 7 – The NFDS shall have at least one detector in the power range channel to provide reliable readings to a predetermined power level above the licensed maximum power level.

SHINE FSAR Section 7.8.4.2, "Logic Processing Functions," states, in part:

> The NFDS also provides a "source range missing" and "power range missing" signal to the PICS for use as an alarm to the operator in alerting that the NFDS is not operating properly.
>
> The TRPS transmits the analog signals as nonsafety-related signals to the PICS to display for operator use when monitoring conditions in the IU cells.

This section in effect describes the signals generated and provided to PICS but does not describe the logic processing within NFDS to generate these signals.

SHINE FSAR Section 7.8.3, "Design Bases," describes the measurement ranges for the NFDS. However, the SHINE FSAR does not describe the logic performed to process the analog signals and generate the actuation signal for TRPS. SHINE FSAR Figure 7.4-1, shows the actuation signals programmed in the TRPS to activate the safety function.

1. Revise the SHINE FSAR to describe how monitored signals are input to NFDS, conditioned to determine power, and transmitted to the TRPS; and where in the two systems the signal is evaluated against defined setpoints in the safety function module with logic to generate safety signals. Revise the FSAR and confirm whether the trip setpoint and actuation is performed within NFDS as described in NFDS Criterion 17; or if trip determination is performed in TRPS and ESFAS based on analog signals from NFDS cabinets (also see RAI 7-47).

2. Confirm if the NFDS is an entirely analog based system as stated in SHINE FSAR Section 7.8.3.2, or if the NFDS includes digital components and/or software that condition analog sensor inputs into analog output signals transmitted to the TRPS (also see RAI 7-42).

<u>SHINE Response</u>

1. The NFDS is a three-division system that contains six detectors.

   Three of the six detectors are fission chamber detectors that provide source range indication for three divisions. The detectors provide signals to NFDS amplifiers where analog signal conditioning is performed. Each of the three divisions of NFDS amplifiers provides a discrete analog signal representative of source range neutron flux to the respective division remote input submodule (RISM) in the target solution vessel (TSV) reactivity protection system (TRPS).

   The other three detectors are compensated ion chambers that provide wide range and power range indications for three divisions. Each individual detector provides both a wide range and a power range indication. The detectors provide signals to NFDS amplifiers, separate from the NFDS amplifiers specific to the source range detectors described above, where analog signal conditioning is performed. Each of the three divisions of NFDS amplifiers for the compensated ion chambers provides an analog signal representative of wide range and power range neutron flux to the respective division RISM in the TRPS.

   There are no setpoints in the NFDS itself and no logic is performed within the NFDS to compare a reading from a detector to a setpoint. Setpoints associated with the NFDS are contained in the TRPS. The TRPS receives inputs from the NFDS as described above, compares these inputs to the associated setpoints, and generates an actuation signal as necessary. Inputs to the TRPS from the NFDS and the logic used to generate an actuation signal are provided in Figure 7.4-1 of the FSAR. The logic performed within the TRPS is further described in the SHINE Response to RAI 7-21 (Reference 3).

SHINE has revised Subsections 7.8.1, 7.8.2, and 7.8.3 of the FSAR to enhance the description of how signals are conditioned, input to the TRPS, and used in the determination of safety actuations. Section 7.8 of the FSAR has also been revised to update the description of the configuration of NFDS detectors. The revision to the FSAR provided via Reference 4 reflects these described revisions.

2. The NFDS is an entirely analog based system as stated in Subsection 7.8.3.2 of the FSAR.

<u>RAI 40</u>

SHINE FSAR Chapter 3, Table 3.1-3, states SHINE Criterion 16, "Protection system independence," as follows:

> The protection systems are designed to ensure that the effects of natural phenomena, and of normal operating, maintenance, testing, and postulated accident conditions on redundant channels do not result in loss of the protection function or are demonstrated to be acceptable on some other defined basis. Design techniques, such as functional diversity or diversity in component design and principles of operation, are used to the extent practical to prevent loss of the protection function.

FSAR Section 7.8.2.2.1, states, in part, the following NFDS criterion:

> NFDS Criterion 8 – The NFDS shall be separated from the PICS to the extent that any removal of a component or channel common to both the NFDS and the PICS preserves the reliability, redundancy, and independence of the NFDS.
>
> NFDS Criterion 10 – The timing of NFDS communications shall be deterministic.
>
> NFDS Criterion 13 – Physical separation and electrical isolation shall be used to maintain the independence of NFDS circuits and equipment among redundant safety divisions or with non-safety systems so that the safety functions required during and following any maximum hypothetical accident or postulated accident can be accomplished.
>
> NFDS Criterion 14 – The NFDS shall be designed such that no communication–within a single safety channel, between safety channels, and between safety and non-safety systems–adversely affects the performance of required safety functions.

SHINE FSAR Section 7.8.2.1.4, "Protection System Independence," describes how the NFDS meets SHINE Design Criterion 16. This description refers to other sections in the FSAR that cover independence and equipment qualification for operation during normal and design basis event.

SHINE FSAR Section 7.8.2.1.3, "Protection System Reliability and Testability," describes the independent NFDS divisions interface with TRPS, which has been analyzed for single failure in accordance with the Institute of Electrical and Electronics Engineers (IEEE) Standard 379-2000, “IEEE Standard Application of the Single-Failure Criterion to Nuclear Power Generating Station Safety Systems,” for all inputs, including NFDS.

SHINE FSAR Section 7.8.2.2.3, “Independence,” identifies the NFDS criteria for single failure criteria and how the system meets these criteria. This section describes that the system is physically and electrically independent. SHINE FSAR Section 7.8.3.4, “Independence,” then repeats this information and adds the location where the detectors would be installed. This section further describes that each NFDS division is independent from each other.

SHINE FSAR Section 7.8.2.2.1, notes that the positioning of the NFDS source range detectors, and the location, and emission rate of the subcritical multiplication source, is designed so that all three channels are on scale throughout filling. However, the FSAR does not provide sufficient information how these designs were implemented.

Regarding independence of communication, the SHINE FSAR describes how the NFDS meets this independence in several sections of the SHINE FSAR. SHINE FSAR Section 7.8.2.1.3, “Protection System Reliability and Testability,” describes that interfacing systems with the NFDS are downstream of the NFDS such that a failure of an interfacing nonsafety system will not impact the NFDS. SHINE FSAR Sections 7.8.2.1.6, “Separation of Protection and Control Systems,” 7.8.2.2.1, 7.8.2.2.2, and 7.8.2.2.3, “Independence,” state that communication with TRPS and PICS are continuous through isolated outputs that only allow the data to be transmitted out of the system so that no failure from an interfacing system can affect the functions of the NFDS. However, SHINE FSAR Section 7.8.4.2, “Logic Processing Functions,” describes that the TRPS transmits the analog signals as nonsafety-related signals to the PICS to display for operator use when monitoring conditions in the IU cells. It is not clear to the NRC staff whether the NFDS communicates directly with PICS or if it is through the TRPS.

After reviewing the information provided in the SHINE FSAR, the NRC staff found that these sections do not provide sufficient information for the NRC staff to evaluate how the NFDS meets the independence criteria. Further during the audit performed on May 12, 2021 (ADAMS Accession No. ML21130A313), SHINE staff stated that a new signal transmitted from the TRPS to the NFDS was added to the design. This signal is not described in the SHINE FSAR. Various places in the FSAR it states that NFDS provides analog signals to TRPS, however, the NRC staff was unable to locate any specific information on methods of communication, signal scaling, linear or log based, etc. Therefore, provide in the SHINE FSAR the following information:

1. Type of signals and communication mechanisms and isolation for signals transmitted from the NFDS to the TRPS.

2. Confirm whether signals are transmitted from the NFDS directly to the PICS (as depicted in FSAR Figure 7.1-1). If so, identify type of signals and communication mechanisms and isolation for signal transitions.

3. Type of signals and communication mechanisms for signals transmitted from the TRPS to the NFDS.

The information requested is necessary to support the following findings in Section 7.3 of NUREG-1537, Part 2:

- The RCS should give continuous indication of the neutron flux from subcritical source multiplication level through the licensed maximum power range. This continuous indication should ensure about one decade of overlap in indication is maintained while observation is transferred from one detector channel to another.

- The sensitivity of each sensor channel should be commensurate with the precision and accuracy to which knowledge of the variable measured is required for the control of the reactor.

- The system should give reliable reactor power level and rate-of-change information from detectors or sensors that directly monitor the neutron flux.

- The system should give reliable information about the status and magnitude of process variables necessary for the full range of normal reactor operation.

SHINE Response

1. In the source range, the NFDS provides a voltage pulse signal to the TRPS with each voltage pulse corresponding to a pulse from the associated fission chamber detector.

   In the wide range and power range, the signal from the compensated ion chambers (CICs) is input to log and linear amplifiers which output 0 to 4 volt signals to TRPS, respectively.

   The signals from both the fission chamber detectors and the CICs to the TRPS are one-way through isolated outputs.

   SHINE has revised Subsection 7.8.3.2 of the FSAR to enhance the description of the analog signals sent from the NFDS to the TRPS. The revision to the FSAR provided via Reference 4 reflects these described revisions.

2. The NFDS does not transmit signals directly to the process integrated control system (PICS). The NFDS sends signals to the TRPS, as shown in Figure 7.1-1 of the FSAR.

3. There are no signals transmitted from the TRPS to the NFDS during normal operations. Signals and communication mechanisms for signals transmitted from the TRPS and NFDS during a channel test and NFDS electronics calibration are described in the SHINE Response to RAI 7-48.

RAI 48

NUREG-1537, Part 2, Section 7.4, acceptance criteria, states, in part, that “[t]he RPS be sufficiently distinct in function from the RCS that its unique safety features can be readily tested, verified, and calibrated.” In addition, NUREG-1537, Part 2, Section 7.4, acceptance criteria, states, in part, that “[t]he RPS function and time scale should be readily tested to ensure operability of at least minimum protection for all … operations.” Therefore, the NFDS should be designed to be readily tested and calibrated to ensure operability. Additionally, the SHINE proposed TSs, including surveillance tests and intervals, should ensure availability and operability of these actuation systems.
SHINE Design Criterion 15, “Protection system reliability and testability,” requires the protection system be designed to permit periodic testing, including a capability to test channels independently to determine failures and losses of redundancy that may have occurred.

The SHINE TS does not include a LCO for the NFDS and includes SR 3.2.3 to require weekly channel check of the NFDS. SHINE FSAR Section and 7.8.3.10 "Maintenance and Testing," states that "The NFDS supports testing and calibration to ensure operability as required by the technical specifications. The NFDS is designed to allow operators to remove portions of the NFDS from service when not required for operation without impacting NFDS components specific to other IU cells." Further, SHINE FSAR Section 7.8.2.1.3, "Protection System Reliability and Testability," states, in part, that "The protection systems are designed to permit periodic testing, including a capability to test channels independently to determine failures and losses of redundancy that may have occurred.

However, the SHINE FSAR does not include detailed information on the testing and diagnostics attributes, process, configurations to evaluate conformance to the maintenance and testing features and how SHINE Design Criterion 15 is met for the NFDS.

Update the SHINE FSAR to describe the maintenance and testing that would be performed for the NFDS diagnostic and maintenance features to ensure operability of the equipment.

The information requested above is necessary to support the evaluation findings in Section 7.4 of NUREG-1537, Part 2:

- [t]he design reasonably ensures that the design bases can be achieved, the system will be built of high-quality components using accepted engineering and industrial practices, and the system can be readily tested and maintained in the design operating condition.

SHINE Response

The operability of the NFDS is demonstrated by the performance of surveillance requirements associated with LCO 3.2.3 of the technical specifications. A channel check is performed on each NFDS channel weekly to ensure continued operability of the channels. A channel calibration, which includes a channel test, is performed annually.

Channel Test

The NFDS provides neutron flux inputs to the TRPS RISMs. There are two RISMs in each of Divisions A, B, and C of the TRPS, one RISM for source range neutron flux input (fission chamber detector) and another RISM for wide range and power range neutron flux inputs (CIC detector). Each RISM is directly associated with a single SFM within the division that allows for remotely locating one Highly Integrated Protection System (HIPS) ISM (mounted on the RISM module) from its associated SFM. Once an input channel is in digital format on the ISM, the input information is provided by the RISM via an isolated, one-way RS-485 connection to its associated SFM within the division for triplication and trip determination. There is an additional RS-485 connection between the RISM and its associated divisional SFM which independently supports modification of tunable parameters and testing necessary on the RISM for the associated neutron flux detector.

For each NFDS fission chamber detector input channel, the following interfaces between the associated TRPS RISM and the respective divisional NFDS equipment are provided:

- Source Range analog pulse output from NFDS to the TRPS RISM's FPGA;
- Non-Operative analog output from NFDS to the TRPS RISM's FPGA;

- Threshold serial peripheral interface (SPI) output from the TRPS RISM's FPGA to the NFDS;
- High Voltage SPI output from the TRPS RISM's FPGA to the NFDS;
- Test Request analog output from the TRPS RISM's FPGA to the NFDS;
- Test Pulse analog output from the TRPS RISM's FPGA to the NFDS; and
- High Voltage Enable analog output from the TRPS RISM's FPGA to the NFDS.

Modification of the NFDS fission chamber tunable parameters (i.e., Threshold SPI and High Voltage SPI) is accomplished via the TRPS and ESFAS maintenance workstation (MWS), as described in the SHINE Response to RAI 7-18 (Reference 5). The MWS allows a technician password protected access to select the system (TRPS), the specific irradiation unit (IU) cell, the division (A, B, or C), the specific RISM, and the tunable parameter which is to be modified. Then a MWS enable hardwired switch is required to be activated to allow for physical connection of the MWS to the calibration and test bus (CTB). The technician must then use the MWS to select the parameter and the associated parameter value to be updated, then the option to update the tunable parameter is enabled to allow the user to select it. When this occurs, the MWS issues a write command to the SFM, which then sends the write command to the RISM, which then writes the data into a nonvolatile memory (NVM) location on the RISM.

The SFM, and hence the RISM, does not receive data from the MWS unless the SFM associated with the RISM is placed into out-of-service (OOS). The user must place the module into the OOS mode by selecting OOS from the module's front panel manual switch before updating a setpoint.

The write command is issued from the MWS and the data is sent to the RISM's NVM as follows:

1) The MWS calculates a Cyclic Redundancy Check (CRC) and sends the data to the divisional monitoring and indication communication module (MICM) that corresponds to the module to be updated.
2) The MICM receives and verifies the data integrity, then calculates a CRC and sends it to the intended SFM.
3) The SFM logic receives and verifies the data integrity, then calculates a CRC for the data and sends it to its RISM.
4) The RISM logic receives and verifies the data integrity, then calculates a CRC for the data and send it to its NVM.
5) The NVM receives and stores it in the intended location.
6) The RISM logic then reads back the data from the same NVM location that it just performed the data write to and verifies the data's integrity. This indicates that the data was stored successfully in the intended NVM location.
7) If the data read back integrity check fails, the module issues an NVM error, and the error is displayed by the MWS.
8) The written data and the data read back from the module are both displayed on the MWS along with the NVM location that was used during the write and read operations to allow the user to verify an accurate parameter update.

A parameter value can be read from the NVM location using the MWS by selecting the specific RISM, then selecting the Read Parameter function. The data read from the NVM location is then displayed on the MWS.

The MWS reads the module's status information and displays it to the user after each write or read operation.

Initiation of an NFDS fission chamber channel test (using the Test Request analog, Test Pulse analog, and Source Range analog pulse output signals) is accomplished via the TRPS and ESFAS MWS similarly as described above, except nothing is written to the RISM's NVM. A technician uses the MWS to select the system (TRPS), the specific IU cell, the division (A, B, or C), and the specific RISM. Then a MWS enable hardwired switch is required to be activated to allow for physical connection of the MWS to the CTB. The technician must then use the MWS to select the specific pulse test to be performed, then the option to initiate the pulse test is enabled to allow the user to select it. When this occurs, the MWS issues a test command to the SFM, which then sends the test command to the RISM, which then initiates the pulse test sequence on the RISM.

The pulse test sequence is accomplished as follows:

1) The RISM provides the specific Test Request analog output signal to the NFDS equipment.
2) The NFDS changes the Non-Operative analog output signal to the fault condition.
3) The NFDS equipment switches the normal detector input to the amplification and conditioning circuitry to the Test Pulse analog output provided from the RISM's FPGA.
4) The RISM provides the specific Test Pulse analog output to the NFDS.
5) The RISM compares the Source Range analog pulse input signal from NFDS to the Test Pulse analog output provided to the NFDS circuitry to confirm, or not, that both are the same.
6) The NFDS changes the Non-Operative analog output signal to the non-faulted condition.

For each NFDS CIC input channel, the following interfaces between the associated TRPS RISM and the respective divisional NFDS equipment are provided:

- 0-4 VDC Wide Range analog output from NFDS to the TRPS RISM's ISM
- 0-4 VDC Power Range analog output from NFDS to the TRPS RISM's ISM
- Non-Operative analog output from NFDS to the TRPS RISM's FPGA
- High Voltage SPI output from the TRPS RISM's FPGA to the NFDS
- Compensating Voltage SPI output from the TRPS RISM's FPGA to the NFDS
- Test Request analog output from the TRPS RISM's FPGA to the NFDS
- Test Select analog output from the TRPS RISM's FPGA to the NFDS
- High Voltage Enable analog output from the TRPS RISM's FPGA to the NFDS

Modification of the NFDS CIC tunable parameters (High Voltage SPI, Compensating Voltage SPI, and multiple Wide and Power Range test current response output values) is accomplished via the TRPS and ESFAS MWS in the same manner as described above for modifying the fission chamber tunable parameters.

Initiation of an NFDS CIC channel test (using the Test Request analog and Test Select analog output signals) is accomplished via the TRPS and ESFAS MWS similarly as described above for the fission chamber channel test.

The CIC test sequence is accomplished as follows:

1) The RISM provides the Test Request analog and the specific Test Select analog output signals to the NFDS equipment.
2) The NFDS changes the Non-Operative analog output signal to the fault condition.
3) The NFDS equipment switches the normal detector input to the amplification circuitry to the on-board Test Current output
4) The NFDS equipment selects the appropriate test current signal based on the Test Select analog and injects it into the amplification circuitry.
5) The RISM compares the Wide and/or Power Range analog output signal from NFDS (depending on the specific Test Select) to the associated Wide and/or Power Range test current response output value(s) to confirm that the channel is operating correctly.
6) The NFDS changes the Non-Operative analog output signal to the non-faulted condition.

NFDS Detector Calibration

Annual calibration of the NFDS power range and wide range detectors is performed as follows:

- Prior to filling a TSV for irradiation, a sample is taken from the associated target solution. The sample is analyzed for activity to determine the volumetric activity of selected isotopes.
- The TSV is filled, using the standard startup procedure, and the TSV level is recorded to determine the volume of irradiated solution.
- The target solution is irradiated for a sufficient time to create activity levels of the selected isotopes sufficient for the calibration.
- A sample of target solution is analyzed post-irradiation to determine the volumetric activity levels of the selected isotopes post-irradiation.
- The power level during irradiation is calculated based upon the initial and final volumetric activity levels of the selected isotopes, indicated power time history, and the TSV volume. This value is used to calibrate the NFDS power range and wide range detectors.

Annual calibration of the source range detectors is performed as follows:

- The Normal Startup Count Rate (NSCR), as described in Subsection 4a2.6.2.7 of the FSAR, is determined by filling the TSV to approximately 95 percent of critical by volume with optimum concentration solution and stable temperature. The source range setpoint is then set relative to the NSCR per LSSS 2.2.3 and LCO 3.2.3 of the technical specifications.
- Additionally, the drift allowance relied on by the source range setpoint calculations is periodically checked using the empty TSV count rate.

The capability of performing channel tests and NFDS detector calibrations as described demonstrates the inservice testability required by SHINE Design Criterion 15.

SHINE has revised Subsection 7.8.2.1.3 of the FSAR to enhance the description of how the NFDS satisfies SHINE Design Criterion 15. The revision to the FSAR provided via Reference 4 reflects these described revisions.

References

1. NRC letter to SHINE Medical Technologies, LLC, “SHINE Medical Technologies, LLC – Request for Additional Information Related to the Neutron Flux Detection System (EPID No. L-2019-NEW-0004),” dated January 27, 2022 (ML22012A203)

2. SHINE Technologies, LLC letter to the NRC, “SHINE Technologies, LLC Application for an Operating License Supplement No. 20 and Response to Request for Additional Information,” dated March 18, 2022 (ML22077A086)

3. SHINE Technologies, LLC letter to NRC, “Application for an Operating License Supplement No. 13 and Response to Request for Additional Information,” dated November 22, 2021 (ML21326A206)

4. SHINE Technologies, LLC letter to the NRC, “Application for an Operating License Supplement No. 30,” dated August 31, 2022

5. SHINE Medical Technologies, LLC letter to NRC, “Application for an Operating License Response to Request for Additional Information,” dated August 27, 2021 (ML21239A049)