Memo

To: SS&D File, GA-1138-D-103-S

From: Eric Jameson

CC: Hopewell Designs, RORushton@HopewellDesigns.com

Date: June 28, 2004

Re: Summary of Telephone Conversation

Date and Time of Conversation: June 22, 2004, ~ 17:00 hours.

Summary: I spoke with R.O. Rushton of Hopewell Designs regarding the DI40 Series irradiator SS&D application. The following lists my questions and his replies.

Q1. On page 3 of the application, Section 3.1, item 5 states ". . . dosimeter . . . "; it should read "exposure." On page 4, Section 4.1, 2nd paragraph says, ". . . DI40-G-2"; it should read, ". . . DI40-G-10." On page 4, Section 4.3, 1st paragraph says, ". . . lead shielding . . . to prevent radiation streaming . . . ." it should polyethylene instead of lead.

A1. Agreed to all changes.

Q2. There are two instances in the application where activities of the Cs-137 sources differ from the maximum activities identified on pages 1 and 2. These are on page 5, section 4.2, and in Appendix A (System Manual) page 3, section 2.2. Please indicate the correct maximum activities.

A2. The values listed on page 5 and in Appendix A reflect the maximum possible activities as listed on the respective source SS&D certificates. The maximum activities for use in the DI40 Series are those listed on pages 1 and 2.

Q3. On page 12, the dose rate tables for the DI40-G-10 and DI40-G-1 have empty cells. Please provide values for those cells.

A3. Those values should be zero. I will provide an updated copy of the tables to reflect that.

Q4. The application did not contain a drawing depicting the DI40-N-1. How does it differ from the DI40-N-10?

A4. I will provide a drawing showing a cross-sectional detail of the DI40-N-1.

Q5. When the device is equipped with the infrared sensor that reads the EPDs, is the device also equipped with a two-tier air cylinder, like Hopewell's device that contains two sources?

A5. No. Actually, during physical testing we found that we can place the sensor beneath the dosimeter tray and angle it so that the EPD does not need to be raised to an interim position prior to irradiation. The EPD can actually be read by the sensor in the normal tray position. Please disregard the text pertaining to an interim position.

Q6. The sealed sources used in the DI40 series all have different diameters. Nothing in the application describes the interaction between the source and the source tube or shield plug. Please describe how the sources are maintained in position in the source tube.

A6. Each source is inserted into a source-specific sleeve so that the outer diameter of each source-sleeve combination is identical, just slightly smaller than the diameter of the source tube. For the DI40-N-* and the DI40-G-10, the length of the shield plug is such that it holds the source in place, preventing the source from moving. For the DI40-G-1, the source tube has a notch at the end to hold the Cl-36 source in place, and a source holder has a tapered space with a "step" to hold the Am-241 source in place. The shield plug is inserted behind the source holder and holds the source holder in place. I will provide a drawing showing installation details of the source holder for the DI40-G-1.

Q7. The DOT Type 7A analysis for the DI40-N-10 includes references to lead shielding. The SS&D application lists only Polycast and steel. Please explain.

A7. That is a result of "cut and paste" from other applications. It should not contain a reference to lead shielding.

Q8. Has there been a Type 7A analysis performed for the DI40-G-*? Is this analysis required for that model?

A8. A Type 7A analysis is required for the DI40-G-*, but it has not been performed yet. This analysis will be performed prior to shipping a DI40-G-*, and a copy will be provided to your office. Our initial customers right now for this product are requesting DI40-N-10 units.

In summary, Hopewell Designs will provide the Program with the following items: (1) revised dose rate tables showing all cells with entries; (2) drawings of the DI40-N-1 and DI40-G-1 source holder; (3) a copy of the DOT Type 7A analysis for the DI40-G-*, prior to shipping one of those units.

End of conversation, ~ 15:35 hours.