



23-May-2017

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Project Manager, NMSS/MSTR/MSLB
U.S. Nuclear Regulatory Commission
301.415.6026

Subject: Response to Questions, 26-April-2017 from Tomas Herrera, re: 31-Mar-2017b **Amendment Request to Mirion Technologies SS&D NR-1147-D-101-S**

NRC Question	Mirion Response
<p>1. In your amendment you requested to use the P04 Series of sources in MGP Instruments calibration systems. Please confirm that the model number of the new source that will be used in the CDM-21 and IDC Intelligent Dosimeter Calibrator is the Cs7.P04.</p>	<p>The source model as provided by Eckert and Ziegler is shown below:</p> <p>Description: P04 Series Capsule Item Number: CS7P040001C, Model Cs7.P04</p> <p>See Attachment 1: E&Z Quotation Mirion Technologies Cs7PO4.pdf</p>
<p>2. Besides the changes summarized in your amendment request, please confirm that there are no other changes in the design and description of the calibrator as summarized in NR-1147-D-101-S. If there are more changes please identify those changes and how they compare to the originally distributed CDM-21 calibrators, preferably in a table format.</p>	<p>There are no mechanical changes to the core components of the IDC – Irradiator (source shield) Unit, Attenuator (filter) Disk and Slide Shield – which would affect (diminish) the radiological profile of the system. The Slide Shield is the exposure chamber for the dosimeter</p> <p>The Control Unit (control I/O boards and power supply) was updated with newer housing and components. A newer, optional multi-axis robot was implemented to replace the aging single-axis arm.</p> <p>See Table 1: CDM-21/IDC COMPARISON</p>
<p>3. Please confirm that there have been no changes to the MGP Instruments quality assurance program.</p>	<p>The Quality Assurance Program has not changed since issue of the SS&D and continues to endorse 10 CFR Part 50, Appendix B.</p>
<p>4. Please provide a picture of diagram of IDC Intelligent Dosimeter Calibrator, with the robotic arm so that it may be incorporated as an attachment to the registration certificate.</p>	<p>See attached drawings, Pages 4-7</p>





If I can provide further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Keith Spero'.

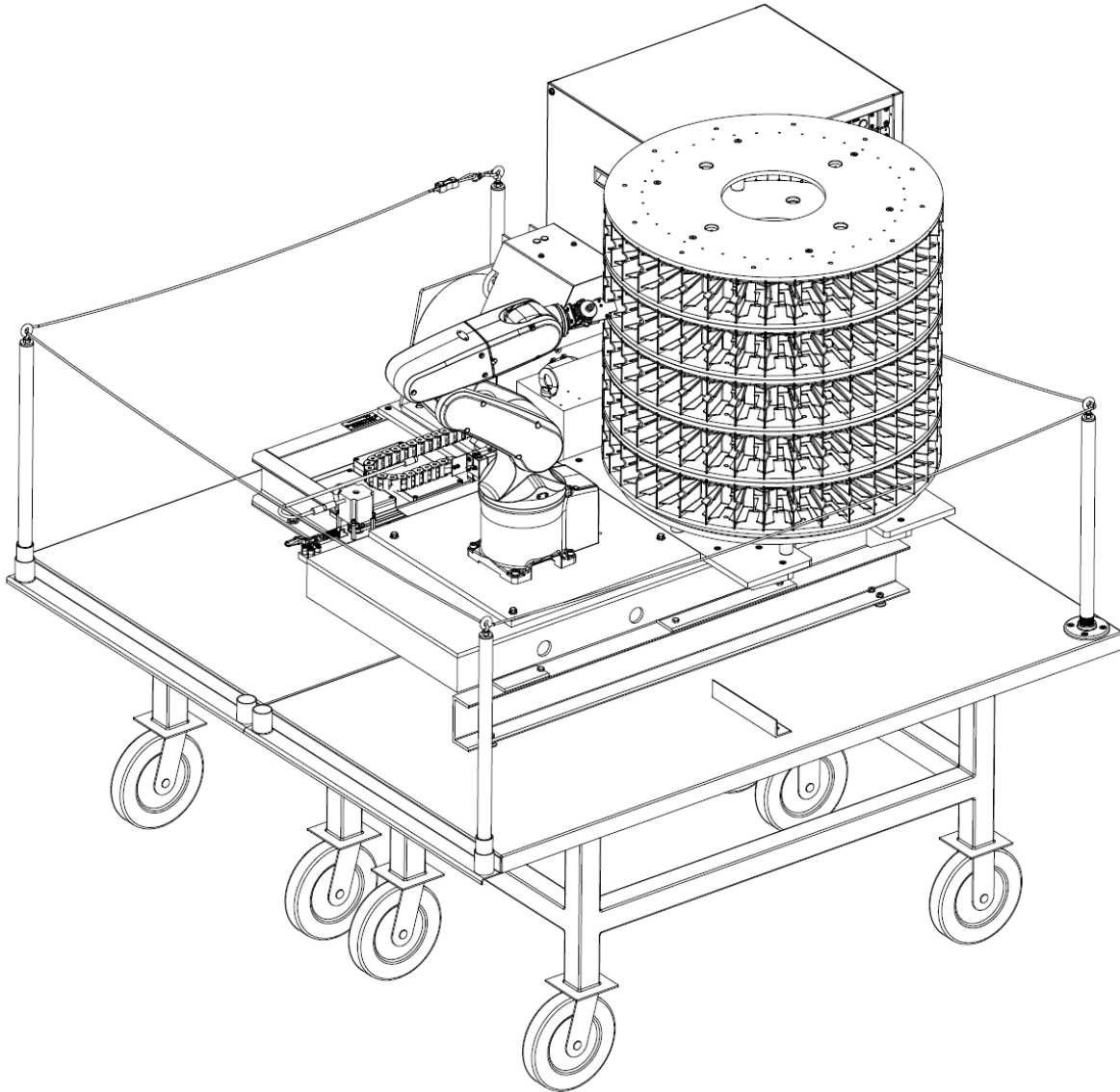
Keith Spero
Radiation Safety Officer
Mirion Technologies (MGPI), Inc.
O: 770.432.2477 x163
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TABLE 1:
CDM-21 / IDC COMPARISON

<p>CDM-21:</p> <p>Image shown is the core CDM-21 system (Option Robot and Dosimeter Magazine not shown).</p> <p>Original CDM-21 design for manual operation of dosimeter insertion into slide shield.</p>	
<p>IDC:</p> <p>Image shown as a complete system with Denso Robot, Carousel and updated Control Unit (Black box).</p> <p>No mechanical changes to Irradiation Source Shield, Attenuator Disk and Slide Shield (dosimeter exposure chamber) thus radiation profile remains unchanged.</p>	

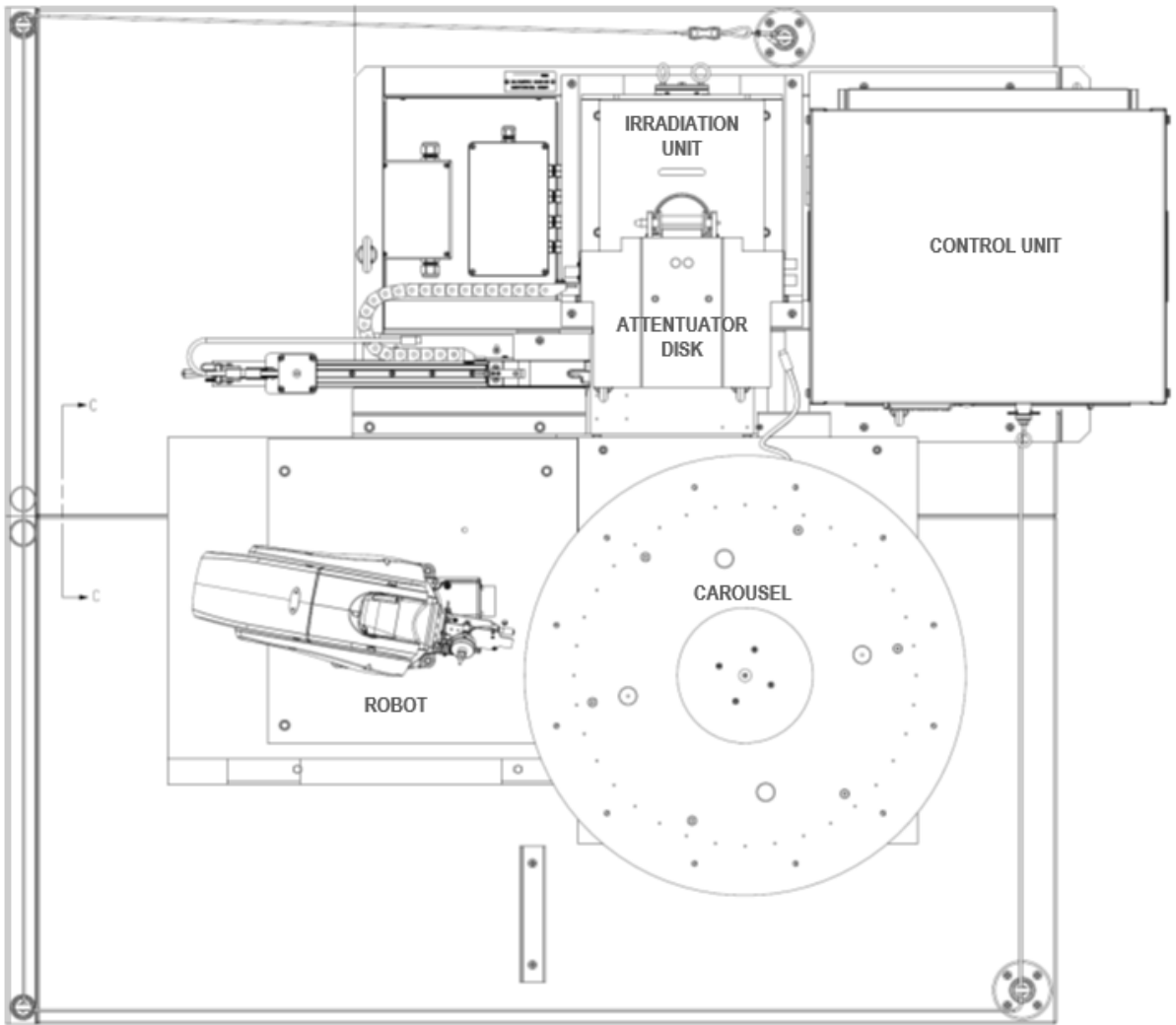


IDC COMPLETE SYSTEM: PERSPECTIVE



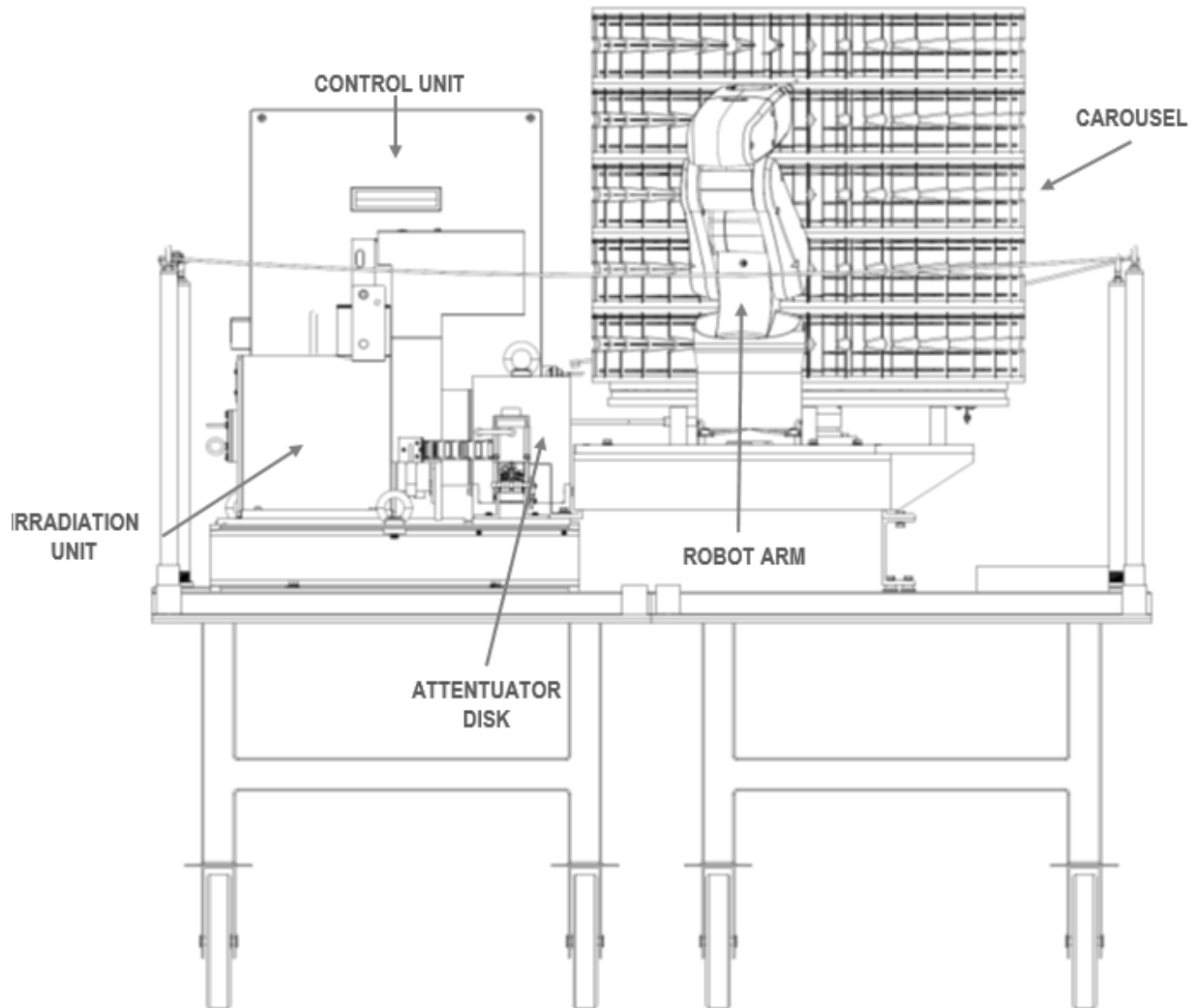


IDC COMPLETE SYSTEM: TOP VIEW



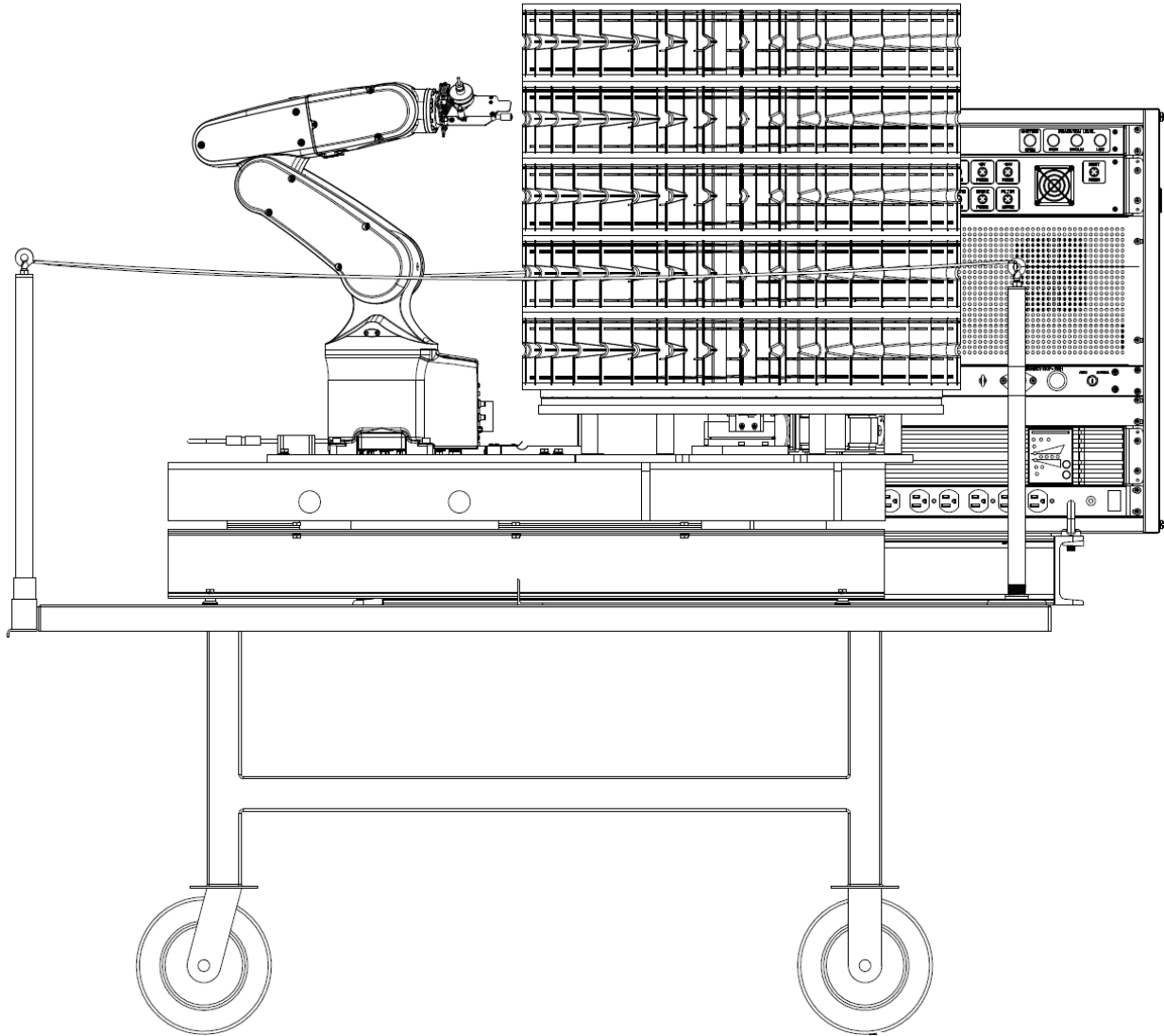


IDC COMPLETE SYSTEM: SIDE VIEW (WIDTH)





IDC COMPLETE SYSTEM: SIDE VIEW (LENGTH)



ATTACHMENT 1



Quote 00009221-6

28 Apr 2017

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Attn

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Quoted By

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Customer account MGPINS02	Slpsn 445	Payment ID Net 30 Days from	Customer reference
PPD/COL Prepay and Add FOB:O	Ship Via BEST METHOD	Lead Time 8 TO 10 WEEKS ARO	

<u>Line</u>	<u>Item number</u>	<u>Description</u>	<u>Qty.</u>	<u>Unit</u>	<u>Unit price</u>	<u>Extended Price</u>
1.0	CS7P040001C	Cs-137, 37 GBq (1Ci), nominal P04 capsule (A3044-1) Cs7.P04	1	Ea		
2.0	*MISC-IND	The Fee to Load Source into Customer Supplied Holder Tube with the spacer and 'C' clip installed.	1	Ea		
3.0	*MISC-IND	Shipping Container CS32 to be confirmed	1	Ea		
4.0	SHIPPING SERVICES	Export/Customs Documentation Fees	1	Ea		
5.0	*MISC-FRT-IND	Freight Charges to be determined.	1	Ea		

A review of your regulatory documents is required prior to processing this quotation. Please be aware that the transfer of products is not guaranteed until all applicable regulations are met in accordance with the US NRC, US BIS, OFAC, and other national and/or country requirements as appropriate.

Shipping & Handling	Sales tax	Quote Total
0.00	0.00	0.00 USD

This quote may not reflect miscellaneous charges, freight, or sales tax unless otherwise indicated above.
This quote is valid for 90 days.

Returns Policy: Due to the nature of our products, all sales are final and no items can be returned for credit unless demonstrated that the product does not meet specifications. Such a claim must be made within 30 days of receipt of order and the source returned to Eckert & Ziegler Isotope Products, Inc., within 60 days after receipt of shipment.