



Limited Liability Company
«RESEARCH AND PRODUCTION COMPANY RADICS»

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Ref. №: 092016/023

Dated: September 20, 2016

PROJ0817

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mr. Joseph Holonich
Senior Project Manager
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Subject: Submittal of RadICS Digital I&C Platform Topical Report

References: (1) Research and Production Corporation Radiy letter to NRC dated January 15, 2015, "Intention to Submit RadICS Digital I&C Platform Topical Report"
(2) Research and Production Corporation Radiy letter to NRC dated May 12, 2015, "Radiy Submittal of RadICS Digital I&C Platform Topical Report"
(3) Research and Production Corporation Radiy letter to NRC dated June 18, 2015, "Phase 0 Meeting for RadICS Digital I&C Platform Topical Report"

In Reference 1 Research and Production Corporation Radiy (RPC Radiy) notified NRC of its intention to submit a topical report for the RadICS digital instrumentation and control (I&C) platform. The RadICS platform is a generic digital safety instrumentation and control (I&C) platform designed to implement Class 1E safety-related applications in United States nuclear power plants. In Reference 2 RPC Radiy requested the opportunity to hold a pre-application meeting with NRC to discuss key features of the RadICS platform and the plans for the preparation and submittal of the RadICS Topical Report. In Reference 3 RPC Radiy provided the presentation material for the phase 0 pre-application meeting held on July 14, 2015.

RPC Radiy, acting through RPC RadICS (its wholly owned LLC), is requesting formal review of the RadICS Topical Report, Revision 0, in accordance with the NRC topical report program for review and acceptance for referencing in regulatory actions. The RadICS design documents submitted in support of the RadICS Topical Report review are cross referenced to the relevant document item numbers in Enclosure B of DI&C-ISG-06 in RadICS Topical Report Table C-1. The following documents are being submitted in support of the RadICS Topical Report review:

Document Title	Revision Level	Classification
2016-RPC003-TR-001, RadICS Topical Report	0/P	Proprietary
	0/NP	Non-proprietary
D2.1, RadICS Functional Safety Management Plan	3.0	Proprietary
D2.2, RadICS Configuration Management Plan	3.0	Proprietary

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Document Title	Revision Level	Classification
D2.4, RadICS Overall Verification and Validation Plan	3.0	Proprietary
D2.8, RadICS Security Analysis Report	1.1	Proprietary
D2.10, RadICS Functional Safety Management Plan Phase 3 Extension	1.0	Proprietary
D3.1, RadICS Safety Requirements Specification	3.0	Proprietary
D4.0, RadICS Safety Validation Test Plan	3.0	Proprietary
D5.1, RadICS Product Architecture Document	3.3	Proprietary
D10.1, RadICS Integration Test Plan	3.0	Proprietary
2016-RTS002-EQTP-004, Equipment Qualification Test Plan	0	Proprietary
2015-RTS001-CGDP-DIM-003 Commercial Grade Dedication Plan for Digital Input Module	4	Proprietary
2015-RTS001-CGDP-LM-101, Commercial Grade Dedication Plan for Logic Module	1	Proprietary
2015-RTS001-CGDP-DOM-102, Commercial Grade Dedication Plan for Digital Output Module	1	Proprietary
2015-RTS001-CGDP-AIM-103, Commercial Grade Dedication Plan for Analog Input Module	2	Proprietary
2015-RTS001-CGDP-AOM-104, Commercial Grade Dedication Plan for Analog Output Module	1	Proprietary
2015-RTS001-CGDP-OCM-106, Commercial Grade Dedication Plan for Optical Communication Module	1	Proprietary
2015-RTS001-CGDP-CH-107, Commercial Grade Dedication Plan for Chassis	1	Proprietary
2015-RTS001-CGDP-IOPM-131, Commercial Grade Dedication Plan for Input/Output Connections Protection Module	1	Proprietary
2015-RTS001-CGDP-VM-132, Commercial Grade Dedication Plan for Ventilation Module	1	Proprietary

RPC Radiy requests that the proprietary documents be withheld from public disclosure. In accordance with 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," an affidavit is enclosed identifying the specific portions of the above documents that are proprietary and the basis for making that determination. A non-proprietary version of the RadICS Topical Report is also provided with the proprietary information redacted.

Nonproprietary versions of the other RadICS documents are not provided based on the guidance in NRC Regulatory Information Summary (RIS) 2014-01. As noted in RIS 2014-01, in instances in which a nonproprietary version would be of no value to the public because of the

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extent of the proprietary information, the agency does not expect a nonproprietary version to be submitted.

All documents are submitted by hard copy mail.

Enclosure 1 provides the proprietary version of the RadICS documents.

Enclosure 2 provides the non-proprietary version of the RadICS Topical Report.

Enclosure 3 provides an affidavit related to the proprietary material in Enclosure 1.

If you have any questions related to this submittal, please contact me at 423-834-4455 or by e-mail at mjburzynski@newclearadayinc.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark J. Burzynski".

Mark J. Burzynski
US Licensing Manager
RadICS

Enclosure 1

Proprietary Documents for RadICS Topical Report

Document Title	Revision Level
2016-RPC003-TR-001, RadICS Topical Report (Proprietary Version)	0
D2.1, RadICS Functional Safety Management Plan	3.0
D2.2, RadICS Configuration Management Plan	3.0
D2.4, RadICS Overall Verification and Validation Plan	3.0
D2.8, RadICS Security Analysis Report	1.1
D2.10, RadICS Functional Safety Management Plan Phase 3 Extension	1.0
D3.1, RadICS Safety Requirements Specification	3.0
D4.0, RadICS Safety Validation Test Plan	3.0
D5.1, RadICS Product Architecture Document	3.3
D10.1, RadICS Integration Test Plan	3.0
2016-RTS002-EQTP-004, Equipment Qualification Test Plan	0
2015-RTS001-CGDP-DIM-003, Commercial Grade Dedication Plan for Digital Input Module	4
2015-RTS001-CGDP-LM-101, Commercial Grade Dedication Plan for Logic Module	1
2015-RTS001-CGDP-DOM-102, Commercial Grade Dedication Plan for Digital Output Module	1
2015-RTS001-CGDP-AIM-103, Commercial Grade Dedication Plan for Analog Input Module	2
2015-RTS001-CGDP-AOM-104, Commercial Grade Dedication Plan for Analog Output Module	1
2015-RTS001-CGDP-OCM-106, Commercial Grade Dedication Plan for Optical Communication Module	1
2015-RTS001-CGDP-CH-107, Commercial Grade Dedication Plan for Chassis	1
2015-RTS001-CGDP-IOPM-131, Commercial Grade Dedication Plan for Input/Output Connections Protection Module	1
2015-RTS001-CGDP-VM-132, Commercial Grade Dedication Plan for Ventilation Module	1

Enclosure 3

Withholding Affidavit Related to the Proprietary Material in Enclosure 1

Affidavit

STATE OF TENNESSEE)

)

COUNTY OF HAMILTON)

1. I, Mark Burzynski (RadICS US Licensing Manager), am familiar with the criteria applied by RadICS to determine whether certain RadICS information is proprietary. I am familiar with the policies established by RadICS to ensure the proper application of these criteria.
2. In accordance with 10 CFR 2.390, "Public inspections, exemptions, requests for withholding," Research and Production Corporation RadICS (hereafter called RadICS) requests withholding from public disclosure of the documents listed in attached Table 1, which is attached to this affidavit. The documents contain application, product design details, and qualification process information related to the RadICS digital instrumentation and controls platform. RadICS has expended a significant amount of money and effort involving numerous contractors over more than 5 years to develop this product.
3. As required by 10 CFR 2.390, RadICS has included in attached Table 1 the following information:
 - Identity of the document or part sought to be withheld;

- Declaration of the basis for proposing the information be withheld, encompassing considerations set forth in § 2.390(a);
 - Specific statement of the harm that would result if the information sought to be withheld is disclosed to the public; and
 - Locations in the documents of all information sought to be withheld.
4. As required in § 2.390(b)(4), RadICS wishes to note that the request for withholding from public disclosure applies to pages that contain commercially sensitive information that RadICS normally discloses only under a Non-Disclosure Agreement (NDA). This commercially sensitive information is not available in public sources and is the type of information customarily held in confidence by RadICS and our competitors. Some examples of categories of information which fit into the definition of proprietary information are:
- a) Information which discloses process, method, or apparatus, including supporting data and analyses, where prevention of its use by RadICS's competitors without license or contract from RadICS constitutes a competitive, economic advantage over other companies in the industry.
 - b) Information, which if used by competitors, would reduce their expenditure of resources or improve their competitive position in the design, manufacture, shipment, application, installation, assurance of quality, or licensing of a similar-product.



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- c) Information which reveals cost or price information, production capacities, budget levels, or commercial strategies of RadICS, its customers, its partners, or, its suppliers.
 - d) Information which reveals aspects of past, present, or future RadICS customer-funded development plans or programs, of potential commercial value to RadICS.
 - e) Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.
 - f) Information obtained through RadICS actions which could reveal, additional insights into nuclear equipment qualification processes, customer applications, and regulatory proceedings, and which are not otherwise readily obtainable by a competitor.
5. RadICS is transmitting this information to NRC in confidence.
6. As noted in attached Table 1, release of this information in a public forum could cause harm to RadICS by revealing trade secrets and/or commercially sensitive design and operational details and technical processes related to designing, building, and/or operating a RadICS digital safety instrumentation and control system.
7. As RadICS US Licensing Manager, I have been specifically delegated responsibility for reviewing the information sought to be withheld, and I am authorized to apply for its withholding on behalf of RadICS.



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8. The foregoing statements are true and correct to the best of my knowledge,
information, and belief.

Mark J. Burzynski

Mark J. Burzynski

US Licensing Manager

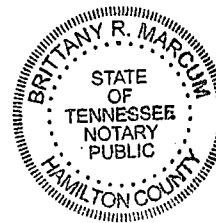
RadICS

Sworn to and subscribed before me

this 19th day of September, 2016

Brittany R. Marcum

Notary Public



My commission expires: Nov. 24, 2018

Table 1. Documents requested for withholding from public disclosure

Document Title	Part of document sought to be withheld from public disclosure	Basis for proposing the information be withheld, encompassing considerations set forth in § 2.390(a)	Specific statement of the harm that would result if the information sought to be withheld is disclosed to the public
2016-RPC003-TR-001, RadICS Topical Report, Revision 0	Portions of Chapters 3, 4, 6, 7, 8, 9, 11, and 12 and Appendices A and B, as marked by brackets []. (see Note 1)	Trade secrets and / or commercial information as per § 2.390(a)(4)	<p>RadICS would be harmed by disclosure of the identified commercially sensitive information, which is of value to a competitor because it would enable competitors to make direct comparisons between aspects of their safety I&C platform and life cycle processes and the corresponding details for the RadICS Platform.</p> <p>Chapters 3, 4, 7, 8, 11, and 12: RadICS would be harmed by disclosure of its proprietary technical processes for the development of digital safety I&C systems. These processes underpin the integrity of RadICS platform electronic designs, which are an important competitive advantage for RadICS.</p> <p>Chapter 6 and Appendices and B: RadICS would be harmed by disclosure of commercially sensitive details of how the generic hardware and electronic design components of the RadICS Platform, and how functions such as data communications and automated testing are implemented. This would be of value to a competitor in understanding specific competitive design and operational characteristics of the RadICS Platform.</p> <p>Chapter 9: RadICS would be harmed by disclosure of by disclosure of the identified commercially sensitive information, which is of value to a competitor because it defines the specific qualification envelope and test processes applied to the RadICS Platform, which would enable competitors to make direct comparisons between the qualification processes and qualification envelopes for their safety I&C platform and the corresponding details for the RadICS Platform.</p>

Document Title	Part of document sought to be withheld from public disclosure	Basis for proposing the information be withheld, encompassing considerations set forth in § 2.390(a)	Specific statement of the harm that would result if the information sought to be withheld is disclosed to the public
D2.1, RadICS Functional Safety Management Plan, Revision 3.0	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its proprietary technical processes for the development of digital safety I&C systems. These processes underpin the integrity of RadICS platform electronic designs, which are an important competitive advantage for RadICS.
D2.2, RadICS Configuration Management Plan, Revision 3.0	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its proprietary technical processes for the development of digital safety I&C systems. These processes underpin the integrity of RadICS platform electronic designs, which are an important competitive advantage for RadICS.
D2.4, RadICS Overall Verification and Validation Plan, Revision 3.0	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its proprietary technical processes for the development of digital safety I&C systems. These processes underpin the integrity of RadICS platform electronic designs, which are an important competitive advantage for RadICS.
D2.8, RadICS Security Analysis Report, Revision 1.1	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its proprietary technical processes for the development of digital safety I&C systems. These processes underpin the integrity of RadICS platform electronic designs, which are an important competitive advantage for RadICS.
D2.10, RadICS Functional Safety Management Plan Phase 3 Extension, Revision 1 0	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its proprietary technical processes for the development of digital safety I&C systems. These processes underpin the integrity of RadICS platform electronic designs, which are an important competitive advantage for RadICS.
D3.1, RadICS Safety Requirements Specification, Revision 3.0	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its proprietary technical features digital safety I&C systems. These technical features of RadICS platform electronic designs are an important competitive advantage for RadICS.

Document Title	Part of document sought to be withheld from public disclosure	Basis for proposing the information be withheld, encompassing considerations set forth in § 2.390(a)	Specific statement of the harm that would result if the information sought to be withheld is disclosed to the public
D4.0, RadICS Safety Validation Test Plan, Revision 3.0	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its proprietary technical processes for the development of digital safety I&C systems. These processes underpin the integrity of RadICS platform electronic designs, which are an important competitive advantage for RadICS.
D5.1, RadICS Product Architecture Document, Revision 3.3	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its proprietary technical features digital safety I&C systems. These technical features of RadICS platform electronic designs are an important competitive advantage for RadICS.
D10.1, RadICS Integration Test Plan, Revision 3.0	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its proprietary technical processes for the development of digital safety I&C systems. These processes underpin the integrity of RadICS platform electronic designs, which are an important competitive advantage for RadICS.
2016-RTS002-EQTP-004, Equipment Qualification Test Plan, Revision 0	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of by disclosure of the identified commercially sensitive information, which is of value to a competitor because it defines the specific qualification envelope and test processes applied to the RadICS Platform, which would enable competitors to make direct comparisons between the qualification processes and qualification envelopes for their safety I&C platform and the corresponding details for the RadICS Platform.
2015-RTS001-CGDP-DIM-003, Commercial Grade Dedication Plan for Digital Input Module, Revision 4	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its commercially sensitive commercial grade dedication process and associated technical characteristics for the RadICS Modules , which would enable competitors to make direct comparisons between the dedication processes and critical characteristics for their safety I&C platform and the corresponding details for the RadICS Platform.

Document Title	Part of document sought to be withheld from public disclosure	Basis for proposing the information be withheld, encompassing considerations set forth in § 2.390(a)	Specific statement of the harm that would result if the information sought to be withheld is disclosed to the public
2015-RTS001-CGDP-LM-101, Commercial Grade Dedication Plan for Logic Module, Revision 1	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its commercially sensitive commercial grade dedication process and associated technical characteristics for the RadICS Modules , which would enable competitors to make direct comparisons between the dedication processes and critical characteristics for their safety I&C platform and the corresponding details for the RadICS Platform.
2015-RTS001-CGDP-DOM-102, Commercial Grade Dedication Plan for Digital Output Module, Revision 1	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its commercially sensitive commercial grade dedication process and associated technical characteristics for the RadICS Modules , which would enable competitors to make direct comparisons between the dedication processes and critical characteristics for their safety I&C platform and the corresponding details for the RadICS Platform.
2015-RTS001-CGDP-AIM-103, Commercial Grade Dedication Plan for Analog Input Module, Revision 2	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its commercially sensitive commercial grade dedication process and associated technical characteristics for the RadICS Modules , which would enable competitors to make direct comparisons between the dedication processes and critical characteristics for their safety I&C platform and the corresponding details for the RadICS Platform.
2015-RTS001-CGDP-AOM-104, Commercial Grade Dedication Plan for Analog Output Module, Revision 1	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its commercially sensitive commercial grade dedication process and associated technical characteristics for the RadICS Modules , which would enable competitors to make direct comparisons between the dedication processes and critical characteristics for their safety I&C platform and the corresponding details for the RadICS Platform.

Document Title	Part of document sought to be withheld from public disclosure	Basis for proposing the information be withheld, encompassing considerations set forth in § 2.390(a)	Specific statement of the harm that would result if the information sought to be withheld is disclosed to the public
2015-RTS001-CGDP-OCM-106, Commercial Grade Dedication Plan for Optical Communication Module, Revision 1	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its commercially sensitive commercial grade dedication process and associated technical characteristics for the RadICS Modules , which would enable competitors to make direct comparisons between the dedication processes and critical characteristics for their safety I&C platform and the corresponding details for the RadICS Platform.
2015-RTS001-CGDP-CH-107, Commercial Grade Dedication Plan for Chassis, Revision 1	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its commercially sensitive commercial grade dedication process and associated technical characteristics for the RadICS Modules , which would enable competitors to make direct comparisons between the dedication processes and critical characteristics for their safety I&C platform and the corresponding details for the RadICS Platform.
2015-RTS001-CGDP-IOPM-131, Commercial Grade Dedication Plan for Input/Output Connections Protection Module, Revision 1	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its commercially sensitive commercial grade dedication process and associated technical characteristics for the RadICS Modules , which would enable competitors to make direct comparisons between the dedication processes and critical characteristics for their safety I&C platform and the corresponding details for the RadICS Platform.
2015-RTS001-CGDP-VM-132, Commercial Grade Dedication Plan for Ventilation Module, Revision 1	Entire document (see Note 2).	Trade secrets and / or commercial information as per § 2.390(a)(4)	RadICS would be harmed by disclosure of aspects of its commercially sensitive commercial grade dedication process and associated technical characteristics for the RadICS Modules , which would enable competitors to make direct comparisons between the dedication processes and critical characteristics for their safety I&C platform and the corresponding details for the RadICS Platform.

Notes:

- (1) As required in NRC Regulatory Information Summary (RIS) 2014-01, documents containing proprietary information are marked with the word "Proprietary" at the top of the first page of the document and at the top of each page containing such information. In these proprietary documents, brackets ("[[]]") denote proprietary information. In the proprietary document, the two brackets denoting the end of a proprietary segment of a report may appear one or more pages following the bracket indicating the start of the proprietary segment. In a nonproprietary edition of a proprietary document, the material within the brackets is removed.
- (2) These documents contain proprietary information in their entirety and are marked with the word "Proprietary" at the top of the first page of the document and at the top of each page containing such information. As noted in RIS 2014-01, in instances in which a nonproprietary version would be of no value to the public because of the extent of the proprietary information, the agency does not expect a nonproprietary version to be submitted.