



February 18, 2014

**AFFIDAVIT OF ROBATEL TECHNOLOGIES, LLC
CONCERNING CONFIDENTIAL INFORMATION AND TRADE SECRETS**

Commonwealth of Virginia
County of Roanoke

I, Teofil Grochowski Jr., depose and say that I am duly authorized to make this affidavit and have reviewed or caused to have reviewed the information which is identified below as proprietary, confidential and/or trade secret information that should be withheld from public disclosure. The documents listed in this Affidavit and corresponding data files are included as part of our SAR Revision 4 submitted for editorial changes for clarification.

Enclosure 1: SAR, Revision 4, dated: February 13, 2014. Content as identified.

1. Drawings:

- a) RT100 NM 1000 Rev. F – Bill of Material
- b) RT100 PE 1001-1 Rev. H – Robatel Transport Package RT-100 General Assembly Sheet 1/2
- c) RT100 PE 1001-2 Rev. H – Robatel Transport Package RT-100 General Assembly Sheet 2/2
- d) RT100 PRS 1011 Rev. E – Robatel Transport Package RT-100 Cask Sub Assembly Weld Map Cask Body
- e) RT100 PRS 1013 Rev. C – Robatel Transport Package RT-100 Cask Sub Assembly Weld Map Secondary Lid
- f) RT100 PRS 1031 Rev. D – Robatel Transport Package RT-100 Cask Sub Assembly Weld Map Lower Impact Limiter
- g) RT100 PRS 1032 Rev. D – Robatel Transport Package RT-100 Cask Sub Assembly Weld Map Upper Impact Limiter
- h) 102885 MD 1031-06 Rev. F – Robatel Transport Package RT-100 Sub Assembly Fabrication Drawing Impact Limiter Foam
- i) 102885 PE 2001 Rev. C – RT 100 Scale Model General Assembly Drawing
- j) 102885 NM 2000 Rev. B – Scale Model Bill of Material
- k) 102885 MD 2021-06 Rev. E – Scale Model Foam Drawing

2. Calculation Packages (Incorporate into SAR Revision 4 by reference)

- a) RTL-001-CALC-CN-0101 Rev. 6- Containment Evaluation for the RT-100
- b) RTL-001-CALC-SH-0101 Rev. 1 - Source Term Characterization for the RT-100
- c) RTL-001-CALC-SH-0201 Rev. 5 - Shielding Evaluation for the RT-100 Transport Cask
- d) RTL-001-CALC-SH-0301 Rev. 4- Application of RT-100 Loading Table in Shielding Evaluations
- e) RTL-001-CALC-ST-0101 Rev. 0 - RT-100 Weight and Center of Gravity Calculation (verifies drawings only)

5115 Bernard Drive • Suite 304 • Roanoke, VA 24018
540/ 989.2878
www.robateltech.com

- f) RTL-001-CALC-ST-0201 Rev. 5 - Lifting Structural Evaluation
- g) RTL-001-CALC-ST-0202 Rev. 4 - Tie-Down Evaluation
- h) RTL-001-CALC-ST-0203 Rev. 6- RT-100 Cask Bolting Calculation
- i) RTL-001-CALC-ST-0401 Rev. 6 - RT-100 Cask Impact Limiter Drop Evaluation
- j) RTL-001-CALC-ST-0402 Rev. 4 - Cask Body Structural Evaluation
- k) RTL-001-CALC-ST-0403 Rev. 4- Pin Puncture Evaluation
- l) RTL-001-CALC-TH-0102 Rev. 6 - RT-100 Cask Maximum Normal Operating Pressure Calculation
- m) RTL-001-CALC-TH-0201 Rev. 6 - RT-100 Cask Thermal Evaluation
- n) RTL-001-CALC-TH-0202 Rev. 6 - RT-100 Cask Hypothetical Accident Condition Maximum Pressure Calculation
- o) RTL-001-CALC-TH-0301 Rev. 1 – RT-100 Cask Hypothetical Accident Condition Combustion Analysis

3. Safety Analysis Report Sections:

- a) Table of Content, List of Figures: 2.12.4-1 through 2.12.4-30
- b) Figure 2.5.1-1: RT-100 Lifting Pocket Dimensions
- c) Appendix 2.12: Impact Limiter Analysis
- d) Appendix 2.13: Closure Bolt Evaluation
- e) Appendix 2.14: Fabrication Stress Evaluation
- f) Appendix 2.15: Seal Region Stress Evaluation
- g) Figure 3.3.1-1: RT-100 ANSYS Finite Element Model Volumes
- h) Figure 3.3.1-2: RT-100 ANSYS Normal Condition Finite Element Mesh
- i) Section 3.3.1.2: Analytical Model
- j) Section 3.3.1.3: Analysis Results
- k) Section 3.4.1.3: HAC Fire Analysis
- l) Section 3.4.2.3: HAC Fire and Cool-down Analysis
- m) Figure 4.1.2-1: Illustration of Containment Boundary
- n) Section 5.3: Shielding Model
- o) Section 5.3.1: Configuration of Source and Shielding
 - Figure 5.3.1-1: NCT Model 1
 - Figure 5.3.1-2: NCT Model 2, 10% Compaction
 - Figure 5.3.1-3: NCT Model Tally Surfaces for Dose Rate Response Estimation
- p) Table 5.3.2-1: RT-100 Material Composition Summary
- q) Section 5.4.1: Methods
 - Figure 5.4.4-3: Total Dose Rate Response for Co-60
 - Figure 5.4.4-4: Total Dose Rate Response for Cs-137
- r) Table 5.5.1-1: List of Gamma Nuclides with Greater Than 1 Day Half Life
- s) Section 5.5.2: Gamma Nuclide Responses to include the following Tables
 - Table 5.5.2-1 – NCT Dose Rate Responses (mrem/hr/Ci)
 - Table 5.5.2-2 – HAC Gamma Dose Rate Responses (mrem/hr/Ci)
 - Table 5.5.2-3 – NCT Nuclide Neutron Dose Rate Responses (mrem/hr/Ci)
 - Table 5.5.2-4 – HAC Nuclide Neutron Dose Rate Responses (mrem/hr/Ci)
- t) Section 5.5.3: Nuclide Maximum Ci/g Loading Limits to include the following Tables
 - Table 5.5.3-1 – Nuclide Maximum Ci/g Loading Limits based on Gamma Response
 - Table 5.5.3-2 – Nuclide Maximum Ci/g Loading Limits based on Neutron Response

- u) Section 7.4.4:
 - Figure 7.4.4-2: Loading of the RT-100 on Transportation Trailer
- v) Section 8.1.5: Component and Material Tests
- w) Appendix 8.3, Section 8.3.2: Minimum Lead Thickness and Gap Determination

Enclosure 2: Drop Test Report in its entirety and supporting documentation as identified.

1. Drop Test Information: Supplied in Supplemental Data Package

- a) 102885 RES 001 RT-100 Drop Test Report, Rev. E
- b) 102885 NTE 001 Rev. B Note Describing the RT-100 Drop Test Scale Model
- c) 102885 PPE 001 Rev. B RT-100 Drop Test Program
- d) RT100 Scale Model Impact Limiters Foam CoC and Inspection Reports, General Plastic Reports

Enclosure 3: MCNP QA Qualification Procedure, Report and Calculation Files

- a) NISYS – 1000 – TR004/R2 – June 2009 – Software Quality Assurance Plan for MCNP revision 5
- b) NISYS – 1000 – TR008/R2 – June 2009 – MCNP Verification Report
- c) MCNP5 Input Files and Process

Enclosure 4: Full size engineered drawings as identified below:

1. Drawings

- a) RT100 PE 1001-1 Rev. H – Robatel Transport Package RT-100 General Assembly Sheet 1/2
- b) RT100 PE 1001-2 Rev. H – Robatel Transport Package RT-100 General Assembly Sheet 2/2
- c) RT100 PRS 1011 Rev. E – Robatel Transport Package RT-100 Cask Sub Assembly Weld Map Cask Body
- d) RT100 PRS 1013 Rev. C – Robatel Transport Package RT-100 Cask Sub Assembly Weld Map Secondary Lid
- e) RT100 PRS 1031 Rev. D – Robatel Transport Package RT-100 Cask Sub Assembly Weld Map Lower Impact Limiter
- f) RT100 PRS 1032 Rev. D – Robatel Transport Package RT-100 Cask Sub Assembly Weld Map Upper Impact Limiter
- g) 102885 MD 1031-06 Rev. F – Robatel Transport Package RT-100 Sub Assembly Fabrication Drawing Impact Limiter Foam
- h) 102885 PE 2001 Rev. C – RT 100 Scale Model General Assembly Drawing
- i) 102885 MD 2021-06 Rev. E – Scale Model Foam Drawing

Enclosure 5: Calculation Packages

1. Calculation Packages

- a) RTL-001-CALC-CN-0101 Rev. 6- Containment Evaluation for the RT-100
- b) RTL-001-CALC-SH-0101 Rev. 1 - Source Term Characterization for the RT-100
- c) RTL-001-CALC-SH-0201 Rev. 5 - Shielding Evaluation for the RT-100 Transport Cask

- d) RTL-001-CALC-SH-0301 Rev. 4- Application of RT-100 Loading Table in Shielding Evaluations
- e) RTL-001-CALC-ST-0101 Rev. 0 - RT-100 Weight and Center of Gravity Calculation (verifies drawings only)
- f) RTL-001-CALC-ST-0201 Rev. 5 - Lifting Structural Evaluation
- g) RTL-001-CALC-ST-0202 Rev. 4 - Tie-Down Evaluation
- h) RTL-001-CALC-ST-0203 Rev. 6 - RT-100 Cask Bolting Calculation
- i) RTL-001-CALC-ST-0401 Rev. 6 - RT-100 Cask Impact Limiter Drop Evaluation
- j) RTL-001-CALC-ST-0402 Rev. 4 - Cask Body Structural Evaluation
- k) RTL-001-CALC-ST-0403 Rev. 4- Pin Puncture Evaluation
- l) RTL-001-CALC-TH-0102 Rev. 6 - RT-100 Cask Maximum Normal Operating Pressure Calculation
- m) RTL-001-CALC-TH-0201 Rev. 6 - RT-100 Cask Thermal Evaluation
- n) RTL-001-CALC-TH-0202 Rev. 6 - RT-100 Cask Hypothetical Accident Condition Maximum Pressure Calculation
- p) RTL-001-CALC-TH-0301 Rev. 1 - RT-100 Cask Hypothetical Accident Condition Combustion Analysis

I have personal knowledge of the criteria and procedures utilized by Robatel Technologies in designating information as a trade secret or as confidential information of a commercial or financial nature. These calculations contain unique information and methods that have been developed by Robatel Technologies, LLC for the design and engineering evaluation of transportation packages. These methods are considered confidential information that includes company trade secrets incorporated into such evaluation processes. The proprietary information submitted to the NRC contains the type of information Robatel Technologies regards as protected and of the type not to be disclosed to unauthorized persons.

The information designated here as proprietary is not available from public sources. Public disclosure of this information would cause substantial harm to the competitive position of Robatel Technologies, LLC. The company has made substantial resource and monetary investments to the development of the RT-100 Type B radioactive waste transport package. Competitors of Robatel Technologies, LLC would have great difficulty in duplicating the methods developed by Robatel Technologies, LLC, due not only to the financial investment of Robatel Technologies, but also to the unique skills, talents and expertise of Robatel Technologies, LLC employees it's trusted engineering resources who have developed these concepts and mathematical models. Disclosure of this information would cause Robatel Technologies, LLC irreparable financial harm and loss of business associated with this and other projects similar in nature.

Respectfully,



Teo Grochowski Jr., CEO
Robatel Technologies, LLC
Commonwealth of Virginia
County of Roanoke

On this 18th day of February 2014, be me, a Notary Public in and for the Commonwealth of Virginia, duly commissioned and sworn, personally appeared Teofil Grochowski Jr., CEO, Robatel Technologies, LLC and on oath stated that he was authorized to make this affidavit on behalf of the corporation.

IN WITNESS WHEREOF, I have set my hand and affixed my official seal the day and year first above written

Elizabeth Whiting Shumate

Notary Public, Commonwealth of Virginia, County of Roanoke

