

August 1, 2012

MEMORANDUM TO: Edward H. Roach, Chief
Mechanical Vendor Branch
Division of Construction Inspection
and Operational Programs
Office of New Reactors

FROM: Marlayna Vaaler, Reactor Operations Engineer/**RA**/
Mechanical Vendor Branch
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Office of New Reactors

SUBJECT: SUMMARY OF THE THIRD NUCLEAR REGULATORY COMMISSION
WORKSHOP ON VENDOR OVERSIGHT FOR NEW REACTOR
CONSTRUCTION

On June 28, 2012, the Office of New Reactors hosted the 3rd Nuclear Regulatory Commission (NRC) Workshop on Vendor Oversight for New Reactor Construction in Baltimore, MD. The NRC held the workshop upon the completion of a Nuclear Procurement Issues Committee (NUPIC) meeting to ensure maximum participation by suppliers to the nuclear industry. This workshop included presentations by members of the NRC staff, NUPIC, the American Society of Mechanical Engineers (ASME), the Nuclear Energy Institute (NEI), the Electric Power Research Institute (EPRI), and three nuclear vendors.

The workshop included discussions on such issues as vendor oversight for new reactors, upcoming changes to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," safety culture, the use of international calibration laboratories, current activities of the Counterfeit, Fraudulent, or Suspect Items (CFSI) team, the use of commercial-grade dedication in safety-related applications, software quality assurance, supplier oversight implementation, non-power reactor vendor oversight, and vendor insights on licensee, NUPIC, and NRC oversight.

A list of attendees is provided in Enclosure 1. The list of speakers is provided in Enclosure 2. All presentations are available in the NRC's Agencywide Documents Access and Management System (ADAMS) at accession number ML12191A242.

The approximately 570 workshop attendees represented companies and organizations from 17 countries to include: 430 vendors, 3 industry groups, 13 government regulatory agencies, and

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33 foreign and domestic utilities, including 67 NRC license applicants (for design certifications (DC), combined licenses (COL), and fuel cycle facilities).

Morning Plenary Session

Ms. Laura Dudes, Director of the NRC's Division of Construction Inspection and Operational Programs (DCIP) in the Office of New Reactors, welcomed the workshop attendees, delivered opening remarks, and introduced NRC Commissioner William Ostendoff as the keynote speaker. She encouraged everyone to use the NRC public website as a tool to keep abreast of recent agency activities and updates in regard to vendor oversight. The public website includes NRC procedures for vendor inspections, results of inspections, regulatory guidance, and will include all of the slides and notes from this workshop. The public vendor oversight website is accessible at: <http://www.nrc.gov/reactors/new-reactors/oversight/quality-assurance.html>.

Commissioner Ostendoff discussed how the NRC and the nuclear industry have been adjusting to new construction activities in an environment that is significantly different from that surrounding the reactor construction that took place more than 30 years ago. The Commissioner discussed construction challenges in the age of globalization, including significant changes in the supply chain, while emphasizing concerns with respect to CFSI (referencing SECY 11-0154, "An Agencywide Approach to Counterfeit, Fraudulent, and Suspect Items"), particularly in the development of digital instrumentation and controls systems.

Mr. Edward Roach, Chief of the Mechanical Vendor Branch, provided additional workshop notes and then introduced panel of speakers for the session.

Ms. Kerri Kavanagh, Chief of the Quality Assurance Branch, discussed the Vendor Inspection Program, including its background and purpose, as well as the newly formed Vendor Inspection Center of Expertise and introduced the associated website (<http://www.nrc.gov/reactors/new-reactors/oversight/quality-assurance/coe.html>). Further, she addressed the relationship of 10 CFR Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants" (Appendix B), to the American Society of Mechanical Engineers (ASME) NQA-1-2008, "Quality Assurance Program Requirements for Nuclear Facilities," with 1a-2009 Addenda document, which is endorsed by NRC Regulatory Guide 1.28, Revision 4, "Quality Assurance Program Criteria (Design and Construction)." Ms. Kavanagh explained that NQA-1, as endorsed, is one acceptable method of fulfilling the requirements of Appendix B and cited common Appendix B misunderstandings. She also compared ISO 9001, "Quality Management Systems - Requirements," to Appendix B while stressing that the ISO program does not fully address the requirements of Appendix B, and discussed the importance of Safety Culture to nuclear vendors. Ms. Kavanagh stressed that the licensee is ultimately responsible for ensuring that quality assurance (QA) requirements are met throughout the supply chain while the NRC provides oversight of the licensee to ensure the adequate protection of the overall health and safety of the public.

Mr. Victor Hall, Reactor Operations Engineer in the Quality Assurance Branch, provided an update on the proposed 10 CFR Part 21 rulemaking. He reviewed the reasons for the update and the emphasis on making Part 21 easier to understand. Mr. Hall also introduced the websites that track the Part 21 rulemaking status and invited interested parties to sign up for Part 21 rulemaking updates at: www.regulations.gov; keyword search NRC-2012-0012.

Mr. Daniel Pasquale, Senior Reactor Operations Engineer in the Electrical Vendor Branch, discussed the activities of the NRC's CFSI team. He discussed the history of NRC involvement in CFSI, current initiatives, and future plans for assuring the quality of the supply chain.

Mr. Pasquale also described an ongoing effort to engage industry and stakeholders in developing best practices and other methods that can be adopted by licensees to mitigate CFSI.

Ms. Lisamarie Jarriel, the NRC's Agency Allegations Advisor, discussed the Safety-Conscious Work Environment (SCWE) initiative. She described the interface between QA program, reporting, and employee protection requirements, compared and contrasted a "chilling effect" to a SCWE, and provided a reference point for SCWE within the larger safety culture arena. Ms. Jarriel encouraged stakeholders to get involved or raise a concern about SCWE at:

<http://www.nrc.gov/about-nrc/regulatory/enforcement/safety-culture.html>.

Commercial Grade Dedication Session

Mr. Richard McIntyre, Senior Reactor Engineer in the Mechanical Vendor Branch, moderated the session, gave opening remarks, and introduced the panel of speakers for the session.

Mr. Paul Prescott, Senior Reactor Operations Engineer in the Quality Assurance Branch, discussed necessary elements of commercial-grade dedication, including the purpose of a technical evaluation and acceptance methods to verify critical characteristics. He focused on dedication of mechanical components, specifically walking through a globe valve dedication example. Mr. Prescott received numerous questions on various aspects of commercial-grade dedication which were answered during the question and answer session.

Mr. Craig Irish, Vice President of Sales and Marketing for Nuclear Logistics, Inc., focused on the dedication of digital equipment, specifically components containing embedded firmware. His presentation included a range of digital applications, examples of typical critical characteristics and acceptance criteria for digital equipment, and the importance of identifying the safety function. Mr. Irish received and answered questions on auditing code developers, error reports, and the authenticity of components / supply chain trustworthiness.

Mr. Yamir Diaz-Castillo, Reactor Operations Engineer in the Mechanical Vendor Branch, and Mr. Mark Harvey, Senior Project Manager for NEI, led a presentation focused on the International Laboratory Accreditation Cooperation (ILAC) agreement. Mr. Diaz-Castillo's presentation gave a history of qualifying calibration services, as well as the NRC's acceptance process and expectations for ILAC. His presentation focused on one key message: in addition to ILAC accreditation, commercial-grade dedication is required for calibration services that will be used in safety-related applications. Mr. Harvey focused his presentation on the status of NEI's action plan to assess the ILAC process and the benefits of NEI facilitating this process. He also discussed the goal of expanding the ILAC process to cover international testing and calibration facilities at some point in the future. Both speakers received questions related to the dedication of calibration services, the timeline of the NRC's review of the NEI document, and the differences in dedication versus procurement of safety-related calibration services.

Software Quality Assurance Session

Mr. Greg Galletti, Senior Reactor Operations Engineer in the Electrical Vendor Branch, moderated the session, gave opening remarks, and introduced the panel of speakers for the session.

Mr. Marc Tannenbaum, Senior Project Manager for EPRI, discussed industry perspectives on software QA implementation. His presentation focused on the existing available guidance in EPRI Technical Report 1025243, "Plant Engineering: Guideline for the Acceptance of Commercial Grade Design and Analysis Computer Programs used in Nuclear Safety-Related Applications," and referenced EPRI Technical Report 106439, "Guideline on Evaluation and Acceptance of Commercial Grade Digital Equipment for Nuclear Safety Applications," for plant processing equipment. Mr. Tannenbaum emphasized the importance of including people knowledgeable in the software that is being dedicated during the dedication process over solely relying on procurement engineers.

Mr. Norman Moreau, President and Senior Management Consultant of Theseus Professional Services, presented the ASME NQA perspective on software QA implementation. His presentation was a high level overview of the guidance provided by NQA-1 in regard to the requirements for software dedication and discussed the recent wording changes to ASME NQA-1-2008 and NQA-1a-2009 addenda.

Mr. George Lipscomb, Electrical Engineer in the Electrical Vendor Branch, presented the NRC's perspective on software QA implementation. He covered the high level regulatory background for software QA, and provided information on the related regulations, guidance documents, and NRC expectations for software dedication. Mr. Lipscomb also presented recent NRC findings in regard to inadequate software QA and answered question on software updates and patches.

Supplier Oversight Implementation Session

Ms. Kerri Kavanagh, Chief of the Quality Assurance Branch, moderated the session, gave opening remarks, and introduced the panel of speakers for the session.

Ms. Samantha Crane, Reactor Operations Engineer in the Mechanical Vendor Branch, discussed an overview of the NRC's findings related to supplier oversight. Her presentation started with a discussion of the Vendor Inspection Program and the 10 CFR Part 50, Appendix B, supply chain. Ms. Crane then explained the breakdown of NRC findings by requirement and went into detail on findings relating to sub-supplier oversight and commercial calibration services. She addressed many questions related to calibration services, NRC and purchaser right-of-access, and dedication packages.

Mr. Jamie Vasquez, Director of Supplier Quality Oversight and Assessment for Westinghouse, presented a vendor perspective on supplier oversight. His presentation gave an overview of the Westinghouse supplier oversight process, operating experience, and lessons learned. Mr. Vasquez handled questions relating to areas such as audit frequency and language issues.

Mr. John Larson, former Chairman of NUPIC, and Lennart Isaksson, of Vattenfall (Sweden), presented on best practices for effective international supplier oversight. They covered a number of international oversight considerations including communication, culture, codes, and

the reaching of conclusions that are understood by both parties. Mr. Larson and Mr. Isaksson answered questions on topics including travel safety and corruption.

Non-Power Reactor Vendor Inspections

Mr. Dan Pasquale, Senior Reactor Operations Engineer in the Construction Electrical Vendor Branch, moderated the session, gave opening remarks, and introduced the panel of speakers for the session.

Mr. Robert Temps, Senior Transportation and Storage Safety Inspector from the NRC's Office of Nuclear Material Safety and Safeguards (NMSS), provided an overview of the NRC's vendor inspection programs for transportation packaging and spent fuel dry cask storage systems. The discussion focused on the requirements of vendors under 10 CFR Part 71 and Part 72 for packaging and dry cask storage systems. Mr. Temps pointed out the similarities and differences of each vendor inspection program, as well as common Part 71 and 72 inspection findings. He also showed examples of Part 71 packaging and Part 72 dry cask storage components.

Mr. William Gloersen, Senior Fuel Facility Inspector from the NRC's Region II Office, discussed regional inspection activities for fuel cycle facilities. He provided an overview of the regulatory basis and quality assurance requirements of the plutonium processing and fuel fabrication plants. Mr. Gloersen also gave specific details of the regional vendor oversight inspection program, as well as common inspection findings at fuel cycle facilities.

Mr. Rodney Whitley, Vice President of Project Assurance at SHAW AREVA MOX Services, discussed the regulatory commitments and the quality assurance program for the upcoming MOX fuel fabrication facility being built at the Savannah River Site in South Carolina. He also discussed recent challenges faced by the MOX facility in commercial-grade dedication, including several NRC inspection findings, and the associated lessons learned and vendor recommendations stemming from these findings.

Summary and Conclusions

Several key messages were developed from the interactions during the workshop:

- Rigorous vendor oversight is crucial to maintaining the integrity of the global supply chain and new reactor safety.
- Safety culture promotes quality in the global supply chain.
- Vigilance is key to prevent the entry of counterfeit, fraudulent, and suspect items into the nuclear supply chain.
- It is important to be an intelligent customer.
- The licensee is ultimately responsible for quality.

Consistent with the first and second vendor workshops, the NRC staff received over 100 questions throughout the day, responding to all of these during the designated question and

answer portions of each session, as well as the final plenary session at the close of the workshop. At this time, the NRC staff is not planning to provide additional written responses to these answered questions on the public website. Interested parties who would like further clarification on any of the topics discussed during the workshop are encouraged to utilize the Frequently Asked Questions section of the NRC public website, or to contact Marlayna Vaaler at marlayna.vaaler@nrc.gov to solicit more detailed responses.

In an effort to enhance the next vendor workshop, the NRC solicited suggestions from the attendees. The NRC included a solicitation for suggested topics at future workshops in the workshop program. NRC Public Meeting Feedback forms were also distributed to attendees, and numerous public meeting feedback forms were received at the close of the workshop. The general consensus was that the attendees appreciated the NRC being proactive in explaining its regulations and expectations for nuclear vendors. In addition, the attendees expressed interest in the NRC's continued conduct of similar outreach activities and suggested that the NRC continue to coordinate its workshop with the annual NUPIC Vendor Meeting. Additional feedback forms are expected by mail. These feedback forms will be used to improve future vendor workshops and to focus on the appropriate topics at the workshops.

In summary, the workshop brought together regulated utilities, government agencies, nuclear component vendors, and other interested stakeholders to discuss such issues as vendor oversight for new reactors; safety culture; commercial-grade dedication; software QA; and CFSI

Enclosures:

As stated

answer portions of each session, as well as the final plenary session at the close of the workshop. At this time, the NRC staff is not planning to provide additional written responses to these answered questions on the public website. Interested parties who would like further clarification on any of the topics discussed during the workshop are encouraged to utilize the Frequently Asked Questions section of the NRC public website, or to contact Marlayna Vaaler at marlayna.vaaler@nrc.gov to solicit more detailed responses.

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Enclosures:
As stated

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OFFICE	NRO/DCIP/CMVB	NRO/DCIP/CMVB	NRO/DCIP/CQAB	NRO/DCIP/CEVB
NAME	MVaaler	ERoach	KKavanagh	RRasmussen
DATE	07/27/2012	07/27/2012	07/27/2012	07/27/2012

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3rd NRC Workshop on Vendor Oversight for New Reactor Construction Mailing List

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3rd NRC Workshop on Vendor Oversight for New Reactor Construction
June 28, 2012

Attendee List

First Name	Last Name	Affiliation
Aaron	Armstrong	US NRC
James	Adams	-----
Matthew	Adams	Ankeng CSD
Jack	Adkins	GEH
Benjamin	Ahrens	Emerson Process Management, Fisher Controls Int'l LLC
Kevin	Ake	Consolidated Power Supply
Gregory	Alexander	Integrated Power Services
Sarah	Alexander	US NRC
Salem	Al-Shamsi	Emirates Nuclear Energy Corp
Ram	Amanchi	Bechtel Corp.
Tanya	Ambrose	International Quality Consultants, Inc.
Tariq	Ameri	Emirates Nuclear Energy Corp
Greg	Amsden	Amsden Consulting Services
James	Amy	Team Industrial Services
Katrina	Anderson	AECOM
Earl	Andes	Andes Quality Consulting, Inc.
Steve	Andrews	Quality Systems Consulting
Kevin	Armstrong	Automatic Valve
David	Arrigo	Westinghouse Electric Co. LLC
Bruce	Bader	RCM Technologies
Scott	Bailey	NuScale Power LLC
Craig	Baird	Plymouth Tube Company
George	Baitinger	Emerson Process Management, Fisher Controls Int'l LLC
Edward	Baker	Talisman International
Joe	Barbera	Sigma, Inc.
Carlos	Barberino	IHI Southwest Technologies, Inc.
Orie	Barnes	Transco Products Inc.
Sonya	Barnette	US Dept of Energy
Robert	Barry	Flowserve Corporation
Malko	Basue	John Crane
Jeff	Baysinger	NextEra Energy
Aixa	Belen-Ojeda	US NRC
Eric	Benner	US NRC
William	Bergen	Scot Forge

First Name	Last Name	Affiliation
Shamsher	Beri	Portland General Electric
Richard	Bird	ITT Engineered Valves, LLC
Garyson	Bitsoie	Curtiss Wright - Scientech
Peter	Blattner	Baker Concrete Construction, Inc.
Buck	Blum	Parsons Corporation
Sandra	Board	Team Industrial Services
Douglas	Bollock	US NRC
Tracy	Bolt	Nuclear Logistics
Bradley	Boothe	Acuity Quality Assurance
Scott	Borland	Amidyne Group - Nuclear Power Services Inc.
Rachel	Bottorff	Westinghouse Electric Company
Matthew	Bowman	ATC Nuclear / Argo Turboserve Corp.
Eric	Brand	Mirion Technologies (IST) Corp.
Tommy	Brauer	Dominion
Korby	Breaux	Flexitallic L.P.
David	Breneman	Dominion Resources Services, Inc.
Linda Chase	Brissey	PCI Energy Services
Joseph	Brodeur	Burndy LLC
Charles	Brown	PPL Susquehanna, LLC
David	Brown	ABB, Inc.
Johnny	Brown	Applied Technical Services, Inc
Kevin	Buckley	Constellation Energy Nuclear Group
Rich	Buechler	PSEG Nuclear, LLC
Robert	Bunz	OPPD
Patrick	Butler	NuSource
Reed	Call	ASCO Numatics
Ronald	Callahan	Intermech, Inc.
Joselito	Calle	US NRC
Scott	Cameron	STPNOC
James	Campbell	ASME
Larry	Campbell	US NRC
Patricia	Campbell	GE Hitachi Nuclear Energy
Paul	Campbell	AT&F Nuclear, Inc.
Tom	Cannon	Bruce Power LP
Jesse	Carlock	URS
John	Carlson	Tampa Armature Works, Inc.
Terry	Carraher	LMT
Ronald	Carver	Luminant Power
John	Cashman	Unistar Nuclear Energy
Lisa	Castelli	US NRC

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John	Caturano	Society for Protective Coatings (SSPC)
Jon	Cavallo	UESI Nuclear Services
Sheila	Cawley	Flowserve
Norrel	Chambers	Exelon-CENG
Roberta	Chandler	SOR Inc.
Chi-Pin	Chang	Taiwan Power Company
Calvin	Cheung	US NRC
Dibu	Chowdhury	HydroAire, Inc.
Rob	Christensen	Energy solutions
Brendaly	Cintron De Leon	Fluor Enterprises
Brent	Clarke	US NRC
Paul	Coco	US NRC
John	Cphoon	Kiewit Nuclear
Dave	Colegrove	GE Energy - Reuter Stokes
Milton	Concepcion	US NRC
Morgan	Connor	Gavial Holdings, Inc.
Sonja	Cook	ceradyne boron products
Douglas	Copeland	US NRC
Mark	Coren	Duke Energy
Linda	Correa	-----
Paul	Couchman	Mirion Technologies (Conax Nuclear), Inc.
Mike	Cox	Areva Federal Services, LLC
Ian	Cozens	US NRC
Stephen	Cramb	Garlock
Samantha	Crane	US NRC
Mike	Craven	Progress Energy
Windell	Crisler	The Shaw Group
Daniel	Cunningham	Sommer Design & Security
Larry	Cunningham	General Cable
Larry	Cunningham	SCE & G
Timothy	Czuba	Entergy
James	Dailey	Weller Energy Services
Simon	Daou	HydroAire, Inc.
Eric	Deal	Flanders Corporation
George	Deaton	HSB Global Standards
Jeffrey	DeFebo	PSEG Nuclear, LLC
John "Rusty"	DeKleine	Enertech, Curtiss-Wright Flow Control
Richard	DeLong	Westinghouse Electric Company
Chris	Des Biens	SMT Corp
Eric	Desgagne	Canadian Nuclear Safety Commission

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John	Detandt	James C. White Co., Inc.
Lewis	Detter	Precision Custom Components, LLC
Tom	DeVincentis	Archon Engineering
Dave	Deweese	The Equity Engineering Group, Inc.
Yamir	Diaz-Castillo	US NRC
Steve	DiMauro	GE Hitachi
Jeff	Diurba	Consolidated Power Supply
Robert	Dodge	Hydra Zorb Co.
Gary	Donnell	Conval
John (Jack)	Donohue	Electric Boat/General Dynamics
Jack	Doyle	GE Energy - Reuter Stokes
Matt	Dreyfuss	Amer Industrial Technologies, Inc
Shamsher	Dua	Emirates Nuclear Energy Corp
Michael	Dunkelberger	MPR Associates
Michael	Dunn	Siemens Energy, Inc.
Michael	Durbin	Sherwin-Williams Company
Steve	Dwyer	Tioga Pipe Supply Comapny, Inc.
Eric	Dyke	Aecon Industrial
Jerome	Ebner	Areva Federal Services, LLC
Michael	Eckenroth	Energys
Shavon	Edmonds	US NRC
Wally	Edsall	ATI Allegheny Ludlum
Steven	Eisenberg	National Technical Systems
Robert	Elfstrom	Sandmeyer Steel
Judith	Elwood	Metalter Energy Products
Joe	Emerson	Preferred Metal Technologies
Rob	Erda	NuSource, LLC
Kevin	Fahey	Altran Solutions
Peter	Fehring	Westinghouse Electric Co.
Gary	Felicetti	Clark Testing
Mauricio	Fernandes	ELETRONUCLEAR S.A.
Stephen	Ferrar	Farris Engineering - Curtiss-Wright FC
John	Fink	Constellation Energy Nuclear Group
Jason	Fishell	Mitsubishi Nuclear Energy Systems
Terence	Flynn	Chempump
Albert	Fonner	American Electric Power
Cathy	Ford	Hirschfeld Industries
Nowelle	Francis	Altran Solutions
Byron	Frank	Westinghouse Electric Co.
Robert	Fraser	MNES

First Name	Last Name	Affiliation
Riley	Frazier	Flowserve
William	Freebairn	Platts Nucleonics Week
Sandra	Freshour	Ceradyne Boron Products
Nathan	Frey	Energy and Process Corporation
Felicia	Friedli	UCI
Larry	Friedman	Electroswitch
Frank	Frodyma Jr.	Scheck Industries
Federico	Fronza	Wartsila Corporation
Timothy	Frye	US NRC
Frank	Furfari	NOVA Machine
Rodney	Furniss	Howden North America
Brent	Furr	EnerSys
Sylvie	Gagnon	Hydro-Quebec Gentilly-2
John	Galatic	HICO America
Daniel	Gallagher	FENOC
Greg	Galletti	US NRC
Paul	Garcia	Areva Federal Services, LLC
Jay	Gardiner	Curtiss Wright - EMD
Robert	George	Ametek
Christopher	Gerlach	Cooper Industries
Jason	Gibson	NWS Technologies
Robin	Gill	SPSI
Michael	Gilman	URS Corp.
Brian	Gilmartin	DRS Consolidated Controls, Inc.
William	Gloersen	US NRC
David	Gobbi	Flowserve Corporation
Dennis	Goolsby	Duke Energy
Randolph	Gounder	TW Metals-NMS
Peter	Gouthier	Electric Boat
Agustin	Grajales	CFE -Mexico-
Daniel	Grannan	Shaw Modular Solutions
Gib	Gratti	Arcos Industries
Brad	Greene	Aquilex WSI
Douglas	Greenfield	Greenfield Enterprises
Stephanie	Greier	Westinghouse Electric Company
Stanley	Griffin	GE Hitachi Nuclear Energy
William	Grimes	AMEC Environment & Infrastructure, Inc.
Dealis	Gwyn	Shaw AREVA MOX Services
Michael	Hadsel	The Shaw Group, Inc.
Bruce	Haley	Presray Corp

First Name	Last Name	Affiliation
Bryan	Hall	NSL Analytical
Victor	Hall	US NRC
Roy	Haller	General Cable
James	Halter	United Controls International (UCI)
Joyce	Hamman	Crane Nuclear, Inc.
Gene	Hancock	Atkore International
Dana	Hanson	BASF Corporation
Dale	Harmon	Westinghouse Electric Co.
Ben	Harper	SOR Inc
Andy	Harrill	Tindall Corporation
William	Harris	Flowserve Corporation
Joshua	Hart	Stevenson & Associates
Duane	Hartle	Ametek Programmable Power
Mark	Harvey	Nuclear Energy Institute
Paul	Hatfield	Reuland Electric
Mary	Haughey	US Department of Energy
John	Hausfeld	Baker Concrete Construction Inc.
Weidong	He	Advanced Systems Technology and Management
Elaine	Heher	US NRC
Jamie	Heisserer	US NRC
Earl	Hemmila	Urenco USA
Brad	Hemphill	AP Services
Mai	Henderson	US NRC
John	Hendricks	Mesa Associates, Inc.
Cheryl	Hensley	ASCO Valve Manufacturing
Brandi	Hernandez	Shaw Modular Solutions
Cesar	Hernandez	Aecon Group
Robert	Heusey	TW Metals- NMS
Carl	Hjort	Exelon-(Constellation Energy Nuclear Group)
Jeff	Hodges	Pacific Gas & Electric
Terry	Hodous	Scheck Industries
Misty	Holmes	Lockheed Martin
Thomas	Horan	Hilti, Inc.
Tom	Horner	Engine Systems, Inc.
Peyton	Howell	Tindall Corporation
Eugene	Huang	US NRC
Justin	Hubbard	Kinectrics Inc.
Thomas	Huerter	Automated Engineering Services Corp.
Steven	Huntington	System One
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Lennart	Isaksson	Ringhals AB
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Alfred	Issa	US NRC
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Jeffrey	Jacobs	BNL Industries, Inc.
Jeffrey	Jacobson	US NRC
David	Jantosik	Shaw Nuclear
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James	Johns	FirstEnergy
Andrea	Johnson	US NRC
Meaghan	Johnson	US NRC
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Mike	Jones	PPG Protective and Marine Coatings
Scott	Jones	Fisher Controls
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Timothy	Keller	NUCON International, Inc.
Ronald	Kelly	National Technical Systems
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Thomas	Kendzia	US NRC
George	Kenney	Superior Air Handling
David	Kerr	Consolidated Power Supply
Haeng-Jin	Kim	Korea Hydrogen Nuclear Power
Sik	Kim	Doosam Heavy Industries
Sukkwan	Kim	Doosan Heavy Industries & Construction Co., Ltd.
Richard	King	Rotork Hiller
Walter	Knox	Gerdau
Bill	Kotteakos	Southern California Edison Company
Andrew	Kottenstette	AMEC
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Steve	Laherty	Invensys
Wilfred	LaRoche	HSB GS
Jeff	Larson	Invensys Systems Inc.
John	Larson	NPP
Ed	Lawrence	Chalmers & Kubeck, Inc.
Tom	Lebs	Reuland Electric
Gary	Lee	Houden North America
Hong-Ming	Lee	Unisont Engineering, Inc.
Troy	Lee	Integrated Power Services (IPS)
Danny	Leigh	Fluor Enterprises
Michael	Lenio	ASCO Numatics
Paul	Lewis	Applus RTD
George	Lipscomb	US NRC
Chris	Lloyd	Transnuclear, Inc
Korina	Looft	United Controls International (UCI)
Dominick	LoSurdo	Constellation Energy Nuclear Group
Debra	Loudenslager	Progress Energy
John	Louwers	Detroit Edison, Fermi 2
Jon	Lubahn	Consumers Energy/Laboratory Services
James	Luehman	US NRC
Per-Olof	Lund	Sandvik
Steve	Lusk	Tennessee Valley Authority (TVA)
Chris	Mahler	ASME
Mark	Maier	Shaw/AREVA MOX Services
Joseph	Mallia	Amsden's Consulting Services
Terence	Malloy	ABB
Alka	Malur	Nexus Technical Services Corporation
Mark	Mamo	Shaw Group
Ted	Manning	WorleyParsons Group
Micky	Manolescu	WeldTech Services, Corp.
Cathy	Mansfield	Applied Technical Services, Inc
Damaris	Marcano	US NRC
Charles	Marcinkiewicz	UniStar Nuclear Energy
Raul	Marcos	EQUIPOS NUCLEARES, S.A.
Richard	Mark	VOLIAN ENTERPRISES

First Name	Last Name	Affiliation
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John	Martin	AMEC Environment & Infrastructure, Inc.
Koichiro	Masumoto	Mitsubishi Nuclear Energy Systmes Inc.
Mark	Mathias	Consolidated Power Supply
Mark	Maurer	Flowserve Corporation
Herbert	Mayes	Southern Company
Earl	Mayhorn	AmerenUE
Michael	McBrearty	General Atomics - ESI
Bill	McCabe	Project Assistance Corporation
Justin	McCabe	Performance Review Institute
Mike	McCarthy	Flowserve Corporation
Adam	McCartney	Cameron
Rebecca	McClellan	Premier Technology, Inc.
Chuck	McCue	Rittal Corporation
Vivian	McDonnell	The Shaw Group
Richard	McIntyre	US NRC
Denis	McLaughlin	Wagstaff Inc.
Alysa	McNearney	Industrial Testing Laboratory Services
Robert	McWey	Southern California Edison
Brian	Meadors	Southern Nuclear
Brian	Mervak	SCE&G
Adam	Messersmith	Emerson Process Management, Fisher Controls Int'l LLC
Eric	Michel	US NRC
David	Midlik	Southern Nuclear
John	Mikach	Homewood Products Corp
Alex	Millar	Mirion Technologies (IST Canada) Inc
Bill	Miller	Westinghouse Electric Company
Justin	Miller	Emerson/Topworx
Peter	Miner	USEC Inc.
Jeffrey	Misner	Bechtel Power Corp.
Chhanubhai	Mistry	Cameron
James	Mitchell	John Crane Inc.
Stanley	Mitchell	Exelon
Craig	Mizer	Swagelok Company
John	Mohr	Parsons
Daryl	Montie	Arsenal Consulting, Inc.
Liam	Moore	Babcock & Wilcox Canada
David	Morley	S.A. Technology
John	Morris	General Atomics Electronic Systems Inc.
Nathan	Morris	Nuclear Logistics Inc.

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David	Murphy	RSCC Wire & Cable
James	Murphy	Scheck Industries
Shozo	Narita	Mistras Services
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David	Nenstiel	DuBose National Energy Fasteners & Machine Parts
Garrett	Newman	US NRC
John	Newton	TBE
Florescu	Nicolac	S.N.N.
Thomas	Niessen	TVA
Kevin	Nietmann	US NRC
Walter	Norcross	Westinghouse Electric Company
Timothy	O'Brien	Southern Nuclear Company
Richard	Oehlberg	Oehlberg Consulting
Gerald	O'Farrell	Precision Custom Components, LLC
Ron	Ogle	Fluid Components International
Jeff	Olson	Flowserve Corp
Patrick	Olson	Twin City Fan Companies, LTD
Jeff	Oneal	Performance Contracting, Inc.
Matty	Ongchangco	Cameron Measurement Systems
Jonathan	Ortega	US NRC
Dale	Overbeck	Integrated Resources, Inc.
Tyler	Owen	LSS Nuclear
Stephen	Packard	Westinghouse Electric Company
Zeke	Palacids	Thermo Fisher Scientific
John	Papai	Westinghouse Electric Company
Tim	Pardue	Bahnson Inc.
Hwoang Y.	Park	Doosan Heavy Industries & Construction Co., Ltd.
Bryan	Parnell	Consolidated Power Supply
Bobby	Parrott	Mesa Associates, Inc.
Daniel	Pasquale	US NRC
RAJU	PATEL	US NRC
Robert	Paton	Energy Steel & Supply Co.
James	Perry	Exelon
Erick	Petersen	Banker Steel Co.
DUYEN	PHAM	Emerson Process Management, Fisher Controls Int'l LLC
David	Phelps	Nuclear Logistics Inc.

First Name	Last Name	Affiliation
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Henry	Pollock	Progress Energy
Jim	Powell	Technetics Group Columbia
Paul	Prescott	US NRC
Greg	Przyjemski	PPL Corp.
Bob	Pullano	GEL Laboratories, LLC
Don	Queen	Energy Northwest
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Jan	Reber	EnerSys
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Kerry	Rhoads	Dominion
Frances	Riley	Global Quality Assurance, Inc.
Pat	Riley	Global Quality Assurance, Inc.
Aida	Rivera	US NRC
Edward	Roach	US NRC
Joe	Robbins	Consolidated Power Supply
Dan	Roberts	Engine Systems, Inc.
Kim	Robinson	Parker Hannifin
Erica	Rodel	Hayward Tyler, INC.
Charles	Rogers	Cameron Measurement Systems
Josh	Rogers	Weldstar
Richard	Rogers	DuBose National Energy Services, INC.
Michael	Ross	NuVision Engineering
William	Ross	EnerSys
Matt	Rossignol	CB&I
Doug	Roszman	Hayward Tyler Inc
Dale	Roth	PPL Bell Bend
Joseph	Roth, Jr.	Georgia Power/Repair Shop
Kate	Roughan	QSA - Global
Dennis	Rowland	Bruce Power LP
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Michael	Scheck	Scheck Industries
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Ernie	Schlangen	RCM Technologies, Inc.
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Del	Senner	Energy Northwest
Nick	Serafin	Consumers Energy / Laboratory Services
Richard	Shamblin	TEC
Calvin	Shannon	SSM Industries, Inc.
Stew	Shannon	Curtiss Wright EMD
Jeremy	Sharp	Lockheed Martin Missiles and Fire Control
John	Sheffield	Exelon Nuclear
Susan	Shields	GE Measurement and Control
Dean	Shipley	B&W Y-12
David	Shugars	Savannah River Remediation
William	Sidberry	Progress Energy
John	Simmons	Luminant Power
Roger	Sims	Kleinsorg Group Risk Services, LLC
James	Slee	Mauell Corp
Don	Sloan	REED AIR PRODUCTS
Randy	Slomski	Flowserve
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Lisa	Smith	Tioga Pipe Supply Company, Inc.
Stacy	Smith	US NRC
Ed	Smithers	Mistras Services
Mark	Snider	ERAI, Inc.
Dennis	Snow	Xylem Inc.
Mark	Soler	Holtec International
Soly	Soto	US NRC
Phousone	Soukchareun	PaR Nuclear Inc. - A Westinghouse Company
David	Soward	Xcel Energy

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David	Stephens	Ultra Electronics, NSPI
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Jacob	Stultz	Lockheed Martin
Edgar	Suarez	ASME
David	Sudweeks	BS&B Safety Systems, LLC.
Phillip	Sullivan	STP Nuclear Operating Company
Harry	Sy	ABB Inc
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Mark	Tanner	Southern Nuclear Company
Matt	Taylor	Ryerson, Inc
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William	Tibbs	AREVA Fuel Division
Mark	Tierney	Laboratory Testing, Inc.
Michael	Tihey	Consolidated Power Supply
William	Tippette	Souriau Connection Technologies
Tony	Tipton	Savannah River Remediation (SRR)
Robert	Titus	Conval
Kazuyuki	Tomoda	IHI Corporation
Gerald	Toole	Hirschfeld Industries
Alan	Torres	SCANA
Roberto	Torres	Energy Northwest
Boyce	Towell	Amer Industrial Technologies, Inc
Leigh	Trocine	US NRC
Patrick	Troy	Lockheed Martin
Arthur	Trozzi	Westinghouse Electric Co.
Karla	True	Fairbanks Morse Engine
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Andreas	Uebleis	Hilti Corporation
Jerry	Umbarger	Studsvik Scandpower, Inc.
Jeff	Usem	Twin City Fan & Blower
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V. Jamie	Vasquez	Westinghouse
Wes	Vaughn	Southern Nuclear
Laura	Veal	Parker Hannifin Instrumentation Products Division
David	Vellekoop	Kinectrics Inc.
Brian	Vickery	Progress Energy
Doug	Vickery	DUBOSE NATIONAL ENERGY SERVICES
Robert	Villegas	EPRI
Popa	Viorel	S.N.N.
Gordon	Vytlacil	Generation mPower
Bob	Walcheski	Underwater Engineering Services, Inc.
Gunnar	Wald	Hilti Corporation
Doug	Walker	Energy & Process Corp
David	Walthall	Electric Power Research Institute
William	Ware	Southern Nuclear Operating Co.
Dottie	Wasmundski	Lehigh Testing Laboratories, Inc.
Gene	Wasson	Constellation Energy Nuclear Group
Dennis	Weaver	Greenberry Fabrication
John	Webb	Tyco (dba Anderson Greenwood Crosby)
Michael	Webb	US NRC
Tom	Webb	Chalmers & Kubeck, Inc.
Michael	Wedemeyer	Emerson Process Management, Fisher Controls Int'l LLC
Michael	Weinstein	Sciencetech
Russell	Wells	AREVA
Brent	Wenger	Schweitzer Engineering Laboratories, Inc
Tara	Werner	AREVA
Ronald	Wessel	Westinghouse Electric Company
Erin	West	Tennessee Valley Authority
Bruce	Wheeler	Quality Management Services, LLC
Kevin	Wheelwright	Numerical Applications
Steven	White	Fluor Enterprises Inc.
Ryan	Whitford	Legacy Consulting, LLC
Rodney	Whitley	Shaw AREVA MOX Services
Nicola	Wiley	Electric Motor & Contracting Co Inc
Jeffrey	Williams	Southern Nuclear
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Henry	Woodberry	ABB Inc, Medium Voltage Service
Robert	Woodward	US NRC (OIG)
Douglas	Wright	Constellation Energy
Jeff	Wright	Scot Forge Company
Robert	Wright	Entergy Corporation
Okuhiko	Yamamoto	IHI Corporation
Douglas	Yates	MOX Services
Sarah	Yeagley	Archon Engineering
Ernest	Yockey	International Quality Consultants, Inc.
Kathryn	Yohn	ITT Engineered Valves
Todd	Young	Transnuclear, Inc.
Sam	Yousif	Dynamic Solutions USA, Inc
Frank	Yurich	American Crane & Equipment Corporation
Albert	Zaehner	CCI AG
Chad	Zeilenga	ATKORE INTERNATIONAL
Michael	Zeitler	US NRC
Stephen	Zieger	PKMJ Technical Services
Jim	Ziemba	Ryerson, Inc.

**List of Speakers for the 3rd NRC Workshop on
Vendor Oversight for New Reactor Construction**

Speaker	Affiliation
Laura Dudes	U.S. Nuclear Regulatory Commission
William Ostendoff	U.S. Nuclear Regulatory Commission
Kerri Kavanagh	U.S. Nuclear Regulatory Commission
Victor Hall	U.S. Nuclear Regulatory Commission
Daniel Pasquale	U.S. Nuclear Regulatory Commission
Lisamarie Jarriel	U.S. Nuclear Regulatory Commission
Paul Prescott	U.S. Nuclear Regulatory Commission
Yamir Diaz-Castillo	U.S. Nuclear Regulatory Commission
George Lipscomb	U.S. Nuclear Regulatory Commission
Samantha Crane	U.S. Nuclear Regulatory Commission
Robert Temps	U.S. Nuclear Regulatory Commission
Bill Gloerson	U.S. Nuclear Regulatory Commission
Rodney Whitley	MOX Services
John Larson	NUPIC
Jamie Vasquez	Westinghouse
Mark Harvey	NEI
Marc Tannenbaum	EPRI
Norman Moreau	Theseus
Craig Irish	Nuclear Logistics