Note to requester: This record was provided to the FOIA team by RES staff with the earliest email only containing the header.

From: Tregoning, Robert
Sent: Tue, 30 Aug 2016 16:48:18 -0400
To: Frankl, Istvan
Cc: Hiser, Matthew;Rao, Appajosula
Subject: RE: Draft UNR

I know it will be part of the SLR UNR, but I think it would still be good to at least allude to it here for internals and particularly CASS components. There will be a new RPV user need and they've talked about adding something in on harvesting related to vessel materials. Just a thought……

Robert Tregoning
Technical Advisor for Materials
US Nuclear Regulatory Commission
Two White Flint North, M/S T-10 A36
11545 Rockville Pike
Rockville, MD 20852-2738
ph: 301-415-2324
fax: 301-415-6671

From: Frankl, Istvan
Sent: Tuesday, August 30, 2016 4:45 PM
To: Tregoning, Robert <Robert.Tregoning@nrc.gov>
Cc: Hiser, Matthew <Matthew.Hiser@nrc.gov>; Rao, Appajosula <Appajosula.Rao@nrc.gov>
Subject: RE: Draft UNR

Rob,

Harvesting will be part of the new UNR on SLR we expect from DLR soon. Should specific harvesting related sub-tasks be moved to this UNR?

Thanks,

Steve

From: Tregoning, Robert
Sent: Tuesday, August 30, 2016 4:07 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>; Rao, Appajosula <Appajosula.Rao@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Draft UNR

Matt/Sri

So, I've only skimmed the tasks quickly but here are my observations and questions:

1. It looks like the tasks are generally consistent with and align with the priorities and topics that were discussed in the winter.

2. I'm glad to see that they call out the various Zorita projects by name in task 2. I think this gives those projects some increased weight.
3. I'm also glad they added a task for us to review the IASCC disposition curve technical basis. We weren't part of that effort and I've been itching to see if what industry's done is appropriate.
4. By biggest disappointment is that I didn't see anything on harvesting at all. It would be good if they at least indicated that we should pursue opportunities as they present themselves or something similar. Why isn't something like this in here?
5. Is there anything else that has not been included that we think should be?

Rob

Robert Tregoning
Technical Advisor for Materials
US Nuclear Regulatory Commission
Two White Flint North, M/S T-10 A36
11545 Rockville Pike
Rockville, MD 20852-2738
ph: 301-415-2324
fax: 301-415-6671

From: Hiser, Matthew
Sent: Tuesday, August 30, 2016 3:46 PM
To: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Rao, Appajosula <Appajosula.Rao@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: FW: Draft UNR

Forwarding draft IAD UNR – includes 3 tasks: void swelling, engagement / monitoring industry research, IASCC CGR disposition curves at ASME Code.

From: Yoo, Mark
Sent: Tuesday, August 30, 2016 3:30 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: Draft UNR

From: Warren, Brenett
Sent: Tue, 20 Feb 2018 16:32:27 +0000
To: Hull, Amy
Cc: Moyer, Carol;Hiser, Matthew;Oberson, Greg;Frankl, Istvan
Subject: RE: EPOSTER AND DIGITAL PRESENTATIONS, STATUS OF EPOSTER AND DIGITAL PRESENTATIONS, REGISTRATION REMINDERS

It's the line spacing we have the appropriate Titles and sponsored by information.

Thanks,

Brenett (Bren) U. Warren
Program Specialist
Office of Nuclear Reactor Regulation
NRR/DMPS/RISB
Location: O13D5
301-415-3114
Brenett.Warren@nrc.gov

Follow us on Twitter @nrcgov_ric

From: Hull, Amy
Sent: Tuesday, February 20, 2018 11:25 AM
To: Warren, Brenett <Brenett.Warren@nrc.gov>
Cc: Moyer, Carol <Carol.Moyer@nrc.gov>; Hiser, Matthew <Matthew.Hiser@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: EPOSTER AND DIGITAL PRESENTATIONS, STATUS OF EPOSTER AND DIGITAL PRESENTATIONS, REGISTRATION REMINDERS

Good Morning Bren,

I read the attached and I have some concerns. It appears that line spacing is off in the original document you attached. I have corrected it and enclose herein.

The two presentations we are associated with are highlighted below in yellow:

Sponsored by the Office of Nuclear Reactor Regulation

Evaluation of Additive Manufacturing of Metallic Parts via Direct Metal Laser Melting

Sponsored by the Office of Nuclear Regulatory Research

Fun Facts on International Exports

Sponsored by the Office of International Programs

Harvesting of Aged Materials from Nuclear Power Plants

Sponsored by the Office of Nuclear Regulatory Research

Knowledge Management

From: Warren, Brenett
Sent: Tuesday, February 20, 2018 11:00 AM
To: Sturzebecher, Karl <Karl.Sturzebecher@nrc.gov>; Kenny, Caylee <Caylee.Kenny@nrc.gov>; Bernardo, Robert <Robert.Bernardo@nrc.gov>; Hall, Victor <Victor.Hall@nrc.gov>; Wilson, Joshua <Joshua.Wilson@nrc.gov>; Couret, Ivonne <Ivonne.Couret@nrc.gov>; West, Stephanie <Stephanie.West@nrc.gov>; Jones, Heather <Heather.Jones@nrc.gov>; Bridge, Joanna <Joanna.Bridge@nrc.gov>; Dembek, Stephen <Stephen.Dembek@nrc.gov>; Yadav, Priya <Priya.Yadav@nrc.gov>; Gifford, Ian <Ian.Gifford@nrc.gov>; Smith, Todd <Todd.Smith@nrc.gov>; Howells, Christopher <Christopher.Howells@nrc.gov>; Orf, Tracy <Tracy.Orf@nrc.gov>; Cruz, Holly <Holly.Cruz@nrc.gov>; Morey, Dennis <Dennis.Morey@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Hull, Amy <Amy.Hull@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>; Savoy, Joanne <Joanne.Savoy@nrc.gov>; Ralph, Melissa <Melissa.Ralph@nrc.gov>; King, Shannon <Shannon.King@nrc.gov>; Hiser, Matthew <Matthew.Hiser@nrc.gov>; Steger, Christine <Christine.Steger@nrc.gov>; Armstrong, Kenneth <Kenneth.Armstrong@nrc.gov>; Homiack, Matthew <Matthew.Homiack@nrc.gov>
Cc: RICMST Resource <RICMST.Resource@nrc.gov>
Subject: EPOSTER AND DIGITAL PRESENTATIONS, STATUS OF EPOSTER AND DIGITAL PRESENTATIONS, REGISTRATION REMINDERS
Importance: High

Dear ePoster and Digital Poster Presenters,

We are 3 weeks away from RIC 2018 so this is to provide updates regarding session/speaker information, status of presentations, as well as some registration reminders.

Online registration closing: As a reminder, online registration closes on **February 27**. All who attend the RIC are required to register. This includes ePoster and Digital Presenters, speakers, chairs, coordinators, volunteers, staff, and members of the Commission. ***Please remind all of your presenters to register before the closing date at https://ric.nrc.gov/ricregistration.*** This is especially important as badges are generated directly from the online registration database. After **February 27**, those interested in attending the conference will need to register onsite at the conference facility.

Pre-registration/Early Badge Pick-up at NRC HQ: On **March 6 and 7,** in the TWFN Exhibit Area, NRC staff who have registered online will have an opportunity to pick up their badge in advance of the conference. We encourage NRC staff to take advantage of this opportunity which will help to with crowd flow at registration onsite. We will be posting a network announcement with details regarding the "pre-registration/early badge pick-up" this week.

-

ePoster and Digital Presentation Information: The attached word doc contains all the ePoster and Digital Titles and the sponsoring office.

Presentation Slides: Our goal is to have information and other conference materials available to the public approximately (2) weeks prior to the conference (week of **February 26**). RICMST has been, and will continue to forward presentations, to our RIC contractors for posting to the RIC website. Currently we have received approximately 95% of the eposter and digital presentations, so ***please continue your diligence in developing, reviewing, and sending presentation slides to RICMST.*** I will also be contacting you individually to discuss the status of presentations still pending.

In a separate email we will be providing you logistical information pertaining to your eposter and digital presentations and how your eposter and digital presentations will be handled onsite.

As always, if you have any questions regarding the information provided above, please feel free to contact me at any time.

Thanks,

Brenett (Bren) U. Warren
Program Specialist
Information Technology and Infrastructure Services Branch
Program Management, Policy Development and Analysis
Office of Nuclear Reactor Regulation
NRR/DMPS/RISB
Location: O13D5
301-415-3114
Brenett.Warren@nrc.gov

Follow us on Twitter @nrcgov_ric

Note to requester:
Attachment is immediately following.

From: Hull, Amy
Sent: Tue, 20 Feb 2018 16:24:56 +0000
To: Warren, Brenett
Cc: Moyer, Carol;Hiser, Matthew;Oberson, Greg;Frankl, Istvan
Subject: RE: EPOSTER AND DIGITAL PRESENTATIONS, STATUS OF EPOSTER AND DIGITAL PRESENTATIONS, REGISTRATION REMINDERS
Attachments: ePoster and Digital Poster Titles.abh.docx

Good Morning Bren,

I read the attached and I have some concerns. It appears that line spacing is off in the original document you attached. I have corrected it and enclose herein.

The two presentations we are associated with are highlighted below in yellow:

Sponsored by the Office of Nuclear Reactor Regulation

Evaluation of Additive Manufacturing of Metallic Parts via Direct Metal Laser Melting

Sponsored by the Office of Nuclear Regulatory Research

Fun Facts on International Exports

Sponsored by the Office of International Programs

Harvesting of Aged Materials from Nuclear Power Plants

Sponsored by the Office of Nuclear Regulatory Research

Knowledge Management

From: Warren, Brenett
Sent: Tuesday, February 20, 2018 11:00 AM
To: Sturzebecher, Karl <Karl.Sturzebecher@nrc.gov>; Kenny, Caylee <Caylee.Kenny@nrc.gov>; Bernardo, Robert <Robert.Bernardo@nrc.gov>; Hall, Victor <Victor.Hall@nrc.gov>; Wilson, Joshua <Joshua.Wilson@nrc.gov>; Couret, Ivonne <Ivonne.Couret@nrc.gov>; West, Stephanie <Stephanie.West@nrc.gov>; Jones, Heather <Heather.Jones@nrc.gov>; Bridge, Joanna <Joanna.Bridge@nrc.gov>; Dembek, Stephen <Stephen.Dembek@nrc.gov>; Yadav, Priya <Priya.Yadav@nrc.gov>; Gifford, Ian <Ian.Gifford@nrc.gov>; Smith, Todd <Todd.Smith@nrc.gov>; Howells, Christopher <Christopher.Howells@nrc.gov>; Orf, Tracy <Tracy.Orf@nrc.gov>; Cruz, Holly <Holly.Cruz@nrc.gov>; Morey, Dennis <Dennis.Morey@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Hull, Amy <Amy.Hull@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>; Savoy, Joanne <Joanne.Savoy@nrc.gov>; Ralph, Melissa <Melissa.Ralph@nrc.gov>; King, Shannon <Shannon.King@nrc.gov>; Hiser, Matthew <Matthew.Hiser@nrc.gov>; Steger, Christine <Christine.Steger@nrc.gov>; Armstrong, Kenneth <Kenneth.Armstrong@nrc.gov>; Homiack, Matthew <Matthew.Homiack@nrc.gov>
Cc: RICMST Resource <RICMST.Resource@nrc.gov>
Subject: EPOSTER AND DIGITAL PRESENTATIONS, STATUS OF EPOSTER AND DIGITAL PRESENTATIONS,

REGISTRATION REMINDERS
Importance: High

Dear ePoster and Digital Poster Presenters,

We are 3 weeks away from RIC 2018 so this is to provide updates regarding session/speaker information, status of presentations, as well as some registration reminders.

Online registration closing: As a reminder, online registration closes on **February 27**. All who attend the RIC are required to register. This includes ePoster and Digital Presenters, speakers, chairs, coordinators, volunteers, staff, and members of the Commission. ***Please remind all of your presenters to register before the closing date at https://ric.nrc.gov/ricregistration.*** This is especially important as badges are generated directly from the online registration database. After **February 27**, those interested in attending the conference will need to register onsite at the conference facility.

Pre-registration/Early Badge Pick-up at NRC HQ: On **March 6 and 7,** in the TWFN Exhibit Area, NRC staff who have registered online will have an opportunity to pick up their badge in advance of the conference. We encourage NRC staff to take advantage of this opportunity which will help to with crowd flow at registration onsite. We will be posting a network announcement with details regarding the "pre-registration/early badge pick-up" this week.

ePoster and Digital Presentation Information: The attached word doc contains all the ePoster and Digital Titles and the sponsoring office.

Presentation Slides: Our goal is to have information and other conference materials available to the public approximately (2) weeks prior to the conference (week of **February 26**). RICMST has been, and will continue to forward presentations, to our RIC contractors for posting to the RIC website. Currently we have received approximately 95% of the eposter and digital presentations, so ***please continue your diligence in developing, reviewing, and sending presentation slides to RICMST.*** I will also be contacting you individually to discuss the status of presentations still pending.

In a separate email we will be providing you logistical information pertaining to your eposter and digital presentations and how your eposter and digital presentations will be handled onsite.

As always, if you have any questions regarding the information provided above, please feel free to contact me at any time.

Thanks,

Brenett (Bren) U. Warren
Program Specialist
Information Technology and Infrastructure Services Branch
Program Management, Policy Development and Analysis
Office of Nuclear Reactor Regulation
NRR/DMPS/RISB
Location: O13D5
301-415-3114
Brenett.Warren@nrc.gov

Follow us on Twitter @nrcgov_ric

ePoster and Digital Presentations

Accident Sequence Precursor Program - Results, Trends, and Insights

Sponsored by the Office of Nuclear Regulatory Research

Advanced Evacuation Simulations and Application to Emergency Preparedness

Sponsored by the Office of Nuclear Security and Incident Response and the Office of Nuclear Regulatory Research

Application of the changes to NUREG/BR-0058 to the Regulatory Analysis of the Decommissioning of Power Reactors Rulemaking

Sponsored by the Office of Nuclear Material Safety and Safeguards

Digital Dashboard for Operating Reactor Licensing Actions

Sponsored by the Office of Nuclear Reactor Regulation

Enhancements to LIC-500, Topical Report Process

Sponsored by the Office of Nuclear Reactor Regulation

Evaluation of Additive Manufacturing of Metallic Parts via Direct Metal Laser Melting

Sponsored by the Office of Nuclear Regulatory Research

Fun Facts on International Exports

Sponsored by the Office of International Programs

Harvesting of Aged Materials from Nuclear Power Plants

Sponsored by the Office of Nuclear Regulatory Research

Knowledge Management

Sponsored by the Office of the Chief Human Capital Officer

Leveraging Cooperative Research Agreements to Improve NRC Safety Codes

Sponsored by the Office of Nuclear Regulatory Research

Non-Reactor Decommissioning: Unexpected Fee Billing Implications

Sponsored by the Office of Nuclear Material Safety and Safeguards and the Office of the Chief Financial Officer

Preserving the -Lessons Learned from Fukushima

Sponsored by the Office of Nuclear Reactor Regulation

Progression of Construction and Oversight Activities at Vogtle Units 3 and 4

Sponsored by the Office of New Reactors

Public Communication - Learn about the Public Affairs Program at the NRC

Sponsored by the Office of Public Affairs

Reactor Oversight Process Framework and Initiatives

Sponsored by the Office of Nuclear Reactor Regulation

Web-based ADAMS - Providing Public Access to the NRC's Official Agency Document Repository

Sponsored by the Office Information Officer

What You Need to Know About the Supplemental Proposed Rulemaking for 10 CFR Part 61, "Licensing Requirements Land Disposal of Radioactive Waste"

Sponsored by the Office of Nuclear Material Safety and Safeguards

---

xLPR Version 2 Code Brings State-of-the-art Probabilistic Analysis Capabilities to Nuclear Power Plant Piping

-Sponsored by the Office of Nuclear Regulatory Research

From: Frankl, Istvan
Sent: Mon, 6 Mar 2017 18:26:48 +0000
To: Weber, Michael
Cc: Boland, Anne;Thomas, Brian;Tregoning, Robert
Subject: RE: Ex Plant Harvesting Workshop
Attachments: Harvesting Workshop talking points.docx
Importance: High

Note to requester: Attachment is immediately following.

Mike,

In response to your request I have attached bullets for your opening remarks.

Please let us know if you need additional information.

Thanks,

Steve

From: Weber, Michael
Sent: Monday, March 06, 2017 11:05 AM
To: Thomas, Brian <Brian.Thomas@nrc.gov>; Boland, Anne <Anne.Boland@nrc.gov>
Cc: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Iyengar, Raj <Raj.Iyengar@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Dickson, Billy <Billy.Dickson@nrc.gov>; Bowen, Jeremy <Jeremy.Bowen@nrc.gov>; Inverso, Tara <Tara.Inverso@nrc.gov>
Subject: Re: Ex Plant Harvesting Workshop

Sounds good. I'll be happy to support. Thanks!

On: 06 March 2017 09:36, "Thomas, Brian" <Brian.Thomas@nrc.gov> wrote:
Mike, Anne,

The subject workshop starts at 8:00am in 3WFN-01C03. I will forward some bullets to help with your opening remarks. Note that it is the first kickoff of the topic/concept thus it will be a working level meeting.

Thx- Brian

Brian

Brian E. Thomas, Director
Division of Engineering
Office of Nuclear Regulatory Research
U S Nuclear Regulatory Commission

Ex-Plant Materials Harvesting Workshop

Motivation:

- There are increasing opportunities to harvest the safety-critical components from decommissioning plants, both domestic and international.
- The harvested materials are valuable because they have been exposed to actual in-service plant operating conditions (temperature, irradiation, coolant, etc.), unlike virgin materials tested under simulated conditions in the lab.
- Data from ex-plant materials should help address technical gaps identified for extended operation of nuclear power plants due to highly relevant aging conditions.

Purpose and Objective:

- For NRC staff and interested stakeholders to have greater awareness and knowledge of the benefits and challenges associated with ex-plant harvesting.
- Facilitate contacts and communication to enable specific cooperative ex-plant harvesting programs to be initiated.

Workshop Topics:

- Harvesting decision-making and prioritization
    - Technical data needs best addressed by harvesting
    - Technical information needed in advance of harvesting
- Sources of materials:
    - Decommissioning reactors
    - Operating reactors – replaced components
    - Previous harvesting programs – "boneyards"
    - Tracking available materials
- Harvesting process
    - Lessons learned from harvesting experience
    - Perspective of utility-owner and decommissioning contractor on harvesting
    - Communication and coordination between decommissioning and researchers

Workshop Approach:

- Each session will consist of solicited presentations followed by lengthy discussion and Q&A period.

Note to requester: Attachment is immediately following, and is also publicly available in ADAMS at ML18029A106.

From: Hiser, Matthew
Sent: Mon, 29 Jan 2018 18:26:51 +0000
To: Audrain, Margaret
Subject: RE: Ex-Plant Harvesting Coordination Meeting
Attachments: Transformation Team Tasking Memo.pdf

This team was stood up by the EDO to recommend areas where transformative change may be needed (such as DI&C, ATF, advanced reactors, advanced manufacturing, etc.). I've attached the tasking memo from the EDO, but can explain more in-person.

Maybe we can meet tomorrow morning to do turnover? Also, one of the subitems under "advanced manufacturing" is HDPE, so I wanted to pick your brain on who to reach out to on that topic for ideas.

Thanks!
Matt

From: Audrain, Margaret
Sent: Monday, January 29, 2018 1:21 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: Ex-Plant Harvesting Coordination Meeting

Wow, that was quick! What will you be doing?

(b)(6)

I'm WAH today because [redacted] I'll be in tomorrow if you have time to talk. I have a call in the afternoon but am free otherwise (my calendar is up to date). Otherwise, I'll be [redacted] (b)(6)

Meg

From: Hiser, Matthew
Sent: Monday, January 29, 2018 9:16 AM
To: Audrain, Margaret <Margaret.Audrain@nrc.gov>
Subject: RE: Ex-Plant Harvesting Coordination Meeting

Hi Meg,

(b)(6)

Welcome back – [redacted] Surprise! I'm actually on rotation starting today for the Transformation Team that's been stood up to report to the EDO. It has people from around the agency (they posted for it back in early January).

Anyway, hopefully I'll have time to chat with you today or tomorrow for turnover on harvesting, NMSS, and GSI-191. Our first team meeting is this morning at 10:00 – I'm at OWFN 3E24 in case you'd like to swing by…

Thanks!
Matt

From: Audrain, Margaret
Sent: Monday, January 29, 2018 8:43 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: Re: Ex-Plant Harvesting Coordination Meeting

Going on your rotation?? What are your dates?

-------- Original Message --------
From: "Hiser, Matthew" <Matthew.Hiser@nrc.gov>
Date: Fri, January 26, 2018 3:59 PM -0500
To: "Purtscher, Patrick" <Patrick.Purtscher@nrc.gov>, "Audrain, Margaret" <Margaret.Audrain@nrc.gov>, "Tregoning, Robert" <Robert.Tregoning@nrc.gov>
Subject: Ex-Plant Harvesting Coordination Meeting

Hi everyone,

Following up from our meeting yesterday, I have attached a meeting summary / path forward outline covering our current activities. I've also attached the latest version of the prioritization table as well as a modified version of the INL database as noted in the meeting summary document.

I appreciate you guys continuing to push forward on this effort in my absence and will hopefully be back in a few months to pick things back up.

Thanks!
Matt

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 25, 2018

MEMORANDUM TO: Transformation Team

FROM: Victor M. McCree
Executive Director for Operations

SUBJECT: FORMATION OF NRC TRANSFORMATION TEAM

In my January 4, 2018 message on *Innovation and Transformation at the NRC*, I indicated that success in fulfilling our safety and security mission is enabled by the NRC Principles of Good Regulation. Our principles help to guide us in making decisions to ensure safety and security, while appropriately considering the interests of NRC stakeholders. The principles have also inspired and supported our decisions to implement a number of innovative changes that improved the effectiveness and efficiency of NRC's regulatory infrastructure. The ability to proactively innovate, along with our commitment to continuous improvement, are essential qualities that will facilitate our long term success in ensuring the safe and secure use of nuclear materials in the 21st century.

However, the nuclear industry has indicated plans to introduce new and novel technologies, such as accident tolerant fuel, small modular reactors, and advanced non-light water reactor designs. Because the use of such new nuclear technologies would challenge our current regulatory framework, we must not only innovate, but also identify and implement transformative change. Transformation of our regulatory infrastructure will be evidenced by significantly different ways to regulate and marked enhancements in our effectiveness, efficiency and agility as we fulfill our mission.

Accordingly, the purpose of this memorandum is to form a Transformation Team to identify potential transformative changes to NRC's regulatory framework, culture, and infrastructure.

The Transformation Team is specifically tasked with the following:

1. Harvest innovation techniques, ideas, and methodologies to successfully implement transformation, including strategies to enhance and sustain a transformative organizational culture. In completing this task, the Transformation Team is encouraged to engage a variety of sources both internal and external to the NRC, including: the nuclear industry; non-governmental organizations; public organizations; private companies; and federal agencies such as the Department of Transportation and the National Aeronautics and Space Administration.

2. Develop and recommend a specific area(s) to initiate transformative change within NRC.

3. Develop a strategy to promote the success of the specific area(s) recommended for transformation. The strategy should include a communications plan(s) for each area and a change management plan to foster and sustain (both innovation and) transformation as a characteristic of the NRC's organizational culture.

4. Develop a Commission paper that describes the merits of transformation. The paper should include sufficient information on each recommended transformation initiative to support a Commission decision on whether, why, and how staff should proceed with detailed development and implementation. The paper should also estimate the approach, schedule, and resources required to refine and implement each initiative, if approved by the Commission.

In carrying out its activities, the Transformation Team should remain focused on transformation that enables the safe and secure use of new technologies. This team will be guided and supported by the CXO Board.

The tasking is due within 90 days of the establishment of the Transformation Team.

CONTACT: Barbara Sanford, OEDO
(301) 287-9260

Note to requester: Attachment is immediately following. The box with the red X in the first email is the Excel attachment (Excel icon and the file name) imbedded into the body of the email.

From: Hiser, Matthew
Sent: Mon, 20 Nov 2017 18:36:09 +0000
To: Purtscher, Patrick;Audrain, Margaret;Tregoning, Robert
Subject: RE: Ex-Plant Harvesting Coordination Meeting
Attachments: Harvesting Needs Prioritization 11-8-17.xlsx

Excel template for each of us to fill in for homework!

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

-----Original Appointment-----
From: Hiser, Matthew
Sent: Friday, September 22, 2017 9:24 AM
To: Hiser, Matthew; Purtscher, Patrick; Audrain, Margaret; Tregoning, Robert
Subject: Ex-Plant Harvesting Coordination Meeting
When: Monday, November 27, 2017 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: T10D40

Setting up a standing every other week meeting on harvesting to help us stay on track and keep making progress.

Topics:

- Sources of Materials
- Prioritization of Data Needs
- PNNL TLR

Criteria Title	Description	**Scoring Guidance** **H = High** **MH = Medium-high** **M = Medium** **ML = Medium-low** **L = Low**
Criticalness of Technical Gap Addressed	Harvesting to address critical gaps should be prioritized over less essential technical gaps	
Difficulty of Laboratory Replication	Degradation mechanisms that are harder to replicate with simulated aging conditions would be of higher priority for harvesting. For example, simultaneous thermal and irradiation conditions are difficult to replicate outside of the plant environment. Alternatively, accelerated aging may not be feasible for a mechanism sensitive to dose rate. These two degradation mechanisms may be best evaluated using harvested materials.	
Uniqueness Field Aspects of Degradation	For example, legacy materials (e.g., fabrication methods, composition) that are no longer available, but may play an important role in a potential degradation mechanism, would have a higher priority than harvesting materials that can be obtained from other sources.	
Applicability to US Operating Fleet	There is greater value in developing knowledge to address an issue that may be applicable to a larger number of plants compared to one that may only affect a relatively small number of plants.	
Absence of Available Inspection Methods	If mature inspection methods exist and are easy to apply to monitor degradation, harvesting may be less valuable. If inspection methods do not exist, harvesting may be essential to ensure confidence in the assessment of age-related degradation in that particular component.	
Lower Confidence in Relevant AMP	The less confidence that NRC staff has in the effectiveness of the relevant AMP, the higher priority for harvesting.	
Harvesting cost and complexity	Activities with higher costs and complexity are less attractive than similar activities with lower costs and that are simpler to execute.. For example, harvesting unirradiated concrete or electrical cables is less expensive and less complex than harvesting from the RPV internals or the RPV.	
Timeliness of results	The ability of a potential harvesting program to provide timely results to support either a technical or regulatory need is important. Having high confidence that results will be timely increases the priority.	
Availability of materials for harvesting	The availability of materials to harvest for a particular data need is clearly essential and increases the priority.	

	Basic Info		Technical Criteria														Cost / Complexity		Project Specific	
Need Description	Purpose / Testing Planned	Technical Knowledge Gained	Criticalness of Technical Gap Addressed		Difficulty of Laboratory Replication		Uniqueness Field Aspects of Degradation		Applicability to US Operating Fleet		Absence of Available Inspection Methods		Lower Confidence in Relevant AMP		Score Average	Basis for Priority	Cost	Complexity	Timeliness of results	Availability of materials for harvesting
METALS			Score	Comment	Score	Comment	Score	Comment	Score	Comment	Score	Comment	Score	Comment						
High fluence reactor internals	Void swelling, mechanical properties, IASCC	Likely extent of void swelling in PWRs during extended operation and impact on cracking		Fills data gap for extended plant operation		No		Vintage compositions and realistic irradiation conditions		Applicable to high-fluence components in most PWRs		None for void swelling; MRP-227 primarily visual testing		Some confidence in MRP-227 to identify issues in sufficient time		Very high cost, but lack of data is significant challenge to regulatory decisions	Very High		TBD	TBD
Thermally aged unirradiated CASS	Fracture toughness and microstructure	Fracture toughness data in real conditions to compare to accelerated aging data		Validate accelerated aging data		No		Vintage compositions and realistic irradiation conditions		Applicable to PWRs more than BWRs (higher temps)		No ISI to measure loss of FT				Moderate cost, but would greatly increase confidence in large set of accelerated aging data	Medium			
Moderate fluence (1-2 dpa) CASS	Fracture toughness and microstructure	Fracture toughness data near limit requiring further evaluation		Fills data gap for regulatory decision-making		No		Vintage compositions and realistic irradiation conditions		Applicable to PWRs more than BWRs (higher temps and fluence)		No ISI to measure loss of FT				High cost, but would increase confidence in regulatory position	High			
Metallic components with known flaws	NDE and destructive examination	Determine whether SCC mitigation methods are effective at preventing SCC; effectiveness of NDE at detection and sizing		Validate NDE and mitigation method effectiveness		Not to provide real-world validation		Actual effectiveness of NDE and mitigation methods in plant environment essential		Applicable to all plants						Moderate cost, but would greatly increase confidence in NDE and mitigation methods	Medium			
Metallic components with limiting fatigue life	NDE and destructive examination	Determine whether fatigue flaws are present in high usage locations		Validate fatigue life methodologies		Not to provide real-world validation		Vintage compositions and realistic loading conditions		Applicable to all plants						Moderate cost, but would greatly increase confidence in fatigue life calculations	Medium			

Need Description	Purpose / Testing Planned	Technical Knowledge Gained	Benefit / Significance	Cost	Alternative to Harvesting?	Priority / Value	Basis for Priority	Unique aspects of harvested materials	ISI availability?
METALS									
RPV - High fluence & high shift vessel with well-established unirradiated properties	Measure fluence, toughness, & chemistry as a function of through-thickness position	Through thickness section to validate fluence & attenuation models	Increases confidence in existing regulatory approach	High	No	**LOW**	High cost not justified by benefit given surveillance specimens and well-established emrittlement trend correlations	Vintage compositions and irradiation conditions	
RPV - Samples from virtually any vessel	Enable measurement of both the Charpy transition curve and master curve transition temperature T0	Provides data supporting evolution from the use of correlative (Charpy-based) to direct measurement (fracture toughness-based) approaches	Increases confidence in existing regulatory approach	High	No	**LOW**	High cost not justified by benefit given surveillance specimens and well-established emrittlement trend correlations	Vintage compositions and realistic irradiation conditions	

Need Description	Purpose / Testing Planned	Technical Knowledge Gained	Benefit / Significance	Cost	Alternative to Harvesting?	Priority / Value	Basis for Priority	Unique aspects of harvested materials	ISI availabilility?
ELECTRICAL									
Low and medium voltage cables				Medium		**HIGH**			
Cables protected with fire retardant coating				Medium					
1E MOVs from harsh and mild environments				Medium					
1E Air operated valves; 4160									
1E breakers				Low					
1E Molded case breakers 480V, 250V DC, 125 VDC,				Low					
1E Relays from mild environment GE – HFA, Agastat timing relays, any from Westinghouse, Potter Brumfield, Stuthers Dunn etc.,				Low					
Batteries				Low					
Electrical penetrations									
Fire research interest									
Electrical enclosures									
Distribution: switchgear, MCCs, LCs | Control: Horseshoe, SSCP, ASP, etc.									

Need Description	Purpose / Testing Planned	Technical Knowledge Gained	Benefit / Significance	Cost	Alternative to Harvesting?	Priority / Value	Basis for Priority	Unique aspects of harvested materials	ISI availabilility?
METALS									
CONCRETE									
Structures exposed to high radiation	Change in properties due to irradiation effects	Loss of strength due to irradiation	Fills data gap for extended plant operation	High		**HIGH**			
Post-tensioned structures				Medium		**LOW**			
Corrosion of reinforcing steel, tendon, liner, embedment				Medium		**LOW**			
Spent fuel pool and transfer canal-boric acid attack on concrete in PWRs				Medium		**LOW**			
Alkali Aggregate Reaction				Medium		**LOW**			
Large structural sections for testing	Effects of concrete aging on structural capacity		Validate assumptions of aging effects at larger scales	High		**LOW**			

Note to requester: Attachment is immediately following. The box with the red X in the first email is the Excel attachment (Excel icon and the file name) imbedded into the body of the email.

From: Hiser, Matthew
Sent: Thu, 2 Nov 2017 12:48:58 +0000
To: Purtscher, Patrick;Audrain, Margaret;Tregoning, Robert
Subject: RE: Ex-Plant Harvesting Coordination Meeting
Attachments: Harvesting Needs Prioritization 11-2-17.xlsx

OK, I apologize for sending this very last-minute before our meeting this afternoon (I hoped to send something last week!), but I wanted to share a strawman for this needs prioritization ranking approach before our meeting today.

In the attached Excel spreadsheet, please focus your attention on the first two tabs: "Criteria descriptions" and "Other metals." The first tab identifies and describes the harvesting criteria and how to score based on those criteria. The second tab shows the example sheet for non-RPV metals and the handful of ideas we presented at the harvesting workshop back in March. There are 6 "technical criteria" that are scored and combined for a "technical" score. Then the cost/complexity is handled separately and the final two criteria of timeliness and availability of materials are considered "project specific", which to me means we can't really address those until we know more about potential sources and specific harvesting opportunities.

If you guys get the chance to look at this some and take your own stab at scoring the "other metals" tab, please feel free. I'm hoping to use a portion of the meeting this afternoon to discuss and refine this straw man ranking approach.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

-----Original Appointment-----
From: Hiser, Matthew
Sent: Friday, September 22, 2017 9:24 AM
To: Hiser, Matthew; Purtscher, Patrick; Audrain, Margaret; Tregoning, Robert
Subject: Ex-Plant Harvesting Coordination Meeting
When: Thursday, November 02, 2017 2:30 PM-3:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where:

Setting up a standing every other week meeting on harvesting to help us stay on track and keep making progress.

Topics:

- Sources of Materials
- Prioritization of Data Needs
- PNNL TLR

Criteria Title	Description	Scoring guidance
Addresses critical gap	Harvesting to address critical gaps should be prioritized over less essential technical gaps	Most critical gaps = 10 Least critical gaps = 1
Laboratory replication	Degradation mechanisms that are harder to replicate with simulated aging conditions would be of higher priority for harvesting. For example, simultaneous thermal and irradiation conditions are difficult to replicate outside of the plant environment. Alternatively, accelerated aging may not be feasible for a mechanism sensitive to dose rate. These two degradation mechanisms may be best evaluated using harvested materials.	Impossible to replicate = 10 Easy to replicate = 1
Unique field aspects of degradation	For example, legacy materials (e.g., fabrication methods, composition) that are no longer available, but may play an important role in a potential degradation mechanism, would have a higher priority than harvesting materials that can be obtained from other sources.	Very important unique field aspects = 10 Minimal or no unique field aspects = 1
Fleet-wide vs. plant-specific applicability of data	There is greater value in developing knowledge to address an issue that may be applicable to a larger number of plants compared to one that may only affect a relatively small number of plants.	Applicable to all plants = 10 All PWRS = 7 All BWRs = 4 Highly plant-specific = 1
ISI Availability	If mature inspection methods exist and are easy to apply to monitor degradation, harvesting may be less valuable. If inspection methods do not exist, harvesting may be essential to ensure confidence in the assessment of age-related degradation in that particular component.	No ISI possible or available = 10 ISI well-established and accepted = 1
AMP Confidence	The less confidence that NRC staff has in the effectiveness of the relevant AMP, the higher priority for harvesting.	Little to no confidence in AMP = 10 Very high condifence in AMP = 1
Harvesting cost and complexity	Activities with higher costs and complexity are less attractive than similar activities with lower costs and that are simpler to execute.. For example, harvesting unirradiated concrete or electrical cables is less expensive and less complex than harvesting from the RPV internals or the RPV.	Highly irradiated (>5 dpa) = very high Lightly irradiated / contaminated = high Light contamination / more intensive unirradiated = medium Unirradiated / low effort = low
Timeliness of results	The ability of a potential harvesting program to provide timely results to support either a technical or regulatory need is important. Having high confidence that results will be timely increases the priority.	
Availability of materials for harvesting	The availability of materials to harvest for a particular data need is clearly essential and increases the priority.	

	Basic Info		Technical Criteria														Cost / Complexity		Project Specific	
Need Description	Purpose / Testing Planned	Technical Knowledge Gained	Addresses critical gap		Laboratory replication		Unique field aspects of degradation		Fleet-wide vs. plant-specific applicability of data		ISI Availability		AMP Confidence		Score Average	Basis for Priority	Cost	Complexity	Timeliness of results	Availability of materials for harvesting
METALS			Score	Comment	Score	Comment	Score	Comment	Score	Comment	Score	Comment	Score	Comment						
High fluence reactor internals	Void swelling, mechanical properties, IASCC	Likely extent of void swelling in PWRs during extended operation and impact on cracking		Fills data gap for extended plant operation		No		Vintage compositions and realistic irradiation conditions		Applicable to high-fluence components in most PARs		None for void swelling; MRP-227 primarily visual testing		Some confidence in MRP-227 to identify issues in sufficient time	#DIV/0!	Very high cost, but lack of data is significant challenge to regulatory decisions	Very High		TBD	TBD
Thermally aged unirradiated CASS	Fracture toughness and microstructure	Fracture toughness data in real conditions to compare to accelerated aging data		Validate accelerated aging data		No		Vintage compositions and realistic irradiation conditions		Applicable to PWRs more than BWRs (higher temps)		No ISI to measure loss of FT			#DIV/0!	Moderate cost, but would greatly increase confidence in large set of accelerated aging data	Medium			
Moderate fluence (1-2 dpa) CASS	Fracture toughness and microstructure	Fracture toughness data near limit requiring further evaluation		Fills data gap for regulatory decision-making		No		Vintage compositions and realistic irradiation conditions		Applicable to PWRs more than BWRs (higher temps and fluence)		No ISI to measure loss of FT			#DIV/0!	High cost, but would increase confidence in regulatory position	High			
Metallic components with known flaws	NDE and destructive examination	Determine whether SCC mitigation methods are effective at preventing SCC; effectiveness of NDE at detection and sizing		Validate NDE and mitigation-method effectiveness		Not to provide real-world validation		Actual effectiveness of NDE and mitigation methods in plant environment		Applicable to all plants					#DIV/0!	Moderate cost, but would greatly increase confidence in NDE and mitigation methods	Medium			
Metallic components with limiting fatigue life	NDE and destructive examination	Determine whether fatigue flaws are present in high usage locations		Validate fatigue life methodologies		Not to provide real-world validation		Vintage compositions and realistic loading conditions		Applicable to all plants					#DIV/0!	Moderate cost, but would greatly increase confidence in fatigue life calculations	Medium			

Need Description	Purpose / Testing Planned	Technical Knowledge Gained	Benefit / Significance	Cost	Alternative to Harvesting?	Priority / Value	Basis for Priority	Unique aspects of harvested materials	ISI availabilility?
METALS									
RPV - High fluence & high shift vessel with well-established unirradiated properties	Measure fluence, toughness, & chemistry as a function of through-thickness position	Through thickness section to validate fluence & attenuation models	Increases confidence in existing regulatory approach	High	No	**LOW**	High cost not justified by benefit given surveillance specimens and well-established emrittlement trend correlations	Vintage compositions and irradiation conditions	
RPV - Samples from virtually any vessel	Enable measurement of both the Charpy transition curve and master curve transition temperature T0	Provides data supporting evolution from the use of correlative (Charpy-based) to direct measurement (fracture toughness-based) approaches	Increases confidence in existing regulatory approach	High	No	**LOW**	High cost not justified by benefit given surveillance specimens and well-established emrittlement trend correlations	Vintage compositions and realistic irradiation conditions	

Need Description	Purpose / Testing Planned	Technical Knowledge Gained	Benefit / Significance	Cost	Alternative to Harvesting?	Priority / Value	Basis for Priority	Unique aspects of harvested materials	ISI availabilility?
ELECTRICAL									
Low and medium voltage cables				Medium		**HIGH**			
Cables protected with fire retardant coating				Medium					
1E MOVs from harsh and mild environments				Medium					
1E Air operated valves; 4160									
1E breakers				Low					
1E Molded case breakers 480V, 250V DC, 125 VDC,				Low					
1E Relays from mild environment GE – HFA, Agastat timing relays, any from Westinghouse, Potter Brumfield, Stuthers Dunn etc.,				Low					
Batteries				Low					
Electrical penetrations									
Fire research interest									
Electrical enclosures									
Distribution: switchgear, MCCs, LCs | Control: Horseshoe, SSCP, ASP, etc.									

Need Description	Purpose / Testing Planned	Technical Knowledge Gained	Benefit / Significance	Cost	Alternative to Harvesting?	Priority / Value	Basis for Priority	Unique aspects of harvested materials	ISI availabilility?
METALS									
CONCRETE									
Structures exposed to high radiation	Change in properties due to irradiation effects	Loss of strength due to irradiation	Fills data gap for extended plant operation	High		**HIGH**			
Post-tensioned structures				Medium		**LOW**			
Corrosion of reinforcing steel, tendon, liner, embedment				Medium		**LOW**			
Spent fuel pool and transfer canal-boric acid attack on concrete in PWRs				Medium		**LOW**			
Alkali Aggregate Reaction				Medium		**LOW**			
Large structural sections for testing	Effects of concrete aging on structural capacity		Validate assumptions of aging effects at larger scales	High		**LOW**			

From: Audrain, Margaret
Sent: Mon, 29 Jan 2018 18:31:55 +0000
To: Hiser, Matthew
Subject: RE: Ex-Plant Harvesting Coordination Meeting

Looks like you're going to have an interesting few months! I'm aiming to be in by 9 tomorrow [redacted] (b)(6)
(b)(6) [redacted] but if you need to meet earlier, let me know and I can push through ☺

From: Hiser, Matthew
Sent: Monday, January 29, 2018 1:27 PM
To: Audrain, Margaret <Margaret.Audrain@nrc.gov>
Subject: RE: Ex-Plant Harvesting Coordination Meeting

This team was stood up by the EDO to recommend areas where transformative change may be needed (such as DI&C, ATF, advanced reactors, advanced manufacturing, etc.). I've attached the tasking memo from the EDO, but can explain more in-person.

Maybe we can meet tomorrow morning to do turnover? Also, one of the subitems under "advanced manufacturing" is HDPE, so I wanted to pick your brain on who to reach out to on that topic for ideas.

Thanks!
Matt

From: Audrain, Margaret
Sent: Monday, January 29, 2018 1:21 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: Ex-Plant Harvesting Coordination Meeting

Wow, that was quick! What will you be doing?

(b)(6)

I'm WAH today because [redacted] I'll be in tomorrow if you have time to talk. I have a call in the afternoon but am free otherwise (my calendar is up to date). Otherwise, [redacted]

(b)(6)

Meg

From: Hiser, Matthew
Sent: Monday, January 29, 2018 9:16 AM
To: Audrain, Margaret <Margaret.Audrain@nrc.gov>
Subject: RE: Ex-Plant Harvesting Coordination Meeting

Hi Meg,

(b)(6)

Welcome back – [redacted] Surprise! I'm actually on rotation starting today for the Transformation Team that's been stood up to report to the EDO. It has people from around the agency (they posted for it back in early January).

Anyway, hopefully I'll have time to chat with you today or tomorrow for turnover on harvesting, NMSS, and GSI-191. Our first team meeting is this morning at 10:00 – I'm at OWFN 3E24 in case you'd like to swing by…

Thanks!
Matt

From: Audrain, Margaret
Sent: Monday, January 29, 2018 8:43 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: Re: Ex-Plant Harvesting Coordination Meeting

Going on your rotation?? What are your dates?

-------- Original Message --------
From: "Hiser, Matthew" <Matthew.Hiser@nrc.gov>
Date: Fri, January 26, 2018 3:59 PM -0500
To: "Purtscher, Patrick" <Patrick.Purtscher@nrc.gov>, "Audrain, Margaret" <Margaret.Audrain@nrc.gov>, "Tregoning, Robert" <Robert.Tregoning@nrc.gov>
Subject: Ex-Plant Harvesting Coordination Meeting

Hi everyone,

Following up from our meeting yesterday, I have attached a meeting summary / path forward outline covering our current activities. I've also attached the latest version of the prioritization table as well as a modified version of the INL database as noted in the meeting summary document.

I appreciate you guys continuing to push forward on this effort in my absence and will hopefully be back in a few months to pick things back up.

Thanks!
Matt

Note to requester: Attachment is immediately following. The box with the red X in the first email is the Word attachment (Word icon and the file name) imbedded into the body of the email.

From: Hiser, Matthew
Sent: Thu, 1 Sep 2016 19:02:41 +0000
To: Brock, Kathryn;Rudland, David;Frankl, Istvan;Tregoning, Robert;Purtscher, Patrick
Subject: RE: Ex-plant Harvesting Workshop Plans meeting
Attachments: Harvesting Workshop Plan.docx

Hi Kathy,

Please find attached the one-pager we discussed on the harvesting workshop.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

-----Original Appointment-----
From: RES_DE_Cal Resource
Sent: Wednesday, August 24, 2016 10:12 AM
To: RES_DE_Cal Resource; Brock, Kathryn; Rudland, David; Frankl, Istvan; Tregoning, Robert; Purtscher, Patrick; Hiser, Matthew
Subject: Ex-plant Harvesting Workshop Plans meeting
When: Thursday, September 01, 2016 2:30 PM-3:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: T-10E14 (Kathryn's office)

Please note that the meeting time has been changed to 2:30pm

Ex-Plant Materials Harvesting Workshop

Purpose and Objective:

- For NRC staff and interested stakeholders to have greater awareness and knowledge of the benefits and challenges associated with ex-plant harvesting.
- Facilitate contacts and communication to enable specific cooperative ex-plant harvesting programs to be initiated, leveraging limited NRC resources to produce highly representative technical data of materials degradation for extended plant operation.

Approach:

- NRC staff host a 2-day workshop with interested stakeholders, including domestic and international utilities and research organizations, to discuss benefits and challenges associated with ex-plant harvesting.
- Format will include sessions with time for presentations and open discussion of different aspects of ex-plant materials harvesting.
- Views and insights from domestic and international regulators, researchers, industry, and decommissioning companies' experience will be encouraged.

Intended Outcome:

- NRC staff and stakeholders are better informed of the benefits and challenges associated with ex-plant harvesting.
- Contacts are made with domestic and international utilities and researchers to allow for further discussion of specific cooperative research projects that may address technical data gaps associated with materials degradation that can be best addressed through ex-plant harvesting.

Potential Dates:

- March 9-10, 2017 – Thursday/Friday before RIC
- March 16-17, 2017 – Thursday/Friday of RIC week
- March 20-21, 2017 – Monday/Tuesday after RIC

Discussion Topics:

- Harvesting decision-making / prioritization
    - Technical data needs best addressed by harvesting
    - Technical information needed in advance of harvesting
- Sources of materials:
    - Decommissioning reactors
    - Operating reactors – replaced or failed components
    - Previous harvesting programs – "boneyards"
    - Tracking available materials
- Harvesting process
    - Lessons learned from harvesting experience
    - Perspective of utility-owner and decommissioning contractor on harvesting
    - Communication and coordination between decommissioning and researchers

From: Tregoning, Robert
Sent: Wed, 17 Aug 2016 08:23:22 -0400
To: Hiser, Matthew
Subject: RE: Ex-Plant Harvesting

Thanks, I should be fine for 11:00 but still may need to call in

Robert Tregoning
Technical Advisor for Materials
US Nuclear Regulatory Commission
Two White Flint North, M/S T-10 A36
11545 Rockville Pike
Rockville, MD 20852-2738
ph: 301-415-2324
fax: 301-415-6671

From: Hiser, Matthew
Sent: Wednesday, August 17, 2016 8:22 AM
To: Tregoning, Robert <Robert.Tregoning@nrc.gov>
Subject: RE: Ex-Plant Harvesting

Hi Rob,

OK – I think it would be good if you can make it. I pushed it back to 11:00, so hopefully that works better for you ☺

Thanks!
Matt

-----Original Appointment-----
From: Tregoning, Robert
Sent: Wednesday, August 17, 2016 6:35 AM
To: Hiser, Matthew
Subject: Tentative: Ex-Plant Harvesting
When: Thursday, August 18, 2016 10:00 AM-10:30 AM (UTC-05:00) Eastern Time (US & Canada).
Where: 10th floor huddle room

Matt:

(b)(6)

I've got an [redacted] tomorrow morning. I'm not sure if I'll be back in time for a 10:00 meeting. I may be able to call in, however on my way in. If not, I'll catch up with you on this unless you decide to move it back.

Rob

From: Hull, Amy
Sent: Wed, 27 May 2015 10:07:13 -0400
To: Hiser, Matthew
Subject: RE: Ex-Plant Materials Harvesting

Working on this now. Do we have any illustrations that we can use?

From: Hiser, Matthew
Sent: Thursday, May 21, 2015 3:51 PM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: RE: Ex-Plant Materials Harvesting

Hi All,

Here is the current draft of the presentation. Can you fill in the relevant information for your projects on slides 7-9? Amy, can you fill in your slides as appropriate related to approach and engagement?

Thanks!
Matt

Matthew Hiser
Materials Engineer
Corrosion and Metallurgy Branch
Division of Engineering
Office of Nuclear Regulatory Research
301-251-7601

From: Hiser, Matthew
Sent: Friday, May 15, 2015 8:21 AM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: Ex-Plant Materials Harvesting

Hi Mita, Darrell, and Eric,

I am working with Amy Hull in my branch on an effort associated with strategic harvesting of ex-plant materials. This effort is just getting underway, but we would like to present the concept at an NRC-industry materials meeting in early June (see attached email). The purpose of this effort is to develop a more systematic proactive "strategic" approach to ex-plant material harvesting, rather than the more reactive opportunistic approach to date. It is important to share this concept with industry, since they will be vital in providing connections/communication to allow future harvesting projects to take place.

I am putting together a slide or two on the reactor internals materials harvesting project at Zorita that I am involved with. I understand each of you have been / are involved with other harvesting efforts at Zion and Zorita on cables, concrete, and neutron absorbers. If you could just provide a

slide or two with a high-level overview of the harvesting project and at least briefly touch on how the harvesting opportunity came together, that would be great.

Thanks!
Matt

From: Murdock, Darrell
Sent: Mon, 18 May 2015 08:49:43 -0400
To: Hiser, Matthew
Subject: RE: Ex-Plant Materials Harvesting
Attachments: Harvesting Efforts.pptx

See attach slides.

Note to requester: Attachment is immediately following.

Darrell Murdock
Electrical Engineer
NRC/RES/DE/ICEEB
E-mail: Darrell.Murdock@nrc.gov
Office: 301-251-7629

From: Hiser, Matthew
Sent: Friday, May 15, 2015 8:21 AM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: Ex-Plant Materials Harvesting

Hi Mita, Darrell, and Eric,

I am working with Amy Hull in my branch on an effort associated with strategic harvesting of ex-plant materials. This effort is just getting underway, but we would like to present the concept at an NRC-industry materials meeting in early June (see attached email). The purpose of this effort is to develop a more systematic proactive "strategic" approach to ex-plant material harvesting, rather than the more reactive opportunistic approach to date. It is important to share this concept with industry, since they will be vital in providing connections/communication to allow future harvesting projects to take place.

I am putting together a slide or two on the reactor internals materials harvesting project at Zorita that I am involved with. I understand each of you have been / are involved with other harvesting efforts at Zion and Zorita on cables, concrete, and neutron absorbers. If you could just provide a slide or two with a high-level overview of the harvesting project and at least briefly touch on how the harvesting opportunity came together, that would be great.

Thanks!
Matt

United States Nuclear Regulatory Commission

Protecting People and the Environment

NRC's CABLE AGING RESEARCH ACTIVITIES

Darrell Murdock

Division of Engineering

Office of Nuclear Regulatory Research

301-251-7629

ASSESSMENT OF CONDITION MONITORING METHODS OF ELECTRICAL CABLES

PHASE 1: ASSESSING CM TECHNIQUES DURING OPERATIONAL AGING

- Cables Subject To Normal Operating Conditions (temperature, radiation, humidity)
- Samples Will Be Subject To Accelerated Aging To Simulate 40, 60 Years
- Selection Of Exposure Environments Is Based On Normal Plant Conditions

PHASE 2: ASSESSING CM TECHNIQUES FOR CABLES SUBJECT TO ACCIDENT CONDITIONS

- Cables Will Be Exposed To Accident Conditions (temperature, pressure, humidity, radiation, chemical/steam spray)

- Condition Monitoring Techniques Will Be Evaluated During And After The Accident Conditions.

ASSESSMENT OF CONDITION MONITORING METHODS OF ELECTRICAL CABLES

- Naturally Aged Cables From Zion
  - Harvesting Effort is Coordinated with Oakridge National Laboratories and Zion Solutions
  - The NRC Has Encounter Significant Delays In Acquiring the Cable Samples Because Of Logistical Challenges Encounter by Zion Solutions
  - Some Cables were Harvested and Ship To The National Institute Of Standards and Technology in 2013
  - Hope To Harvest The Remainder Of The Cable Samples in 2015

- Naturally Aged Cables From Cristal River
  - Harvesting Efforts are been Coordinated with the Electric Power Research Institute
  - Possibility Of Getting Cable Samples From Crystal River
  - A visit to Cristal River is Scheduled For June 2015 to Pick Desired Cable Samples

From: Hiser, Matthew
Sent: Fri, 16 Sep 2016 15:36:51 +0000
To: Vera, Graciela
Subject: RE: Ex-plant Materials Harvesting

Sure, an hour should be fine ☺

From: Vera, Graciela
Sent: Friday, September 16, 2016 11:33 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting

For one hour?

From: Hiser, Matthew
Sent: Friday, September 16, 2016 11:01 AM
To: Vera, Graciela <Graciela.Vera@nrc.gov>; Thompson, Jacqueline <Jacqueline.Thompson@nrc.gov>
Subject: FW: Ex-plant Materials Harvesting

Hi Gracie or Jacquie,

Could you schedule a briefing with Brian Thomas on Ex-Plant Materials Harvesting? Please include the following participants:

Brock, Kathryn
Tregoning, Robert
Thomas, Brian
Purtscher, Patrick
Frankl, Istvan

It looks like there are available times on September 27 or 28.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

Note to requester:
Attachment is
immediately following.

From: Sircar, Madhumita
Sent: Wed, 27 May 2015 08:24:55 -0400
To: Hiser, Matthew
Subject: RE: Ex-Plant Materials Harvesting
Attachments: Harvesting Efforts Hiser June NRC-Industry materials mtg.pptx Autosaved1.pptx

Matt: Use this one and please delete the one that I sent yesterday.

From: Sircar, Madhumita
Sent: Tuesday, May 26, 2015 4:59 PM
To: Hiser, Matthew
Subject: RE: Ex-Plant Materials Harvesting

Matt,
Please see my input.

Thanks,
Mita

From: Hiser, Matthew
Sent: Thursday, May 21, 2015 3:51 PM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: RE: Ex-Plant Materials Harvesting

Hi All,

Here is the current draft of the presentation. Can you fill in the relevant information for your projects on slides 7-9? Amy, can you fill in your slides as appropriate related to approach and engagement?

Thanks!
Matt

Matthew Hiser
Materials Engineer
Corrosion and Metallurgy Branch
Division of Engineering
Office of Nuclear Regulatory Research
301-251-7601

From: Hiser, Matthew
Sent: Friday, May 15, 2015 8:21 AM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: Ex-Plant Materials Harvesting

Hi Mita, Darrell, and Eric,

I am working with Amy Hull in my branch on an effort associated with strategic harvesting of ex-plant materials. This effort is just getting underway, but we would like to present the concept at an NRC-industry materials meeting in early June (see attached email). The purpose of this effort is to develop a more systematic proactive “strategic” approach to ex-plant material harvesting, rather than the more reactive opportunistic approach to date. It is important to share this concept with industry, since they will be vital in providing connections/communication to allow future harvesting projects to take place.

I am putting together a slide or two on the reactor internals materials harvesting project at Zorita that I am involved with. I understand each of you have been / are involved with other harvesting efforts at Zion and Zorita on cables, concrete, and neutron absorbers. If you could just provide a slide or two with a high-level overview of the harvesting project and at least briefly touch on how the harvesting opportunity came together, that would be great.

Thanks!
Matt

Strategic Approach for Obtaining Material and Component Aging Information

Amy Hull and Matthew Hiser
Division of Engineering
Office of Nuclear Regulatory Research

Outline

- Purpose
- Background
- Harvesting Experience
- Approach
- Engagement with Other Stakeholders

Purpose

- Create a framework for a strategic approach to harvesting ex-plant materials
  - Ex-plant materials offer unique environmental exposure that cannot be entirely replicated by laboratory testing with fresh materials
- Combine high priority data needs identified in SLR/LTO activities with harvesting opportunities from decommissioning plants

Background

- To date, harvesting opportunities have been limited due to few decommissioning plants
  - Zion in U.S., Zorita in Spain
- However, several U.S. plants have already shut down or are planning to do so in the near future
  - Kewaunee, SONGS, Crystal River, Vermont Yankee, Oyster Creek
- This provides a unique opportunity to plan harvesting for the maximum utility to address the highest priority technical issues

Harvesting Experience

- Past harvesting efforts have generally involved a reactive decision-making process
  - Limited opportunities to acquire ex-plant materials
  - Limited strategic planning for harvesting
- Harvesting projects with NRC involvement:
  - Reactors internal materials from Zorita
  - Concrete from Zorita
  - Neutron absorber material from Zion
  - Cables from Zion and Crystal River

Zorita Internals Research

- **Materials Harvested**:
  - Baffle plate and core barrel weld materials
- **Scope**:
  - Mechanical testing (tensile, CGR, FT)
  - Microstructural characterization (void swelling)
- **Purpose**:
  - High-fluence (up to 50 dpa) IAD effects with representative LWR exposure conditions
- **Timeline**:
  - Initial discussions in 2006, harvesting in 2013, testing ongoing
- **Coordination**:
  - EPRI, international consortium, Studsvik, Halden

Concrete from Zorita (Plan)

- **Materials Harvested**:
  - Concrete from structures that are in close proximity to RPV
- **Scope**:
  - Mechanical testing (compressive, tensile, modulus of elasticity)
  - Microstructural characterization
  - Physical change
- **Purpose**:
  - High fluence in combination with temperature and humidity that are representative of Light Water Reactor effects on structural and shielding performance
- **Timeline**:
  - Initial discussions in 2014, harvesting in 2015, testing 2016-2018
- **Coordination**:
  - NRC , ENRESA and CSN

Neutron Absorbers from Zion

- **Materials Harvested**:
- **Scope**:
- **Purpose**:
- **Timeline**:
  - Initial discussions in ????, harvesting in ????, testing ????
- **Coordination**:
  - EPRI, ????

Cables from Zion and Crystal River

- **Materials Harvested**:
  - Cables (high / low voltage??)
- **Scope**:
  - Condition monitoring to assess cable performance under normal operating conditions (accelerated aging) and accident conditions
- **Purpose**:
  - Cable degradation due to normal operating environment and accident conditions
- **Timeline**:
  - Initial discussions in ????, harvesting in 2013, testing ongoing
- **Coordination**:
  - ORNL, Zion Solutions, NIST, EPRI

Approach

Stakeholder Engagement

Acknowledgements

- Robert Tregoning, RES/DE
- Eric Focht, RES/DE
- Darrell Murdock, RES/DE
- Mita Sircar, RES/DE

Note to requester:
Attachment is
immediately following.

From: Sircar, Madhumita
Sent: Tue, 26 May 2015 16:59:24 -0400
To: Hiser, Matthew
Subject: RE: Ex-Plant Materials Harvesting
Attachments: Harvesting Efforts Hiser June NRC-Industry materials mtg.pptx Autosaved1.pptx

Matt,
Please see my input.

Thanks,
Mita

From: Hiser, Matthew
Sent: Thursday, May 21, 2015 3:51 PM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: RE: Ex-Plant Materials Harvesting

Hi All,

Here is the current draft of the presentation. Can you fill in the relevant information for your projects on slides 7-9? Amy, can you fill in your slides as appropriate related to approach and engagement?

Thanks!
Matt

Matthew Hiser
Materials Engineer
Corrosion and Metallurgy Branch
Division of Engineering
Office of Nuclear Regulatory Research
301-251-7601

From: Hiser, Matthew
Sent: Friday, May 15, 2015 8:21 AM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: Ex-Plant Materials Harvesting

Hi Mita, Darrell, and Eric,

I am working with Amy Hull in my branch on an effort associated with strategic harvesting of ex-plant materials. This effort is just getting underway, but we would like to present the concept at an NRC-industry materials meeting in early June (see attached email). The purpose of this effort is to develop a more systematic proactive "strategic" approach to ex-plant material harvesting, rather than the more reactive opportunistic approach to date. It is important to share this

concept with industry, since they will be vital in providing connections/communication to allow future harvesting projects to take place.

I am putting together a slide or two on the reactor internals materials harvesting project at Zorita that I am involved with. I understand each of you have been / are involved with other harvesting efforts at Zion and Zorita on cables, concrete, and neutron absorbers. If you could just provide a slide or two with a high-level overview of the harvesting project and at least briefly touch on how the harvesting opportunity came together, that would be great.

Thanks!
Matt

Strategic Approach for Obtaining Material and Component Aging Information

Amy Hull and Matthew Hiser
Division of Engineering
Office of Nuclear Regulatory Research

Outline

- Purpose
- Background
- Harvesting Experience
- Approach
- Engagement with Other Stakeholders

Purpose

- Create a framework for a strategic approach to harvesting ex-plant materials
  - Ex-plant materials offer unique environmental exposure that cannot be entirely replicated by laboratory testing with fresh materials
- Combine high priority data needs identified in SLR/LTO activities with harvesting opportunities from decommissioning plants

Background

- To date, harvesting opportunities have been limited due to few decommissioning plants
  - Zion in U.S., Zorita in Spain
- However, several U.S. plants have already shut down or are planning to do so in the near future
  - Kewaunee, SONGS, Crystal River, Vermont Yankee, Oyster Creek
- This provides a unique opportunity to plan harvesting for the maximum utility to address the highest priority technical issues

Harvesting Experience

- Past harvesting efforts have generally involved a reactive decision-making process
  - Limited opportunities to acquire ex-plant materials
  - Limited strategic planning for harvesting
- Harvesting projects with NRC involvement:
  - Reactors internal materials from Zorita
  - Concrete from Zorita
  - Neutron absorber material from Zion
  - Cables from Zion and Crystal River

Zorita Internals Research

- **Materials Harvested**:
  - Baffle plate and core barrel weld materials
- **Scope**:
  - Mechanical testing (tensile, CGR, FT)
  - Microstructural characterization (void swelling)
- **Purpose**:
  - High-fluence (up to 50 dpa) IAD effects with representative LWR exposure conditions
- **Timeline**:
  - Initial discussions in 2006, harvesting in 2013, testing ongoing
- **Coordination**:
  - EPRI, international consortium, Studsvik, Halden

Concrete from Zorita

- **Materials Harvested**:
  - Concrete from structures that are in close proximity to RPV
- **Scope**:
  - Mechanical testing (compressive, tensile, modulus of elasticity)
  - Microstructural characterization
  - Physical change
- **Purpose**:
  - High fluence in combination with temperature and humidity that are representative of Light Water Reactor effects on structural and shielding performance
- **Timeline**:
  - Initial discussions in 2014, harvesting in 2015, testing 2016 (tentative)
- **Coordination**:
  - NRC with ENRESA and CSN

Neutron Absorbers from Zion

- **Materials Harvested**:
- **Scope**:
- **Purpose**:
- **Timeline**:
  - Initial discussions in ????, harvesting in ????, testing ????
- **Coordination**:
  - EPRI, ????

Cables from Zion and Crystal River

- **Materials Harvested**:
  - Cables (high / low voltage??)
- **Scope**:
  - Condition monitoring to assess cable performance under normal operating conditions (accelerated aging) and accident conditions
- **Purpose**:
  - Cable degradation due to normal operating environment and accident conditions
- **Timeline**:
  - Initial discussions in ????, harvesting in 2013, testing ongoing
- **Coordination**:
  - ORNL, Zion Solutions, NIST, EPRI

Approach

Stakeholder Engagement

Acknowledgements

- Robert Tregoning, RES/DE
- Eric Focht, RES/DE
- Darrell Murdock, RES/DE
- Mita Sircar, RES/DE

From: Hiser, Matthew
Sent: Wed, 27 May 2015 13:49:18 +0000
To: Focht, Eric
Subject: RE: Ex-Plant Materials Harvesting

Thanks Eric!

From: Focht, Eric
Sent: Wednesday, May 27, 2015 9:38 AM
To: Hiser, Matthew
Subject: RE: Ex-Plant Materials Harvesting

Here's my input on NAM and Zion.

From: Hiser, Matthew
Sent: Thursday, May 21, 2015 3:51 PM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: RE: Ex-Plant Materials Harvesting

Hi All,

Here is the current draft of the presentation. Can you fill in the relevant information for your projects on slides 7-9? Amy, can you fill in your slides as appropriate related to approach and engagement?

Thanks!
Matt

Matthew Hiser
Materials Engineer
Corrosion and Metallurgy Branch
Division of Engineering
Office of Nuclear Regulatory Research
301-251-7601

From: Hiser, Matthew
Sent: Friday, May 15, 2015 8:21 AM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: Ex-Plant Materials Harvesting

Hi Mita, Darrell, and Eric,

I am working with Amy Hull in my branch on an effort associated with strategic harvesting of ex-plant materials. This effort is just getting underway, but we would like to present the concept at an NRC-industry materials meeting in early June (see attached email). The purpose of this effort is to develop a more systematic proactive "strategic" approach to ex-plant material harvesting, rather than the more reactive opportunistic approach to date. It is important to share this

concept with industry, since they will be vital in providing connections/communication to allow future harvesting projects to take place.

I am putting together a slide or two on the reactor internals materials harvesting project at Zorita that I am involved with. I understand each of you have been / are involved with other harvesting efforts at Zion and Zorita on cables, concrete, and neutron absorbers. If you could just provide a slide or two with a high-level overview of the harvesting project and at least briefly touch on how the harvesting opportunity came together, that would be great.

Thanks!
Matt

From: Hiser, Matthew
Sent: Thu, 21 May 2015 19:51:01 +0000
To: Focht, Eric;Murdock, Darrell;Sircar, Madhumita
Cc: Hull, Amy
Subject: RE: Ex-Plant Materials Harvesting
Attachments: Harvesting Efforts Hiser June NRC-Industry materials mtg.pptx [Autosaved].pptx

Note to requester: Attachment is immediately following.

Hi All,

Here is the current draft of the presentation. Can you fill in the relevant information for your projects on slides 7-9? Amy, can you fill in your slides as appropriate related to approach and engagement?

Thanks!
Matt

Matthew Hiser
Materials Engineer
Corrosion and Metallurgy Branch
Division of Engineering
Office of Nuclear Regulatory Research
301-251-7601

From: Hiser, Matthew
Sent: Friday, May 15, 2015 8:21 AM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: Ex-Plant Materials Harvesting

Hi Mita, Darrell, and Eric,

I am working with Amy Hull in my branch on an effort associated with strategic harvesting of ex-plant materials. This effort is just getting underway, but we would like to present the concept at an NRC-industry materials meeting in early June (see attached email). The purpose of this effort is to develop a more systematic proactive "strategic" approach to ex-plant material harvesting, rather than the more reactive opportunistic approach to date. It is important to share this concept with industry, since they will be vital in providing connections/communication to allow future harvesting projects to take place.

I am putting together a slide or two on the reactor internals materials harvesting project at Zorita that I am involved with. I understand each of you have been / are involved with other harvesting efforts at Zion and Zorita on cables, concrete, and neutron absorbers. If you could just provide a slide or two with a high-level overview of the harvesting project and at least briefly touch on how the harvesting opportunity came together, that would be great.

Thanks!
Matt

Strategic Approach for Obtaining Material and Component Aging Information

Amy Hull and Matthew Hiser
Division of Engineering
Office of Nuclear Regulatory Research

Outline

- Purpose
- Background
- Harvesting Experience
- Approach
- Engagement with Other Stakeholders

Purpose

- Create a framework for a strategic approach to harvesting ex-plant materials
  - Ex-plant materials offer unique environmental exposure that cannot be entirely replicated by laboratory testing with fresh materials
- Combine high priority data needs identified in SLR/LTO activities with harvesting opportunities from decommissioning plants

Background

- To date, harvesting opportunities have been limited due to few decommissioning plants
  - Zion in U.S., Zorita in Spain
- However, several U.S. plants have already shut down or are planning to do so in the near future
  - Kewaunee, SONGS, Crystal River, Vermont Yankee, Oyster Creek
- This provides a unique opportunity to plan harvesting for the maximum utility to address the highest priority technical issues

Harvesting Experience

- Past harvesting efforts have generally involved a reactive decision-making process
  - Limited opportunities to acquire ex-plant materials
  - Limited strategic planning for harvesting
- Harvesting projects with NRC involvement:
  - Reactors internal materials from Zorita
  - Concrete from Zorita
  - Neutron absorber material from Zion
  - Cables from Zion and Crystal River

Zorita Internals Research

- **Materials Harvested**:
  - Baffle plate and core barrel weld materials
- **Scope**:
  - Mechanical testing (tensile, CGR, FT)
  - Microstructural characterization (void swelling)
- **Purpose**:
  - High-fluence (up to 50 dpa) IAD effects with representative LWR exposure conditions
- **Timeline**:
  - Initial discussions in 2006, harvesting in 2013, testing ongoing
- **Coordination**:
  - EPRI, international consortium, Studsvik, Halden

Concrete from Zorita

- **Materials Harvested**:
- **Scope**:
- **Purpose**:
- **Timeline**:
  - Initial discussions in ????, harvesting in ????, testing ????
- **Coordination**:
  - EPRI, ????

Neutron Absorbers from Zion

- **Materials Harvested**:
- **Scope**:
- **Purpose**:
- **Timeline**:
  - Initial discussions in ????, harvesting in ????, testing ????
- **Coordination**:
  - EPRI, ????

Cables from Zion and Crystal River

- **Materials Harvested**:
  - Cables (high / low voltage??)
- **Scope**:
  - Condition monitoring to assess cable performance under normal operating conditions (accelerated aging) and accident conditions
- **Purpose**:
  - Cable degradation due to normal operating environment and accident conditions
- **Timeline**:
  - Initial discussions in ????, harvesting in 2013, testing ongoing
- **Coordination**:
  - ORNL, Zion Solutions, NIST, EPRI

Approach

Stakeholder Engagement

Acknowledgements

- Robert Tregoning, RES/DE
- Eric Focht, RES/DE
- Darrell Murdock, RES/DE
- Mita Sircar, RES/DE

From: Hiser, Matthew
Sent: Thu, 27 Oct 2016 16:58:39 +0000
To: Frankl, Istvan
Subject: RE: Ex-Plant Materials Harvesting meeting

Hi Steve,

I don't think we need to engage DLR for this activity. I think we should keep them in the loop, but for domestic participants from industry working through EPRI is probably the right approach.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Frankl, Istvan
Sent: Wednesday, October 26, 2016 5:38 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

Thanks a lot Matt!

Hope we get lots of speakers/participants from overseas.

Is there a need to engage DLR with soliciting domestic participation from licensees as well as decommissioning companies, perhaps through EPRI/NEI as well?

Steve

From: Hiser, Matthew
Sent: Wednesday, October 26, 2016 2:25 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: NRC Harvesting Workshop.docx >>
Hi All,

OK, Rob helped me share this announcement/dates with DOE and EPRI. The feedback we received is that their preference would be to hold this workshop the week before RIC on March 7-8 (Tues/Wed) before the ACRS full committee meeting on the GALL SLR on Thursday, March 9.

I have gone ahead and reserved the TWFN Auditorium on those dates and updated the announcement to indicate the workshop will be held on March 7-8.

The next step is that Rob will share this announcement of the workshop to be held on March 7-8, 2017 with his international counterparts at CSNI as well as GRS (Germany) for the right contacts for international participation.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Tuesday, October 18, 2016 12:29 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Announcement 10-17-16 .docx >>
Here is the latest harvesting workshop announcement. I incorporated input from Pat and narrowed the dates (eliminated the week before RIC option) per discussion with Rob.

Please take one last look and then we can use this to reach out to DOE/EPRI and international participants.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Friday, October 07, 2016 8:31 AM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Announcement.docx >>
Hi Rob, Pat, and Steve,

Please find attached a draft announcement for the harvesting workshop. I left in all the date options, but I think we really should focus on the week of RIC (March 16-17) based on the feedback I have heard from discussing this with people.

Please give any comments and edits and we can start publicizing this beyond NRC.

Thanks!
Matt

From: Hiser, Matthew
Sent: Tuesday, September 27, 2016 1:03 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Plan 9-27-16.docx >>

Hi Steve,

I have attached my updates to the one-pager per the feedback from the meeting this morning.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

-----Original Appointment-----
From: Vera, Graciela
Sent: Friday, September 16, 2016 12:14 PM
To: Vera, Graciela; Brock, Kathryn; RES_DE_Cal Resource; Thomas, Brian; Frankl, Istvan; Tregoning, Robert; Purtscher, Patrick; Hiser, Matthew
Subject: Ex-Plant Materials Harvesting meeting
When: Tuesday, September 27, 2016 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: TWFN-07B01

Note to requester: Attachment is immediately following. The box with the red X in the first email is the Word attachment (Word icon and the file name) imbedded into the body of the email.

From: Hiser, Matthew
Sent: Wed, 26 Oct 2016 18:25:06 +0000
To: Frankl, Istvan;Tregoning, Robert;Purtscher, Patrick
Subject: RE: Ex-Plant Materials Harvesting meeting
Attachments: NRC Harvesting Workshop.docx

Hi All,

OK, Rob helped me share this announcement/dates with DOE and EPRI. The feedback we received is that their preference would be to hold this workshop the week before RIC on March 7-8 (Tues/Wed) before the ACRS full committee meeting on the GALL SLR on Thursday, March 9.

I have gone ahead and reserved the TWFN Auditorium on those dates and updated the announcement to indicate the workshop will be held on March 7-8.

The next step is that Rob will share this announcement of the workshop to be held on March 7-8, 2017 with his international counterparts at CSNI as well as GRS (Germany) for the right contacts for international participation.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Tuesday, October 18, 2016 12:29 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Announcement 10-17-16 .docx >>
Here is the latest harvesting workshop announcement. I incorporated input from Pat and narrowed the dates (eliminated the week before RIC option) per discussion with Rob.

Please take one last look and then we can use this to reach out to DOE/EPRI and international participants.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Friday, October 07, 2016 8:31 AM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Announcement.docx >>
Hi Rob, Pat, and Steve,

Please find attached a draft announcement for the harvesting workshop. I left in all the date options, but I think we really should focus on the week of RIC (March 16-17) based on the feedback I have heard from discussing this with people.

Please give any comments and edits and we can start publicizing this beyond NRC.

Thanks!
Matt

From: Hiser, Matthew
Sent: Tuesday, September 27, 2016 1:03 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Plan 9-27-16.docx >>

Hi Steve,

I have attached my updates to the one-pager per the feedback from the meeting this morning.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

-----Original Appointment-----
From: Vera, Graciela
Sent: Friday, September 16, 2016 12:14 PM
To: Vera, Graciela; Brock, Kathryn; RES_DE_Cal Resource; Thomas, Brian; Frankl, Istvan; Tregoning, Robert; Purtscher, Patrick; Hiser, Matthew
Subject: Ex-Plant Materials Harvesting meeting
When: Tuesday, September 27, 2016 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: TWFN-07B01

Ex-Plant Materials Harvesting Workshop

Location: NRC HQ in Rockville, MD

Dates: March 7-8, 2017

Motivation:

- There are increasing opportunities to harvest the safety-critical components from decommissioning plants, both domestic and international.
- The harvested materials are valuable because they have been exposed to actual in-service plant operating conditions (temperature, irradiation, coolant, etc.), unlike virgin materials tested under simulated conditions in the lab.
- Data from ex-plant materials should help address technical gaps identified for extended operation of nuclear power plants due to highly relevant aging conditions.

Purpose and Objective:

- For NRC staff and interested stakeholders to have greater awareness and knowledge of the benefits and challenges associated with ex-plant harvesting.
- Facilitate contacts and communication to enable specific cooperative ex-plant harvesting programs to be initiated.

Workshop Topics:

- Harvesting decision-making and prioritization
    - Technical data needs best addressed by harvesting
    - Technical information needed in advance of harvesting
- Sources of materials:
    - Decommissioning reactors
    - Operating reactors – replaced components
    - Previous harvesting programs – "boneyards"
    - Tracking available materials
- Harvesting process
    - Lessons learned from harvesting experience
    - Perspective of utility-owner and decommissioning contractor on harvesting
    - Communication and coordination between decommissioning and researchers
- International collaborative programs on specific components at specific plants

Note to requester: Attachment is immediately following. The box with the red X in the first email is the Word attachment (Word icon and the file name) imbedded into the body of the email.

From: Hiser, Matthew
Sent: Thu, 20 Oct 2016 19:57:18 +0000
To: Frankl, Istvan
Subject: RE: Ex-Plant Materials Harvesting meeting
Attachments: Harvesting Workshop Announcement 10-20-16 .docx

How does this look Steve? I think it is equally applicable to both domestic and international plants…

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Frankl, Istvan
Sent: Thursday, October 20, 2016 2:04 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

Matt,

Your generic bullet is fine but you may want to add bullet(s) on why industry and regulators would be interested in harvesting? In the US, the benefits of harvesting are reasonably understood, i.e. supporting and reviewing SLR applications but what would the international benefits be for foreign applicants, decommissioning companies and regulators? I think addressing/clarifying the domestic as well as international benefits under the Merits section would make the call for participation in the workshop stronger.

Thanks,

Steve

From: Hiser, Matthew
Sent: Wednesday, October 19, 2016 10:08 AM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

Hi Steve,

I thought this bullet addressed that point generically for both domestic and international parties:

- The harvested materials are valuable because they have been exposed to actual in-service plant operating conditions (temperature, irradiation, coolant, etc.), unlike virgin materials tested under simulated conditions in the lab.

I'm not sure what other details to add given this is just a 1-page workshop announcement. If you have some additional language or details to offer, I am more than happy to add them.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Frankl, Istvan
Sent: Wednesday, October 19, 2016 8:47 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

Thanks Matt,

The Motivation section needs to be strengthened. What would motivate US entities or international partners to embark on harvesting ex-plant materials, a potential expensive and logistically complicated undertaking? Since domestic and international drivers are different (the licensing frameworks are different, SLR is unique in the US), this section should address topics that would "motivate" domestic as well as international entities to participate in the workshop .

Steve

From: Hiser, Matthew

Sent: Tuesday, October 18, 2016 12:29 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Announcement 10-17-16 .docx >>
Here is the latest harvesting workshop announcement. I incorporated input from Pat and narrowed the dates (eliminated the week before RIC option) per discussion with Rob.

Please take one last look and then we can use this to reach out to DOE/EPRI and international participants.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Friday, October 07, 2016 8:31 AM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Announcement.docx >>
Hi Rob, Pat, and Steve,

Please find attached a draft announcement for the harvesting workshop. I left in all the date options, but I think we really should focus on the week of RIC (March 16-17) based on the feedback I have heard from discussing this with people.

Please give any comments and edits and we can start publicizing this beyond NRC.

Thanks!
Matt

From: Hiser, Matthew
Sent: Tuesday, September 27, 2016 1:03 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Plan 9-27-16.docx >>

Hi Steve,

I have attached my updates to the one-pager per the feedback from the meeting this morning.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

-----Original Appointment-----
From: Vera, Graciela
Sent: Friday, September 16, 2016 12:14 PM
To: Vera, Graciela; Brock, Kathryn; RES_DE_Cal Resource; Thomas, Brian; Frankl, Istvan; Tregoning, Robert; Purtscher, Patrick; Hiser, Matthew
Subject: Ex-Plant Materials Harvesting meeting
When: Tuesday, September 27, 2016 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: TWFN-07B01

Ex-Plant Materials Harvesting Workshop

Location: NRC HQ in Rockville, MD

Potential Dates:

- March 16-17, 2017 – Thursday/Friday of RIC week
- March 20-21, 2017 – Monday/Tuesday after RIC

Motivation:

- There are increasing opportunities to harvest the safety-critical components from decommissioning plants, both domestic and international.
- The harvested materials are valuable because they have been exposed to actual in-service plant operating conditions (temperature, irradiation, coolant, etc.), unlike virgin materials tested under simulated conditions in the lab.
- Data from ex-plant materials should help address technical gaps identified for extended operation of nuclear power plants due to highly relevant aging conditions.

Purpose and Objective:

- For NRC staff and interested stakeholders to have greater awareness and knowledge of the benefits and challenges associated with ex-plant harvesting.
- Facilitate contacts and communication to enable specific cooperative ex-plant harvesting programs to be initiated.

Workshop Topics:

- Harvesting decision-making and prioritization
    - Technical data needs best addressed by harvesting
    - Technical information needed in advance of harvesting
- Sources of materials:
    - Decommissioning reactors
    - Operating reactors – replaced components
    - Previous harvesting programs – "boneyards"
    - Tracking available materials
- Harvesting process
    - Lessons learned from harvesting experience
    - Perspective of utility-owner and decommissioning contractor on harvesting
    - Communication and coordination between decommissioning and researchers
- International collaborative programs on specific components at specific plants

Note to requester: Attachment is immediately following. The box with the red X in the first email is the Word attachment (Word icon and the file name) imbedded into the body of the email.

From: Hiser, Matthew
Sent: Tue, 18 Oct 2016 16:28:53 +0000
To: Frankl, Istvan;Tregoning, Robert;Purtscher, Patrick
Subject: RE: Ex-Plant Materials Harvesting meeting
Attachments: Harvesting Workshop Announcement 10-17-16 .docx

Here is the latest harvesting workshop announcement. I incorporated input from Pat and narrowed the dates (eliminated the week before RIC option) per discussion with Rob.

Please take one last look and then we can use this to reach out to DOE/EPRI and international participants.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Friday, October 07, 2016 8:31 AM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Announcement.docx >>
Hi Rob, Pat, and Steve,

Please find attached a draft announcement for the harvesting workshop. I left in all the date options, but I think we really should focus on the week of RIC (March 16-17) based on the feedback I have heard from discussing this with people.

Please give any comments and edits and we can start publicizing this beyond NRC.

Thanks!
Matt

_____

From: Hiser, Matthew
Sent: Tuesday, September 27, 2016 1:03 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Plan 9-27-16.docx >>

Hi Steve,

I have attached my updates to the one-pager per the feedback from the meeting this morning.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

-----Original Appointment-----
From: Vera, Graciela
Sent: Friday, September 16, 2016 12:14 PM
To: Vera, Graciela; Brock, Kathryn; RES_DE_Cal Resource; Thomas, Brian; Frankl, Istvan; Tregoning, Robert; Purtscher, Patrick; Hiser, Matthew
Subject: Ex-Plant Materials Harvesting meeting
When: Tuesday, September 27, 2016 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: TWFN-07B01

Ex-Plant Materials Harvesting Workshop

Location: NRC HQ in Rockville, MD

Potential Dates:

- March 16-17, 2017 – Thursday/Friday of RIC week
- March 20-21, 2017 – Monday/Tuesday after RIC

Motivation:

- There are increasing opportunities to harvest the safety-critical components from decommissioning plants, both domestic and international.
- The harvested materials are valuable because they have been exposed to actual in-service plant operating conditions (temperature, irradiation, coolant, etc.), unlike virgin materials tested under simulated conditions in the lab.

Purpose and Objective:

- For NRC staff and interested stakeholders to have greater awareness and knowledge of the benefits and challenges associated with ex-plant harvesting.
- Facilitate contacts and communication to enable specific cooperative ex-plant harvesting programs to be initiated.

Workshop Topics:

- Harvesting decision-making and prioritization
    - Technical data needs best addressed by harvesting
    - Technical information needed in advance of harvesting
- Sources of materials:
    - Decommissioning reactors
    - Operating reactors – replaced components
    - Previous harvesting programs – "boneyards"
    - Tracking available materials
- Harvesting process
    - Lessons learned from harvesting experience
    - Perspective of utility-owner and decommissioning contractor on harvesting
    - Communication and coordination between decommissioning and researchers
- International collaborative programs on specific components at specific plants

Note to requester:
Attachment is immediately following. The box with the red X in the first email is the Word attachment (Word icon and the file name) imbedded into the body of the email.

From: Hiser, Matthew
Sent: Fri, 7 Oct 2016 12:31:22 +0000
To: Frankl, Istvan;Tregoning, Robert;Purtscher, Patrick
Subject: RE: Ex-Plant Materials Harvesting meeting
Attachments: Harvesting Workshop Announcement.docx

Hi Rob, Pat, and Steve,

Please find attached a draft announcement for the harvesting workshop. I left in all the date options, but I think we really should focus on the week of RIC (March 16-17) based on the feedback I have heard from discussing this with people.

Please give any comments and edits and we can start publicizing this beyond NRC.

Thanks!
Matt

From: Hiser, Matthew
Sent: Tuesday, September 27, 2016 1:03 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Plan 9-27-16.docx >>

Hi Steve,

I have attached my updates to the one-pager per the feedback from the meeting this morning.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

-----Original Appointment-----
From: Vera, Graciela
Sent: Friday, September 16, 2016 12:14 PM
To: Vera, Graciela; Brock, Kathryn; RES_DE_Cal Resource; Thomas, Brian; Frankl, Istvan; Tregoning, Robert; Purtscher, Patrick; Hiser, Matthew
Subject: Ex-Plant Materials Harvesting meeting
When: Tuesday, September 27, 2016 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: TWFN-07B01

Ex-Plant Materials Harvesting Workshop

Location: NRC HQ in Rockville, MD

Potential Dates:

- March 9-10, 2017 – Thursday/Friday before RIC
- March 16-17, 2017 – Thursday/Friday of RIC week
- March 20-21, 2017 – Monday/Tuesday after RIC

Motivation:

- With a number of plants shutting down both in the U.S. and internationally, there are increasing opportunities to harvest components from decommissioning plants.
- Ex-plant materials are valuable because they have been exposed to actual in-service plant operating conditions (temperature, irradiation, coolant, etc.), unlike virgin materials tested under simulated conditions in the lab, which reduces the uncertainty associated with the applicability of the aging conditions.

Purpose and Objective:

- For NRC staff and interested stakeholders to have greater awareness and knowledge of the benefits and challenges associated with ex-plant harvesting.
- Facilitate contacts and communication to enable specific cooperative ex-plant harvesting programs to be initiated.

Workshop Topics:

- Harvesting decision-making and prioritization
    - Technical data needs best addressed by harvesting
    - Technical information needed in advance of harvesting
- Sources of materials:
    - Decommissioning reactors
    - Operating reactors – replaced or failed components
    - Previous harvesting programs – "boneyards"
    - Tracking available materials
- Harvesting process
    - Lessons learned from harvesting experience
    - Perspective of utility-owner and decommissioning contractor on harvesting
    - Communication and coordination between decommissioning and researchers
- International collaborative programs on specific components at specific plants

Note to requester: Attachment is immediately following. The box with the red X in the first email is the Word attachment (Word icon and the file name) imbedded into the body of the email.

From: Hiser, Matthew
Sent: Tue, 27 Sep 2016 17:02:41 +0000
To: Frankl, Istvan;Tregoning, Robert;Purtscher, Patrick
Subject: RE: Ex-Plant Materials Harvesting meeting
Attachments: Harvesting Workshop Plan 9-27-16.docx

Hi Steve,

I have attached my updates to the one-pager per the feedback from the meeting this morning.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

-----Original Appointment-----
From: Vera, Graciela
Sent: Friday, September 16, 2016 12:14 PM
To: Vera, Graciela; Brock, Kathryn; RES_DE_Cal Resource; Thomas, Brian; Frankl, Istvan; Tregoning, Robert; Purtscher, Patrick; Hiser, Matthew
Subject: Ex-Plant Materials Harvesting meeting
When: Tuesday, September 27, 2016 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: TWFN-07B01

Ex-Plant Materials Harvesting Workshop

Motivation:

- With the wave of plants shutting down both in the U.S. and Europe, there are increasing opportunities to harvest components from decommissioning plants. Ex-plant materials are valuable because they have been exposed to actual in-service plant operating conditions (temperature, irradiation, coolant, etc.), unlike virgin materials tested under simulated conditions in the lab, which reduces the uncertainty associated with the applicability of the aging conditions.
- Insights from ex-plant harvesting research would support regulatory decisions for subsequent license renewal (SLR), and could have implications for the current license period depending on the findings.
- There is a task in the new draft UNR for SLR from NRR/DLR requesting RES to investigate opportunities for harvesting where appropriate.

Purpose and Objective:

- For NRC staff and interested stakeholders to have greater awareness and knowledge of the benefits and challenges associated with ex-plant harvesting.
- Facilitate contacts and communication to enable specific cooperative ex-plant harvesting programs to be initiated, leveraging limited NRC resources to produce highly representative technical data of materials degradation for extended plant operation.

Approach:

- NRC staff host a 2-day workshop with interested stakeholders, including domestic and international utilities and research organizations, to discuss benefits and challenges associated with ex-plant harvesting.
- Format will include sessions with time for presentations and open discussion of different aspects of ex-plant materials harvesting.
- Views and insights from domestic and international regulators (JNRA), researchers (DOE, SCK-CEN in Belgium), industry (EPRI, utilities), and decommissioning companies' experience will be encouraged.
- Single talk given at relevant RIC session to disseminate ex-plant harvesting effort and encourage participation in workshop.

Intended Outcome:

- NRC staff and stakeholders are better informed of the benefits and challenges associated with ex-plant harvesting.
- Contacts are made with domestic and international utilities and researchers to allow for further discussion of specific cooperative research projects that may address technical data gaps associated with materials degradation that can be best addressed through ex-plant harvesting.

Potential Dates:

- March 9-10, 2017 – Thursday/Friday before RIC
- March 16-17, 2017 – Thursday/Friday of RIC week
- March 20-21, 2017 – Monday/Tuesday after RIC

Discussion Topics:

- Harvesting decision-making / prioritization
  - Technical data needs best addressed by harvesting
  - Technical information needed in advance of harvesting
- Sources of materials:
  - Decommissioning reactors
  - Operating reactors – replaced or failed components
  - Previous harvesting programs – “boneyards”
  - Tracking available materials
- Harvesting process
  - Lessons learned from harvesting experience
  - Perspective of utility-owner and decommissioning contractor on harvesting
  - Communication and coordination between decommissioning and researchers
- International collaborative programs on specific components at specific plants

From: Hiser, Matthew
Sent: Mon, 26 Sep 2016 19:49:18 +0000
To: Frankl, Istvan
Subject: RE: Ex-Plant Materials Harvesting meeting

Hi Steve,

Absolutely – many good ideas and insights both from the meeting and the follow-up email, but nothing that impacts the materials we need to brief Brian.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Frankl, Istvan
Sent: Monday, September 26, 2016 1:28 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

Any feedback and lessons learned from our alignment meeting with NRR held on September 19?

Steve

From: Hiser, Matthew
Sent: Monday, September 26, 2016 11:44 AM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>
Cc: Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Plan.docx >>
Hi Steve,

I did not receive any input from last week's meeting that would change the previous one-pager, so here is the same one we used to brief Kathy a few weeks back.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Frankl, Istvan
Sent: Friday, September 23, 2016 5:32 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Cc: Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting
Importance: High

Matt,

Please have draft one-pager (and/or POP or presentation) ready for my review by noon Monday.

Thanks,

Steve

-----Original Appointment-----
From: Vera, Graciela
Sent: Friday, September 16, 2016 12:14 PM
To: Vera, Graciela; Brock, Kathryn; RES_DE_Cal Resource; Thomas, Brian; Frankl, Istvan; Tregoning, Robert; Purtscher, Patrick; Hiser, Matthew
Subject: Ex-Plant Materials Harvesting meeting
When: Tuesday, September 27, 2016 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: TWFN-07B01

Note to requester: Attachment is immediately following. The box with the red X in the first email is the Word attachment (Word icon and the file name) imbedded into the body of the email.

From: Hiser, Matthew
Sent: Mon, 26 Sep 2016 15:43:32 +0000
To: Frankl, Istvan
Cc: Purtscher, Patrick
Subject: RE: Ex-Plant Materials Harvesting meeting
Attachments: Harvesting Workshop Plan.docx

Hi Steve,

I did not receive any input from last week's meeting that would change the previous one-pager, so here is the same one we used to brief Kathy a few weeks back.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Frankl, Istvan
Sent: Friday, September 23, 2016 5:32 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Cc: Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting
Importance: High

Matt,

Please have draft one-pager (and/or POP or presentation) ready for my review by noon Monday.

Thanks,

Steve

-----Original Appointment-----
From: Vera, Graciela

Sent: Friday, September 16, 2016 12:14 PM
To: Vera, Graciela; Brock, Kathryn; RES_DE_Cal Resource; Thomas, Brian; Frankl, Istvan; Tregoning, Robert; Purtscher, Patrick; Hiser, Matthew
Subject: Ex-Plant Materials Harvesting meeting
When: Tuesday, September 27, 2016 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US & Canada).
Where: TWFN-07B01

Ex-Plant Materials Harvesting Workshop

Purpose and Objective:

- For NRC staff and interested stakeholders to have greater awareness and knowledge of the benefits and challenges associated with ex-plant harvesting.
- Facilitate contacts and communication to enable specific cooperative ex-plant harvesting programs to be initiated, leveraging limited NRC resources to produce highly representative technical data of materials degradation for extended plant operation.

Approach:

- NRC staff host a 2-day workshop with interested stakeholders, including domestic and international utilities and research organizations, to discuss benefits and challenges associated with ex-plant harvesting.
- Format will include sessions with time for presentations and open discussion of different aspects of ex-plant materials harvesting.
- Views and insights from domestic and international regulators, researchers, industry, and decommissioning companies' experience will be encouraged.

Intended Outcome:

- NRC staff and stakeholders are better informed of the benefits and challenges associated with ex-plant harvesting.
- Contacts are made with domestic and international utilities and researchers to allow for further discussion of specific cooperative research projects that may address technical data gaps associated with materials degradation that can be best addressed through ex-plant harvesting.

Potential Dates:

- March 9-10, 2017 – Thursday/Friday before RIC
- March 16-17, 2017 – Thursday/Friday of RIC week
- March 20-21, 2017 – Monday/Tuesday after RIC

Discussion Topics:

- Harvesting decision-making / prioritization
    - Technical data needs best addressed by harvesting
    - Technical information needed in advance of harvesting
- Sources of materials:
    - Decommissioning reactors
    - Operating reactors – replaced or failed components
    - Previous harvesting programs – "boneyards"
    - Tracking available materials
- Harvesting process
    - Lessons learned from harvesting experience
    - Perspective of utility-owner and decommissioning contractor on harvesting
    - Communication and coordination between decommissioning and researchers

From: Frankl, Istvan
Sent: Fri, 21 Oct 2016 08:53:21 -0400
To: Hiser, Matthew
Subject: RE: Ex-Plant Materials Harvesting meeting

That's pretty good.

Thanks,

Steve

From: Hiser, Matthew
Sent: Thursday, October 20, 2016 3:57 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Announcement 10-20-16 .docx >>
How does this look Steve? I think it is equally applicable to both domestic and international plants…

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Frankl, Istvan
Sent: Thursday, October 20, 2016 2:04 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

Matt,

Your generic bullet is fine but you may want to add bullet(s) on why industry and regulators would be interested in harvesting? In the US, the benefits of harvesting are reasonably understood, i.e. supporting and reviewing SLR applications but what would the international benefits be for foreign applicants, decommissioning companies and regulators? I think

addressing/clarifying the domestic as well as international benefits under the Merits section would make the call for participation in the workshop stronger.

Thanks,

Steve

From: Hiser, Matthew
Sent: Wednesday, October 19, 2016 10:08 AM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

Hi Steve,

I thought this bullet addressed that point generically for both domestic and international parties:

- The harvested materials are valuable because they have been exposed to actual in-service plant operating conditions (temperature, irradiation, coolant, etc.), unlike virgin materials tested under simulated conditions in the lab.

I'm not sure what other details to add given this is just a 1-page workshop announcement. If you have some additional language or details to offer, I am more than happy to add them.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Frankl, Istvan
Sent: Wednesday, October 19, 2016 8:47 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

Thanks Matt,

The Motivation section needs to be strengthened. What would motivate US entities or international partners to embark on harvesting ex-plant materials, a potential expensive and logistically complicated undertaking? Since domestic and international drivers are different (the licensing frameworks are different, SLR is unique in the US), this section should address topics that would "motivate" domestic as well as international entities to participate in the workshop .

Steve

From: Hiser, Matthew
Sent: Tuesday, October 18, 2016 12:29 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Announcement 10-17-16 .docx >>
Here is the latest harvesting workshop announcement. I incorporated input from Pat and narrowed the dates (eliminated the week before RIC option) per discussion with Rob.

Please take one last look and then we can use this to reach out to DOE/EPRI and international participants.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Friday, October 07, 2016 8:31 AM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Announcement.docx >>

Hi Rob, Pat, and Steve,

Please find attached a draft announcement for the harvesting workshop. I left in all the date options, but I think we really should focus on the week of RIC (March 16-17) based on the feedback I have heard from discussing this with people.

Please give any comments and edits and we can start publicizing this beyond NRC.

Thanks!
Matt

From: Hiser, Matthew
Sent: Tuesday, September 27, 2016 1:03 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: Ex-Plant Materials Harvesting meeting

<< File: Harvesting Workshop Plan 9-27-16.docx >>

Hi Steve,

I have attached my updates to the one-pager per the feedback from the meeting this morning.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

-----Original Appointment-----
From: Vera, Graciela
Sent: Friday, September 16, 2016 12:14 PM
To: Vera, Graciela; Brock, Kathryn; RES_DE_Cal Resource; Thomas, Brian; Frankl, Istvan; Tregoning, Robert; Purtscher, Patrick; Hiser, Matthew
Subject: Ex-Plant Materials Harvesting meeting
When: Tuesday, September 27, 2016 10:00 AM-11:00 AM (UTC-05:00) Eastern Time (US &

Canada).
Where: TWFN-07B01

From: Hiser, Matthew
Sent: Fri, 8 Sep 2017 15:10:55 +0000
To: Sircar, Madhumita
Subject: RE: Ex-plant Materials Harvesting Workshop

Thanks Mita!

From: Sircar, Madhumita
Sent: Friday, September 08, 2017 10:02 AM
To: Hiser, Matthew
Subject: RE: Ex-plant Materials Harvesting Workshop

Matt,

I have received the report from EPRI.

Mita

From: Hiser, Matthew
Sent: Friday, September 08, 2017 9:30 AM
To: Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Hi Mita,

I am finalizing this report after receiving feedback from Rob. One of the action items was related to your question about boric acid attack on concrete: "EPRI report on spent fuel liner boric acid transport through concrete. NRC will contact EPRI for report if there is interest in obtaining this report."

EPRI indicated they had recently published a report on the topic that indicated it is not an issue. Here's what a quick search on EPRI's website turned up for me:

https://www.epri.com/#/pages/product/1025166/

https://www.epri.com/#/pages/product/3002007348/

Did you get what you needed from EPRI on this topic or do you still want / need to reach out to them?

Thanks!
Matt

From: Hiser, Matthew
Sent: Monday, August 28, 2017 6:57 AM

To: Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Sounds good Mita!

From: Sircar, Madhumita
Sent: Sunday, August 27, 2017 9:18 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: Re: Ex-plant Materials Harvesting Workshop

Hi Matt,
I planned to review it on Friday. However, I needed (b)(6) on Friday.
I plan to do it tomorrow if that works for you.
Thanks,
Mita

From: Hiser, Matthew
Sent: Friday, August 25, 2017 10:14 AM
To: Tregoning, Robert; Sircar, Madhumita
Subject: RE: Ex-plant Materials Harvesting Workshop

Reminder to provide any comments by today before we finalize this meeting summary.

From: Hiser, Matthew
Sent: Thursday, August 17, 2017 12:31 PM
To: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Hi Rob and Mita,

Here is the latest version of the workshop report. Please take a look and provide any feedback by next Friday, August 25 before I finalize it at the end of the month.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Thursday, June 22, 2017 3:20 PM

To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; 'Jackson, John Howard' <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>; 'Amberge, Kyle' <kamberge@epri.com>; Moyer, Carol <Carol.Moyer@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Poehler, Jeffrey <Jeffrey.Poehler@nrc.gov>; Hiser, Allen <Allen.Hiser@nrc.gov>; Yoo, Mark <Mark.Yoo@nrc.gov>; Koshy, Thomas <Thomas.Koshy@nrc.gov>; Buford, Angela <Angela.Buford@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>; Hull, Amy <Amy.Hull@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

I have received input from a couple participants. This is a gentle reminder to please provide any input on the report by next Friday, June 30.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Wednesday, May 31, 2017 4:21 PM
To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp'

<arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; 'Jackson, John Howard' <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>; 'Amberge, Kyle' <kamberge@epri.com>; Moyer, Carol <Carol.Moyer@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Poehler, Jeffrey <Jeffrey.Poehler@nrc.gov>; Hiser, Allen <Allen.Hiser@nrc.gov>; Yoo, Mark <Mark.Yoo@nrc.gov>; Koshy, Thomas <Thomas.Koshy@nrc.gov>; Buford, Angela <Angela.Buford@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>; Hull, Amy <Amy.Hull@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Dear Workshop Participants:

I would like to share for your review and comment the workshop summary report (attached). In the report, we tried to capture as much of the discussion as possible, while focusing on the key takeaways that might be useful for all participants as they consider harvesting in the future. In particular, please review how your presentation and contribution to the discussion is characterized, in case you feel it should be clarified in any way. Feel free to provide additional references to previous research on harvested materials that should be captured in this report. Comments, edits, and suggestions on any other parts of the report are welcome.

Please provide your input by June 30 at the latest and we will try to finalize the report by sometime in July.

As indicated in action items 4 and 5, we will be pursuing further coordination efforts on data needs for harvesting and a sources of materials database and welcome any other parties that may be interested in participating in these discussions.

Thank you once again for your participation and engagement in this workshop!

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Friday, March 17, 2017 8:39 AM

To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; 'Jackson, John Howard' <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>; 'Amberge, Kyle' <kamberge@epri.com>; Hull, Amy <Amy.Hull@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Poehler, Jeffrey <Jeffrey.Poehler@nrc.gov>; Hiser, Allen <Allen.Hiser@nrc.gov>; Yoo, Mark <Mark.Yoo@nrc.gov>; Koshy, Thomas <Thomas.Koshy@nrc.gov>; Buford, Angela <Angela.Buford@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Dear Workshop Participants:

I have attached a list of participants in last week's workshop, along with their email for contact.

Also, I have not received any concerns from the presenters regarding sharing slides, so feel free to share the slides, which are available on Google Drive:
https://drive.google.com/open?id=0B5DWMLch5YSXcnpZZ0JOS055QUU .

We hope to share a detailed workshop summary report in the next two months.

Thanks!
Matt

From: Hiser, Matthew
Sent: Friday, March 10, 2017 7:03 AM
To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp'

<arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; 'Jackson, John Howard' <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>; 'Amberge, Kyle' <kamberge@epri.com>; Hull, Amy <Amy.Hull@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Poehler, Jeffrey <Jeffrey.Poehler@nrc.gov>; Hiser, Allen <Allen.Hiser@nrc.gov>; Yoo, Mark <Mark.Yoo@nrc.gov>; Koshy, Thomas <Thomas.Koshy@nrc.gov>; Buford, Angela <Angela.Buford@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Dear Workshop Participants:

Thank you for attending and participating in the workshop this week. I appreciate your active participation in what was a very interesting and informative discussion. I hope you were able to come away from the meeting with a better understanding of how to approach harvesting and what to expect in terms of cost, schedule, complexity, challenges, etc.

NRC will be developing a workshop summary report to be shared among meeting participants. We have also placed all of the presentations into a Google Drive folder for sharing among meeting participants (https://drive.google.com/open?id=0B5DWMLch5YSXcnpZZ0JOS055QUU).

I have laid out the action items and planned next steps to address each item below:

1. Sharing workshop slides (Ahluwalia)
    a. **Next step**: Presenters, please reply to this email if you have any concerns with meeting participants sharing your slides with colleagues or other organizations. If I don't hear from you, we'll assume you're OK with sharing.
2. MRP-320 (Product ID: 1022866) on harvesting from MRP-227 inspections
    a. Available to public for fee
3. Cable surveillance programs in Germany
    a. **Next step**: GRS (Jendrich) to inquire with cable colleagues and share
4. Sources of Materials database
    a. **Next step**: Opportunities presented in this meeting to be documented in workshop summary.
    b. **Next step**: AECL, CNSC, NRC, PNNL, INL NSUF interested in database development. Any other parties interested?
5. Prioritized data needs
    a. **Next step**: Smaller group meetings to prioritize data needs of interest

i. Material / component of interest, purpose, intended outcome

    b. Idea: survey of participants at Environmental Degradation conference
6. EPRI report on SFP liner boric acid transport through concrete
    a. NRC (Sircar) to contact EPRI if needed

7. Harvested Materials Research Results
    a. **Next step:** A section of the workshop summary report to cover references from previous harvested materials research
    b. Use references from EMDA as starting point
    c. **Next step:** Please send any references to harvested materials research that should be included and its outcome to Matt Hiser.

Please feel free to contact me with any questions or suggestions for documenting the workshop and the next steps moving forward.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Friday, March 03, 2017 8:22 AM
To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; Jackson, John Howard <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Dear Harvesting Workshop Attendees:

You are receiving this email because I have you recorded as attending the upcoming Ex-plant Materials Harvesting Workshop on March 7-8 at USNRC headquarters in Rockville, MD. I have attached the final workshop agenda as well as the workshop introduction slides that cover meeting logistics, motivation, approach, expected outcome, and session expectations. We are

hoping these slides provide a common vision for the workshop that will allow for a focused, productive discussion.

The workshop will be held in NRC's Three White Flint North (3WFN) building, which is directly adjacent to the White Flint Metro station, in room 1C3 on the first floor. I have attached a map of the local area showing the Metro station and the 3WFN building.

The workshop is scheduled to start at 8:00 on Tuesday, March 7. I recommend planning to arrive at 3WFN around 7:30-7:45 in order to go through security to enter the building.

If you have not yet responded, please let me know if you plan to join for the dinner with other workshop participants, so I can make the appropriate reservation.

Thank you for your participation in the workshop. We are looking forward to the discussion and engagement and appreciate your contribution to a productive and interesting meeting!

Please let me know if you have any questions.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Mon, 28 Aug 2017 11:08:06 +0000
To: Tregoning, Robert
Subject: RE: Ex-plant Materials Harvesting Workshop

Sounds good Rob!

From: Tregoning, Robert
Sent: Monday, August 28, 2017 7:07 AM
To: Hiser, Matthew
Subject: RE: Ex-plant Materials Harvesting Workshop

Matt:

Can you give me until the end of this week?

Thanks,

Rob

Robert Tregoning
Technical Advisor for Materials
US Nuclear Regulatory Commission
Two White Flint North, M/S T-10 A36
11545 Rockville Pike
Rockville, MD 20852-2738
ph: 301-415-2324
fax: 301-415-6671

From: Hiser, Matthew
Sent: Friday, August 25, 2017 10:14 AM
To: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Reminder to provide any comments by today before we finalize this meeting summary.

From: Hiser, Matthew
Sent: Thursday, August 17, 2017 12:31 PM
To: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Hi Rob and Mita,

Here is the latest version of the workshop report. Please take a look and provide any feedback by next Friday, August 25 before I finalize it at the end of the month.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Thursday, June 22, 2017 3:20 PM
To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; 'Jackson, John Howard' <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>; 'Amberge, Kyle' <kamberge@epri.com>; Moyer, Carol <Carol.Moyer@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Poehler, Jeffrey <Jeffrey.Poehler@nrc.gov>; Hiser, Allen <Allen.Hiser@nrc.gov>; Yoo, Mark <Mark.Yoo@nrc.gov>; Koshy, Thomas <Thomas.Koshy@nrc.gov>; Buford, Angela <Angela.Buford@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>; Hull, Amy <Amy.Hull@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

I have received input from a couple participants. This is a gentle reminder to please provide any input on the report by next Friday, June 30.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Wednesday, May 31, 2017 4:21 PM
To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; 'Jackson, John Howard' <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>; 'Amberge, Kyle' <kamberge@epri.com>; Moyer, Carol <Carol.Moyer@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Poehler, Jeffrey <Jeffrey.Poehler@nrc.gov>; Hiser, Allen <Allen.Hiser@nrc.gov>; Yoo, Mark <Mark.Yoo@nrc.gov>; Koshy, Thomas <Thomas.Koshy@nrc.gov>; Buford, Angela <Angela.Buford@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>; Hull, Amy <Amy.Hull@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Dear Workshop Participants:

I would like to share for your review and comment the workshop summary report (attached). In the report, we tried to capture as much of the discussion as possible, while focusing on the key takeaways that might be useful for all participants as they consider harvesting in the future. In particular, please review how your presentation and contribution to the discussion is characterized, in case you feel it should be clarified in any way. Feel free to provide additional references to previous research on harvested materials that should be captured in this report. Comments, edits, and suggestions on any other parts of the report are welcome.

Please provide your input by June 30 at the latest and we will try to finalize the report by sometime in July.

As indicated in action items 4 and 5, we will be pursuing further coordination efforts on data needs for harvesting and a sources of materials database and welcome any other parties that may be interested in participating in these discussions.

Thank you once again for your participation and engagement in this workshop!

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Friday, March 17, 2017 8:39 AM
To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; 'Jackson, John Howard' <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>; 'Amberge, Kyle' <kamberge@epri.com>; Hull, Amy <Amy.Hull@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Poehler, Jeffrey <Jeffrey.Poehler@nrc.gov>; Hiser, Allen <Allen.Hiser@nrc.gov>; Yoo, Mark <Mark.Yoo@nrc.gov>; Koshy, Thomas <Thomas.Koshy@nrc.gov>; Buford, Angela <Angela.Buford@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Dear Workshop Participants:

I have attached a list of participants in last week's workshop, along with their email for contact.

Also, I have not received any concerns from the presenters regarding sharing slides, so feel free to share the slides, which are available on Google Drive:
https://drive.google.com/open?id=0B5DWMLch5YSXcnpZZ0JOS055QUU .

We hope to share a detailed workshop summary report in the next two months.

Thanks!
Matt

From: Hiser, Matthew
Sent: Friday, March 10, 2017 7:03 AM
To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; 'Jackson, John Howard' <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>; 'Amberge, Kyle' <kamberge@epri.com>; Hull, Amy <Amy.Hull@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Poehler, Jeffrey <Jeffrey.Poehler@nrc.gov>; Hiser, Allen <Allen.Hiser@nrc.gov>; Yoo, Mark <Mark.Yoo@nrc.gov>; Koshy, Thomas <Thomas.Koshy@nrc.gov>; Buford, Angela <Angela.Buford@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Dear Workshop Participants:

Thank you for attending and participating in the workshop this week. I appreciate your active participation in what was a very interesting and informative discussion. I hope you were able to come away from the meeting with a better understanding of how to approach harvesting and what to expect in terms of cost, schedule, complexity, challenges, etc.

NRC will be developing a workshop summary report to be shared among meeting participants. We have also placed all of the presentations into a Google Drive folder for sharing among meeting participants (https://drive.google.com/open?id=0B5DWMLch5YSXcnpZZ0JOS055QUU).

I have laid out the action items and planned next steps to address each item below:

1. Sharing workshop slides (Ahluwalia)
    a. **Next step**: Presenters, please reply to this email if you have any concerns with meeting participants sharing your slides with colleagues or other organizations. If I don't hear from you, we'll assume you're OK with sharing.
2. MRP-320 (Product ID: 1022866) on harvesting from MRP-227 inspections
    a. Available to public for fee
3. Cable surveillance programs in Germany
    a. **Next step**: GRS (Jendrich) to inquire with cable colleagues and share

4. Sources of Materials database
    a. **Next step**: Opportunities presented in this meeting to be documented in workshop summary.
    b. **Next step**: AECL, CNSC, NRC, PNNL, INL NSUF interested in database development. Any other parties interested?
5. Prioritized data needs
    a. **Next step**: Smaller group meetings to prioritize data needs of interest

i. Material / component of interest, purpose, intended outcome

    b. Idea: survey of participants at Environmental Degradation conference
6. EPRI report on SFP liner boric acid transport through concrete
    a. NRC (Sircar) to contact EPRI if needed
7. Harvested Materials Research Results
    a. **Next step:** A section of the workshop summary report to cover references from previous harvested materials research
    b. Use references from EMDA as starting point
    c. **Next step:** Please send any references to harvested materials research that should be included and its outcome to Matt Hiser.

Please feel free to contact me with any questions or suggestions for documenting the workshop and the next steps moving forward.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Friday, March 03, 2017 8:22 AM
To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; Jackson, John Howard <john.jackson@inl.gov>; 'Roussel Guy'

<guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Dear Harvesting Workshop Attendees:

You are receiving this email because I have you recorded as attending the upcoming Ex-plant Materials Harvesting Workshop on March 7-8 at USNRC headquarters in Rockville, MD. I have attached the final workshop agenda as well as the workshop introduction slides that cover meeting logistics, motivation, approach, expected outcome, and session expectations. We are hoping these slides provide a common vision for the workshop that will allow for a focused, productive discussion.

The workshop will be held in NRC's Three White Flint North (3WFN) building, which is directly adjacent to the White Flint Metro station, in room 1C3 on the first floor. I have attached a map of the local area showing the Metro station and the 3WFN building.

The workshop is scheduled to start at 8:00 on Tuesday, March 7. I recommend planning to arrive at 3WFN around 7:30-7:45 in order to go through security to enter the building.

If you have not yet responded, please let me know if you plan to join for the dinner with other workshop participants, so I can make the appropriate reservation.

Thank you for your participation in the workshop. We are looking forward to the discussion and engagement and appreciate your contribution to a productive and interesting meeting!

Please let me know if you have any questions.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

Note to requester:
Attachment is immediately following.

From: Hiser, Matthew
Sent: Thu, 23 Feb 2017 14:06:39 +0000
To: Bernhoft, Sherry (sbernhoft@epri.com);Dyle, Robin;Jean Smith (jmsmith@epri.com);Ahluwalia, Kawaljit;Richard Reister (Richard.Reister@nuclear.energy.gov);'leonardk@ornl.gov';'Rosseel, Thomas M.';'William F Zipp (Generation - 4)';'Gerard P. Van Noordennen';Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov);'daniel.tello@canada.ca';'Uwe.Jendrich@grs.de';'rachid.chaouadi@sckcen.be';'arait@criepi.denken.or.jp';'alpanfa@westinghouse.com';Jackson, John Howard;desire.ndomba@canada.ca
Cc: Tregoning, Robert;Purtscher, Patrick
Subject: RE: Ex-plant Materials Harvesting Workshop Presentations
Attachments: Harvesting Workshop Agenda.docx

Dear Presenters:

Friendly reminders:

- Please provide presentation title by February 28.
- Please send me your slides (either via email or upload to Google Drive: https://drive.google.com/drive/folders/0B5DWMLch5YSXcnpZZ0JOS055QUU?usp=sharing) by March 3.

I have attached the workshop agenda to this email. Please let me know if you have any questions or corrections.

Thanks!
Matt

From: Hiser, Matthew
Sent: Wednesday, February 15, 2017 10:47 AM
To: Bernhoft, Sherry (sbernhoft@epri.com) <sbernhoft@epri.com>; Dyle, Robin <rdyle@epri.com>; Jean Smith (jmsmith@epri.com) <jmsmith@epri.com>; Ahluwalia, Kawaljit <kahluwal@epri.com>; Richard Reister (Richard.Reister@nuclear.energy.gov) <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov) <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: Ex-plant Materials Harvesting Workshop Presentations

Dear Harvesting Workshop Presenters:

If you are receiving this email, then I have you down on the agenda to present at the upcoming Ex-plant Materials Harvesting Workshop on March 7-8. I have attached the workshop introduction slides that have been shared with most, if not all, of you. These slides cover meeting logistics, motivation, approach, expected outcome, and session expectations. We are hoping these slides provide a common vision for the workshop that will allow for a focused, productive discussion. Please take a look at these slides and try to tailor your presentation to the focus and length of the respective session.

There are two actions I request from presenters:

1. I have attached the confirmed list of speakers in an Excel document. Please take a look at this list to confirm you are presenting in the session you expected and if I have made any mistakes in the list of speakers. If you have not already done so, please provide me with a presentation title.
2. Please send me your slides (either via email or upload to Google Drive: https://drive.google.com/drive/folders/0B5DWMLch5YSXcnpZZ0JOS055QUU?usp=sharing) by the end of February if possible.

Thank you for your participation in the workshop. We are looking forward to the discussion and engagement and appreciate your contribution to a productive and interesting meeting!

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

Ex-Plant Materials Harvesting Workshop Agenda

Tuesday, March 7

Session	Time	Organization	Speaker	Presentation Title
Intro	8:00	NRC		Welcome and Introduction to Workshop
1	8:15 – 8:45	EPRI	Sherry Bernhoft	
		DOE	Rich Reister	
		NRC	Robert Tregoning	NRC Perspective on Motivation for Harvesting
		GRS	Uwe Jendrich	
		CRIEPI	Taku Arai	
	8:45 – 9:45	DISCUSSION		
9:45-10:00		**BREAK**		
2	10:00 – 10:20	PNNL (for NRC)	Pradeep Ramuhalli	Data Needs Best Addressed By Harvesting
	10:20 – 10:30	NRC	Matthew Hiser	High-Priority Data Needs for Harvesting
	10:30 – 10:55	DOE	Keith Leonard	
	10:55 – 11:20	SCK-CEN	Rachid Chaouadi	Review of past RPV sampling test programs and perspective for long term operation
	11:20 – 11:45	Westinghouse	Arzu Alpan	Importance of Harvesting to Evaluate Radiation Effects on Concrete Properties
	11:45 – 12:30	DISCUSSION		
12:30 – 2:00		**LUNCH**		
3	2:00 – 2:15	NRC	Matthew Hiser	Sources of Materials: Past NRC Harvesting and U.S. Decommissioning Plants
	2:15 – 2:30	EPRI	Al Ahluwalia	
	2:30 – 2:45	DOE/ORNL	Tom Rosseel	
	2:45 – 3:00	DOE/INL	John Jackson	NSUF Material Sample Library
	3:00 – 3:15	Energy Solutions	Gerry van Noordennen	
	3:15 – 3:30	Westinghouse	Arzu Alpan	Potential Harvesting of Concrete from Mihama Unit 1
	3:30 – 3:45	**BREAK**		
	3:45 – 4:00	GRS	Uwe Jendrich	
	4:00 – 4:15	CNSC	Daniel Tello	
	4:15 – 5:00	DISCUSSION		

Wednesday, March 8

Session	Time	Organization	Speaker	Presentation Title
4	8:00 – 8:30	EPRI	Jean Smith	
	8:30 – 9:00	DOE	Tom Rosseel	
	9:00 – 9:30	NRC	Matthew Hiser	NRC Perspective on Harvesting Experience and Lessons Learned
	9:30 – 10:00	CRIEPI	Taku Arai	
	10:00 – 10:15	**BREAK**		
	10:15 - 10:45	Energy Solutions	Gerry van Noordennen	
	10:45 - 11:15	Dominion	Bill Zipp	
	11:15 – 12:00	DISCUSSION		
12:00 – 1:30		**LUNCH**		
5	1:30 – 1:45	PNNL (for NRC)	Pradeep Ramuhalli	Technical Information Needed for Informed Harvesting Decisions
	1:45 – 2:30	DISCUSSION		
	2:30 – 3:00	Action Items and Next Steps		
	3:00 – 4:00	EPRI	Sherry Bernhoft	Closing Thoughts
		DOE	Rich Reister	
		NRC	Robert Tregoning	
		ALL		

From: Frankl, Istvan
Sent: Fri, 10 Mar 2017 15:04:15 +0000
To: Hiser, Matthew
Subject: RE: Ex-plant Materials Harvesting Workshop

Great achievement and a nice letter.

Hope you learned more about potential availability of source materials we are looking for.

Steve

From: Hiser, Matthew
Sent: Friday, March 10, 2017 7:03 AM
To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; 'Jackson, John Howard' <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>; 'Amberge, Kyle' <kamberge@epri.com>; Hull, Amy <Amy.Hull@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Poehler, Jeffrey <Jeffrey.Poehler@nrc.gov>; Hiser, Allen <Allen.Hiser@nrc.gov>; Yoo, Mark <Mark.Yoo@nrc.gov>; Koshy, Thomas <Thomas.Koshy@nrc.gov>; Buford, Angela <Angela.Buford@nrc.gov>; Sircar, Madhumita <Madhumita.Sircar@nrc.gov>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Dear Workshop Participants:

Thank you for attending and participating in the workshop this week. I appreciate your active participation in what was a very interesting and informative discussion. I hope you were able to come away from the meeting with a better understanding of how to approach harvesting and what to expect in terms of cost, schedule, complexity, challenges, etc.

NRC will be developing a workshop summary report to be shared among meeting participants. We have also placed all of the presentations into a Google Drive folder for sharing among meeting participants (https://drive.google.com/open?id=0B5DWMLch5YSXcnpZZ0JOS055QUU).

I have laid out the action items and planned next steps to address each item below:

1. Sharing workshop slides (Ahluwalia)
    a. **Next step**: Presenters, please reply to this email if you have any concerns with meeting participants sharing your slides with colleagues or other organizations. If I don't hear from you, we'll assume you're OK with sharing.
2. MRP-320 (Product ID: 1022866) on harvesting from MRP-227 inspections
    a. Available to public for fee
3. Cable surveillance programs in Germany
    a. **Next step**: GRS (Jendrich) to inquire with cable colleagues and share
4. Sources of Materials database
    a. **Next step**: Opportunities presented in this meeting to be documented in workshop summary.
    b. **Next step**: AECL, CNSC, NRC, PNNL, INL NSUF interested in database development. Any other parties interested?
5. Prioritized data needs
    a. **Next step**: Smaller group meetings to prioritize data needs of interest
        i. Material / component of interest, purpose, intended outcome
    b. Idea: survey of participants at Environmental Degradation conference
6. EPRI report on SFP liner boric acid transport through concrete
    a. NRC (Sircar) to contact EPRI if needed
7. Harvested Materials Research Results
    a. **Next step:** A section of the workshop summary report to cover references from previous harvested materials research
    b. Use references from EMDA as starting point
    c. **Next step:** Please send any references to harvested materials research that should be included and its outcome to Matt Hiser.

Please feel free to contact me with any questions or suggestions for documenting the workshop and the next steps moving forward.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | *Office: TWFN 10D62*
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Friday, March 03, 2017 8:22 AM
To: 'Bernhoft, Sherry' <sbernhoft@epri.com>; 'Dyle, Robin' <rdyle@epri.com>; 'Jean Smith (jmsmith@epri.com)' <jmsmith@epri.com>; 'Ahluwalia, Kawaljit' <kahluwal@epri.com>; 'Richard Reister (Richard.Reister@nuclear.energy.gov)' <Richard.Reister@nuclear.energy.gov>; 'leonardk@ornl.gov' <leonardk@ornl.gov>; 'Rosseel, Thomas M.' <rosseeltm@ornl.gov>; 'William F Zipp (Generation - 4)' <william.f.zipp@dom.com>; 'Gerard P. Van Noordennen' <gpvannoordennen@energysolutions.com>; 'Ramuhalli, Pradeep (Pradeep.Ramuhalli@pnnl.gov)' <Pradeep.Ramuhalli@pnnl.gov>; 'daniel.tello@canada.ca' <daniel.tello@canada.ca>; 'Uwe.Jendrich@grs.de' <Uwe.Jendrich@grs.de>; 'rachid.chaouadi@sckcen.be' <rachid.chaouadi@sckcen.be>; 'arait@criepi.denken.or.jp' <arait@criepi.denken.or.jp>; 'alpanfa@westinghouse.com' <alpanfa@westinghouse.com>; 'sokolovm@ornl.gov' <sokolovm@ornl.gov>; 'desire.ndomba@canada.ca' <desire.ndomba@canada.ca>; 'khuynh@aecl.ca' <khuynh@aecl.ca>; 'higuchi@criepi.denken.or.jp' <higuchi@criepi.denken.or.jp>; 'kazunobu_sakamoto@nsr.go.jp' <kazunobu_sakamoto@nsr.go.jp>; 'chimi.yasuhiro@jaea.go.jp' <chimi.yasuhiro@jaea.go.jp>; Jackson, John Howard <john.jackson@inl.gov>; 'Roussel Guy' <guy.roussel@Belv.be>; 'john.wagner@inl.gov' <john.wagner@inl.gov>; 'Riccardella, Pete' <Priccardella@Structint.com>; 'RICHTER, Mark' <mar@nei.org>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: Ex-plant Materials Harvesting Workshop

Dear Harvesting Workshop Attendees:

You are receiving this email because I have you recorded as attending the upcoming Ex-plant Materials Harvesting Workshop on March 7-8 at USNRC headquarters in Rockville, MD. I have attached the final workshop agenda as well as the workshop introduction slides that cover meeting logistics, motivation, approach, expected outcome, and session expectations. We are hoping these slides provide a common vision for the workshop that will allow for a focused, productive discussion.

The workshop will be held in NRC's Three White Flint North (3WFN) building, which is directly adjacent to the White Flint Metro station, in room 1C3 on the first floor. I have attached a map of the local area showing the Metro station and the 3WFN building.

The workshop is scheduled to start at 8:00 on Tuesday, March 7. I recommend planning to arrive at 3WFN around 7:30-7:45 in order to go through security to enter the building.

If you have not yet responded, please let me know if you plan to join for the dinner with other workshop participants, so I can make the appropriate reservation.

Thank you for your participation in the workshop. We are looking forward to the discussion and engagement and appreciate your contribution to a productive and interesting meeting!

Please let me know if you have any questions.

Thanks!
Matt

Matthew Hiser

Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

Note to requester: Attachment is immediately following.

From: Focht, Eric
Sent: Wed, 27 May 2015 09:37:58 -0400
To: Hiser, Matthew
Subject: RE: Ex-Plant Materials Harvesting
Attachments: Harvesting Efforts Hiser June NRC-Industry materials mtg - EMF.pptx

Here's my input on NAM and Zion.

From: Hiser, Matthew
Sent: Thursday, May 21, 2015 3:51 PM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: RE: Ex-Plant Materials Harvesting

Hi All,

Here is the current draft of the presentation. Can you fill in the relevant information for your projects on slides 7-9? Amy, can you fill in your slides as appropriate related to approach and engagement?

Thanks!
Matt

Matthew Hiser
Materials Engineer
Corrosion and Metallurgy Branch
Division of Engineering
Office of Nuclear Regulatory Research
301-251-7601

From: Hiser, Matthew
Sent: Friday, May 15, 2015 8:21 AM
To: Focht, Eric; Murdock, Darrell; Sircar, Madhumita
Cc: Hull, Amy
Subject: Ex-Plant Materials Harvesting

Hi Mita, Darrell, and Eric,

I am working with Amy Hull in my branch on an effort associated with strategic harvesting of ex-plant materials. This effort is just getting underway, but we would like to present the concept at an NRC-industry materials meeting in early June (see attached email). The purpose of this effort is to develop a more systematic proactive "strategic" approach to ex-plant material harvesting, rather than the more reactive opportunistic approach to date. It is important to share this concept with industry, since they will be vital in providing connections/communication to allow future harvesting projects to take place.

I am putting together a slide or two on the reactor internals materials harvesting project at Zorita that I am involved with. I understand each of you have been / are involved with other harvesting efforts at Zion and Zorita on cables, concrete, and neutron absorbers. If you could just provide a

slide or two with a high-level overview of the harvesting project and at least briefly touch on how the harvesting opportunity came together, that would be great.

Thanks!
Matt

Strategic Approach for Obtaining Material and Component Aging Information

Amy Hull and Matthew Hiser
Division of Engineering
Office of Nuclear Regulatory Research

Outline

- Purpose
- Background
- Harvesting Experience
- Approach
- Engagement with Other Stakeholders

Purpose

- Create a framework for a strategic approach to harvesting ex-plant materials
  - Ex-plant materials offer unique environmental exposure that cannot be entirely replicated by laboratory testing with fresh materials
- Combine high priority data needs identified in SLR/LTO activities with harvesting opportunities from decommissioning plants

Background

- To date, harvesting opportunities have been limited due to few decommissioning plants
  - Zion in U.S., Zorita in Spain
- However, several U.S. plants have already shut down or are planning to do so in the near future
  - Kewaunee, SONGS, Crystal River, Vermont Yankee, Oyster Creek
- This provides a unique opportunity to plan harvesting for the maximum utility to address the highest priority technical issues

Harvesting Experience

- Past harvesting efforts have generally involved a reactive decision-making process
  - Limited opportunities to acquire ex-plant materials
  - Limited strategic planning for harvesting
- Harvesting projects with NRC involvement:
  - Reactors internal materials from Zorita
  - Concrete from Zorita
  - Neutron absorber material from Zion
  - Cables from Zion and Crystal River

Zorita Internals Research

- **Materials Harvested**:
  - Baffle plate and core barrel weld materials
- **Scope**:
  - Mechanical testing (tensile, CGR, FT)
  - Microstructural characterization (void swelling)
- **Purpose**:
  - High-fluence (up to 50 dpa) IAD effects with representative LWR exposure conditions
- **Timeline**:
  - Initial discussions in 2006, harvesting in 2013, testing ongoing
- **Coordination**:
  - EPRI, international consortium, Studsvik, Halden

Concrete from Zorita

- **Materials Harvested**:
- **Scope**:
- **Purpose**:
- **Timeline**:
  - Initial discussions in ????, harvesting in ????, testing ????
- **Coordination**:
  - EPRI, ????

Neutron Absorbers from Zion

- **Materials Harvested**:
  - Select Boral® NAM panels from Regions 1 and 2 of the Zion SFP
- **Scope**:
  - Visual and microstructural examinations (incl. areal density)
  - Corrosion testing
- **Purpose**:
  - Identify degradation mechanisms
  - Estimate degradation rate
  - Confirm results of in-situ areal density measurements
- **Timeline**:
  - Initial discussions in 2014, harvesting in 2015, testing in 2015-2016
- **Coordination**:
  - EPRI, ZionSolutions, SRNL

Cables from Zion and Crystal River

- **Materials Harvested**:
  - Cables (high / low voltage??)
- **Scope**:
  - Condition monitoring to assess cable performance under normal operating conditions (accelerated aging) and accident conditions
- **Purpose**:
  - Cable degradation due to normal operating environment and accident conditions
- **Timeline**:
  - Initial discussions in ????, harvesting in 2013, testing ongoing
- **Coordination**:
  - ORNL, Zion Solutions, NIST, EPRI

Approach

Stakeholder Engagement

Acknowledgements

- Robert Tregoning, RES/DE
- Eric Focht, RES/DE
- Darrell Murdock, RES/DE
- Mita Sircar, RES/DE

From: Audrain, Margaret
Sent: Tue, 6 Mar 2018 16:13:07 +0000
To: Purtscher, Patrick;Hull, Amy;Herrity, Thomas;Burke, John;Moyer, Carol;Tregoning, Robert;Harris, Brian
Cc: Frankl, Istvan;Hiser, Matthew
Subject: RE: filling in some more time ....: RIC EPOSTERS AND DIGITAL PRESENTER GUIDANCE - NEXT STEPS

I can do the 8:30-10 slot on Tuesday.

From: Purtscher, Patrick
Sent: Monday, March 05, 2018 2:46 PM
To: Hull, Amy <Amy.Hull@nrc.gov>; Herrity, Thomas <Thomas.Herrity@nrc.gov>; Burke, John <John.Burke@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Harris, Brian <Brian.Harris2@nrc.gov>
Cc: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: filling in some more time ....: RIC EPOSTERS AND DIGITAL PRESENTER GUIDANCE - NEXT STEPS

I can take the 10:30 a.m. 12:00 p.m. Commission Plenary slots on Tuesday for the harvesting poster.

Pat

From: Hull, Amy
Sent: Monday, March 05, 2018 2:25 PM
To: Herrity, Thomas <Thomas.Herrity@nrc.gov>; Burke, John <John.Burke@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Audrain, Margaret <Margaret.Audrain@nrc.gov>; Harris, Brian <Brian.Harris2@nrc.gov>
Cc: Frankl, Istvan <Istvan.Frankl@nrc.gov>; Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: filling in some more time ....: RIC EPOSTERS AND DIGITAL PRESENTER GUIDANCE - NEXT STEPS
Importance: High

Per our guidance below, I have updated the attached schedule for next week. Bren recommends below that poster presentations be staffed all of Tuesday morning. So there are 3 more hrs for AM and 3 more hrs for Harvesting. Please let us know if you want to have added time by the posters.

From: Warren, Brenett
Sent: Monday, March 05, 2018 1:55 PM
To: Bridge, Joanna <Joanna.Bridge@nrc.gov>; Mendiola, Mary <Mary.Mendiola@nrc.gov>; Zuberi, Sardar <Sardar.Zuberi@nrc.gov>; Dembek, Stephen <Stephen.Dembek@nrc.gov>; Yadav, Priya <Priya.Yadav@nrc.gov>; Kenny, Caylee <Caylee.Kenny@nrc.gov>; Sturzebecher, Karl

<Karl.Sturzebecher@nrc.gov>; Bernardo, Robert <Robert.Bernardo@nrc.gov>; Wilson, Joshua <Joshua.Wilson@nrc.gov>; Hall, Victor <Victor.Hall@nrc.gov>; Couret, Ivonne <Ivonne.Couret@nrc.gov>; West, Stephanie <Stephanie.West@nrc.gov>; Savoy, Joanne <Joanne.Savoy@nrc.gov>; King, Shannon <Shannon.King@nrc.gov>; Ralph, Melissa <Melissa.Ralph@nrc.gov>; Hiser, Matthew <Matthew.Hiser@nrc.gov>; Steger, Christine <Christine.Steger@nrc.gov>; Armstrong, Kenneth <Kenneth.Armstrong@nrc.gov>; Gifford, Ian <Ian.Gifford@nrc.gov>; Smith, Todd <Todd.Smith@nrc.gov>; Howells, Christopher <Christopher.Howells@nrc.gov>; Orf, Tracy <Tracy.Orf@nrc.gov>; Cruz, Holly <Holly.Cruz@nrc.gov>; Morey, Dennis <Dennis.Morey@nrc.gov>; Oberson, Greg <Greg.Oberson@nrc.gov>; Hull, Amy <Amy.Hull@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>; Bowman, Gregory <Gregory.Bowman@nrc.gov>
Cc: RICMST Resource <RICMST.Resource@nrc.gov>; Kipfer, Lorna <Lorna.Kipfer@nrc.gov>
Subject: RIC EPOSTERS AND DIGITAL PRESENTER GUIDANCE - NEXT STEPS
Importance: High

Good Afternoon Poster Presenters,

We are 1 week from RIC 2018 and I want to provide you with a few details to assist:

EPOSTER AND DIGITAL PRESENTATION SCHEDULE

- ePoster and Digital Presenters should be present at the RIC. Although your poster may be set on a continuous run/feed there should be a person present to discuss the poster and to field questions from the attendee viewing the slide presentation March 13 – 15, 2018.

- Refer to Program Agenda on the RIC website at https://ric.nrc.gov/agenda for the full schedule of the RIC. Recommended times for visual presence should be during the following:

Tuesday:

7:30 a.m. – 8:30 a.m.	Meet and Greet – Networking Opportunity
8:30 a.m. – 10:00 a.m.	Opening Sessions
10:00 a.m. – 10:30 a.m.	Networking Break
10:30 a.m. 12:00 p.m.	Commission Plenary
12:00 p.m. – 1:30 p.m.	Lunch Break
3:00 p.m. - 3:30 p.m.	Networking Breaks

Wednesday:

7:30 a.m. – 8:30 a.m.	Meet and Greet – Networking Opportunity
10:00 a.m. – 10:30 a.m.	Networking Break
12:00 p.m. – 1:30 p.m.	Lunch Break
3:00 p.m. - 3:30 p.m.	Networking Breaks

Thursday:

7:30 a.m. – 8:30 a.m.	Meet and Greet – Networking Opportunity
10:00 a.m. – 10:30 a.m.	Networking Break

LAPTOP SETUP AND TESTING WITH OCIO TECH

- Arrive at the Bethesda North Marriott Hotel and Conference Center on **Monday, March 12, 2018 between 9:00 a.m. and 11:00 a.m.**
    - Test laptop/monitor connection
    - Verify loaded presentation shows accurately on monitor
- There will be a NRC technician from OCIO to complete the install of laptops with interactive (multi page slides). Single slide presenters (ePoster) may view their presentation at that time as well.

FLOORPLAN FOR EPOSTER AND DIGITAL PRESENTATIONS

- The preliminary floorplan is attached for your reference. If for any reason the floorplan should change, you will be notified.
- Ensure accuracy when referring to your poster, refer to the attached ePoster and Digital Presentation by number. Note, the posters were previously renumbered however, some presenters continued to use the old numbers. Please use the following numbered posters and titles.

SHIPPING MATERIALS

- If you plan to include materials for your ePoster and Digital Presentation with the bulk shipment from the NRC to the Marriott, it is imperative that you have all of the items properly labeled and taken to the Reprographics OP1-B3500 common area - labeled RIC shipping by **close of business Thursday, March 8, 2018**.
- All materials must be packed, properly labeled and in the designated Reprographics pick up location by close of business March 8, 2018. Provide on the shipping label and also to RICMST.Resource@nrc.gov:
    - The total number of boxes
    - Include your name
    - Include title of your ePoster and Digital Presentation
- We do ask that you **limit the amount of materials** you will bring due to reduced space in the Marriott foyer area.
- Affix a completed **shipping label to each box**. The materials received will be included on the manifest report for tracking purposes.
- Return shipping will occur on March 15 at 1:00 pm. If you wish to have any materials returned to the NRC prior to your departure from the Marriott, please affix a returnTo ensure accurate return please affix a label with your name and mailstop. All unmarked materials left in the Marriott foyer unmarked will be discarded.

Thank you,

-

Brenett (Bren) U. Warren
Program Specialist
Office of Nuclear Reactor Regulation
NRR/DMPS/RISB
Location: O13D5
301-415-3114
Brenett.Warren@nrc.gov

Follow us on Twitter @nrcgov_ric

From: Hiser, Matthew
Sent: Fri, 5 Aug 2016 14:03:49 +0000
To: Purtscher, Patrick
Subject: RE: First Draft Outline Harvesting PNNL 7-21-15 mah--ptp comments.docx

Yeah, I think that's a good idea… I generally don't put too many "low-level" updates in that bi-weekly document, but we haven't had much to report on this harvesting program, so it's probably good to include something ☺

From: Purtscher, Patrick
Sent: Friday, August 05, 2016 10:01 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: First Draft Outline Harvesting PNNL 7-21-15 mah--ptp comments.docx

Not yet, but I thought I could send them out today with a suggestion of scheduling a quick call after he has had time to look them over.

I thought I could update the project in the Bi-weekly status update saying that we have given PNNL comments on an early draft document. Do you think that is appropriate?

Pat

From: Hiser, Matthew
Sent: Friday, August 05, 2016 9:30 AM
To: Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: First Draft Outline Harvesting PNNL 7-21-15 mah--ptp comments.docx

Hi Pat,

Just checking whether you had shared these comments with PNNL…

Thanks!
Matt

From: Hiser, Matthew
Sent: Tuesday, August 02, 2016 2:45 PM
To: Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: First Draft Outline Harvesting PNNL 7-21-15 mah--ptp comments.docx

Hi Pat,

I rewrote your comment on page x (to be hopefully a little more clear) and then commented on your comments on pages 2 and 8. Otherwise, looks good to me ☺

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Purtscher, Patrick
Sent: Tuesday, August 02, 2016 11:04 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: First Draft Outline Harvesting PNNL 7-21-15 mah--ptp comments.docx

Here are our combined comments.

Let me know if you think this is OK as a starting point for more discussion with PNNL?

Pat

From: Frankl, Istvan
Sent: Tue, 3 Oct 2017 08:51:28 -0600
To: Hiser, Matthew
Subject: RE: For Review: Harvesting Poster for PLiM

Yes, Brian/Chris will need to review/approve and sign form 390.

The AAs should prepare a concurrence package and add the ML# to form 390 for you. The package should have form 390, the printout of the poster and form 665.

You will need to sign form 390 and give package to me for review/concurrence. After that the package will go to Brian/Chris for review/approval.

Thanks,

Steve

From: Hiser, Matthew
Sent: Tuesday, October 03, 2017 10:42 AM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: For Review: Harvesting Poster for PLiM

Thanks Steve! Does this need to be reviewed by RES/DE management?

From: Frankl, Istvan
Sent: Tuesday, October 03, 2017 10:41 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Cc: Purtscher, Patrick <Patrick.Purtscher@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>
Subject: RE: For Review: Harvesting Poster for PLiM
Importance: High

Matt,

Thanks for the reminder. Somehow I did not flag this action on my calendar last week.

I completed my review. The poster looks good. (I only finalized minor fixes that were shown with strikeout.)

Please ask the AAs to put the poster in ADAMS with delayed public release (the date should specified in form 665 and should correspond to the date of the conference). This will make it easier to make changes to the document before the conference.

Meg has recent experience with publishing posters, so please reach out to her for advice on how to get this done ASAP.

Thanks,

Steve

From: Moyer, Carol
Sent: Thursday, September 28, 2017 2:30 PM
To: Frankl, Istvan <Istvan.Frankl@nrc.gov>
Cc: Hiser, Matthew <Matthew.Hiser@nrc.gov>; Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: For Review: Harvesting Poster for PLiM

Steve,

Matt created the attached Harvesting poster for the PLiM conference. The attached version includes some minor edits by Pat and myself.

Carol

From: Hiser, Matthew
Sent: Friday, September 15, 2017 11:07 AM
To: Moyer, Carol <Carol.Moyer@nrc.gov>; Hull, Amy <Amy.Hull@nrc.gov>
Cc: Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Subject: RE: FW: PLiM abstract on harvesting

Hi Amy and Carol,

Here's my initial stab at the harvesting poster for PLiM.

Please take a look and let me know what you think.

Thanks!
Matt

From: Moyer, Carol
Sent: Friday, July 21, 2017 11:26 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>; Hull, Amy <Amy.Hull@nrc.gov>
Subject: RE: FW: PLiM abstract on harvesting

Thank you both!

The conference website is here: http://www-pub.iaea.org/iaeameetings/50811/Fourth-International-Conference-on-Nuclear-Power-Plant-Life-Management
Poster guidelines are here: http://www-pub.iaea.org/MTCD/Meetings/PDFplus/2017/cn246/cn246PosterGuidelines.pdf

No specific due date is listed for posters.

M. Key Dates and Deadlines

Submission of Form for Submission of a Paper (Form B)
and extended synopsis (800 words) 28 May 2017
Submission of Grant Application Form (Form C): 28 May 2017

Notification of acceptance of papers/posters: 30 June 2017
Submission of full paper (only upon request by the IAEA): 18 October 2017

Posters may only be "due" at the conference itself? It would not hurt to have it done by 18 Oct., the paper deadline, though. It is unclear to me what they would do with a full paper, if one was not requested by IAEA. But I think you can prepare one, if you like. If they will not publish it as part of PLiM, we can find another home for it, or just release it as an NRC document.

-Carol

From: Hiser, Matthew
Sent: Friday, July 21, 2017 11:12 AM
To: Hull, Amy <Amy.Hull@nrc.gov>; Moyer, Carol <Carol.Moyer@nrc.gov>
Subject: RE: FW: PLiM abstract on harvesting

OK, I can work with Amy to make a poster. Rob and Pat and our PNNL contractor are also listed as co-authors…

From: Hull, Amy
Sent: Friday, July 21, 2017 11:08 AM
To: Moyer, Carol <Carol.Moyer@nrc.gov>; Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: FW: PLiM abstract on harvesting

I think this is a good opportunity to publicize harvesting work and develop collaboration. Task 2 in UNR. I will make the poster. When is it dur?

From: Moyer, Carol
Sent: Friday, July 21, 2017 10:57 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>; Hull, Amy <Amy.Hull@nrc.gov>
Subject: RE: FW: PLiM abstract on harvesting

I'm pretty ambivalent about it. Amy, do you have a strong desire to make up a poster for the PLiM? Are there other co-authors to be consulted?

-Carol

From: Hiser, Matthew
Sent: Friday, July 21, 2017 7:28 AM
To: Moyer, Carol <Carol.Moyer@nrc.gov>
Subject: RE: FW: PLiM abstract on harvesting

Hi Carol,

Not terribly interested in a poster… The other thing is then you'd have to babysit the poster during poster session(s)?

I'd suggest we say thanks for the offer, but that's alright… what do you think?

Thanks!
Matt

From: Moyer, Carol
Sent: Thursday, July 20, 2017 12:49 PM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: FW: FW: PLiM abstract on harvesting

Matt,

I am a bit confused by the pronoun used in this email…

Are you interested in doing a poster instead?

Carol

From: KRIVANEK, Robert [mailto:R.Krivanek@iaea.org]
Sent: Thursday, July 20, 2017 11:10 AM
To: Moyer, Carol <Carol.Moyer@nrc.gov>
Subject: [External_Sender] FW: PLiM abstract on harvesting

You have just agreed that we will add this paper to poster session.

Best regards,

Mr Robert KRIVANEK | Senior Safety Officer |
LTO Programme Manager
Operational Safety Section |Division of Nuclear Installation Safety|Department of Nuclear Safety and Security |
International Atomic Energy Agency | Vienna International Centre, PO Box 100, 1400 Vienna, Austria |
Email: r.krivanek@iaea.org | T: (+43-1) 2600-22018 | F: (+43-1) 2600-26007 |

IAEA 60 Years

Atoms for Peace and Development

Follow us on **www.iaea.org**

From: KRIVANEK, Robert
Sent: Thursday, 20 July 2017 16:10
To: 'Carol.Moyer@nrc.gov' <Carol.Moyer@nrc.gov>
Subject: FW: PLiM abstract on harvesting

Dear Carol,

We asked you to submit your synopsis through INDICO (see email below) but it did not happened. So we were not able to send your synopsis to programme committee for evaluation and it will not occur on the conference programme.
Sorry for that but there are currently 300 delegates and 150 synopsis, so we were not able to track each of them separately.

Best regards,

Mr Robert KRIVANEK | Senior Safety Officer |
LTO Programme Manager
Operational Safety Section | Division of Nuclear Installation Safety | Department of Nuclear Safety and Security |
International Atomic Energy Agency | Vienna International Centre, PO Box 100, 1400 Vienna, Austria |
Email: r.krivanek@iaea.org | T: (+43-1) 2600-22018 | F: (+43-1) 2600-26007 |

IAEA 60 Years
Atoms for Peace and Development

Follow us on **www.iaea.org**

From: KRIVANEK, Robert
Sent: Friday, 26 May 2017 08:55
To: 'Carol.Moyer@nrc.gov' <Carol.Moyer@nrc.gov>
Cc: KHAELSS, Martina <M.Khaelss@iaea.org>
Subject: FW: PLiM abstract on harvesting

Dear Carol,

Thank you for your synopsis. We have opened INDICO system for this week, so please submit it through the system.

Best regards,

Mr Robert KRIVANEK | Senior Safety Officer |
LTO Programme Manager
Operational Safety Section |Division of Nuclear Installation Safety|Department of Nuclear Safety and Security |
International Atomic Energy Agency | Vienna International Centre, PO Box 100, 1400 Vienna, Austria |
Email: r.krivanek@iaea.org | T: (+43-1) 2600-22018 | F: (+43-1) 2600-26007 |

IAEA 60 Years
Atoms for Peace and Development

Follow us on **www.iaea.org**

From: Carol.Moyer@nrc.gov [mailto:Carol.Moyer@nrc.gov]
Sent: Friday, 26 May 2017 00:19
To: KRIVANEK, Robert <R.Krivanek@iaea.org>
Cc: Hiser, Matthew <Matthew.Hiser@nrc.gov>; Tregoning, Robert <Robert.Tregoning@nrc.gov>; Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: PLiM abstract on harvesting

Dear Mr. Krivanek,

The US NRC would like to propose one more presentation for this autumn's PLiM conference, on harvesting of materials from operating and decommissioning power plants. I understand

from Sherry Bernhoft that you already have an impressive number of abstracts, so I will understand if there is not room in the program for this one. Nevertheless, we would appreciate your consideration of this proposal.

Again, please let me know if you need any additional information. Many thanks,

Carol

Carol E. Moyer
Sr. Materials Engineer
Office of Nuclear Regulatory Research
RES/DE/CMB
carol.moyer@nrc.gov
301-415-2153

From: KRIVANEK, Robert [mailto:R.Krivanek@iaea.org]
Sent: Tuesday, May 23, 2017 2:41 AM
To: Moyer, Carol <Carol.Moyer@nrc.gov>
Subject: [External_Sender] RE: RE: CN246_PLiM_Abstract deadline extended to 19 May 2017

Dear Carol,

I will arrange it. Thank you.

Best regards,

Mr Robert KRIVANEK | Senior Safety Officer |
LTO Programme Manager
Operational Safety Section |Division of Nuclear Installation Safety|Department of Nuclear Safety and Security |
International Atomic Energy Agency | Vienna International Centre, PO Box 100, 1400 Vienna, Austria |
Email: r.krivanek@iaea.org | T: (+43-1) 2600-22018 | F: (+43-1) 2600-26007 |

IAEA 60 Years
Atoms for Peace and Development

Follow us on **www.iaea.org**

From: Carol.Moyer@nrc.gov [mailto:Carol.Moyer@nrc.gov]
Sent: Monday, 22 May 2017 20:44
To: KRIVANEK, Robert <R.Krivanek@iaea.org>
Subject: RE: RE: CN246_PLiM_Abstract deadline extended to 19 May 2017

Dear Mr. Krivanek,

Since the formal deadline for abstract submissions has passed, I am no longer able to access the Indico system through the PLiM website (https://conferences.iaea.org/indico/event/134/). My abstract and Form B are attached.

Are you able to work with these documents? Is there anything else that you need me to do at this time?

Thanks again for your patience and assistance,
Carol

From: Moyer, Carol
Sent: Monday, May 22, 2017 10:59 AM
To: 'KRIVANEK, Robert' <R.Krivanek@iaea.org>
Cc: Frankl, Istvan <Istvan.Frankl@nrc.gov>
Subject: RE: RE: CN246_PLiM_Abstract deadline extended to 19 May 2017

Dear Mr. Krivanek,

My abstract is attached to this message, for your info. Separately, I will submit it through the Indico system. Please let me know if you need any other information at this stage.

Thank you,
Mrs. Carol Moyer

From: KRIVANEK, Robert [mailto:R.Krivanek@iaea.org]
Sent: Monday, May 22, 2017 2:56 AM
To: Moyer, Carol <Carol.Moyer@nrc.gov>
Cc: Tregoning, Robert <Robert.Tregoning@nrc.gov>
Subject: [External_Sender] RE: CN246_PLiM_Abstract deadline extended to 19 May 2017

Dear Mr Moyer,

It will be fine if you submit your abstracts this week.
We are looking forward to see a strong NRC delegation in Lyon.

Best regards,

Mr Robert KRIVANEK | Senior Safety Officer |
LTO Programme Manager
Operational Safety Section |Division of Nuclear Installation Safety|Department of Nuclear Safety and Security |
International Atomic Energy Agency | Vienna International Centre, PO Box 100, 1400 Vienna, Austria |
Email: r.krivanek@iaea.org | T: (+43-1) 2600-22018 | F: (+43-1) 2600-26007 |

IAEA 60 Years
Atoms for Peace and Development

Follow us on **www.iaea.org**

From: Carol.Moyer@nrc.gov [mailto:Carol.Moyer@nrc.gov]
Sent: Friday, 19 May 2017 23:19
To: KRIVANEK, Robert <R.Krivanek@iaea.org>
Cc: KANG, Ki-Sig <K.S.Kang@iaea.org>; Tregoning, Robert <Robert.Tregoning@nrc.gov>
Subject: RE: CN246_PLiM_Abstract deadline extended to 19 May 2017

Dear Mr. Krivanek,

The U.S. NRC intends to submit several abstracts for consideration for the PLiM conference in October. We have a short delay in completing one of our abstracts. I will be submitting it early next week, and I hope that you still will be able to consider it for the conference.

Thank you,
Carol Moyer

Carol E. Moyer
Sr. Materials Engineer
U.S. Nuclear Regulatory Commission
Office of Nuclear Regulatory Research
MS: T-10A36
Washington, DC 20555-0001
carol.moyer@nrc.gov
301-415-2153

From: R.Krivanek@iaea.org [mailto:R.Krivanek@iaea.org]
Sent: Friday, April 21, 2017 8:44 AM
To: R.Krivanek@iaea.org
Subject: [External_Sender] CN246_PLiM_Abstract deadline extended to 19 May 2017

Dear all,

Please be informed that we extended the abstract submission deadline to 19 May 2017 and updated the conference accordingly.

Best regards,

Mr Robert KRIVANEK | Senior Safety Officer |
LTO Programme Manager
Operational Safety Section |Division of Nuclear Installation Safety|Department of Nuclear Safety and Security |
International Atomic Energy Agency | Vienna International Centre, PO Box 100, 1400 Vienna, Austria |
Email: r.krivanek@iaea.org | T: (+43-1) 2600-22018 | F: (+43-1) 2600-26007 |

IAEA 60 Years
Atoms for Peace and Development

Follow us on www.iaea.org

This email message is intended only for the use of the named recipient. Information contained in this email message and its attachments may be privileged, confidential and protected from disclosure. If you are not the intended recipient, please do not read, copy, use or disclose this communication to others. Also please notify the sender by replying to this message and then delete it from your system.

This email message is intended only for the use of the named recipient. Information contained in this email message and its attachments may be privileged, confidential and protected from disclosure. If you are not the intended recipient, please do not read, copy, use or disclose this

communication to others. Also please notify the sender by replying to this message and then delete it from your system.

This email message is intended only for the use of the named recipient. Information contained in this email message and its attachments may be privileged, confidential and protected from disclosure. If you are not the intended recipient, please do not read, copy, use or disclose this communication to others. Also please notify the sender by replying to this message and then delete it from your system.

This email message is intended only for the use of the named recipient. Information contained in this email message and its attachments may be privileged, confidential and protected from disclosure. If you are not the intended recipient, please do not read, copy, use or disclose this communication to others. Also please notify the sender by replying to this message and then delete it from your system.

From: Hiser, Matthew
Sent: Mon, 27 Feb 2017 18:49:12 +0000
To: Foreign Visitor Resource
Subject: RE: Foreign Visitors

The password for Chimi's passport pdf is [redacted]

(b)(6)

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Monday, February 27, 2017 1:46 PM
To: Foreign Visitor Resource <ForeignVisitor.Resource@nrc.gov>; Wittick, Susan <Susan.Wittick@nrc.gov>; Holzman (Schwartzman), Jennifer <Jennifer.Holzman@nrc.gov>; Emche, Danielle <Danielle.Emche@nrc.gov>; Rini, Brett <Brett.Rini@nrc.gov>; Stahl, Eric <Eric.Stahl@nrc.gov>
Cc: Sangimino, Donna-Marie <Donna-Marie.Sangimino@nrc.gov>
Subject: RE: Foreign Visitors

Additional passports attached. Still awaiting 2 more…

From: Hiser, Matthew
Sent: Friday, February 24, 2017 2:37 PM
To: Foreign Visitor Resource <ForeignVisitor.Resource@nrc.gov>; Wittick, Susan <Susan.Wittick@nrc.gov>; Holzman (Schwartzman), Jennifer <Jennifer.Holzman@nrc.gov>; Emche, Danielle <Danielle.Emche@nrc.gov>; Rini, Brett <Brett.Rini@nrc.gov>; Stahl, Eric <Eric.Stahl@nrc.gov>
Cc: Sangimino, Donna-Marie <Donna-Marie.Sangimino@nrc.gov>
Subject: Foreign Visitors

Dear OIP Desk Officers and Foreign Visitor Resource,

I am providing notification of foreign visitors on March 7-8, 2017 for an NRC-hosted workshop on ex-plant materials harvesting. There are a total of 10 foreign visitors expected for this workshop from Canada (3), Belgium (2), Germany (1), and Japan (4). I have attached 5 of the 10 passport copies that have been received to date as well as the draft agenda for the workshop. I expect to receive the remaining 5 passport copies next week and will provide them once I receive them.

i) March 7-8, 2017, 8 AM – 5 PM, 3WFN
ii) Workshop agenda attached
iii) Matthew Hiser, 301-415-2454
iv) Publicly available

v) Recipients on this email: Wittick, Holzman, Emche, Rini, Stahl
vi) No security support needed

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Skidmore, Karen
Sent: Wed, 1 Mar 2017 09:44:44 -0500
To: Hiser, Matthew
Subject: RE: Foreign Visitors

Thanks

From: Hiser, Matthew
Sent: Wednesday, March 01, 2017 7:39 AM
To: Foreign Visitor Resource <ForeignVisitor.Resource@nrc.gov>; Skidmore, Karen <Karen.Skidmore@nrc.gov>
Subject: RE: Foreign Visitors

Hi Karen,

Last passport from the workshop visitors for next week.

Thanks!
Matt

From: Hiser, Matthew
Sent: Tuesday, February 28, 2017 1:18 PM
To: Foreign Visitor Resource <ForeignVisitor.Resource@nrc.gov>; Skidmore, Karen <Karen.Skidmore@nrc.gov>
Subject: RE: Foreign Visitors

Hi Karen,

Here is Mr. Ndomba's passport copy.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Monday, February 27, 2017 1:46 PM
To: Foreign Visitor Resource <ForeignVisitor.Resource@nrc.gov>; Wittick, Susan <Susan.Wittick@nrc.gov>; Holzman (Schwartzman), Jennifer <Jennifer.Holzman@nrc.gov>; Emche, Danielle <Danielle.Emche@nrc.gov>; Rini, Brett <Brett.Rini@nrc.gov>; Stahl, Eric <Eric.Stahl@nrc.gov>
Cc: Sangimino, Donna-Marie <Donna-Marie.Sangimino@nrc.gov>
Subject: RE: Foreign Visitors

Additional passports attached. Still awaiting 2 more…

From: Hiser, Matthew
Sent: Friday, February 24, 2017 2:37 PM
To: Foreign Visitor Resource <ForeignVisitor.Resource@nrc.gov>; Wittick, Susan <Susan.Wittick@nrc.gov>; Holzman (Schwartzman), Jennifer <Jennifer.Holzman@nrc.gov>; Emche, Danielle <Danielle.Emche@nrc.gov>; Rini, Brett <Brett.Rini@nrc.gov>; Stahl, Eric <Eric.Stahl@nrc.gov>
Cc: Sangimino, Donna-Marie <Donna-Marie.Sangimino@nrc.gov>
Subject: Foreign Visitors

Dear OIP Desk Officers and Foreign Visitor Resource,

I am providing notification of foreign visitors on March 7-8, 2017 for an NRC-hosted workshop on ex-plant materials harvesting. There are a total of 10 foreign visitors expected for this workshop from Canada (3), Belgium (2), Germany (1), and Japan (4). I have attached 5 of the 10 passport copies that have been received to date as well as the draft agenda for the workshop. I expect to receive the remaining 5 passport copies next week and will provide them once I receive them.

i) March 7-8, 2017, 8 AM – 5 PM, 3WFN
ii) Workshop agenda attached
iii) Matthew Hiser, 301-415-2454
iv) Publicly available
v) Recipients on this email: Wittick, Holzman, Emche, Rini, Stahl
vi) No security support needed

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Mon, 27 Feb 2017 16:27:51 +0000
To: Mehta, Shivani
Cc: Iyengar, Raj
Subject: RE: Foreign Visitors

Thanks Shivani! I am adding it to iVisit and yes, we have CIB involved in a meeting with the Belgians the day before the workshop.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Mehta, Shivani
Sent: Monday, February 27, 2017 8:51 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Cc: Iyengar, Raj <Raj.Iyengar@nrc.gov>
Subject: FW: Foreign Visitors

Hi Matt,

I just saw that you have a meeting next week with some foreign visitors. A couple things:

- Please make sure to add this visit to iVisit (go to the itravel.nrc.gov and look for the "International Visits" tab)
- Is CIB aware of your meeting? There was interest in meeting with the Belgian RPV people at the RIC but we will not be able to accommodate that request. I'm wondering if there will be time for the Belgians to meet with Raj's branch. I apologize if this is redundant to discussions you are already having.

Thanks
Shivani

From: Hiser, Matthew
Sent: Friday, February 24, 2017 2:37 PM
To: Foreign Visitor Resource <ForeignVisitor.Resource@nrc.gov>; Wittick, Susan <Susan.Wittick@nrc.gov>; Holzman (Schwartzman), Jennifer <Jennifer.Holzman@nrc.gov>; Emche, Danielle <Danielle.Emche@nrc.gov>; Rini, Brett <Brett.Rini@nrc.gov>; Stahl, Eric <Eric.Stahl@nrc.gov>
Cc: Sangimino, Donna-Marie <Donna-Marie.Sangimino@nrc.gov>
Subject: Foreign Visitors

Dear OIP Desk Officers and Foreign Visitor Resource,

I am providing notification of foreign visitors on March 7-8, 2017 for an NRC-hosted workshop on ex-plant materials harvesting. There are a total of 10 foreign visitors expected for this workshop from Canada (3), Belgium (2), Germany (1), and Japan (4). I have attached 5 of the 10 passport copies that have been received to date as well as the draft agenda for the workshop. I expect to receive the remaining 5 passport copies next week and will provide them once I receive them.

i) March 7-8, 2017, 8 AM – 5 PM, 3WFN
ii) Workshop agenda attached
iii) Matthew Hiser, 301-415-2454
iv) Publicly available
v) Recipients on this email: Wittick, Holzman, Emche, Rini, Stahl
vi) No security support needed

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Holzman (Schwartzman), Jennifer
Sent: Mon, 27 Feb 2017 09:56:10 -0500
To: Hiser, Matthew
Cc: RES_International_Mailbox
Subject: RE: Foreign Visitors

OK, perfect – thanks Matt!

From: Hiser, Matthew
Sent: Monday, February 27, 2017 9:56 AM
To: Holzman (Schwartzman), Jennifer <Jennifer.Holzman@nrc.gov>
Subject: RE: Foreign Visitors

Thanks Jen! Yes, there is a meeting scheduled with the Belgians the day before the workshop to discuss their RPV research plans.

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Holzman (Schwartzman), Jennifer
Sent: Monday, February 27, 2017 8:37 AM
To: Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: RE: Foreign Visitors

Good morning Matthew,

I had sent the attached information to the RES international programs team (Donna-Marie Sangimino, Shivani Mehta and Sylvia Valencia) but wanted to be sure you had it as well since Belgium is participating in your meeting. FANC and Bel V are quite interested in having NRC participate in their work.

Thanks,
Jen

From: Hiser, Matthew
Sent: Friday, February 24, 2017 2:37 PM
To: Foreign Visitor Resource <ForeignVisitor.Resource@nrc.gov>; Wittick, Susan <Susan.Wittick@nrc.gov>; Holzman (Schwartzman), Jennifer <Jennifer.Holzman@nrc.gov>; Emche, Danielle <Danielle.Emche@nrc.gov>; Rini, Brett <Brett.Rini@nrc.gov>; Stahl, Eric <Eric.Stahl@nrc.gov>

Cc: Sangimino, Donna-Marie <Donna-Marie.Sangimino@nrc.gov>
Subject: Foreign Visitors

Dear OIP Desk Officers and Foreign Visitor Resource,

I am providing notification of foreign visitors on March 7-8, 2017 for an NRC-hosted workshop on ex-plant materials harvesting. There are a total of 10 foreign visitors expected for this workshop from Canada (3), Belgium (2), Germany (1), and Japan (4). I have attached 5 of the 10 passport copies that have been received to date as well as the draft agenda for the workshop. I expect to receive the remaining 5 passport copies next week and will provide them once I receive them.

i) March 7-8, 2017, 8 AM – 5 PM, 3WFN
ii) Workshop agenda attached
iii) Matthew Hiser, 301-415-2454
iv) Publicly available
v) Recipients on this email: Wittick, Holzman, Emche, Rini, Stahl
vi) No security support needed

Thanks!
Matt

Matthew Hiser
Materials Engineer
US Nuclear Regulatory Commission | Office of Nuclear Regulatory Research
Division of Engineering | Corrosion and Metallurgy Branch
Phone: 301-415-2454 | Office: TWFN 10D62
Matthew.Hiser@nrc.gov

From: Hiser, Matthew
Sent: Tue, 3 Jan 2017 20:11:54 +0000
To: Purtscher, Patrick;Tregoning, Robert
Subject: RE: FW: Harvesting Workshop Session 3

Thanks Pat! Just to be clear, I think the Energy Solutions presentation would be in session 4, not 3, so I can work with Tom and follow up with Mr. van Noordennen.

Thanks!
Matt

From: Purtscher, Patrick
Sent: Tuesday, January 03, 2017 2:50 PM
To: Tregoning, Robert <Robert.Tregoning@nrc.gov>; Hiser, Matthew <Matthew.Hiser@nrc.gov>
Subject: FW: FW: Harvesting Workshop Session 3

FYI

From: Rosseel, Thomas M. [mailto:rosseeltm@ornl.gov]
Sent: Tuesday, January 03, 2017 2:46 PM
To: Purtscher, Patrick <Patrick.Purtscher@nrc.gov>
Cc: Gerard P. Van Noordennen <gpvannoordennen@energysolutions.com>; Leonard, Keith J. <leonardk@ornl.gov>; Richard Reister <Richard.Reister@nuclear.energy.gov>
Subject: [External_Sender] FW: Harvesting Workshop Session 3

Pat,

Gerry van Noordennen has agreed to speak at the workshop. His contact information is listed below.

Regards,

Tom

Gerry van Noordennen
Vice President Regulatory Affairs
Energy*Solutions*
151 Lafayette Drive, Suite 201
Oak Ridge, TN 37830
Office: 865-481-6319
Cell: [redacted] (b)(6)

From: "Purtscher, Patrick" <Patrick.Purtscher@nrc.gov>
Date: Tuesday, January 3, 2017 at 11:22 AM

To: "T. M. Rosseel" <rosseeltm@ornl.gov>
Subject: Harvesting Workshop Session 3

Hello,

I am in the Corrosion and Metallurgy Branch of NRC RES. For the workshop related to material harvesting, we wanted to find a contact person at Energy Solutions who might be able to speak to the decommissioning process. Rob Tregoning thought that you or someone there at ORNL might know of a good contact there through the work you have done on harvesting from Zion.

Please respond to let me know if you know of someone at Energy Solutions.

Thank you.

Pat
Patrick Purtscher
Materials Engineer
Nuclear Regulatory Regulation
Division of Engineering
Vessel & Internals Branch
301-415-3942

From: Hiser, Matthew
Sent: Mon, 6 Mar 2017 13:25:40 +0000
To: Cheruvenki, Ganesh
Subject: RE: FW: Materials Harvesting Workshop

Hi Ganesh,

Only Jeff is attending from NRR/DE. There are also a couple from NRR/DLR and a handful from RES. We have limited space in room, so we are encouraging webinar participation.

Thanks!
Matt

-----Original Appointment-----
From: Cheruvenki, Ganesh
Sent: Monday, March 06, 2017 8:24 AM
To: Hiser, Matthew
Subject: Accepted: FW: Materials Harvesting Workshop
When: Tuesday, March 07, 2017 8:00 AM-5:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: HQ-3WFN-1C03-32p

Yes, Matt,

Who is attending from our group.