

R2RA Interagency Work Group Notes

Wednesday, August 13, 1 – 2 PM EST

Work Group Members on the Call

ATSDR:

Olivia Harris
Steve Jones
John Wheeler

NIEHS:

Beth Anderson
Danielle Carlin
Michelle Heacock
Heather Henry

EPA:

Xabier Arzuaga
Vince Cogliano
Melissa Dreyfus
Annette Gatchett
Kira Lynch
Mark Maddaloni
Chuck Maurice
Larry Zaragoza

MDB:

Larry Reed
Elmer Akin
Maureen Avakian

New Work Group Members:

Annette Gatchett is the Acting Division Director in the Office of Research and Development in the National Center for Environment Assessment Cincinnati Division

Michael Scozzafava is the Chief of the Science Policy Branch in the Division of Assessment and Remediation.

Call overview

The call focused on two goals/outcomes:

1. A Review of R2RA progress so that everyone is up to date and participating as they'd like
2. A discussion of the new directions for R2RA for this upcoming year

Updates – Status Report on Ongoing R2RA Projects

Information Exchange: “So, what is a Superfund Site anyway?”

Michelle Heacock

- Thanks to Jennifer Wendel, a Remedial Project Manager and National Priorities List Coordinator, who put together a webinar that provided insight into how Superfund sites

are selected, the process that leads to site remediation, and the scientific issues involved.

- Grantees took full advantage of the opportunity to ask questions about the EPA national program as well as site assessment and remediation. The webinar had more than 80 participants.

Phosphate amendments for treating lead-contaminated soil

Heather Henry

- The group is in the final stages of updating the draft for publication, which will be submitted to the Journal of Environmental Quality in the next few weeks.
- There are continuing discussions within the committee working on this project: Mark Maddaloni, Kirk Scheckel, a number of academics, researchers from Oak Ridge National Laboratory.
- In their next paper that they plan to work on this fall, the group would like to take more of a holistic approach to talk about how bioavailability is incorporated into risk assessment and submit the publication to Environmental Health Perspectives.

PCB's Inhalation Study

Beth Anderson

- This has been one of the mainstay areas of emphasis for the R2RA work group
- Just recently, PCBs came up as a topic of interest for the National Toxicology Program (NTP). They were asked to investigate a number of PCBs through their standard testing assays.
- A committee has been formed to look into PCBs. They had an initial phone call looking at different PCBs and how NTP can be efficient in their studies on PCBs. This started off as a federal work group. There is interest in going beyond that.
- They are aware of the work being done by Larry Robertson at University of Iowa SRP and work at University of Kentucky SRP.
- This work is ongoing and this could be a good collaboration opportunity. NIEHS will keep the working group up to date on this activity.

Soil Vapor Intrusion

Larry Reed

- This started off with conference calls with members of the EPA and SRP.
- SRP grantees Eric Suuberg and Kelly Pennell have been working in this area
- Brown SRP has co-sponsored two workshops on soil vapor intrusion with the Northeast Waste Management Officials Association (NEWMOA), and environmental consultants to the advantages that such modeling work can offer in understanding the hazard posed by vapor intrusion to homes or businesses built atop contaminated sites.

- Henry Schuver from the RCRA office participated in one of these workshops.
- Kelly Pennell has also done external peer reviews for ATSDR and the American National Standard Committee for Soil Gas Mitigation Standards.
- There have been several SRP publications dealing with SVI. Some examples:

Shen, Rui and Eric M. Suuberg. **2014**. Analytical quantification of the subslab volatile organic vapor concentration from a non-uniform source. [Environmental Modelling & Software](#). **54**:1-8. [doi:10.1016/j.envsoft.2013.12.007](https://doi.org/10.1016/j.envsoft.2013.12.007)

Fu, Jinxia and Eric M. Suuberg. **2013**. Thermochemical and vapor pressure behavior of anthracene and brominated anthracene mixtures. [Fluid Phase Equilibria](#). **342**:60-70. [doi:10.1016/j.fluid.2012.12.036](https://doi.org/10.1016/j.fluid.2012.12.036)

Shen, Rui, Yijun Yao, Kelly G. Pennell, and Eric M. Suuberg. 2013. Modeling quantification of the influence of soil moisture on subslab vapor concentration. *Environmental Science- Processes & Impacts*. **15**:1444-1451. [doi:10.1039/c3em00225j](https://doi.org/10.1039/c3em00225j)

Musielak, Marion, Mark L. Brusseau, Manuel Marcoux, Candice Morrison, and Michel Quintard. **2014**. Determination of chlorinated solvent sorption by porous material-application to trichloroethene vapor on cement mortar. [Transport in Porous Media](#). **104**:77-90. [doi:10.1007/s11242-014-0321-8](https://doi.org/10.1007/s11242-014-0321-8)

Biological Response Indicator Devices for Gauging Environmental Stressors (aka BRIDGES)

Elmer Akin

- Kim Anderson, a grantee at OSU SRP, has been working with Kira Lynch in Region 10 on potential site applications of this passive sampling technology at Superfund sites
- Kim has also been working with Mark Maddaloni regarding potential application of the BRIDGES technology to PCB air sampling in New York City schools.

Data Collection: One- to-One Calls

- NIEHS SRP staff reached out to each of the working group members to ask about hot topics, comments, and ideas for the working group to learn more about areas of interest and what would interface well with SRP grantees.
- Again, thanks to each of you for making time to talk earlier this year to share your science interests for consideration of future R2RA collaboration projects.
- Received 60 different suggestions for potential future needs and R2RA work. See the [data visualization](#) for a summary of the comments and topics of interest and specific suggestions.
 - Comments were reviewed to identify common, cross-cutting themes and grouped into eight categories for future R2RA follow-up.
 - These criteria were more qualitative, so they are not statistically based.
 - On the R2RA Work Group Comments and Topics page. Each box is a specific comment – you can hover over with your mouse for more info.

- For three of the eight topics (Site access collaboration effort, fish advisories, and information exchange) SRP now has activities underway as a function of these individual work group calls.

Activities Now Underway

Information Exchange Webinars

Xabier Arzuaga

- The next Information Exchange webinar has been scheduled for September 9, 1-3 pm ET.
- Geniece Lehmann of EPA ORD NCEA and Xabier Arzuaga will lead discussions on the EPA human health risk assessment process
- An overview from the process of planning and scoping and will include information on hazard identification, dose-response assessment, exposure assessment, and risk characterization.
- Geniece will focus on the types of studies that are usually considered for hazard characterization and considerations when developing an assessment for a given chemical.

Fish Advisories Network

Melissa Dreyfus

- The purpose of the EPA/NIEHS Fish Advisories information network (FishNet) is to be an information network to share research and experiences around fish advisories, fish consumption research, and fish trade programs related to Superfund sites.
- Multiple disciplines from across EPA, NIEHS, ATSDR, and SRP grantees are participating in the network
- The network is divided into three topics: implementation effectiveness, exposure pathway research, and messaging.
- The first call was a scoping call with several people on the first call. The network is intended to be an information sharing network and not to be too work intensive.
- The next call is tentatively scheduled for August 25 at 1 pm ET.
- If you are interested in being on the network, contact Melissa Dreyfus to be added to the list.

Site Access Document

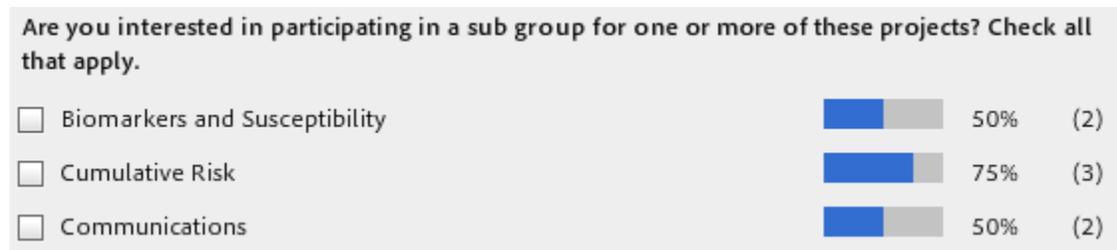
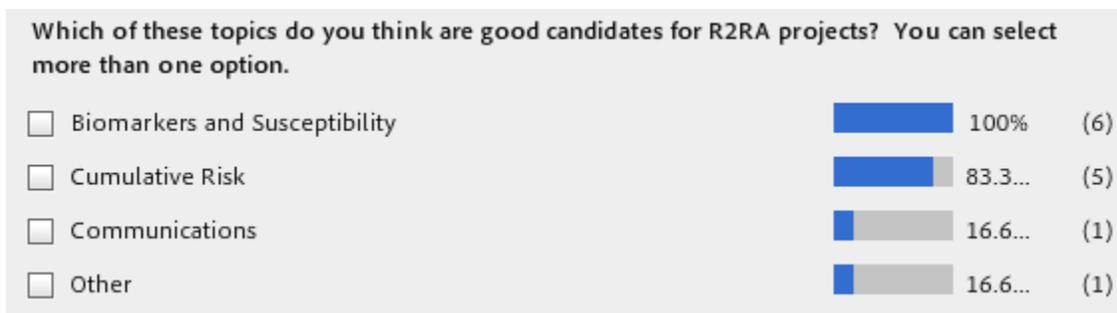
Michelle Heacock

- SRP staff has been working with a Site Access sub group arising from the last R2RA Work Group call.

- They appreciate everyone’s input on this issue, and they are incorporating suggestions on the SRP Site AccessTips document to assist SRP grantees in working with EPA and ATSDR at hazardous waste sites.
- Will be a resource to provide to grantees who are interested in gaining access to hazardous waste sites for sampling and field work.

Open Discussion

- Three of the identified suggestions were biomarkers and susceptibility, cumulative risk/mixtures, and communications.
- The working group was asked to fill out the following poll questions during the call. The poll results were:



What other topics do you think the R2RA group should consider for new projects?

Answers (3)

for epi/tox workshop on mixtures discuss additive versus multiplicative interactions; toxicologists & epidemiologists usually mean different things when they use these terms

Improving linkage between HH & ecol assessments, decision-making, & communication.

EPA would also be interested in improving linkages between HH and Eco assessments, decision-making.

Comments

- SRP staff met with Mathy Stanislaus at EPA recently and he was very interested in the communications aspect. There is a push for being able to communicate risk and how to better communicate risk assessment. Bioavailability is one concept that is very difficult to discuss that requires a need for better communication.

- The Work Group comments grouped into the communication categories varied from working with communities to communicating between SRP grantees and federal scientists. The category of communication from responses from the Work Group encompasses a very broad ways of communicating and not just communicating risk.
- Danielle Carlin is heading up a work group charged with putting on a workshop to address better ways to look at mixtures from an epidemiological perspective.
 - July 13-14
 - Different teams will be included in the workshop including epidemiologists and statisticians
 - Tom Webster is developing a simulated data set and there will be a real data set
 - As people register for the workshop, they will have to also include their approach for approaching the data sets

Suggestions for ways to approach these topics moving forward

- Chuck Maurice would like to see a better harmonization of how assessments are conducted and the methodologies. In terms of the ecological effects, there could be a lot more done in cross referencing what is going on in populations and communities to ecological factors and how contaminants affect different organisms. There should be better ways of better connecting the different aspects.
- Danielle added that there are perhaps new approaches related to ecological risk assessment that may be included in the epidemiology mixtures workshop.
 - Danielle will follow up with Chuck offline to discuss incorporating the ecological aspect into the workshop.
 - Annette Gatchett added that there are people in her office in Cincinnati who would be interested in the workshop.
- Work Group members are interested in receiving research and activity updates about SRP grantees who are working on topics relevant to the R2RA work group.
- Regarding EPA and ATSDR comments on the SRP Request for Applications, understanding what the priorities are is important for including as specific research topics in the RFA.
- Members of the group discussed how the three topics proposed were of interest.
 - Biomarkers of susceptibility are the last great frontier of toxicology. There is a need for a better basic understanding for mechanisms and modes of actions for chemicals to better develop biomarkers.
 - Modeling intermittent exposures and peak blood levels has advanced but there is a question of how to interpret this information. The pharmacokinetics are outpacing the pharmacodynamics so there is a need to better advance the pharmacodynamics aspect.

Recap/Wrap up

The work group recognized that the three topics are important and everyone has the Tableau [data visualization](#) to see what your colleagues are interested in. Let SRP staff know if there is anything else that comes to mind when reviewing this.

- Possible dates for the next call: Please fill out the [AgreeADate poll](#) to lock-in one of the following times:
 - Feb 11, 2015, 1 PM (ET)
 - Feb 18, 2015, 1 PM (ET)
 - March 3, 1 PM (ET)
- SRP will continue to send updates and research activities from SRP grantees.
- SRP staff hopes to see those of you as travel permits at the SRP Annual Meeting Nov 12-14 in San Jose, California: <http://www.srpannualmeeting.org/>