

U.S. EPA Superfund Remedial Program Collaboration with International Community on Radiation Sites Issues

Stuart Walker
U.S. Environmental Protection Agency
Office of Superfund Remediation
and Technology Innovation (OSRTI)
Science and Policy Branch

Presented to the
WM 2014 Symposia
in Phoenix, AZ on Monday 4 March, 2014

Purpose

- ◆ Provide overview of U.S. Environmental Protection Agency (EPA) Superfund site remediation program's efforts at international collaboration on radiation sites
 - » There are international collaboration efforts on other issue areas with EPA not discussed here
- ◆ Provide synopsis of EPA Superfund remediation program support for EPA research collaboration Japanese response to Fukushima

Part 1. International Outreach

Need for Collaboration

- ◆ International community focusing more efforts on remediation of legacy sites and uranium mines
- ◆ These are critical issues within the US also, and EPA is involved in remediating both types of sites
- ◆ EPA can:
 - » exchange information on remediation at similar site types
 - » Participate in meetings and workgroups
- ◆ Shrinking resources make collaboration even more important

Superfund Remediation sites: Number and Progress

- ◆ 1,304 NPL sites
 - » 66 are radiation sites
- ◆ 59 more sites proposed for NPL
 - » 1 is a radiation site
- ◆ 1,124 NPL sites are “construction completion”
 - » 38 are radiation sites
- ◆ 360 Sites have been deleted from NPL
 - » 9 are radiation sites

Role of International Information

- ◆ EPA does not use risk management framework used by ICRP/IAEA and most other agencies addressing radiation
- ◆ However, EPA does use technical information from international guidance
 - » EPA has contractual agreement with Oak Ridge National Lab (Keith Eckerman) which also produces much of health effect material for ICRP
 - » EPA slope factors for risk are modified from ICRP dose conversion factors
 - » EPA risk assessment model (PRG calculator) uses IAEA transfer coefficients

International Information Sharing

- ◆ Representatives from Australia, France, United Kingdom, Iraq, Japan, Norway, and Russia have presented at annual EPA internal meeting with field staff and conducted site visits
- ◆ EPA staff work with IAEA on workgroups, workshops, hosting IAEA sponsored Iraqi staff.
- ◆ EPA staff work with NATO, Russia, and Norway on workshops, meetings, on the issue of remediation of contaminated sites in Northern Russia

International Information Sharing

- ◆ EPA and French (ASN) officials have conducted several site visits and meetings in each other's countries.
- ◆ EPA staff have met with UK (EA) staff for one week visit at Sellafield site. This was followed by 1 year detail of EPA staffer on Sellafield and UK national issues.

Part 2

Synopsis of U.S. EPA Superfund support for EPA Research office Collaboration with Japanese on Fukushima



Activities to Date

- ◆ June 2012: Japanese staffer attended EPA's National Radiation Superfund Meeting in Long Beach, California.
 - » Followed staff discussions at 2012 WM symposium in Phoenix
- ◆ In 2013, Superfund remedial program supported EPA National Homeland Security Research Center of Office of Research and Development efforts as part of Embassy fellows program sponsored by State Department and including DOE Savannah River and Pacific Northwest labs

Activities to Date, cont.

- ◆ In 2013, Superfund remedial program supported EPA National Homeland Security Research Center of Office of Research and Development efforts as part of Embassy fellows program sponsored by State Department.
 - » This work is part of the US-Japan Bilateral Commission Working Group: Decommissioning and Environmental Management Workgroup
 - » The Embassy fellows programs includes DOE Savannah River and Pacific Northwest labs



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**



EPA
United States
Environmental Protection
Agency

Embassy Science Fellows Observations and Recommendations

Sang Don Lee
*U.S. Environmental
Protection Agency*

Bob Sindelar
*Savannah River
National Laboratory*

Mark Triplett
*Pacific Northwest
National Laboratory*

SRNL-MS-2013-00103

July 18, 2013

- **US State Department's Embassy Science Fellowship Program was used to provide expert support to Japan's Ministry of the Environment (MOE) in its decontamination efforts in areas outside of the Daiichi nuclear plant site.**
- **Overall intent was to draw upon US DOE and US EPA remediation experience to:**
 - Share methods and lessons learned
 - Offer suggestions for enhancing Japan's off-site decontamination efforts, and
 - Identify areas for future collaboration
- **Assignment duration:** February – March 2013
- **Approach:**
 - Worked closely with MOE's Decontamination Team
 - Reviewed extensive set of program documents, guidelines, procedures, methods, status, etc.
 - Met with staff from related agencies: Japan Atomic Energy Agency, National Institute for Environmental Studies, Nuclear Regulation Authority, etc.
 - Visited Fukushima Prefecture and municipal government decontamination offices
 - Visited decontamination and waste storage sites in evacuated and non-evacuated areas
 - Met with decontamination contractors carrying out full-scale remediation and demonstration projects

Embassy Fellows Report

- ◆ US Embassy Fellows issued report to Japan in July 2013
http://srnl.doe.gov/pubs/SRNL-RP-2013-00303_embassy-fellows-report.pdf
- ◆ EPA Superfund remediation program support to the report included:
 - » Guidance documents and models for Superfund sites
 - » Site-specific Superfund documents



Additional Meetings

- ◆ Superfund manager and EPA ORD and DOE had workshop with Japanese in Tokyo, 18-19, July 2013 on long-term cleanup issues for Fukushima
- ◆ Japanese (MOE) had a follow-up meeting with EPA staff on 5 November 2013

Follow-up Support

- ◆ Superfund remedial program continues to support to research office collaboration
 - » Providing information about the Superfund program as requested.
 - Policies (guidance documents, models, technical documents)
 - Site-specific documents

Questions

