**Agenda for**

**DOE Workshop to Discuss Issues Regarding**

**Deposition Velocity and MACCS2**

**June 5-6, 2012**

Department of Energy, Cloverleaf Building, Room 1300

20400 Century Boulevard, Germantown, MD 20874

## Purpose:

* Discuss MACCS2 and atmospheric dispersion models as applied to DOE consequence analysis
* Discuss implementation of HSS Safety Bulletin 2011-2, *Accident Analysis Parameter Update,* at field sites
* Develop a consistent Department-side approach for responding to the HSS Safety Bulletin
* Identify areas for improved DOE guidance for ensuring defensible consequence analyses

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| **Tuesday, June 5, 2012** | | |
| 8:30 – 8:45 am | **Introduction** | Chip Lagdon  Chief of Nuclear Safety |
| 8:45 - 11:15 am | **Site Experiences** |  |
| 8:45 – 9:15 | Savannah River Site | Andrew Vincent  Savannah River Nuclear Solutions |
| 9:15 – 9:45 | Y-12 - UPF | Doug Clark  BW-Y12 |
| 9:45 – 10:15 | Oak Ridge | Mike Hitchler  URS | CH2M Oak Ridge LLC (UCOR) |
| 10:15 - 10:30 am | **Break** |  |
| 10:30 – 11:00 | Sandia National Laboratory – TA-V | Jim Dahl  Safety Basis Group Lead TA-V |
| 11:00 - 11:30 | Los Alamos National Laboratory | Ray Sartor  Los Alamos Technical Services |
| 11:30 – 12:00 pm | **DNFSB Perspectives** | Adam Poloski  DNFSB Staff |
| 12:00 – 1:30 pm | **Lunch** |  |
| 1:30 – 2:30 pm | **Current Toolbox Models: MACCS2** | Nate Bixler  Sandia National Laboratory |
| 2:30 - 2:45 pm | **Break** |  |
| 2:45 - 3:45 pm | **Current Toolbox Models: GENII and GENII2** | Jeremy Rishel  Pacific Northwest National Lab |

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| **Wednesday, June 6, 2012** | | |
| 8:00 - 10:00 am | **Atmospheric Transport Models and**  **Understanding Risk** | John Till  Risk Assessment Corporation  Art Rood  Risk Assessment Corporation |
| 10:00 - 10:15 am | **Break** |  |
| 10:15 – 10:35 am | **HSS Safety Bulletin Technical Basis** | Brian Dinunno  Project Enhancement Corporation |
| 10:35 – 12:00 pm | **Current Policy Practice: Panel Discussion** | Garrett Smith  HSS Office of Nuclear Safety Basis and Facility Design  Todd Lapointe  EM Office of Safety Management  Brad Embrey  NNSA Office of Nuclear Safety |
| 12:00 – 1:30 pm | **Lunch** |  |
| 1:30 - 2:00 pm | **NSR&D Status &**  **EFCOG SAWG Meeting Summary** | Caroline Garzon  Chief of Nuclear Safety Staff |
| 2:00 - 3:00 pm | **Open Discussion on Path Forward** | All |

**Attachment 1:**

**Potential Discussion Topics**

**SITE-SPECIFIC ISSUES:**

**SRS:**

* Deposition velocity of tritium
* Deposition velocity of particulates
* Surface roughness and how it applies to dispersion coefficients
* Dispersion coefficients- how to select the best set of coefficients for the site
* Meteorology input file- acceptable methodology for obtaining data (includes normalization of data)
* X/Q for 100 meter worker
* Possible change in controls
* SR looking to develop consistent multi-contractor meteorology base for dispersion – usable model for other sites?

**Y-12:**

* Reasonable conservative site-specific calculation for DV (includes appropriate parameters, etc)
* Possible impact of calculation from one facility affecting another- possible change in controls
* Dispersion coefficients- how to select the best parameterization for the site
* Extremely slow/calm wind speeds
  + If more than 5% of data is in calms, is MACCS accurate?
  + Is it conservative?
* DR and ARFxRF values sufficiently conservative.

**HSS**:

* Needs to update MACCS2 guidance
* How to incorporate in standards and handbooks
  + What level of detail in 3009
  + What to include in accident analysis handbook

**GENERAL ISSUES/COMMENTS:**

* MACCS2
  + Understanding of how MACCS2 calculates χ/Q
  + Discussion of parameters in MACCS2 and their conservatism
  + Overall conservatism and uncertainty in MACCS2
  + Identify other vulnerabilities in MACCS. When is it not an ideal tool?
  + New versions of MACCS2
    - What does it improve
    - How to get into the HSS Toolbox
* How do we ensure a standardized, conservative approach in calculating dose?
* Comparison of Reg. Guide1.23 and EPA-454 methodology
* Can we develop a standardized approach to calculating deposition velocity? Or can we select a default value that will give all sites a reasonably conservative estimation of dose?
* What are the implications of pursuing other models? (ie Lagrangian puff)
  + Validation
  + Appropriate guidance on which model to use when
  + Appropriate guidance resulting in consistent application
* Guidance for use of deposition velocity outside of the limited DOE-STD-3009 setting