

**From:** [King, David](#)  
**To:** [Chang, Richard](#)  
**Cc:** [Misenhimer, David](#)  
**Subject:** [External\_Sender] RE: Ville Swiss Dose Calcs  
**Date:** Monday, June 19, 2017 11:16:48 AM

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Richard,

I looked at the Ville Swiss dose summary section. We found a few hot spots with very little removable (~0.1% of the total), so gamma is the dominant pathway. The net gamma doses do not exceed the TI threshold of 15 uR/hr (25 gross) for residential, so dose is ok where we had access. Making no changes at this time.

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**From:** Chang, Richard [mailto:[Richard.Chang@nrc.gov](mailto:Richard.Chang@nrc.gov)]  
**Sent:** Friday, June 16, 2017 1:51 PM  
**To:** King, David  
**Cc:** Misenhimer, David  
**Subject:** FW: Ville Swiss Dose Calcs

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\*\*\*ATTENTION: This message originates outside of the ORAU/ORISE network.\*\*\*

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David,

As part of finalizing the Ville Swiss Report, when you look at the dose assessment section, could you please double check the assumptions below for Sessions also apply to Ville Swiss Floor 3?

Also, should I expect the final report next week?

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**From:** Grossman, Christopher  
**Sent:** Friday, June 16, 2017 1:18 PM  
**To:** Chang, Richard <[Richard.Chang@nrc.gov](mailto:Richard.Chang@nrc.gov)>  
**Subject:** RE: Ville Swiss Dose Calcs

Richard-

While I didn't perform calculations specific to Ville Swiss, the approach used for the Sessions Clock company at 61 E. Main Street in Bristol, CT was relied upon to inform the dose assessment section of the Ville Swiss report. The approach was documented in an endnote to the ORAU Sessions report and is repeated here: "Both industrial and residential building occupant scenarios were considered in DandD Version 2.4. Default parameters were used for the industrial occupancy scenario, except for the resuspension factor, which was revised to be consistent with the recommended distribution in NUREG-1720, in which the NRC staff re-evaluated the default resuspension factor in DandD. Parameter values for the residential occupancy scenario were the same as the industrial occupancy scenario except for the occupancy time, which was set to 6,800 hours. Radium (i.e., Ra226+C) surface concentrations were set at 1,700 dpm/100 cm<sup>2</sup> over a localized area based on observed

areas of elevated measurements (i.e., an area equal to 1.2m<sup>2</sup>, which equates to the product of 4 areas of elevated measurements and 0.3m<sup>2</sup> per area of elevated measurement) for both scenarios. Estimates of potential secondary ingestion were developed using DandD Version 2.4 as discussed for the inhalation doses above. However, the removable fraction was modified to 1% (from 10% default) to account for observed removable fraction.” In my comments to you on the draft ORAU Ville Swiss report in which I recommended that ORAU revise the dose assessment section to more closely mirror the Sessions’ report, I indicated they would need to verify that the conclusions were valid for Ville Swiss, given the information from the initial site visit for Ville Swiss.

Chris

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**From:** Chang, Richard  
**Sent:** Friday, June 09, 2017 2:49 PM  
**To:** Grossman, Christopher <[Christopher.Grossman@nrc.gov](mailto:Christopher.Grossman@nrc.gov)>  
**Subject:** Ville Swiss Dose Calcs  
**Importance:** High

Chris,

We are close to issuing our closeout letter for Ville Swiss. When you have a chance, we had previously talked about you issuing a Note to File within the Docket in ADAMS with your calculations for the dose determinations for that site. Could you do that?

Thanks,  
Richard