

WBN2Public Resource

From: Arent, Gordon [garent@tva.gov]
Sent: Thursday, September 29, 2011 7:07 AM
To: Milano, Patrick; Poole, Justin
Cc: Bryan, Robert H Jr
Subject: FW: Need for clarification on revised SAMDA letter
Attachments: Table 5c-1_revised_28sept2011.doc

Pat,

The following was received from ABS Consulting regarding the question raised by PNNL on SAMA.

Attached is a revision to Table 5.c-1 from our revised SAMA submittal earlier this month. Track changes has been left on so you can see what was changed. ABS has also deleted the date from the table title as they believed it was confusing.

The NRC reviewers are correct in noting that the two values under Release Category 3- Late for SAMA-93 are incorrect in the recently submitted Table 5.c-1. This table was generated as an intermediate result. Due to the nature of the assessment for SAMA -93, the values here for that SAMA only should be replaced using the numbers detailed in the response to 5.f; i.e. for this SAMA which addresses containment venting. Replacement of these values does not affect subsequent results and in particular does not change our evaluated cost benefit numbers. We have verified that the correct values for SAMA 93 are used throughout the remainder of the report. The problem here was one of having to manually revised these intermediate numbers for SAMA 93 only in this spreadsheet, which we neglected to do.

Gordon

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Table 5.c-1. ~~October 2010~~, SAMA Model Release Categories, Frequencies, Doses, and Economic Costs

SAMA	Release Category 1 - LERF			Release Category 2 - BYPASS			Release Category 3 - LATE			Release Category 5 - SERF		
	Freq (per yr)	Dose Risk (man - rem/yr)	Economic Risk (\$/yr)	Freq (per yr)	Dose Risk (man - rem/yr)	Economic Risk (\$/yr)	Freq (per yr)	Dose Risk (man - rem/yr)	Economic Risk (\$/yr)	Freq (per yr)	Dose Risk (man - rem/yr)	Economic Risk (\$/yr)
Base	1.26E-06	3.72E+00	\$7,971	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,614	3.84E-06	1.23E+00	\$2,243
4	1.25E-06	3.70E+00	\$7,929	3.45E-07	8.25E-01	\$1,832	1.29E-05	1.40E+01	\$41,231	3.81E-06	1.23E+00	\$2,231
8	1.25E-06	3.71E+00	\$7,963	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,608	3.82E-06	1.23E+00	\$2,235
26	1.23E-06	3.65E+00	\$7,827	3.50E-07	8.37E-01	\$1,859	1.28E-05	1.40E+01	\$40,944	3.81E-06	1.23E+00	\$2,228
32	6.51E-07	1.93E+00	\$4,134	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.41E+01	\$41,506	2.36E-06	7.60E-01	\$1,380
45	1.26E-06	3.72E+00	\$7,970	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,586	3.83E-06	1.23E+00	\$2,241
46	1.25E-06	3.70E+00	\$7,924	3.49E-07	8.35E-01	\$1,855	8.11E-06	1.36E+01	\$39,797	3.77E-06	1.21E+00	\$2,203
56	1.18E-06	3.48E+00	\$7,459	3.50E-07	8.37E-01	\$1,859	1.27E-05	8.82E+00	\$25,891	3.21E-06	1.03E+00	\$1,880
70	1.25E-06	3.70E+00	\$7,936	3.48E-07	8.33E-01	\$1,850	1.30E-05	1.38E+01	\$40,449	3.79E-06	1.22E+00	\$2,214
71	1.26E-06	3.72E+00	\$7,971	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,614	3.84E-06	1.23E+00	\$2,243
87	1.26E-06	3.72E+00	\$7,971	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,592	3.83E-06	1.23E+00	\$2,242
93	1.26E-06	3.72E+00	\$7,971	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$16,060	3.84E-06	1.23E+00	\$2,243
101	6.14E-07	1.82E+00	\$3,896	3.50E-07	8.37E-01	\$1,859	1.32E-05	1.44E+01	\$42,256	3.84E-06	1.23E+00	\$2,243
103	5.20E-07	1.54E+00	\$3,299	3.42E-07	8.17E-01	\$1,816	9.85E-06	1.07E+01	\$31,464	1.49E-06	4.79E-01	\$871
109	6.43E-07	1.90E+00	\$4,078	3.50E-07	8.37E-01	\$1,859	1.26E-05	1.37E+01	\$40,212	3.84E-06	1.23E+00	\$2,243
110	9.51E-07	2.82E+00	\$6,037	3.50E-07	8.37E-01	\$1,859	1.31E-05	1.43E+01	\$41,825	3.84E-06	1.23E+00	\$2,243
112	1.26E-06	3.72E+00	\$7,971	3.42E-07	8.18E-01	\$1,816	1.30E-05	1.42E+01	\$41,614	3.84E-06	1.23E+00	\$2,243
136	1.25E-06	3.71E+00	\$7,954	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,611	3.82E-06	1.23E+00	\$2,234
156	1.19E-06	3.53E+00	\$7,568	3.50E-07	8.37E-01	\$1,859	9.70E-06	1.06E+01	\$30,988	3.44E-06	1.11E+00	\$2,011
176	1.14E-06	3.37E+00	\$7,227	2.72E-07	6.50E-01	\$1,445	1.05E-05	1.14E+01	\$33,523	3.46E-06	1.11E+00	\$2,025

Table 5.c-1. **October 2010**, SAMA Model Release Categories, Frequencies, Doses, and Economic Costs (Continued)

SAMA	Release Category 1 - LERF			Release Category 2 - BYPASS			Release Category 3 - LATE			Release Category 5 - SERF		
	Freq (per yr)	Dose Risk (man - rem/yr)	Economic Risk (\$/yr)	Freq (per yr)	Dose Risk (man - rem/yr)	Economic Risk (\$/yr)	Freq (per yr)	Dose Risk (man - rem/yr)	Economic Risk (\$/yr)	Freq (per yr)	Dose Risk (man - rem/yr)	Economic Risk (\$/yr)
191	1.26E-06	3.72E+00	\$7,971	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,614	3.84E-06	1.23E+00	\$2,243
215	1.16E-06	3.44E+00	\$7,369	3.50E-07	8.37E-01	\$1,859	7.78E-06	8.47E+00	\$24,856	3.18E-06	1.02E+00	\$1,860
226	1.16E-06	3.44E+00	\$7,369	3.50E-07	8.37E-01	\$1,859	7.78E-06	8.47E+00	\$24,856	3.18E-06	1.02E+00	\$1,860
255	1.05E-06	3.10E+00	\$6,651	1.88E-07	4.50E-01	\$1,001	1.05E-05	1.14E+01	\$33,373	3.47E-06	1.12E+00	\$2,026
256	9.42E-07	2.79E+00	\$5,978	2.63E-07	6.28E-01	\$1,396	9.77E-06	1.06E+01	\$31,211	2.88E-06	9.26E-01	\$1,682
276	1.25E-06	3.70E+00	\$7,926	3.48E-07	8.32E-01	\$1,849	1.30E-05	1.41E+01	\$41,368	3.81E-06	1.23E+00	\$2,231
279	1.25E-06	3.71E+00	\$7,954	3.50E-07	8.35E-01	\$1,856	1.28E-05	1.39E+01	\$40,768	3.80E-06	1.22E+00	\$2,223
280	1.25E-06	3.71E+00	\$7,954	3.50E-07	8.35E-01	\$1,856	1.28E-05	1.39E+01	\$40,768	3.80E-06	1.22E+00	\$2,223
282	1.25E-06	3.71E+00	\$7,965	3.42E-07	8.18E-01	\$1,816	1.30E-05	1.42E+01	\$41,614	3.83E-06	1.23E+00	\$2,238
285	1.25E-06	3.70E+00	\$7,936	3.49E-07	8.34E-01	\$1,852	1.30E-05	1.42E+01	\$41,605	3.74E-06	1.20E+00	\$2,186
292	5.97E-07	1.77E+00	\$3,788	3.50E-07	8.37E-01	\$1,859	1.29E-05	1.41E+01	\$41,266	2.03E-06	6.54E-01	\$1,189
295	1.26E-06	3.72E+00	\$7,971	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,614	3.89E-09	1.25E-03	\$2
299	1.23E-06	3.64E+00	\$7,803	3.50E-07	8.37E-01	\$1,859	1.19E-05	1.30E+01	\$38,156	3.71E-06	1.19E+00	\$2,169
300	1.25E-06	3.70E+00	\$7,936	3.49E-07	8.34E-01	\$1,852	1.30E-05	1.42E+01	\$41,604	3.78E-06	1.22E+00	\$2,209
303	1.25E-06	3.71E+00	\$7,964	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,589	3.84E-06	1.23E+00	\$2,243
304	1.25E-06	3.71E+00	\$7,964	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,589	3.84E-06	1.23E+00	\$2,243
305	9.06E-07	2.68E+00	\$5,749	3.50E-07	8.37E-01	\$1,859	1.29E-05	1.40E+01	\$41,199	3.84E-06	1.23E+00	\$2,243
306	9.07E-07	2.68E+00	\$5,755	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,563	3.79E-06	1.22E+00	\$2,218
307	1.26E-06	3.72E+00	\$7,969	3.50E-07	8.37E-01	\$1,859	1.30E-05	1.42E+01	\$41,605	3.84E-06	1.23E+00	\$2,243