Commenter	Page No.	Guidance Section	Guidance Sub-Section	Comment	EPA Resolution
Gogolak	1	Disclaimer	NA	Broken Link	EPA will fix the link. Note that an overall EPA internet upgrade that occurred after the peer review started, broke many links on the SPRG website.
Gogolak	1	Disclaimer	NA	Broken Link	EPA will fix the link.
Gogolak	1	Introduction	NA	Refer reader to where it is explained how to do this.	EPA will add the link.
Gogolak	2	2.0	2.1	Broken Link	EPA will fix the link.
Gogolak	2	2.0	2.1	Broken Link	EPA will fix the link.
Gogolak	2	2.0	2.3	Ditto	EPA will fix the link.
Gogolak	2	2.0	2.3	Many of these links say authorization required. Why is this since I already entered a password?	EPA will fix. This was another result of an overall EPA internet upgrade.
Gogolak	3	3.0		Authorization required for link	EPA will fix the link.
Gogolak	3	3.0	3.1	Provide links	EPA will add the links for both documents.
Gogolak	3	3.0	3.1	Ditto	EPA will add the link.
Gogolak	3	3.0	3.1	I guess open circles signify not quantified?	EPA will add a key to the CSM figure clarifying the meaning of open and closed circles.
Gogolak	3	4.0	NA	In the Surface PRG calculations, the 3 choices are resident, indoor worker and outdoor worker. Where do these other scenarios fit in?	No change. The 3 receptor choices (e.g., resident, indoor worker, and indoor worker) are selected, and the calculator provides results for the different exposure scenarios (e.g., dust on streets, fixed contamination on slabs or streets, sidewalks, and sides of buildings) for that receptor.
Gogolak	4	4.0	4.1	There are 5 residential scenarios in the preceding section, it would be better to have these links associated with the "equation bullets" rather than just lumped together as they are now.	No change. This would cause the graphical representation which were developed to be a short summary description of each exposure scenario to appear de-emphasized in the more lengthy and detailed depictions of scenarios.

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Gogolak	4	4.0	4.1	The sheer number of parameters is overwhelming. I suggest that you hyperlink the parameters in the equation to their definition and default values in Table 1.Otherwise it just gets too hard to follow.	No change. This would be very difficult to program and maintain. Users may print out any of these pages or open the website in separate window if they are trying to look at two pages side by side.
Gogolak	4	4.0	4.1	Explain the relationship between this equation and those that follow. Explain where they will be found in the calculator, and whether or how they should be combined	No change. The equations describe different exposure routes. It is up to the discretion of the user to determine when and how to combine the risk-based PRGs.
Gogolak	4	4.0	4.1	These four equations seem to vary only with the depth of contamination. This is not readily apparent and causes some considerable redundancy. Use one equation and state which parameter changes and why.	No change. EPA is providing equations for each of the default results provided by the calculator.
Gogolak	5	4.0	4.1	Same as comment above	No response needed.
Gogolak	5	4.0	4.2.1	Same comments as for residential	No response needed.
Gogolak	6	4.0	4.2.2	Again, same comments as for residential	No response needed.
Gogolak	8	4.0	4.3	Can these discussions be hyperlinked to Table 1? There is a lot of info here, but it is not very well organized to be useful. Since this appears to be a web tool, maximum advantage of hyperlinking should be considered. It would also be useful to have a self contained help file with the same links.	No change. This would be very difficult to program and maintain. Users may print out any of these pages or open the website in separate window if they are trying to look at two pages side by side.
Gogolak	8	4.0	4.3.1	Did I miss any prior discussion of how this tool should be used differently for children and adults? Since this is screening, would using the most restrictive be appropriate? for residential?	No change. The residential scenario assumes the resident is at the site from birth for the next 30 years, including childhood.
Gogolak	12	4.0	4.3.11	Link refers to Table 5.1. Is there supposed to be a Section 5 in this user's manual?	EPA will add in the webpage for ACF, that the language on the ACF webpage was derived from Section 5 of the Technical Background Document for the Soil Screening Guidance for Radionuclides.
Gogolak	16	4.0	4.4.2.2 (Table 1)	Authorization required message	EPA will fix. This was another result of an overall EPA internet upgrade.

Commenter	Page No.	Guidance Section	Guidance Sub-Section	Comment	EPA Resolution
Darois		Web Site		Finding the actual calculator was not initially obvious. I suggest making this easier. In the download section it was not initially obvious that the xls and pdf files were simply the default SPRG values.	The calculator mechanism being under the "Search" button is standard EPA Superfund calculator practice. EPA will add a sentence to the download page to clarify that these are default SPRG values.
Darois		Web Site		Have objectives of SPRG Calculator, as stated in the documentation, been realized? Yes	No response needed.
Darois		Web Site		Does the Users Guide match the SPRG Search calculator (online tool) and visa-versa? Yes, generally the user's guide is consistent with the calculator.	No response needed.
Darois		General		I am primarily concerned with the number of very conservative assumptions that are used as default values. This appears to compound into some values that are below the measurement capability of instrumentation. Also, there is no discussion of the presence of multiple nuclides. I have provided an annotated pdf of the guide and a separate Word document that discusses the results of various default analyses (see Eric Darois Summary of SPRG Default Value Observations.doc).	EPA believes that the defaults are appropriate. EPA acknowledges that compared to other exposure scenarios, there is less data for hard surface environments on which to base defaults. EPA is conducting further research on exposures from contaminated material on hard surfaces focused on exposures to chemical (non-radiological contaminants) as part of another effort. This may lead to changes to the SPRG defaults in the future as well, particularly since the SPRG is using the same defaults for ingestion of material on hard surfaces as the World Trade Center analysis.
Darois	4	4.0	4.1	The equations or the sections below should be numbered for easy reference.	No change. These equations are not being individually cross referenced from other sections.
Darois	4	4.0	4.1	The explanation of the differences and application of the 2D and 3D models is not well described.	No change. The exposure scenarios are described in more detail in the previous section.
Darois	4	4.0	4.1	Intuitively, it appears that the numerator should include (lambda + k) rather than lambda alone. Please verify that this is correct.	No change. K is for dissipation and is not related to lambda.
Darois	4	4.0	4.1	This equation does not seem reasonable. These default values also seem unreasonable.	No response needed.

Commenter	Page No.	Guidance Section	Guidance Sub-Section	Comment	EPA Resolution
Darois	5	4.0	4.1	It would appear that this equation should be the same as the external component of the 1st equation, but it is quite different.	No response needed.
Darois	8	4.0	4.3.3	I know of no adults that put three fingers in their mouth regularly. This is an ultra-conservative assumption.	EPA disagrees. This EPA default has been peer reviewed previously.
Darois	8	4.0	4.3.4	Yes but, these frequency values are linked to the SA values. So an adult will place 45cm^2 of hand surface to his mouth 1 time per hour? I do not think this is reasonable.	EPA disagrees. This EPA default has been peer reviewed previously.
Darois	8	4.0	4.3.5	Also quite high, especially for indoor workers where the hands are washed several times per day.	EPA disagrees. This EPA default has been peer reviewed previously.
Darois	9	4.0	4.3.8	This is all true. However, for the first case where fixed contamination is on an outdoor surface, a k factor from weathering should be encouraged and applied. Also, more guidance on K factors from weathering must be available and should be included. This guidance discourages the use of K unless it is well understood and documented but it is likely a rare event that a zero value of K is actually found.	EPA disagrees. A site-specific k factor from weathering should not be adopted without site-specific data justifying its use. The use of literature values that may overestimate weathering at the site could result in cleanup levels that are not protective.
Darois	10	4.0	4.3.10	So we have this factor but the value of K is set to 0? These assumptions are inconsistent.	EPA disagrees. This is a conservative assumption that can be altered with site-specific information.
Darois	10	4.0	4.3.10	This factor assumes that the silt is the source. This is an inconsistent assumption. I believe the introduction of "clean" silt will effectively reduce the inhalation intakes.	EPA disagrees. It is not inconsistent or unreasonable to assume as a conservative default parameter that roadways with contaminated dust are near dirt that is contaminated as well.
Darois	12	4.0	4.3.11	This is true for external gamma radiation. However, for factors such as SLF and PEF, this does not appear to be true since clean silt will be introduced into the contamination area. The ACF adjustments do not consider inhalation pathways.	This tool is only a static measurement of the contamination. The % of clean to unclean isn't a factor in the SPRG calculations. The user can modify the SPRGs after the fact if they wish.
Darois	12	4.0	4.3.12	I am unaware of any outside structure that has been contaminated to any appreciable height. This is an overly conservative estimate and may lead to confusion of the end user. I suggest limiting the height choices to more realistic values.	EPA disagrees. There are sites where structures have been constructed using radioactively contaminated building materials.

Commenter	Page No.	Guidance Section	Guidance Sub-Section	Comment	EPA Resolution
Darois	12	4.0	4.4.2	This should be related to the value of K since the particles are assumed to be source particles. I would suggest that most of these particles would not be source particles.	K is for dissipation on surfaces. The mPEF is used for the inhalation pathway and not as a source for particles.
Darois	13	4.0	4.4.2.2	This assumes soil and is inconsistent with concrete surfaces. Especially if the K value is set to 0.	EPA disagrees. There are often vegetation near hard surfaces. The k value may be changed from its conservative default using site-specific data.
Darois	15	4.0	4.4.2.2 (Table 1)	This variable is labeled SFinh in the 1st equation.	No response needed.
Darois	15	4.0	4.4.2.2 (Table 1)	Using this value as a default does not recognize the acceptable range of risk values. As with most default values, this will likely cause most decision makers to apply these very conservative values in order to maintain a safety margin. This results in clean-up values that compound the conservatisms such that the actual risk is much lower than the assumed value. I generally suggest that the calculator consider a range of default values for some of the critical parameters such that a range of clean-up values is provided. This may give the end user a "feel" for the uncertainties involved and less likely to interpret these values and sacrosanct limits.	EPA disagrees. Users should generally deviate from defaults only where they have site-specicific information.
Darois	15	4.0	4.4.2.2 (Table 1)	T	No response needed.
Darois	16	4.0	4.4.2.2 (Table 1)	T	No response needed.
Darois	16	4.0	4.4.2.2 (Table 1)	T	No response needed.
Darois	16	4.0	4.4.2.2 (Table 1)	These factors (highlighted in yellow) can take on a large range. Probably needs more guidance on using any parameter values including the defaults.	EPA disagrees and considers the level of guidance sufficient.
Darois	16	4.0	4.4.2.2 (Table 1)	T	No response needed.
Darois	16	4.0	4.4.2.2 (Table 1)	T	No response needed.
Darois	16	4.0	4.4.2.2 (Table 1)	T	No response needed.
Mullen		General	Website	The web site is generally easy to navigate, with an appealing mix of figures and text. The embedded links in the text to various references are very useful. The layout is useful and easy to follow.	No response needed.

Commenter	Page No.	Guidance Section	Guidance Sub-Section	Comment	EPA Resolution
Mullen		General		The silt loading factor (SLF) refers to paved roads while the particle emission factor (PEF) is based on an old equation for unpaved roads. This guide and the tool should use different PEF formulas based on whether the vehicle activity at the site is occurring on paved or unpaved roads.	EPA will make the change to allow the user to select under the "site-specific option", either of these 3 road types: paved road, public unpaved road, or industrial unpaved road.
Mullen	13	4.0	4.4.2.1	The equation used to calculate resuspended dust emissions from unpaved roads is out of date. The current equation (based on the AP-42 chapter finalized November 2006) is as follows (http://www.epa.gov/ttn/chief/ap42/ch13/index.html): Public Unpaved Roads: E = {[1.8 * (s/12) * (S/30)0.5 / (M/0.5)0.2] – 0.00047} * (365-p)/365 * 281.9 * sum(VKT) Where E is the total resuspended road dust emissions in grams, s is the surface material silt content (%), M is the surface material moisture content (%), p is the number of days in a year with at least 0.01 inches of precipitation, and VKT is the total vehicle kilometers traveled on the road segment. More details on the definitions of the variables and appropriate ranges can be found in the AP-42 chapter. In addition, the AP-42 document provides a separate equation for resuspended road dust on industrial roads. Since it is expected that many of these sites might have industrial roads rather than publicly traveled unpaved roads, the tool should distinguish between which type of road is located on or near the site, and use the appropriate equation.	EPA will make the change to allow the user to select under the "site-specific option", either of these 3 road types: paved road, public unpaved road, or industrial unpaved road.
Mullen	13	4.0	4.4.2.1	The current AP-42 equation for resuspended road dust on industrial unpaved roads is as follows: Unpaved Industrial Sites: E = 1.5 * (s/12)0.9 * (W/3)0.45 * (365-p)/365 * 281.9 * sum(VKT) Where E is the total resuspended road dust emissions in grams, s is the surface material silt content (%), W is the mean vehicle weight (tons), p is the number of days in a year with at least 0.01 inches of precipitation, and VKT is the total vehicle kilometers traveled on the road segment. More details on the definitions of the variables and appropriate ranges can be found in the AP-42 chapter.	EPA will make the change to allow the user to select under the "site-specific option", either of these 3 road types: paved road, public unpaved road, or industrial unpaved road.

Commenter	Page No.	Guidance Section	Guidance Sub-Section	Comment	EPA Resolution
Mullen	13	4.0	4.4.2.1	Both of these equations include a conversion factor of 281.9, which was also included in the PEF equation. This is not defined anywhere in the PEF equation description and is not obvious. This should be documented and is the conversion from lb per vehicle mile traveled (VMT) to gram per VKT.	EPA will make this change.
Mullen	13	4.0	4.4.2.1	Similar equations should also be provided for paved roads and the tool should have the user select the appropriate road type: paved road; public unpaved road; or industrial unpaved road. The AP-42 equation for resuspended road dust from paved roads is as follows: Paved Roads: E = [4.6 * (sL/2)0.65 * (W/3)1.5 – 0.1317] * [1 – p / (4*365)] * sum(VKT) Where E is the total resuspended road dust emissions in grams, sL is the road surface silt loading (g/m2), W is the mean vehicle weight (tons), p is the number of days in a year with at least 0.01 inches of precipitation, and VKT is the total vehicle kilometers traveled on the road segment. More details on the definitions of the variables and appropriate ranges can be found in the AP-42 chapter.	EPA will make the change to allow the user to select under the "site-specific option", either of these 3 road types: paved road, public unpaved road, or industrial unpaved road.
Mullen	13	4.0	4.4.2.1	The Table A1-6 provided in the user's guide is useful, however, as indicated, this table applies to paved roads, not unpaved roads (which is what is currently calculated in the PEF equation). Its utility is much greater than the state purpose of estimating the mean vehicle weight. Mean vehicle weight should be relatively easy to estimate based on the mix of vehicles traveling over the road. The more useful information in this table would be in providing general examples of the other variables needed in the resuspended road dust equation for paved roads, such as silt loadings.	EPA will make the change to allow the user to select under the "site-specific option", either of these 3 road types: paved road, public unpaved road, or industrial unpaved road.
Mullen	13	4.0	4.4.2.1	The text in section 4.4.2.1 should be updated to be specific to the equations presented above, and the tool should be updated to allow the user to select the type of road (public unpaved, industrial unpaved, or paved).	EPA will make changes to reflect the updated information, and EPA will make the change to allow the user to select under the "site-specific option", either of these 3 road types: paved road, public unpaved road, or industrial unpaved road.

Commenter	Page No.	Guidance Section	Guidance Sub-Section	Comment	EPA Resolution
Mullen	10	4.0	4.3.10	It would be useful to copy the sentence from section 4.4.2.1 that provides the definition of silt into this section, since this section is focused on the silt loading factor. Table 2 is probably not useful for this discussion. Table 2 is looking at the aggregation of vehicle travel by roadway class across all roadways of the same type in a state. Since the purpose of the SPRG calculator is for more site-specific calculations, the user should have a pretty good idea of the type of road and traffic volume on the road. Therefore, Table 2 should be replaced with the silt loading factor defaults shown for the baseline by average daily travel category from Table 13.2.1-3 in the paved road section of AP-42.	Copied sentence regarding silt over to this section. EPA disagrees that Table 2 should be deleted. Users may use the "site-specific" rather than "state-specific" option if they have the data to make the calculations for mechanical PEF.
Mullen	10	4.0	4.3.10	The paragraph at the end of this section seems extraneous. It is not necessary to know the road class to estimate the default silt loading factor if the table referenced in the above paragraph (13.2.1-3 from AP-42) is included. The information in Table 13.2.1-4 is useful and should be retained.	EPA disagrees. The paragraph helps the user understand the significant variation for mechanical PEF between different states and roadway types.
Mullen		General User's Guide		For the PEF equation presented in the green box in section 4.4.2.1, it doesn't make sense that some of the variables are defined but some aren't. I realize that all the variables are defined in a later table, but it would be helpful to have the PEF variables all defined in the green box, if possible.	EPA will make this change.
Mullen		General User's Guide		I am not sure I understand why the SLF is divided by the PEF, when (at least for paved roads) the SLF is used in calculating the PEF. The overall calculations shown in sections 4.1 and 4.2 are outside the area of my expertise, but this is just puzzling to me, and it would be good if someone with expertise in this part of the process can verify that this portion of the equations makes sense. Also, I am not sure what should be used in place of the SLF for unpaved roads, which are generally defined by a silt content percent rather than a loading factor.	The SLF and the PEF are both necessary when calculating a SPRG based on area. EPA will make the change to allow the user to select under the "site-specific option", either of these 3 road types: paved road, public unpaved road, or industrial unpaved road. The equations for each will differ
Mullen		General-Search Tool		The width of the Variable field should be shortened so that the Value field doesn't start to disappear off the end of the computer screen.	EPA will attempt to make this programming change.
Mullen		General-Search Tool		The user should be able to enter the silt loading factor (SLF) in units of g/m^2, since this is the set of units that SLFs are generally expressed in. The tool should then convert these units as needed.	EPA will make this change.

Commenter	Page No.	Guidance Section	Guidance Sub-Section	Comment	EPA Resolution
Mullen		General-Search Tool		The dropdown menus for “Most Likely State Road Conditions” (when State Specific SPRGs is selected) could be replaced by a user entry box for the SLF, if the recommendations from the User’s Guide section are implemented.	EPA will make the change to allow the user to select under the "site-specific option", either of these 3 road types: paved road, public unpaved road, or industrial unpaved road. The user will pick between the 3 road types in the "site-specific" option. The "state-specific" option will continue to use the dropdown menues for paved roads.
Mullen		General-Search Tool		When Site Specific SPRGs is selected, default values should be included for the tons/car and tons/truck fields.	EPA disagrees, particularly since the "site-specific" option now includes industrial roads which have a wider variety of standard vehicle sizes.
Mullen		General-Search Tool		In addition, these fields would need to be updated to capture the variables needed for the revised AP-42 equations.	EPA agrees. The new equations used.
Mullen		General-Search Tool		Reflecting the input variables and values selected in the output section is very useful.	No response needed.
Mullen		General-Search Tool		Some range checks should be performed on the values entered in the tool, and the user should be alerted if an entered value is outside of the expected range. Typical ranges could be listed next to the variables.	EPA agrees. Ranges are now presented in tables in user guide.
Ginevan		General		The calculator is really the SPRG Search tab – this should be made clear somehow (a tutorial?). Would it be more appropriate to call the site something like a data resource? This might be more accurate.	EPA will be issuing a tutorial on using the SPRG search functions as part of an internet based training course that will be archived and linked to from the SPRG User Guide. Since other similar calculational tools are referred to as calculators, EPA thinks it would be confusing to change the name of this product.
Ginevan		General		When one opens the user manual tab it should open in a new window – the way it works now is that the calculator page is closed when the manual is opened. Trying to refer to the manual while using the calculator is frustrating.	The user may open another window.

Commenter	Page No.	Guidance Section	Guidance Sub-Section	Comment	EPA Resolution
Ginevan		General		I have found that the calculator (the SPRG search tab) works sporadically in Firefox – should the documentation note Internet Explorer only? In the same vein, has anybody tried it on a Mac?	EPA has had the SPRG calculator tested using Firefox. The difficulties the user experienced may have been part of problems caused by EPA's internet upgrade problems
Ginevan		General		Some entries are accepted that don't make sense – that is, I specified "F_{CD} (fraction of time spent in compartment) unitless" as 2. I think this only makes sense as 0-1, you need to do range checking. If we increase FCD from 1 to 2 PRG is smaller by a factor of 2 but does this make sense? Some other entries may have the same problem	EPA will attempt to make this programming change.
Ginevan		General		The diagram on page 1 is nice but could we add some live links – that is when you click on "HEAST" you get the HEAST link? Actually live diagrams might be a nice organizing principal for a lot of this material.	EPA disagrees. Having links from the initial diagram would be confusing without having had the User Guide explanations.
Ginevan		General		Obviously I cannot check all equations but the sources are pretty well documented and the math makes sense. One issue that may not be addressed is the "sunbather" scenario. That is in certain cases people actually recline on a surface – this is a worst case for gamma emitters. I recognize that this is uncommon but it came up once for me. If it's there I missed it.	The user may alter the standard scenarios to create a more unusual scenario, if needed.
Ginevan		General		One problem that might want to be highlighted is the sample support issue – the goals are "reasonable maximum exposure (RME) concentrations." I would take these to be upper confidence bounds on the arithmetic mean concentration, but operationally we certainly do not want to remove all material above the goal because typically the data are right skewed and removing all samples above even an upper bound on the mean would result in an average much below the mean.	EPA disagrees. Sampling issues are outside the scope of this risk assessment calculator.
Ginevan		General		One issue that I'm not sure is adequately addressed is that radiation exposure can be a very small area exposure compared to chemicals. That is, if one simply sits in one spot, the amount of chemical exposure will usually be nil but radiation exposure for gamma emitters particularly can be pretty substantial. This adds a dimension to point 7 above – we have to know what the PRG numbers apply to in terms of sample size – 50 cm^2 surface measurements are more variable than 500 cm^2 measurements. I think the PRG number calculations assume a uniform concentration – which is reasonable, but I think some guidance has to be given or explicitly referenced to allow users to relate the PRG's to actual measurements. That is, what concentration (average/upper bound/something else) from what area (square meters?) should the PRG's be compared to?	EPA disagrees. Survey issues are outside the scope of this risk assessment calculator.