

Attachment 2

Industry response to NRC RAIs on NEI 10-01

RAI #	Topic	Industry Response
General Comments		
G-1	Generic Plant Parameter (PPE) Table	A new Section 3.4.2 has been added to NEI 10-01 to introduce and describe the Generic PPE Table and the Table itself has been added to the document as Appendix C.
G-2	Background, Purpose, Scope, Appendix A	Industry has invoked the requirements identified by NRC by adding references to those requirements in Appendix A, Section A.4 "Regulatory Bases".
Meteorological Comments		
M-1	Possible new item, release point	Industry has decided not to revise the parameters identified in this comment. All design certifications currently under review by the NRC are based on a ground level release which is conservative. The NEI guidance document for a PPE based ESP assumes that the specific orientation of the release point with respect to the main control room intake has not been established. All radiological evaluations are performed at a distance from the release point (EAB, LPZ, Site Boundary). Therefore, a ground level release X/Q is sufficient to evaluate the suitability of the site. The comments raised by NRC in this RAI pertain to an elevated release point, for which no credit is being taken and hence which need not be addressed in this section of the Vendor Information Worksheet. Elevated release points comments are addressed in the Generic PPE table being added in response to comment G-1 above. In addition, the design certifications provide average annual releases for comparison against annual dose limits. Therefore, intermittent or purge releases are already considered in the design certification releases and do not need to be accounted for separately.
M-2	Snow/ice load	Vendor Information Worksheet Section 1.2.2 has been revised to address NRC comments 1 through 3 in this RAI. The original construction of this parameter was confusing because it went beyond what is provided by the vendors. Regarding NRC's fourth comment, while industry agrees that DC/COL ISG-07 could be used in determining the respective site parameter and/or corresponding site characteristic values, a specific reference to this ISG has not been added. Doing so would add a level of detail to the worksheet which

		<p>goes beyond that intended by this guidance document. If industry were to do this for this parameter, similar references would need to be added for many of the other parameters in the worksheet, which would make it unwieldy and difficult to use (and would also necessitate a need to revise NEI 10-01 if/when the ISG is supplanted by more permanent guidance). This is consistent with how regulatory guidance is treated throughout the document.</p>
M-3	Tornado	<p>Industry has decided not to revise the parameters identified in this comment. Consistent with our response to NRC's 4th comment in RAI M-2 above in that a general determination has been made not to include detailed references in the worksheet in order to optimize its utility and prevent the need for revision when the references are updated or superseded.</p>
M-4	3 Second Gust	<p>Industry has deleted reference to SEI/ASCE as latest version would be picked up by applicant in review of SRP. This is consistent with our response to NRC's 4th comment in RAI M-2 above in that a general determination has been made not to include detailed references in the worksheet in order to optimize its utility and prevent the need for revision when the references are updated or superseded. Industry has also added the words "(Non-Tornado)" after wind to make the distinction identified by NRC.</p>
M-5	Importance Factors	<p>Industry has decided not to revise the parameters identified in this comment. The importance factors are not a function of the site location, but rather a function of the design of the buildings at the location. They are technology specific parameters and should not be included as part of the site parameters. The new ASCE/SEI 7-10 guidance no longer uses importance factors, and an importance factor of 1.0 is used for all structures.</p>
M-6	Norm Max Ambient Temperature	<p>This RAI contains 6 comments which are addressed as follows:</p> <ul style="list-style-type: none"> • First Comment, The term "Normal" has been changed to "Operational" • 2nd , 3rd , and 4th comments, Section 2.1.1 has been revised to provide the clarifications identified by NRC • 5th comment, industry has made no revision because the explanation indicated pertains to a site characteristic calculation that the applicant performs

		<p>and does not relate to the vendor calculated value and hence would not be addressed via a vendor information worksheet.</p> <ul style="list-style-type: none"> • 6th comment, industry has made no revision because the provision of such details is beyond the scope of this worksheet. If industry were to do this for this parameter, similar examples would need to be added for many of the other parameters in the worksheet which would make it unwieldy and difficult to use.
M-7	Norm Max Wet Bulb Temperature	<p>This RAI contains 8 comments which are addressed as follows:</p> <ul style="list-style-type: none"> • NRC's 1st comment has been addressed consistent with the response to M-6 above. • For NRC's 2nd, and 3rd comments, industry has revised Section 2.1.2 and added a new Section 2.1.3 to provide the clarification identified by NRC. • 4th and 5th comments, industry has made no revision because the information identified by NRC pertains to a site characteristic calculation that applicant performs and does not relate to the vendor calculated value and hence would not be addressed via a vendor information worksheet. • Comments 6 through 8, industry has confirmed the information identified by NRC and provided the necessary explanation in our revision to Section 2.1.2
M-8	Norm Min Ambient Temperature	<p>Industry has revised former Section 2.1.3 [2.1.4] to provide the clarification identified consistent with our response to RAIs M-6 and M-7</p>
M-9	RX Thermal Power Max Ambient Temperature	<p>Industry has revised former Section 2.1.4 [2.1.5] to provide the clarification identified consistent with our response to RAIs M-6 and M-7</p>
M-10	Rx Thermal Power Max Wet Bulb Temperature	<p>Industry has revised former Section 2.1.5 [2.1.6] to provide the clarification identified consistent with our response to RAIs M-6 and M-7</p>
M-11	RX Thermal Power Min Ambient Temperature	<p>This RAI contains 6 comments. Industry has revised former Section 2.1.6 [2.1.7] where appropriate to provide the clarification identified consistent with our response to RAIs M-6 and M-7. Some of the comments appeared to be related to the applicants calculation of site characteristics which would not be addressed via a vendor information worksheet. In such instances, industry made no revision.</p>

M-12	Atmospheric Dispersion – Accident	This comment refers to the vendor worksheet where the applicant requests the site parameters for atmospheric dispersion used in the design certification. The applicant will then use this information along with the site characteristic to develop the dose information required for the SSAR and ER. Therefore there is no reason to differentiate between the 5% and 50% X/Q developed for the site and used in the SSAR and ER. Section 9.1.6 has been deleted as indicated by NRC’s comment.
Geologic Comments		
G-1	Bearing Capacities	This comment refers to the vendor worksheet where the applicant requests the site parameters for bearing capacity used in the design certification. The applicant will use this information along with the site characteristics to evaluate if a technology is commercially feasible for the site. This information will not be sent to the NRC as part of the ESP. Industry has decided not to revise the parameters identified in this comment.
G-2	Peak Ground Motion	Although Peak Ground Acceleration (PGA) and Ground Motion Response Spectra (GMRS) are related, these two descriptors of seismic activity are not identical and therefore, requesting PGA in the vendor information worksheet is not redundant. Peak Ground Acceleration is included as a site parameter under the Site Characteristics portion of the DCD whereas the Ground Motion Response Spectrum used in design is included as part of the seismic design parameters under the Design of Structures, Components, Equipment and Systems portion of the DCD.
G-3	Time History	We agree with NRC’s view that neither of the requests represents something that is fully addressed at ESP stage and that finality will not be gained until the COL stage. Although not reviewed by the NRC during the ESP application process, the time history of ground motion used for a particular design is presented in the DCD and can provide some insight into the dynamic response characteristics of the particular structure. We therefore include this as part of the vendor information request for information purposes, not as a parameter to be included in the PPE.
Radiological Comments		
R-1	General Process	Industry has revised Section 3.1.2 to guide prospective

	Description and Guidance	applicants on how to address the two issues identified in this comment at the ESP stage.
R-2	Normal and Accident Source Terms	<p>Industry has addressed NRC's comments as follows:</p> <p>1st paragraph:</p> <p>Industry has revised Section A.4, as indicated in our response to RAI G-2 above, to include the regulatory references identified by NRC. As indicated in our response to RAI M-2 above in that a general determination has been made not to include detailed references in the worksheet in order to optimize its utility and prevent the need for revision when the references are updated or superseded. Footnote 1 to Table 3 has been corrected as indicated.</p> <p>2nd paragraph:</p> <p>Section 4 was revised to address the question of multiple gaseous release pathways. In a PPE based ESP with Ground level release points doses are only evaluated far from the plant where building wake effects are negligible.</p> <p>3rd paragraph:</p> <p>Section 4 was revised to caution applicants that calculation of normal effluent doses will require a significant amount of analytical work.</p> <p>4th paragraph:</p> <p>It is not the purpose of this document to be a comprehensive description of ESP and COLA requirements but merely to guide PPE development. What a licensee will ask the vendors for and what the licensee will do with the information received are different things. Industry's decision to include a</p>

		<p>generic PPE as identified by NRC in RAI G-1 (general) will be useful in helping perspective applicants understand such distinctions. Sufficient guidance for all non-PPE uses of this information in either an ESP or COLA is contained in SRP and followed by applicants. NUREG-0800 chapter 2.0.</p> <p>5th paragraph:</p> <p>Industry agrees that the applicant should include sufficient information to support staff's independent analysis in confirming the requirements of Part 20, Appendix B, Table 2 ECLs and Part 50 Appendix I design objectives. Accordingly NRC comments 1 a through d, are addressed as follows:</p> <p>1.a See responses to paragraphs 1 through 4 above</p> <p>1.b Industry agrees that a cutoff threshold of 10^{-2} is too coarse, Table 3 has been revised to specify a cutoff threshold of 10^{-3}. Appropriate LLRW considerations have been identified in Section 3.1.2 in response to RAI R-1. Industry recognizes that an estimate of the expected LLRW volume distributions may be required in the ESP to support NRC's review. However addressing such estimates in Table 3 goes beyond the intended scope of the table which is merely to request radionuclide information from the vendor. Industry has chosen not to guide applicants to request quantities in both conventional and SI units because there is no requirement to do so and including both units would add unnecessary complexity to the data request.</p> <p>1.c Industry agrees that applicants need to know the type of plant for which it is receiving data. This will be made clear in the complete information package that the applicant receives from each vendor. It does not need to be delineated on individual information tables (such as Table 7) since each response received will relate to one and only one vendor/technology. The isotopes requested have been added to the table and the table title has been changed as indicated. Industry has chosen not to guide applicants to request quantities in both conventional and SI units because</p>
--	--	--

		<p>there is no requirement to do so and including both units would add unnecessary complexity to the data request.</p> <p>1.d Industry agrees that applicants need to know the type of plant for which it is receiving data. This will be made clear in the complete information package that the applicant receives from each vendor. It does not need to be delineated on individual information tables (such as Table 10) since each response received will relate to one and only one vendor/technology. The isotopes requested have been added to the table. Industry has chosen not to guide applicants to request quantities in both conventional and SI units because there is no requirement to do so and including both units would add unnecessary complexity to the data request.</p>
<p>Accident Comments</p>		
A-1	Normal and Accident Source Terms	Industry agrees that the applicant cannot completely defer the accident dose calculation to the COL application and has revised NEI 10-01 to remove the statement to this effect from page 18.
A-2	Normal and Accident Source Terms – accident releases	Industry agrees that additional guidance on the development of PPE accident source terms is both useful and available. NEI 10-01 already makes reference to RS-002. To include all potentially applicable references would go beyond the scope of this document.
A-3	Normal and Accident Source Terms – accident releases	Industry agrees that the source term information indicated should be developed and presented in the ER. An item 18.9 has been added to the vendor information worksheet for this purpose. Guidance explaining how this information should be addressed in the ER to a PPE based ESP has been added to Section 4 of NEI 10-01.
A-4	Regulatory Bases	Industry agrees that the reference to RG 1.183 is not completely correct and has deleted this reference from Section A.4 in Appendix A.
<p>Environmental Comments</p>		
E-1	Parameter Detail	Industry agrees with NRC’s comment. The Vendor Information Worksheet contained in Appendix B of NEI 10-01 was developed after a careful review of the NRC Safety

		Evaluation Reports and Environmental Impact Statements prepared for the first three ESP. The reviews identified the parameters contained in Appendix D that were used to support the conclusion that the site is suitable for a reactor. As a result, the number of parameters in the Vendor Information Worksheet in Appendix B is reduced in comparison to what was provided in the first three PPE based ESPs.
Security Comments		
S-1	10 CFR 52.17 requirements	Industry has revised Section A.4 of Appendix A to include reference to 10 CFR 52.17(a)(1)(x) and 10 CFR 100.21(f) where appropriate.
S-2	10 CFR 52.17 references	Industry has decided that to add the specific references identified by NRC would take the discussion of security to a greater level of detail than that for other equally important issues. Adding such detailed discussion across the entire scope of the Regulatory Bases discussion would make this Section extremely cumbersome and detract from the intended purpose of the document.