



THE GOOD, THE BAD, AND THE UGLY, OF THE TWO YEAR REVIEW CYCLE

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Abstract

With the adoption of the 1996 Edition of the "Regulations for the Safe Transport of Radioactive Material" IAEA began a biennial process for the review and potential modifications of the regulations. IAEA members are currently in the third review cycle; this experience provides a perspective of the benefits, the problems and the discord with this process. This paper presents a perspective of the nuclear industry on these issues. It also includes recommendations to make the process more meaningful and of greater value to all parties that involved. "The Good" will focus on the benefits, "The Bad" will identify the problems, and "The Ugly" will cover the discords. "The Good" An effective safety program/procedure includes a provision for periodic review and, if warranted, modifications. The 1996 Edition provides a schedule and a plan for executing that schedule. This provides for a logical review and modification and therefore a plan for keeping the regulations current. "The Bad" The benefit of a review of the regulations is lost when it is consumed by minor editorial changes that have minimal positive impact on safety. The use of limited resources to address insignificant changes results in a reduction of resources for safety in other aspects of the transportation area. The two year review should capture these minor changes but the implementation should be deferred until prompted by a significant change requirement or the volume of minor changes warrants a revision of the regulations. "The Ugly" The ugly part of the process is the adoption of the changes by the various competent authorities. In some competent authorities it is a simple dictate that this is the way it will be, while other authorities have a very open public process with public participation and open meetings. The result is there is not uniform adoption of the changes either in timing or in consistency.

The Good

A biennial review process has several very positive aspects. These include; 1. keeping the standard fresh as attitudes towards safety are constantly changing, 2. the review encourages transportation sector to think about how problems can be addressed in the near term versus a single brain storming every 10 years, and 3. this is in accordance with good industry practice of keeping safety procedures current.

The public perceptions of issues change almost on a daily basis, depending on what the most recent news story, whether it is a radio, television or newspaper. In public relations and perception when it comes to radioactive material no news is the best news. Even when positive stories come out about radioactive materials, the people and organizations that oppose the use of radioactive materials use the news event to gain media attention for their respective position. One of the countering forces in this debate is the standards for the protection against adverse radiation impacts. The public wants the standards to be well established and enforced. In the public discussions the fact that the transportation standard is reviewed and updated on a two year cycle provides a high level of comfort.

The second advantage (good) of the two year review cycle is recent events and occurrences can be factored in the review and identifying any potential changes to the standard. When an adverse event occurs there are three factors which impact how the event is perceived. These are; time since the event occurred, distance between the event and the person considering it, and relevance of the event to the person who is considering it. An adverse event that occurred nine years ago would not be as significant as a similar event that occurred five years ago or as significant as the similar event that occurred three months ago. The same consideration is true to distances and an individual. Something that happen in another country could be bad, but if that same thing happen in the next state or providence it would be worst, but if it happen in the your town or facility it is really significant. Lastly, if the event was a transportation accident involving explosives it would be a concern to us, if the transportation event involved radioactive materials for the weapons programs it would be a greater concern, but if the event involved commercial radioactive materials we would be very concerned. With the two year review cycle it allows the opportunity to minimize the time between an event and potential changes in the standard. Because of the

timeliness it helps to make the people who were involved with the event available in the review of the impact it may make in the standard. This is compared to an event that occurred seven years ago and the people involved have all moved on to other areas or begin to forget about the details of the event. Finally, because of the international nature of the IAEA standard the people who were most impacted by an event would be part of the review and common group considering the changes.

The third positive (Good) aspect of the two year review cycle is it is good safety practice. Most facilities/companies/organizations who handle, possess, transport or use radioactive materials require a periodic review of the safety procedures. This is any where from annually to biennially, to once every three years. This has two benefits. First it gives the people who are using the procedures a reminder of what is in them, vs. continue to operate based on what they remember is in them. Second, it provides the opportunity to update the procedures due to change equipment, facilities, process makeup or other changing conditions which haven't been previously adopted in the procedure. It is a good industry practice which helps to assure the safety of the operations involving radioactive materials.

The Bad

The biennial review cycle also has a number of bad aspects. These include; 1. the cycle isn't a two year cycle it is closer to a four or five year cycle, 2. due to the overlap of cycles it leads to considerable confusion as to what has change, what is changing and what needs to be changed, and 3. the review process results in a large number of trivial concerns which must be addressed which waste limited resources.

The bad aspect of the process is that it isn't truly a two year process. The process begins with the call for proposals. This is usually about six months from the notice until the proposals are forward to IAEA. Then there is about three months for the proposals to be consolidated into one document and made available for the first Review Panel. The first panel meets about the 10th month into the process. The review panel completes its work and forwards the results on to TRANSSC. This takes about five months or the 15th month of the process. TRANSSC reviews the work of the review panel and returns the compiled information with its recommendations. The review panel takes into consideration all of the input and convenes a second review panel which will occur about the 22nd month into the process. The results from this panel are then forwarded as final recommendations to TRANSSC who will meet to consider them in the 27th month of the process. With their approval the recommendations are forwarded to CSS for approval and then the Board of Governors which will occur in the 32 month of the process. With the Board of Governors approval it is released for publication which takes an additional six months. Therefore the process isn't complete until about the 38th month. Therefore, while the process is called a two year cycle it is an over three year cycle. Since the objective is to keep it on a two year cycle to be consistent with the publication of the UN Orange Book shortly I will suggest how to do that.

The next bad thing about the two year cycle is the overlapping that occurs. As was discussed earlier two year review cycle is over a three year cycle. This dictates that a new review cycle has begun prior to the printing and releasing of the changes from the previous review cycle. Depending on the printing schedule it could be the call for comments may be closed before the prior edition has printed. Obviously, this is very very bad. Commenters will be providing comments based on what they guess is in the standard. To address this and the above question I suggest the following schedule.

The call for comments begin five months prior to first review panel, IAEA compiles the comments and distribute them to Review Panel about a month prior to the meeting. The results of the first meeting are widely distributed including the members of TRANSSC. Comments from member states, including TRANSSC members are due four months later or about 9 months into the process. A second Review Panel meeting is held 10 months into the process. The final recommendations are forwarded to TRANSSC the 12th month of the process. The first TRANSSC review will be eliminated. Comments and recommendations from TRANSSC's March meeting are forwarded to the CSS and the Board of Governors for the September meeting. With the Boards approval the IAEA will have 6 months to print the final version and remain within the two year cycle. Additionally, the printing will be released at the beginning of the next two year cycle.

In addition to the two previous bad aspects of the two year review cycle, a third bad consequence of this is the drain on resources. Even though previously it was discussed as beneficial or good to have a two year cycle these benefits are out weighted by the bad and ugly aspects of it. In industry and government resources are at a premium. The resources in place are working close to the maximum and any additional work load results in either

it not being done at all, being done poorly or being done at the expense of some other project. In the case of the two year review cycle it has all three. Some companies and governments do not spend any time on the reviews as they do not warrant the resources. Sometimes companies and governments do spend some resources but the result of the effort is hardly worth the resources spent. Finally, when the companies and or governments expend the resources to truly review and understand the changes, this is at the expense of some other project. The IAEA standard for transportation has been around since 1961. It is a mature standard and does not require a lot of modification. The radioactive material transport has been around a lot longer than that. The safety record is outstanding and an example to other hazardous materials transport. There is no reason to modify it even two years. The resources required to review these changes would be better spent on other safety areas. A lot of the resources are spent making sure the standard remains at a stable technically defensible level. This is apparent as the current review cycle has 120 proposed changes. It is hard to understand how a standard that is over 30 years old and has an excellent record would need to have 120 changes made in two years from the previous review cycle. The best way to address this is to move it to a five year review cycle. This would be consistent with national standard bodies review cycles. It would also allow more time for process similar to that which is in current use.

The Ugly

The ugliest part is the implementation. The ugliness begins with the final review and publishing at IAEA. This is followed by the ugly inconsistent implementation in each state.

The IAEA process for the publishing doesn't start until the Board of Governor has approved the document. When IAEA publisher receives the document they review and edit it. This is good and bad. It is good as it helps improve the readability, however, it is ugly when they want the text changed in such a way it would change the intent or meaning. This can lead to heated discussions and delays in the publishing of the document. If the technical people lose the point the whole intent of a section could be changed. To resolve this issue the editing must be completed by IAEA prior to final approval of TRANSSC. This would assure the editors had their input plus the text most likely not be changed from the final review and approved version of TRANSSC.

The next set of ugliness occurs when the individual states begin to implement the new standard. In the United States it typically takes three to five year to do a rulemaking. In the case of the 1996 IAEA standard, we will complete the process on October 1, almost eight years from the finalization of the updated standard. The states need to tailor their processes and programs to meet a reasonable implementation process. This could start with one year after the standard is released to review and determine what changes will be needed to meet it. This would be followed by one year of volunteer compliance for those who want to take advantage of the changes and then a required implementation date that is uniformly adopted around the world. This would give state like the US sufficient time to adopt the standard and would provide time for the transportation community to implement the changes.

Summary

In summary the two year review cycle has some good points however they are out weighted by the bad aspect of the timing and resource requirements and the ugliness of the implementation. To resolve this it should move from a two year cycle to a five year cycle followed by a two year implementation schedule.