

Attachment 1
NEI Answers to NRC Staff Questions in 12/17/18 Meeting Handout

SLIDING SCALE – CREDIT FOR OPERATOR ACTIONS, FLEX EQUIPMENT, AND LAW ENFORCEMENT ASSISTANCE

1. What are the perceived advantages for industry to implement the sliding scale option? Disadvantages?

This question is difficult to answer because NEI has not been afforded an opportunity to review a complete sliding scale proposal. Our answer would need to consider the bounding/coping time that could be credited for each tier and key aspects of the guidance that would be used to assess the acceptability of licensee actions to meet tier requirements. In general, an advantage is that this approach would provide some bounding/coping time credit, so it is better than the status quo. A disadvantage is that the credit being offered and/or certain steps in the guidance may make the approach unattractive when assessed against the resources necessary for implementation.

A question we have concerning the sliding scale approach: Would there be different criteria for one or more of the tiers depending upon where the credited action would take place? For example, would the Communications or Training and Validation tiers have different criteria for missions in the Owner Controlled Area, Protected Area and power block?

a. Provide a timeframe for implementation by the industry.

Having not seen the complete proposal, it is not possible to answer this question.

2. What specific credit is industry seeking if the Commission were to select the sliding scale option?

A licensee could credit law enforcement tactical support to enable performance of mitigation actions to prevent radiological sabotage. A mitigation action is an action that may be taken by an operator to prevent the irreversible onset of radiological sabotage but does not meet the operator action criteria in Regulatory Guide 5.81. Credit for law enforcement support and mitigation actions could be incorporated into guidance for the development of target sets, and considered during the control and evaluation of tactical response drills and Force-on-Force (FOF) exercises, thus enhancing the realism of these activities.

3. How does industry view the six elements of the sliding scale option in helping to decrease the security coping time?

This question is difficult to answer because NEI has not been afforded an opportunity to review a complete sliding scale proposal. Our answer would need to consider key aspects of the guidance that would be used to assess the acceptability of licensee actions to meet tier requirements. We do recommend that the staff consider changing the framework to three tiers to both simplify the process and reflect the inherent connections between the anticipated work involved in implementing the guidance for each tier:

- Documentation and Information Exchange
- Familiarization and Tabletop Discussions
- Communications, and Training and Validation

We noted that the "Information Exchange" tier contains a reference to "Contingency Response Tools" (CRTs). How would this expectation be addressed by sites that do not have a CRT?

Attachment 1
NEI Answers to NRC Staff Questions in 12/17/18 Meeting Handout

- a. Should one element be weighed more? If yes, which one any why?

With consideration of our response above, we suggest giving the most weight to a combined Familiarization and Tabletop Discussions tier because it is anticipated that it would offer the most planning and readiness benefit relative to the resources needed for implementation.

4. As it relates to the Training and Validation element of the sliding scale, provide the frequency in which licensees should conduct practice drills with their respective law enforcement agencies.

Drill frequency should be determined jointly by the licensee and the law enforcement agency based on the mission profile (e.g., location and complexity). Missions inside the power block would likely require a higher drill frequency than those conducted outside the power block and, similarly, between the Protected Area and the Owner Controlled Area.

Attachment 1
NEI Answers to NRC Staff Questions in 12/17/18 Meeting Handout

NUCLEAR ENERGY INSTITUTE (NEI) SECURITY BOUNDING TIME (SBT) WHITE PAPER – CREDIT FOR OPERATOR ACTIONS, FLEX EQUIPMENT, AND LAW ENFORCEMENT ASSISTANCE

1. What are the perceived advantages for industry to implement NEI's SBT white paper? Disadvantages?

Advantages: The SBT white paper provides a standard approach to obtaining law enforcement credit and, with NRC endorsement, regulatory certainty and more predictable inspection outcomes. The SBT process addresses the topics needed for successful tactical mission planning and execution, and does so in a comprehensive and integrated manner. In addition, resource commitments may be adjusted to align with the needs of a site-specific mission profile, and accommodate the preferences and professional judgment of law enforcement officials involved in the process.

We are not aware of any disadvantages.

a. Provide a timeframe for implementation by the industry.

Implementation of the SBT process by a licensee is voluntary and a decision to implement the SBT process would require a site-specific evaluation. Likewise, an implementation schedule would also be site-specific.

2. What specific credit is industry seeking if the Commission were to select NEI's SBT option for implementation?

A licensee could credit law enforcement tactical support to enable performance of mitigation actions to prevent radiological sabotage. A mitigation action is an action that may be taken by an operator to prevent the irreversible onset of radiological sabotage but does not meet the operator action criteria in Regulatory Guide 5.81. Credit for law enforcement support and mitigation actions could be incorporated into guidance for the development of target sets, and considered during the control and evaluation of tactical response drills and Force-on-Force (FOF) exercises, thus enhancing the realism of these activities.

3. Are there minimum capability standards the law enforcement support would have to meet before SBT credit is applied?

Yes; these are described in the SBT white paper. See step #3, "Determine Required Tactical Team Composition and Capabilities."

4. Indicate whether the Protected Area (PA) formula in the SBT White Paper would enable licensees to credit law enforcement support just in exterior areas inside a PA, or also within structures like the power block.

The PA formula applies to any area inside the Protected Area, including structures like the power block. Potential changes to this formula could be the subject of a future meeting.

Attachment 1
NEI Answers to NRC Staff Questions in 12/17/18 Meeting Handout

5. Explain the basis for the law enforcement mission planning and execution times in the Owner Controlled Area (OCA) and PA formulas.

The mission planning and execution times are based on licensee experience (several of whom also have law enforcement backgrounds) and discussions with law enforcement agency officials. The following paragraph, addressing this topic, appears in the NEI SBT white paper:

"The assumed mission planning and execution times above are considered reasonable and bounding for a wide range of conditions. Using drills to determine these times is impractical given the number of variables and uncertainties associated with an actual attack (i.e., a very large number of scenarios are possible), and the inability to run all aspects of a drill at a "real world" pace (due to personal, industrial and radiological safety requirements). The availability of assumed times notwithstanding, the tactical team agency may determine times greater than the assumed times based on the application of professional judgement and experience to the planned mission profile and tasks. The licensee should confirm the times used to calculate the SBT with the tactical team agency prior to implementation."

6. NEI's SBT white paper contains a six step process. These steps are similar to the NRC's sliding scale option. What does industry view as the biggest difference between the SBT option and sliding scale option?

The NEI SBT process addresses the topics needed for successful tactical mission planning and execution, and does so in a comprehensive and integrated manner. Acknowledging that we have not seen the complete sliding scale proposal, the approach seems somewhat disjointed and the tier boundaries arbitrary. For example, we believe some of the tasks under "Information Exchange" necessarily require performance of certain tasks in the next higher tier, "Familiarization Activities."

- a. Does one option provide for more credit than the other?

We cannot answer this question because NEI has not been afforded an opportunity to review a complete sliding scale proposal.

7. Would licensees be expected to provide law enforcement organizations with site information prior to an attack, or only be prepared to make it available during an attack?

Prior to the attack.

8. Explain how the fixed times for law enforcement mission planning and execution in the SBT White Paper formulas maintain the relationship between actual law enforcement capabilities and SBT credit.

The SBT white paper addresses essentially the same topics as the sliding scale approach. The difference, as far as we can determine, is that, under the SBT process, the licensee and law enforcement agency engage in a comprehensive and integrated planning effort (i.e., no tiers). For this engagement, the licensee is awarded SBT credit that is considered reasonable and bounding for a wide range of conditions. And the tactical team agency may increase the SBT based on professional judgement and experience. The sliding scale approach, with its use of tiers, does not promote comprehensive and integrated planning. It simply carves up a "final" SBT that could be awarded for a comprehensive and integrated planning effort and apportions it to completion of various planning and readiness sub-activities/tasks.

Attachment 1
NEI Answers to NRC Staff Questions in 12/17/18 Meeting Handout

TARGET SETS – CREDIT FOR OPERATOR ACTIONS, FLEX EQUIPMENT, AND LAW ENFORCEMENT ASSISTANCE

1. If industry is seeking credit for operator actions and the use of plant equipment (including FLEX) as it pertains to target sets, provide input to the following:

The number of operator actions that could be added is unknown. Whatever the number, a licensee should be able to credit an operator action when there is reasonable assurance it can be performed during an attack. NEI and our members believe that existing target set development guidance for assessing adversary interference goes beyond a reasonable assurance standard and precludes the use of operator actions that could realistically be performed.

- b. Has the industry determined the number or percentage of target sets that would be impacted based on establishing a security bounding time (SBT)?

No. The SBT initiative is grounded in achieving realism (i.e., target set guidance should credit offsite support that would be available in a real event). At some time following the initiation of an attack, it is realistic to expect there would be a law enforcement tactical response, coordination between site security and law enforcement tactical officers to neutralize the threat, and action a licensee could take after this time to prevent radiological sabotage. A licensee should be able to address this "reality" during the development of target sets.

- c. To utilize a SBT, what methodology does the industry see as effective for identifying time to core damage that can be applied consistently? Will industry propose a standard methodology?

The preferred method would be one that uses applicable information from existing Probabilistic Risk Assessment analyses. Other methods could also be acceptable. While the industry will not propose a standard methodology, we believe that guidance on preferred and alternate methods could be added to Regulatory Guide 5.81.

- d. Should SBT be site-specific or a standard number across the industry? What are the advantages and disadvantages of a site-specific SBT versus a standard SBT across the industry?

Both a site-specific SBT and a standard (default) SBT should be available. This would give licensees the flexibility to use the standard SBT or follow an approved process to develop a shorter, site-specific SBT. The shorter the SBT, the greater the potential range of mitigation actions that could be credited. While a site-specific SBT would likely be shorter than a standard SBT, it would also require additional licensee actions and resources to establish.

2. If offsite equipment, such as FLEX equipment, is considered in a target set element, provide input to the following:

- a. Is it industry's intent to include locations (i.e., bridges, ingress/egress routes, etc.) as methods to prevent an action from being accomplished if the action relies on offsite support? Will these elements be assumed lost, similar to offsite power sources?

It is not anticipated that offsite equipment, such as FLEX equipment, would be considered in a target set element, notwithstanding the existing guidance related to offsite power sources.

- b. Is it industry's intent to include offsite facilities (all offsite locations) as methods to prevent an action from being accomplished if the action relies on offsite support? Will these elements be assumed lost,

Attachment 1
NEI Answers to NRC Staff Questions in 12/17/18 Meeting Handout

similar to offsite power sources?

It is not anticipated that offsite equipment, such as FLEX equipment, would be considered in a target set element, notwithstanding the existing guidance related to offsite power sources.

3. If target set elements include operator actions that can be seen from outside of the Protected Area (PA), provide input to the following:

a. Is it industry's intent to include locations (i.e., bridges, ingress/egress routes, etc.) as viable locations to prevent an action from being accomplished if successful performance of the operator action relies on onsite security personnel?

i. Recalled security personnel?

ii. Law enforcement organization support?

This topic could be addressed in guidance. Development of the guidance should consider the increased complexity of the adversary's mission (e.g., ability to execute a sophisticated coordinated attack) and include a provision to assess site-specific factors affecting an adversary's ability to interdict at "viable locations to prevent an action." Also, we note that an analogous question was addressed during the development of NEI 12-01, *Guideline for Assessing Beyond Design Basis Accident Response Staffing and Communications Capabilities*; refer to step 2.2.4 on page 9. We are not suggesting use of these times but wish to point out that there should be a way to reasonably address the potential adversary actions inferred by this question.

4. If industry is seeking credit for law enforcement assistance as it relates to operator actions and the use of plant equipment (including FLEX), provide input to the following:

NOTE – An action that requires law enforcement assistance to perform cannot be an "operator action" because adversary interference was not precluded. This question applies to "mitigation actions."

a. Is the Owner Controlled Area (OCA) and Protected Area (PA) the only areas of the plant that industry would like to take credit for?

We are seeking credit for law enforcement assistance in all onsite areas; however, it is anticipated that the greatest benefit will be achieved from having credit available for actions in the OCA and the PA, outside the power block.

b. Are there other areas of the plant that industry would like to take credit for?

We are seeking credit for law enforcement assistance in all onsite areas; however, it is anticipated that the greatest benefit will be achieved from having credit available for actions in the OCA and the PA, outside the power block.

c. What type of training would industry provide to law enforcement organizations to receive the maximum amount of credit?

See step #5 of the NEI SBT white paper. The licensee and law enforcement personnel will determine and document the types and frequencies of training and drills that will be conducted to instill and maintain response proficiency. The training would be based on the tactical response plan

Attachment 1
NEI Answers to NRC Staff Questions in 12/17/18 Meeting Handout

and supporting procedures developed in step #2 (as verified, validated and revised per step#4).

- d. What would be the training frequency industry would provide to law enforcement organizations to receive the maximum amount of credit?

See step #5 of the NEI SBT white paper. The licensee and law enforcement personnel will determine and document the types and frequencies of training and drills that will be conducted to instill and maintain response proficiency. The training would be based on the tactical response plan and supporting procedures developed in step #2 (as verified, validated and revised per step#4).

- e. Does industry see a benefit to law enforcement organizations playing with them in FOF exercises?

A considered answer to this question requires a meeting.

Attachment 1
NEI Answers to NRC Staff Questions in 12/17/18 Meeting Handout

SIGNIFICANCE DETERMINATION PROCESS (SDP) – CREDIT FOR OPERATOR ACTIONS, FLEX EQUIPMENT, AND LAW ENFORCEMENT ASSISTANCE

1. Does providing credit in the significance determination process for actions that can be taken after a loss of target set (mitigation strategies such as FLEX and/or additional actions by law enforcement organizations), provide sufficient consideration of these actions (extraordinary operator actions (SAMGs), LLEA, and/or offsite equipment) or is it the intent of the industry to now characterize exercise outcomes as effective and not enter SDP space?

The industry is proposing to add a new category of actions, mitigation actions (reliant upon law enforcement tactical support), to the target set development guidance in Regulatory Guide 5.81. Under this approach, “a loss of a target set” means that any included mitigation action was not effective in preventing radiological sabotage. Therefore, under our proposal, a loss of a target set would be an ineffective exercise. NEI and our members are prepared to meet with the staff to determine the optimum way to reflect this approach in the Security SDP.

2. If industry is seeking credit in the significance determination process (SDP) for actions that can be taken after loss of a target set element, provide input to the following:

- a. Does credit in the SDP provide sufficient consideration of the actions to be taken after loss of a target set element (i.e., extraordinary actions by operators for severe accident mitigation guidelines (SAMGs); the use of offsite equipment (such as FLEX); or law enforcement organization assistance)?

- i. If yes, what does industry see as sufficient consideration?
- ii. If no, what information (or additional information) does industry need to consider?

- b. Is it the intent of the industry to now characterize exercise outcomes as effective and no longer enter the SDP?

See answer above. And it is worth stressing here the point made in the cover letter to this attachment; mitigation actions are different from damage control measures. The former may be taken to prevent radiological sabotage while the latter reduces the impact of radiological sabotage to the public. The paradigm of thinking about categories of guidelines and equipment as used before or after a target set loss should be rethought. An operator action or mitigation action may use FLEX or B.5.b equipment provided all the associated criteria are met. Damage control measures could also employ FLEX or B.5.b equipment. SAMGs are guidelines that provide strategies to implement upon receipt of specific plant parameter values indicative of imminent or actual damage to irradiated fuel (e.g., high core exit thermocouple temperatures or low RPV water level). SAMGs would be implemented only if radiological sabotage has been achieved.

Attachment 1
NEI Answers to NRC Staff Questions in 12/17/18 Meeting Handout

REGULATORY GUIDE (RG) 5.81, CRITERION 3, PRECLUDING ADVISORY INTERFERENCE

1. What does industry see as the advantages and disadvantages in regards to modifying RG 5.81, Criterion 3, Precluding Advisory Interference, in the following ways:

NOTE – As discussed during the December 17th public meeting, an “operator action” is an action that can take place prior to adversary interference, as determined by an assessment. If the assessment cannot reasonably rule out adversary interference, then the action would require elimination of the interference to enable performance and is a “mitigation action.” Once adversary interference is assumed, an action becomes a mitigation action through the remainder of the event – it does not revert to an operator action after adversary interference has been eliminated. The answers below should be understood within this context.

- a. Allowing operators an extended time to move based on increased adversary timelines (i.e., a specified time added for each defensive fighting position an adversary would encounter)?

The advantage is that it may allow a licensee to add more target elements to target sets. Adding target elements, in the form of operator actions, increases the complexity of the adversary's mission, which decreases the probability of success and improves protection margin. Increasing protection margin enhances the overall effectiveness of a site protective strategy. We do not see any disadvantages currently.

We also note that credit for the protective strategy to permit operator actions interior to the power block is already in place for the Control Room. This credit should be extended to operator actions in most locations inside the power block unless there are site-specific strategy considerations or performance-based data/outcomes dictating otherwise.

- i. What amount of time is reasonable for an adversary to circumvent an interior defensive fighting position (i.e., would include primary defensive fighting position, not a redirected defensive fighting position)?

This topic should be addressed in future meetings between the NRC staff and NEI to discuss and align on new guidance in Regulatory Guide 5.81. In general, we think the determination of adversary timelines should be site-specific and performance-based to the degree practicable. Standard guidance could be provided concerning the use of assessment techniques and tools, such as computer modeling, and criteria/factors affecting adversary movement. Guidance could also address approaches to take when site-specific data are not available.

- b. Precluding adversary interference by security force members aiding operator movement?

The advantage is that this option may enable some licensees to add target elements to target sets in cases where conditions would have otherwise prohibited it. We do not see any disadvantages currently.

- i. Would this involve a dedicated security force member? If yes, provide the dedicated number (i.e., 1, 2, etc.).

A dedicated security force member is not necessarily required provided the protective strategy protects the operator during travel and at the action location. A dedicated security force member(s) may be used with the number dependent upon the profile of the operator action (e.g., the travel path and distance, travel path and action performance locations relative to

Attachment 1
NEI Answers to NRC Staff Questions in 12/17/18 Meeting Handout

security force member positions, etc.). If a site has a "denial strategy" and can demonstrate with reasonable assurance that the adversaries cannot interdict the operator, then there is no need to require a dedicated officer.

- c. Precluding adversary interference by onsite security personnel aiding operator actions and/or movement?

We are unclear how this question is different from question 1.b.

- d. Precluding adversary interference by recalled security personnel to protect onsite/offsite equipment to prevent core damage?

The advantage is that this option may enable some licensees to add mitigation actions to target sets. These actions could prevent the loss of a target set or compensate for the loss of a target set. We do not see any disadvantages currently.

- e. Precluding adversary interference by law enforcement organizations aiding operator actions or protecting onsite/offsite equipment to prevent core damage?

The advantage is that this option may enable some licensees to add mitigation actions to target sets. These actions could prevent the loss of a target set or compensate for the loss of a target set. We do not see any disadvantages currently.

2. As it relates to RG 5.81, are there additional options to modify what is acceptable and unacceptable to meet Criterion 3?

None that we are aware of.

- a. If RG 5.81, Criterion 3 reverts to what it was before its last revision, would this change industry's support and request for law enforcement credit?

The initial issue of Regulatory Guide 5.81 is dated November 2010 and this version remains the current guidance, i.e., there is no previous revision. We are unclear as to what "last revision" this question is referring. If this question is referring to step 7.2 of DG-5035, dated March 2010, then the answer is "no;" changes would still be required. The term "well beyond" would need to be defined, and "operator actions" needs to be replaced with "mitigation actions" because there is no intent to postulate "free movement through the facility." In addition, the guidance would still need to explicitly address the relationship between target set desirability and the expected level of protection.