

A NEW APPROACH TO THE STAKEHOLDER PARTICIPATION PROCESS

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ABSTRACT

The development of stakeholder processes at the Institute for Regulatory Science (RSI) resulted from the need to include stakeholders in the peer review program jointly performed by the American Society of Mechanical Engineers (ASME) and RSI. Because the objective of peer review is to assess the scientific and engineering validity of claims by the sponsoring agency, the issues of concern consist entirely of technical content and exclude political, societal and other non technical considerations. Consequently the scientific concerns of all stakeholders, regardless of why they are interested in the topic, are treated equally.

The core of the RSI stakeholder program is the categorization of stakeholders into four categories, with the intent of identifying how each category is notified, who represents them, and their specific concerns. The general categories are:

Personally Impacted stakeholders are those who are directly impacted by an activity in terms of their health, job, or property. These individuals are often hard to reach; consequently, an affirmative outreach is required to reach these stakeholders.

Administratively Impacted stakeholders are elected or appointed officials who are involved in permitting, licensing and related activities. This group is readily identifiable. In many cases members of this group are engaged in the process.

Generally concerned stakeholders are individuals who as a matter of belief, ideology, religion and similar reasons are interested in the proposed action. This category primarily consists of non-governmental organizations (NGO's) who are well- informed and in many cases can be informed through the public media.

Process concerned stakeholders are those who are not necessarily concerned over the action but over the process. They also primarily consist of NGO's but they are concerned about the unnecessary expenditure of public funds and they want to ensure that sound science is used in the decision. Their notification is similar to that of generally concerned stakeholders.

The RSI process has been used successfully in various peer reviews including such diverse topics as the remediation of groundwater contamination at the Nevada Test Site, the strategy for treatment of the vadose zone at the Idaho Falls laboratory of the U. S. Department of Energy, and issues related to permitting of the Waste Isolation Pilot Plant in Carlsbad, New Mexico. RSI's stakeholder process is continuously updated to incorporate improvements as they are identified.

INTRODUCTION

The initiation of the development of the stakeholder participation process by the Institute for Regulatory Science (RSI) was based on a request by the U. S. Department of Energy (DOE) to include stakeholders in an independent peer review performed jointly by the American Society of Mechanical Engineers (ASME) and RSI. With experience in preparing over 200 peer-review reports, RSI approached the

challenge of developing a process for stakeholder participation that would be equivalent to the peer review process. The experience with the ASME/RSI peer review process had provided strong evidence that it was likely that any existing stakeholder process had to be refined to meet the strict requirements of a professional engineering society meeting.

The first step in developing the stakeholder participation process was to identify questions that were equivalent to the core peer review criteria. These criteria were general questions that were provided to the managers of sponsoring agencies so that they develop project-specific review criteria (1). Consistent with the experience of dealing with the peer review, members of the ASME Peer Review Committee were informally polled to identify core questions. These responses were compiled and edited. The resulting core questions were as follows:

- Who is a stakeholder?
- What is the timing of the participation of stakeholders in a decision?
- How would various stakeholders with competing desires know that their concerns were considered?
- How would the decision maker evaluate the desires of many individuals and groups of stakeholders which consist of a mixture of science, engineering, fear, belief, ideology, advocacy, and many other non-technical issues?

In order to find answers to these core questions, initially it was hoped that an existing process could be adopted. It was assumed that, given the extensive requirements of stakeholder participation, there would be a reasonable agreement on answers to core questions. As additional information became available, it became clear that this was not the case. Consequently, a study was initiated with the objective to develop and test a stakeholder participation process based on answers to the core questions.

RESEARCH APPROACH

The approach used to respond to the core questions evolved as information became available and experience was gained. The approach included four major efforts as follows:

- A contract was awarded to a well-known stakeholder specialist to write a report.
- An attempt was made to seek the advice of individuals who dealt directly or indirectly with stakeholder participation.
- An Internet search was initiated using the words “stakeholder” and “stakeholder participation.”
- A conventional library search was performed by relying primarily upon regulations and reports of the National Research Council (NRC), the research arm of the National Academy of Sciences; the National Academy of Engineering; and the Institute of Medicine.

INITIAL RESULTS

The initial results of these efforts were disappointing. Although one could find reasonable agreement on certain issues, there was no clear answer to the core questions. The overwhelming response to the question “who is a stakeholder?” was “whoever wants to be”. Although the contractor report contained some useful information, there was no response to the first core question and answers to the remaining questions were at best qualitative. For example, on the question of timing, the contractor’s report contained the phrase, “as soon as appropriate”.

The Internet search identified 11,000 entries. Those who have used the Internet as a search tool are aware of a significant duplication of entries. In addition, the current system is not designed to make a

distinction between peer-reviewed information and other materials. After evaluating about 600 entries, a decision was made not to continue the evaluation. Instead, an attempt was made to identify specific organizations or authors and evaluate their information. This evaluation is ongoing. However, the study indicated significant disagreement and confusion on virtually all aspects of the subjects included in the core questions. The study also identified several areas of agreement as follows:

- Almost all groups consider those directly impacted to require special consideration.
- There is no attempt to exclude any individual or any organization from any category of stakeholders.
- Nearly all who have dealt with the issue consider the participation of stakeholders to be desirable.
- There appears to be no clear separation among various categories of stakeholders.
- There appears to be no systematic study identifying who is a stakeholder and how stakeholder participation can be managed generically.
- Nearly all studies dealing with stakeholders and stakeholder participation are anecdotal.

RSI STAKEHOLDER PARTICIPATION PROCESS

The process described in this paper was developed in conjunction with the joint ASME/RSI peer review program. It was reviewed by the Peer Review Committee of ASME, revised accordingly, used on several occasions, and the results of those meetings were also reviewed by ASME's Peer Review Committee.(2)

An orderly management of stakeholder participation must be based on a clear identification of stakeholders and how they can be reached. In particular, it is imperative to give those whose lives are impacted by a proposed action the opportunity to be reached, and for their voices to be heard. Stakeholder participation is particularly important in issues involving scientific decisions.

Categorization of Stakeholders

There are several important reasons for categorization of stakeholders. The literature search clearly demonstrated the need to give particular consideration to those individuals and communities that are directly impacted by a decision. Those who may be directly affected by a decision are usually much more difficult to reach than those who give the necessary permit or license. Similarly, their educational background and their knowledge of the subject may not be equivalent to those working on the project.

Finally, the decision maker can make better decisions with knowledge of the concerns of various categories of stakeholders. Therefore, the RSI stakeholder participation process (3) is based on defining and categorizing groups of stakeholders as shown in Fig.1.

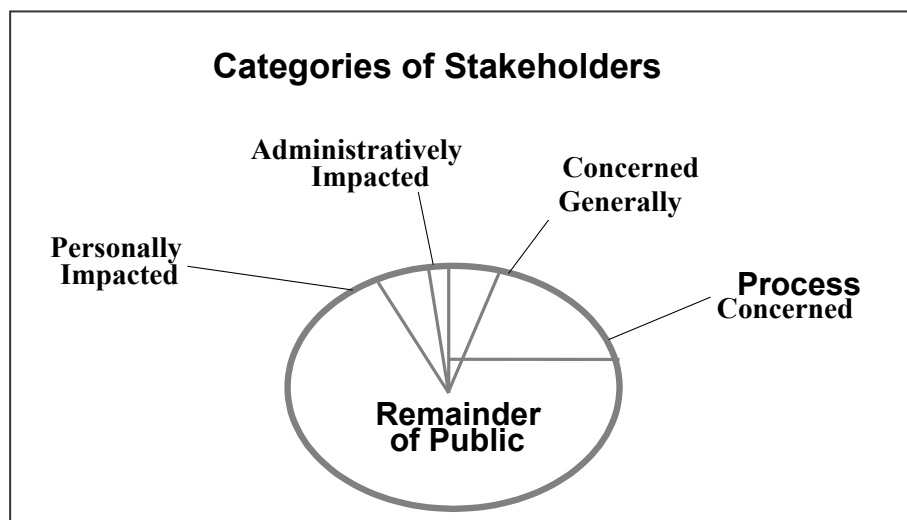


Fig. 1 Categories of Stakeholders within the public at large

Personally Impacted Stakeholders: This category consists of individuals whose lives are directly impacted by the proposed project. These impacts may include any aspect of the individual's life. There are several subcategories included in this category as follows:

Subcategory 1

This subcategory consists of those whose health may be impacted by a decision. In order to avoid potential hypothetical human health risks, the RSI process relies upon current regulatory agreements. The EPA(4) has traditionally considered a lifetime risk of 10^{-6} to 10^{-4} to be acceptable. Therefore, those who are likely to receive a risk in excess of these values would be personally impacted. If the computed risk is unavailable, the approach used by the U.S. Nuclear Regulatory Commission (5) may be used by assuming that those living within a 50-mile radius of a site can be considered to be personally impacted.

Subcategory 2

An individual whose job would be impacted by the proposed action is also considered a personally impacted stakeholder.

Subcategory 3

If the value of an individual's property (located within a 50-mile radius of the location affected by a decision) were impacted, the individual would be personally impacted. Similarly, an individual whose business would be impacted by the proposed decision would be in this category, provided the business is located within the 50-mile radius of the site.

Subcategory 4

An individual whose quality of life is impacted by foul smell, noise or other discomfort or inconvenience.

Administratively Impacted Stakeholders

This category consists of elected, appointed, or employed individuals who must ensure that the proposed project is prepared, reviewed, approved, or implemented in accordance with applicable laws, regulations, permits, licenses, or agreements. The participation of these stakeholders is also important. However,

planning for their participation is somewhat less complicated than personally impacted stakeholders. This category also includes the following groups:

Subcategory 1

If a major portion of the constituency of an elected official consists of personally impacted stakeholders, the individual falls into this category.

Subcategory 2

An elected official whose constituency includes personally impacted stakeholders, but not to the level of Subcategory 1, falls into this group. The overwhelming majority of relevant elected officials (mayors; relevant state representatives and senators; and relevant members of the House and Senate) are included in this group.

Subcategory 3

This subcategory consists of members of regulatory agencies at the local, state, and federal level who are responsible for regulations, permits, licenses, and enforcement of the proposed action.

Subcategory 4

This group is the counterpart to subcategory 3, as it is responsible for the preparation and implementation of permits and for the licenses issued by subcategory 3.

Generally Concerned Stakeholders

This category includes individuals who, by virtue of their personal philosophies, beliefs, or ideologies, are interested in or concerned about an action. Note that although personally and administratively impacted categories are also concerned about a proposed action, the intention of defining this category is to identify those individuals and organizations that are neither personally nor administratively impacted and yet are concerned over an action. In contrast to the previous two, this category is largely represented by organizations.

Process Concerned Stakeholders

There is a segment of the public that is concerned over the process that is used to manage a proposed action. There are several distinct subcategories within this category of stakeholders.

Subcategory 1

This group considers the participation of stakeholders in the decision process important for the acceptance of the final decision and an improved quality of decision.

Subcategory 2

This group is concerned over the undue influence that stakeholders may exert during the decision and wants to ensure that their influence is commensurate with their stake in the outcome of the decision.

Subcategory 3

This group desires that decisions are based on best available science, sometimes called sound science. This subcategory includes professional organizations of various scientific and engineering disciplines; the National Research Council; the National Council on Radiation Protection and Measurements; and the National Academy of Public Administration.

IDENTIFICATION AND NOTIFICATION OF STAKEHOLDERS

Virtually every organization involved in contentious decisions claims the desire to involve all stakeholders. However, the strategy for identification and notification of stakeholders must consider their

respective roles in the process. Each category of stakeholders must be identified and notified consistent with how each is impacted by a proposed activity.

Personally Impacted Stakeholders

Experience shows that often individuals within this category of stakeholders are somewhat reluctant to participate in the decision process. Precisely because of the potential impact to this category of stakeholders, an affirmative outreach approach is necessary to ensure their participation. A description of how to reach this category is beyond the scope of this paper. However, one of the reasons that the National Research Council (6&7) discourages the use of the term "stakeholders" is based on the need to reach this group.

Administratively Impacted Stakeholders

The identification and notification of this group is relatively easy. Elected officials can be readily identified and members of the regulatory agencies are also easily identifiable.

Generally Concerned and Process Concerned Stakeholders

These categories normally consist of citizen, advocacy, and other organizations as well as their members. As these groups are seldom truly identifiable, they are responsible for identifying themselves to the system.

REQUIREMENTS FOR CREDIBLE PUBLIC PARTICIPATION

There appears to be some skepticism within the general public and within various categories of particular stakeholders regarding the validity and fairness of stakeholder participation. Personally impacted stakeholders often complain that their desires are overshadowed by individuals and organizations of those who constitute generally concerned stakeholders. Conversely, the generally concerned often complain that the decision process does not adequately consider their concerns. Finally, the process concerned stakeholders are often concerned that subcategory 3 of the administratively impacted (regulators) is overly influenced by the generally concerned and pays insufficient attention to the best available scientific information. The increasing demand of the process-concerned stakeholders for independent peer review is founded on their skepticism. Thus, there are several requirements for an appropriate public and stakeholder participation process.

Resolution of Scientific Issues

Often stakeholder participation is based on an action which includes a scientific or engineering component. The stakeholders must be assured that the sponsoring agency used scientific information which is acceptable to the scientific community. At RSI (8), the concept of Best Available Science (BAS) has been developed to address the validity of scientific claims. The BAS concept is based on classification of the status of scientific information and a categorization of the reliability of each class. The cornerstone of BAS is independent peer review, a process routinely used by various professional societies in their publications. Scientific issues identified by any category or subcategory of stakeholders are appropriately resolved through the independent peer review process. Note that currently, many individuals and organizations claim to perform peer review. An RSI report (9) includes a description of the independent peer review process based on currently accepted principles.

Science vs. Social Concerns

One of the primary reasons for lack of public acceptance of many decisions is the intermingling of science and societal concerns. After having performed over 300 peer reviews (mostly in conjunction with

ASME), there is sufficient evidence indicating that the separation of science from societal judgment is a key to reaching a consensus within a panel with wide-ranging political, societal, and religious views.

Reaching Stakeholders

Proper notification of stakeholders is a key issue in gaining their participation. One of the primary reasons for the categorization of stakeholders is that it greatly simplifies the approach to reach members of each category. Therefore, an appropriate approach would be as follows:

- Attempt an affirmative outreach to identify and reach personally impacted stakeholders.
- Contact relevant subcategories 1 and 2 of administratively impacted stakeholders.
- Contact and reach an agreement with leaders of subcategories 3 and 4 to appoint a representative.
- Announce the impending proposal in appropriate media and through the Internet, and ask the generally concerned and process concerned stakeholders for input.

Stakeholder Participation Management

Many stakeholders have a deep-seated mistrust of agencies responsible for public and stakeholder participation. The rule governing the management of stakeholder participation requires that those responsible for management of stakeholder participation are independent of those who have a stake in the outcome of the action under consideration. Consequently, neither the sponsoring agency nor the stakeholders should manage the stakeholder participation process.

Timing of Stakeholder Involvement

An important issue of concern to the stakeholders is the timing of their involvement. Stakeholders frequently complain that decisions have already been made and their participation is merely "window dressing" in order to justify the decision. It is imperative to include stakeholders at an early stage of the decision process (3).

Required Information for Stakeholders

All stakeholders must be provided at least the minimum amount of relevant information sufficient for informed input. This information must be written in a language commensurate with the expected technical competency of the stakeholders. In most cases the stakeholders have little or no technical knowledge; consequently, the information must be written for that audience. However, lack of knowledge must not be equated with lack of intelligence.

The necessary information for all categories of stakeholders is:

- A summary of the subject under consideration
- A list of key issues that are being considered
- A description of the rules governing stakeholder participation
- The address of a web site, if such a site is intended for providing information or receiving comments
- Other information that aids stakeholder participation

If a meeting is envisioned, those stakeholders who are invited to present their case should be provided detailed information similar or identical to that provided to major participants, in addition to any special logistic requirements. In addition, occasionally, certain stakeholders need technical assistance. This assistance should be provided preferably by an organization other than the sponsoring entity.

Continuous Interaction with Stakeholders

A successful stakeholder participation program must ensure continuous iterative involvement between decision-makers and stakeholders. The Internet increasingly provides an effective mechanism to ensure such interaction. However, its application in stakeholder participation requires an active and sincere effort to perform the following tasks:

- The web site should be updated at a frequency commensurate with the duration of the decision process. For example, for a project that requires several years, a quarterly update would be reasonable.
- The questions or topics of concern to stakeholders should be identified in advance, and the system should be capable of revising them as the project progresses.
- Stakeholders who desire to provide comments must indicate which question or topic they are addressing.
- The decision-makers must make every effort to provide responses to stakeholder concerns.

Reconciliation of Competing and Contradictory Stakeholder Interests

By attempting to separate scientific from societal aspects of a decision, a great deal of contention is eliminated. The science portion of the decision is subjected to independent peer review and thus is essentially removed from contention. (Note that the participation of stakeholders in the peer review is essential for the acceptance of its outcome.)

For consideration of other concerns, the manager of stakeholder participation should attempt to include all categories of stakeholders. The concern of each category and each relevant subcategory of stakeholders must be identified and appropriately summarized. For example, the concerns of personally impacted stakeholders can be and often are different than generally concerned stakeholders. However, on occasion two subcategories of stakeholders (for example, personally impacted stakeholders concerned over human health vs. those concerned over job losses) may be different and should be separately identified and reported.

Inclusion of Stakeholders in the Final Decision

Stakeholders are often frustrated because they perceive that their participation has no impact on the final decision. Consequently, the decision-maker must ensure that a full description of the final decision is communicated to the stakeholders as early as possible. The description should include the following:

- How the final decision was made
- Those elements that were based on the desires of stakeholders
- Those elements that were not based on the desires of stakeholders, including an explanation resolving why they were not accepted
- A general description of how the decision-making progressed as a direct consequence of stakeholder participation

EXAMPLES OF SUCCESSFUL STAKEHOLDER PARTICIPATION PROCESS

The process described in this paper is based on a categorization of stakeholders; an appropriate stakeholder management process; and a major effort to demonstrate fairness. The application of the

process in past activities demonstrated both the strengths and weaknesses of the process. When a weakness was identified, an attempt was made to correct the problem.

The RSI process has been used in a number of peer reviews and stakeholder participation workshops dealing with such diverse topics as a peer review of remediation of groundwater contamination at the Nevada Test Site; a project dealing with the strategy for treatment of the vadose zone at DOE's Idaho Falls laboratory; and issues related to permitting of the Waste Isolation Pilot Plant in Carlsbad, New Mexico.

In most cases a questionnaire was provided to the audience, collected, and evaluated. Stakeholder categorization, along with other relevant topics, was included in the questionnaire. (1).

The following example of a peer review dealing with the Nevada Test Site (NTS) may be used to demonstrate the application of the stakeholder participation process.

The NTS was established as the principal U.S. nuclear weapons testing facility. It is a remote, arid, and restricted area predominantly surrounded by tightly-controlled federal lands and facilities (1). During its history, about 900 nuclear weapons were detonated at the site. These detonations that occurred primarily underground (below, above, and at the groundwater levels) resulted in groundwater contamination.

The DOE developed a strategy for remediation of groundwater based on a number of studies that included extensive monitoring data; development and application of hydrological models; and hydro-geological studies. The outcome of these studies was that among radionuclides, tritium in the form of tritiated water was of particular concern. The strategy was based on the assumption that the migration rate of groundwater was slower than the radioactive decay of tritium. The strategy was peer-reviewed by a panel assembled in accordance with the process and procedures established jointly by the ASME and RSI (1).

Prior to the meeting, the DOE officials were provided a guidance document describing both the peer review and stakeholder participation processes. In addition, during the planning of the meeting the requirement of compliance with the tradition of all professional societies was emphasized. This requirement included the need to make sure that all segments of the meeting (except the executive sessions of the review panel) were open to the public. The review panel consisting of six individuals was provided with extensive reading materials. Subsequently, the panel met in June of 2001 to listen to presentations by the project managers and various stakeholders. All participants in the peer review meeting were registered and received a name badge. Their registration packets included a summary of the project; peer review criteria; an agenda of the meeting; guidance for stakeholders; and a questionnaire.

During the introduction, the rules governing the peer review and stakeholder participation were described. Members of the audience were told that they could ask questions from the speakers as well as make statements during the program designated for that purpose. In every case, stakeholders who wanted to ask a question or make a statement had to indicate their name, affiliation, and their category of stakeholder. They were also asked which one of the criteria they were addressing. The audience was also asked to fill out the questionnaire. The presentations, the discussion, and statements by the stakeholders during the meeting were recorded and transcribed. At the end of the meeting, the questionnaires were collected and subsequently evaluated.

Subsequent to the meeting, the review panel met and wrote its report in accordance with the peer review procedures. The results of the peer review were presented to the Community Advisory Board in a

January 2002 meeting. This second meeting was also open to the public and included stakeholders. The evaluation of transcribed materials and completed questionnaires led to the following conclusions:

- The overwhelming majority of stakeholder respondents found the process to be reasonable and fair.
- The majority of stakeholders agreed that the presentations were understandable, although comments indicated that the audience was concerned about an extreme reliance on acronyms and abbreviations.
- There were both written and verbal complaints by most of the stakeholders that some stakeholders did not follow the rules. On more than one occasion the audience was impatient with those who tried to make comments unrelated to the topic under discussion.
- Stakeholders overwhelmingly agreed that the definitions of stakeholders (as shown in the document provided to them) were reasonable. Similarly, they appeared to have no problems placing themselves into one of the categories.

CONCLUSIONS

The development of the stakeholder participation process resulted in a number of lessons learned as follows:

- The rules governing stakeholder participation must be clear and fair. They must be communicated to the stakeholders and must be applied fairly to everyone.
- The managers of stakeholder participation must make an honest attempt to engage all from the beginning of the process.
- Stakeholders are highly skeptical of those who are proposing an action, particularly if the entity is a federal agency.
- The chair of a stakeholder meeting must encourage the group to remain focused on the subject by assisting in reformulating their questions or otherwise keeping the input actionable and constructive.
- The notification of stakeholders must consider their categorization and appropriate prioritization of their involvement.
- An important prerequisite for successful stakeholder participation is the separation of scientific issues from social concerns.
- The stakeholders must be convinced that scientific issues are resolved using an independent peer review which includes their participation.
- An earnest effort must be made to listen to the concerns of all stakeholders and respond to them.
- Stakeholder participation provides useful information to the decision makers. It is not intended to shift the responsibility from the decision maker to stakeholders or to those who manage the stakeholder participation.
- The development of RSI's stakeholder participation process is far from complete. For example, the current process has no provision for inclusion of unique groups such as Indian Nations or Amish communities. The process must identify these groups and ensure that their unique requirements are met.
- This is a "living process". As constructive comments, questions, and other input are provided, changes will continually be made to improve the process.

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