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# DRAFT REPORT

## Risk Analysis, Communication, Evaluation, and Reduction at LANL

Recommendations for Increasing Public Involvement

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## Executive Summary

In 2003, Colorado State University (CSU) initiated an independent and comprehensive risk assessment for public health and the environment for chemicals and radionuclides released into the environment by the Los Alamos National Laboratory (LANL). CSU is supported by the University of California (UC) to conduct and manage the project through a contract designed to ensure the scientific integrity of the work. Risk Assessment Corporation (RAC) of Neeses, S.C., was selected by CSU to conduct the technical work. The project is referred to as Risk Analysis, Communication, Evaluation, and Reduction at LANL, abbreviated as the RACER project, or the RACER at LANL process.

The principles of RACER are to:

- Make data needed to estimate exposure to radionuclides and chemicals readily accessible and consistent in format
- Provide a transparent and flexible approach that uses human health risk and environmental concentrations as fundamental metrics for comparing sources of these risks on a relative basis
- Consider all key sources of risk from radionuclides and chemicals in decision making
- Provide tools to enhance interpretation and communication of data, results, risks, and decisions
- Involve the public.

The final principle emphasizes the involvement of a wide range of individuals, from the public to the regulatory community or decision-making bodies that are responsible for risk reduction decisions at facilities. This process constitutes public dialogue where all parties know they can express their views, voice their concerns, and have the opportunity to provide feedback to the project to have some effect on decisions. Effective public dialogue must be sustainable, diverse, accessible to all, flexible, and timely with regard to issues. Public involvement has been an important cornerstone of the RACER project from the start.

The purpose of this report is to provide recommendations for increasing public involvement in the future for RACER at LANL among the key parties (New Mexico Community Foundation [NMCF], New Mexico Environment Department [NMED], LANL, and the U.S. Department of Energy [DOE]) and the public. NMCF, identified as the steward and convening authority for the RACER at LANL project, will be responsible for the long-term, independent management of the RACER tools and process, and will oversee the public involvement efforts. The foundation is committed to continuing the public involvement that has been established during the RACER process by creating opportunities for regular and on-going communication among the key parties and the community; ensuring there is a transparent, consistent, and objective process for public input into the RACER process; and enhancing the technology-based aspects of public involvement.

The report lays out critical roles the other key parties will fulfill each year to ensure the ongoing success of the RACER process into the future. Some of these responsibilities are specific to each party's position in the process. All parties have committed to continued communication with the public on a regular basis, through NMCF public involvement activities, and to stay actively involved in the RACER-related, community-wide programs.

The proposed recommendations for increasing public involvement are designed to allow the continuous and smooth operation of the RACER project even if individuals within the key

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organizations change. A critical element of public involvement is a serious long-term commitment by all parties with the recognition that regulatory recommendations exist for DOE, NMED, and LANL that must be met for scheduling and holding meetings on certain remediation activities. These recommendations are not intended to interfere with those activities; rather, RACER public communication can serve in tandem with such efforts at LANL, NMED, and DOE.

RAC has identified recommendations in five different areas that can be used to enhance public dialogue opportunities with LANL and NMED and to increase public involvement in the RACER process. These are technology-based aspects, public meetings, workshops, symposia, and special meetings called by a convening authority. The overall recommendation for all parties for increasing public involvement is to work closely with and remain active contributors to the overall public involvement process for RACER and to specific activities arranged by NMCF.

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## Acronyms and Abbreviations

CSU	Colorado State University
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
NMCF	New Mexico Community Foundation
NMED	New Mexico Environment Department
LANL	Los Alamos National Laboratory
RAC	Risk Assessment Corporation
RACER	Risk Analysis, Communication, Evaluation, and Reduction
RACER at LANL	Risk Analysis, Communication, Evaluation, and Reduction at Los Alamos National Laboratory
RCRA	Resource Conservation and Recovery Act
UC	University of California

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## Introduction

In 2003, Colorado State University (CSU) initiated an independent and comprehensive risk assessment for public health and the environment for radionuclides and chemicals released into the environment as a result of operations at Los Alamos National Laboratory (LANL). CSU is supported by the University of California (UC) to conduct and manage the project through a contract designed to ensure the scientific integrity of the work. Risk Assessment Corporation (RAC) of Neeses, S.C., was selected by CSU to conduct the technical work. The project is referred to as Risk Analysis, Communication, Evaluation, and Reduction at LANL, abbreviated as the RACER project, or the RACER at LANL process.

The principles of RACER are to:

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- Provide tools to enhance interpretation and communication of data, results, risks, and decisions
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The most fundamental principle of RACER is to provide environmental data in an accessible and consistent format. As a part of the RACER process, RAC has developed a system of tools that enhance access to pertinent information about potential health risks of radionuclides and chemicals in the environment. The data analysis tool (DAT) provides access to environmental data related to LANL, together with features that provide meaning to the data. These features include a spatial display of the data, comparison of the data to relevant standards and reference values, and graphs or plots of trends in the data. The DAT will be available on the web and open to the public. The New Mexico Community Foundation (NMCF) has been designated as the independent manager of this tool. It is envisioned that public dissemination of environmental data will help build credibility and trust among the public, the regulator, and the Laboratory.

The second principle of RACER is to provide a consistent method for understanding and interpreting the data so that radionuclide and chemical sources in the environment can be ranked in terms of human health risk or hazard, referred to generically as risk throughout this report. This allows a user to evaluate impacts based on relative importance. The risk ranking can then be combined with other elements that need to be considered in decision making to form a final assessment of the situation. Using risk as the basis of the ranking and decision-making process provides a true quantitative metric, which is critical in a defensible decision-making process.

The RACER methodology emphasizes considering all sources of risk for a facility. This is important because it helps put the different sources of risk in perspective. For instance, the source that contributes most to risk may not be the source that is considered by stakeholders or regulators as the most critical source to remediate or understand. A considerable amount of time and resources can be wasted dealing with a source that contributes little to overall risk when, in fact, another source poses a higher health risk. This ranking of different sources is an important feature to help manage resources to reduce risk.

It is critical to provide tools that help a wide spectrum of people understand the significance of radionuclides and chemicals released to the environment. Such tools make environmental measurements more readily available and give meaning to them by providing standard values and regulatory reference values for comparison. Ranking tools based on human health risk assessment are designed to be transparent and flexible by providing multiple ways to assess environmental concentrations. The user can choose how to evaluate the data and is provided with the information to understand that choice.

The final principle of RACER emphasizes the involvement of a wide range of individuals, from the public to the regulatory community or decision-making bodies that are responsible for risk reduction decisions at facilities. For this range of people, the final principle of RACER is two-fold. For decision makers, a full complement of information is needed so decisions can be informed and timely. For everyone impacted by the decisions, the information used to reach the decision should be available and transparent to them, and they should have the opportunity to provide input to the process in a timely fashion. This process constitutes public dialogue, which provides key parties the opportunity to hear the views of the public (who have no connection with the facility) and allows members of the public to contribute their ideas and to articulate the nature of their concerns, if any. In a dialogue, the public needs to have realistic expectations about what will happen after the process concludes, time to think about the process, and feedback about its impact (Sykes 2007). Establishing and increasing this dialogue has been one of the major goals of RACER.

During the final year of RAC's involvement in the RACER at LANL process, it is important to reflect on the public involvement process that occurred during the project and to consider recommendations for the future based on that knowledge. Several project documents lay out the communication methods developed and put into use during RACER (Aanenson et al. 2004, Chapter 2; Aanenson et al. 2007; and Stetar et al. 2007). Specifically, Aanenson et al. (2007) examined stakeholder involvement in the RACER project and reviewed RAC's impressions about lessons learned while interacting with stakeholders.

In addition to the RACER project, RAC's earlier experiences working with the public in scientific studies have clearly indicated that the public can be successfully involved in decision-making while maintaining sound science. This process is most effective when incorporated at the beginning of a project, as it has been in RACER. Several important conclusions have emerged from those studies (Till 1995; Till and Sharp 2000; Till and Meyer 2001; and Till 2002). Openness and establishing a clear dialogue process among all key parties with the public does not interfere with, but rather strengthens, the overall process. Decision makers can make better decisions that are effective and long lasting if the public is involved early and productively. Successful public input occurs when an independent third party with impartiality can serve as the convening authority for guiding the public dialogue efforts, tracking its progress, and communicating with all involved about outcomes of these efforts. Undoubtedly, the researchers, scientists, and regulators must be closely engaged in the process to help communicate the progress and technical details, but an autonomous and separate group is much more effective for leading the overall public involvement and communication process.

The purpose of this report is to provide recommendations for public involvement in the future for RACER at LANL. These recommendations are designed to allow the continuous and smooth operation of the RACER project even if individuals within the key organizations change. The report describes NMCF as the RACER steward, public involvement opportunities by other

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key parties, and recommendations for increasing public dialogue about RACER. Related topics to the public communication efforts, including documentation of the process and the stipend procedure, are also addressed.

## The RACER Steward

NMCF will be the steward and the convening authority for the RACER at LANL project and has been involved since the early stages of the project. The RACER steward will be responsible for long-term, independent management of the RACER tools and process. It is important that the steward be independent of LANL, NMED, and DOE to establish credibility with the public as an autonomous organization and to obtain useful public interaction within the RACER process. To this end, NMCF will administer and oversee the RACER project as an independent organization as well as oversee public dialogue efforts.

The role of the convening authority involves not only process, but also technical management of RACER. NMCF will be the overall steward for the entire process and will hire a group or individuals to oversee technical aspects of the project.

As the convening authority, NMCF has the ability to oversee the public dialogue process and coordinate the process activities. The foundation understands that ongoing public involvement efforts cannot be resource-intensive if they are to be long lasting.

As a local and statewide community organization, NMCF is uniquely positioned to involve actively a broad spectrum of community members from the northern New Mexico area in the RACER process. Because NMCF is a statewide endowment-building and grant-making organization that serves and invests in New Mexico's communities and people, it is well suited and committed to establishing an active dialogue process with community members about issues related to remediation decisions that will be heard by NMED, LANL, and DOE. NMCF believes that every person has a role to play in building healthy communities and that each community member's insight and opinions should be valued equally. NMCF is an objective convener in many areas of the state involving a broad range of subjects and is committed to this project because it sees the need for an objective source to continue public dialogue and to disseminate information and build trust among communities, LANL, and NMED.

NMCF's roles and responsibilities specific to public involvement include:

- Continuing the public involvement that has already been established during RACER by creating opportunities for regular and on-going communication and interaction among LANL, NMED, and the community at large
- Ensuring there is a transparent, consistent, and objective process for public input into the RACER process and communication among regulators, technical experts, and the general public
- Identifying technical people from LANL, DOE, NMED, and the community at large who can help to convey technical information to the public. An important feature of RACER has been to be proactive in seeking and obtaining information from all groups and individuals who can provide relevant data and technical information
- Increasing public involvement by using NMCF's unique role in the community and its independence from NMED, LANL, and DOE. Some ideas for accomplishing this goal are included in a following section.

A scope of work for NMCF was drafted by RAC and NMCF. That scope of work is included in Appendix A of this report. The scope of work includes all aspects of NMCF's role as the steward for RACER, with these public involvement aspects included as part of its larger role. Active involvement in the public process by LANL, NMED, and DOE will be critical to the success of the public process, and NMCF's independent role seeks to ensure that involvement occurs. LANL, NMED, and DOE will also have specific tasks to complete to ensure the success of public involvement in RACER, and NMCF will be responsible for making sure that those tasks are completed as agreed upon by all parties.

## **Public Involvement by Other Parties**

While NMCF is the overall RACER steward and convening authority, other key parties will fulfill critical roles each year to ensure the ongoing success of the RACER public involvement process into the future. The key parties in the RACER process are NMCF, NMED, LANL, and DOE. The RACER project has been successful because of firm commitments by all parties to the goals of RACER and in particular to the public involvement aspects of the project.

To continue and increase the public communication process that actively involves all key parties in a public dialogue, the key parties have certain roles and responsibilities in the public involvement process for RACER.

### **LANL**

LANL plays a unique role in the stakeholder process as the source of potential risk, a primary data steward, and a resource of technical expertise and proficiency. Most importantly, LANL has stated its commitment to the RACER process and has agreed to work closely with all interested parties (NMED 2007). With this in mind, LANL's role in the continued stakeholder process is to:

- Continue to communicate with the public on a regular basis, through NMCF public involvement activities, about updates to the measurement database and about the public's experience with the reliability and stability of the RACER tools
- Provide updates to the measurement database on a regular basis
- Commit to responsive, timely, and open resolution of data-related issues with the public and NMED and to convey that information openly to the community
- Participate regularly with NMCF and other data entities to review the status of the online DAT to ensure consistency in data gathering/compiling methods, analyte and location naming conventions, and other elements critical to the operation of the online tools
- Stay actively involved in RACER-related, community-wide programs.

### **NMED**

NMED, which has regulatory responsibilities for LANL, is also an important environmental data steward and can offer significant technical expertise and oversight that can serve as impetus for community involvement. It also is positioned to gain more insight into the preferences and concerns of the public regarding remediation activities at LANL and to get feedback from a broader spectrum of the public. NMED's role in the stakeholder process is to:

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- Communicate on a regular basis with community members, through ongoing NMCF public involvement activities, about the community's experience with the reliability and stability of the RACER tools
- Provide updates to the measurement database on a regular basis
- Solicit input to the RACER process from its perspective as a regulator
- Commit to responsive, timely, and open resolution of data-related issues with the public and LANL and to convey that information openly to the community
- Participate regularly with NMCF and other data entities to review the status of the online DAT to ensure consistency in data gathering/compiling methods, analyte and location naming conventions, and other elements critical to the operation of the online tools
- Remain actively involved in RACER-related, community-wide programs.

## DOE

DOE is the primary funding source for the project and is committed to maintaining the RACER process at LANL for the duration of remediation activities. With this in mind, DOE's role in the RACER public involvement process is to:

- Maintain consistent and sufficient resources to continue the RACER process
- Communicate with community members, through NMCF public involvement efforts, about the community's experience with the reliability and stability of the RACER tools.
- Commit to responsive, timely, and open resolution of issues that arise with the public and LANL and to convey that information openly to the community.

## Recommendations for Increasing Public Involvement

An overall recommendation for DOE, NMED, and LANL is to work closely with and remain active contributors in the overall public involvement process for RACER and in specific activities arranged by NMCF. The most important element of public involvement is, without a doubt, serious commitment by all parties over the long-term. This long-standing commitment ensures that a documented track record is developed.

One avenue for establishing open dialogue among key parties and with the public is through preexisting groups associated with or within LANL, NMED, and DOE. These entities may provide additional public interaction opportunities for the RACER process. DOE, LANL, and NMED have had an enormous presence in the northern New Mexico region for an extended period of time, and the public is well acquainted with activities, research efforts, and staff members through local newspapers and community conversations. Because of this knowledge, an important recommendation is that the key parties pursue the possibility of using existing forums as opportunities to dialogue with community members regarding RACER. Working through established groups or entities has the advantage of ensuring a smooth continuum for the RACER process, one that does not suffer from delays as new mechanisms are tested for their efficacy in maintaining public dialogue for the RACER process. Having NMCF as the independent RACER convening authority to help coordinate some of NMED's and LANL's public efforts can strengthen a working network among key parties and the community that will ensure a robust public dialogue into the future.

The ultimate goal of continuing and increasing public involvement as part of the ongoing RACER process at LANL is to improve the public dialogue regarding decisions to remediate at LANL. More communication and feedback with the public related to these issues improves the entire decision-making process.

Methods to implement effective public involvement have changed over time and must be specific to the facilities and geographic region, as well as be responsive to the cultural and community insights of the people. The public has come to expect more than large public meetings. Effective public involvement and communication today must have several key features, which include the following:

- Sustainability (a commitment over time)
- Diversity (offering different approaches)
- Accessibility (using electronic formats)
- Flexibility (can change with the issue or circumstance to reach all)
- Timeliness with regard to issues.

In 2007, RAC published a report examining public involvement methods used to date in the RACER project and evaluated the effectiveness of each method (Aanenson et al. 2007). For the most part, public meetings held during the RACER project were poorly attended. At the time, RAC concluded that poor attendance was related to the lack of immediacy of an issue of interest, but it may be that public meetings, while useful in some situations, may not be an effective primary form of communication with the public. Experience with the RACER project indicated that the best methods of communication and interaction were generally small-group meetings, or focused meetings with students and community members from small towns in northern New Mexico where the key parties are actively involved. Meetings focused around a specific topic with a hands-on element to them were more effective and will continue to be used in the future. Electronic forms of communication also seemed to be a quite effective means of involving individuals.

A key lesson from the RACER public involvement process is that “public involvement looks different depending on where you stand.” It is important to find a middle ground where people can come together, exchange ideas, and discuss issues openly in an atmosphere where everyone listens to one another. The goal of the public process for the future is to create situations where dialogue exists so that all parties know they can express their views, voice their concerns, and have the opportunity to provide feedback to the project that will have some effect on decisions.

It is important to recognize that regulatory requirements exist for DOE, NMED, and LANL that must be met for scheduling and holding meetings on certain remediation activities. Any RACER recommendations for public dialogue are not intended to interfere with those activities. However, where feasible, RACER public communication can serve in tandem with such efforts at LANL, NMED, and DOE.

Public involvement for the RACER process at LANL is divided into five different areas. Each type of involvement may not be used in a given year, and some may overlap depending on effectiveness and ongoing evaluation of the public process. The five methods for public involvement that are anticipated to be most effective with the RACER process in the future are:

1. ***Technology-Based Aspects.*** To truly engage the public in a technology centered age, it is no longer enough to just hold public meetings. NMCF’s approach to public involvement for RACER will include state-of-the-art technological methods. An Internet forum, a page for questions and answers, a website, and other online tools can be used to

engage an increasingly technically advanced public. In many situations, individuals would rather engage in a process such as RACER using advanced technical tools that allow them flexibility of time and resources. The existing RACER website ([www.racermm.com](http://www.racermm.com)) will remain a key avenue for providing access to project reports and information and for receiving comments on these reports in a timely fashion. Currently, project reports are posted on the website as Adobe Acrobat Portable Document Format (PDF) files, and community members can download the reports or request a hard copy of any report. This strategy allows anyone to review project reports and to submit comments directly to the report authors via e-mail or mail.

New features and modifications will be investigated to enhance the website's effectiveness. These may include an Internet forum for public input and feedback, which will provide a valuable method for receiving input from the public in the maintenance of the RACER tools and in understanding and tracking general public attitudes about the laboratory and RACER's role in conveying information about its environmental activities. A web-based meeting forum, such as GoToWebinar™, may serve as a fast and affordable way to involve many participants in meetings, updates, or demonstrations. The web-based DAT, developed as a part of RACER, will certainly play an important role in this application of technology for public involvement. The DAT will be available to anyone with no mandatory registration; however, the user will have the option to register. Registration can ensure that people get information about updates to software, announcements about meetings, and other information. This technology-based approach will be emphasized because it is an excellent way to disseminate information and to document comments and responses.

2. **Public Meetings.** Although public meetings can no longer be the cornerstone of public involvement the way they once were, it is still important to engage the public using some sort of regular meeting schedule that will highlight important happenings for RACER. Guest speakers can be especially effective when they can engage the public in dialogue. This may be particularly important as decisions about remediation are being made so that the public can voice an opinion on decisions at LANL. A facilitator will be present at such meetings to ensure open dialogue and to document questions and answers.
3. **Workshops.** Because an important part of the RACER process will be the legacy of public interaction with environmental data made possible with the RACER DAT, it will be important to hold public training workshops periodically as the need arises. A user manual for the online RACER DAT is available on the website, but the importance and usefulness of hands-on training of the public by a technical individual cannot be underestimated.
4. **Symposia.** A recommendation is to establish an annual or biannual RACER symposium under NMCF's sponsorship. The purpose of the symposium will be to explain any changes to RACER, review key information related to the past year's environmental data, include an environmental perspective summary by NMED and LANL, and present guest speakers. A symposium will provide an opportunity for the public to ask LANL management and the regulator questions about decision making and to offer them suggestions about improvements the public may consider important. Other aspects of a symposium that may be included would be training on the RACER tools or information about risk analysis. NMED, LANL, environmental groups, and pueblos and tribes would

all have an opportunity to be on the agenda. RAC suggests that the first such symposium should be held in 2009 on a date yet to be determined.

5. *Special Meetings as a Convening Authority.* One of the unique aspects of NMCF's independent role is its ability to conduct meetings at the request of NMED or LANL as an independent convening authority. Such meetings could address issues related to remediation activities or other topical issues related to radionuclide and chemical concentrations in the environment as determined by the involved parties. As an independent steward for the RACER process, NMCF is uniquely positioned to help in this regard. The outcome of such meetings could be conveyed to the public using one of the above-mentioned public involvement methods.

## **Documentation of Public Involvement**

In order to be most effective, a public involvement program needs to be documented and evaluated periodically to identify what works and what does not work so that the program can be continually tailored and improved to increase the public dialogue. RAC recommends that NMCF provide annual reports that document public communication activities with an assessment of each activity's effectiveness. These reports would be generated within 90 days from the end of each fiscal year, or by December 31 of each year. The public communication documentation report may include:

- A list of people who participated during the year
- A record of meeting agendas, symposium topics and agendas, etc.
- An evaluation of the effectiveness of each public involvement tool
- Recommendations to improve the public involvement activities into the next year.

Providing written documentation ensures that the RACER public communication process will retain the fundamental features of an effective process: sustainability, diversity, accessibility, flexibility, and timeliness with regard to issues. The process will remain fluid and effective, not static and rigid. With this periodic review, NMCF can work with LANL, NMED, and DOE to preserve the best ways to involve the public each year and to dispense with activities that are less effective.

## **Financial Report**

A useful and informative service that RAC recommends NMCF provide to the public is a financial report to the public on how RACER funds were allocated each year. This report could be part of the annual public involvement evaluation report. It would include a summary of public involvement efforts, administrative efforts, and technical efforts engaged in each year and the dollar amount committed to each.

## **Stipends for the Public**

A stipend program was initiated early in the RACER project to provide varying amounts of monetary support to individuals and organizations within the community that committed their time to RACER. RAC recommends that the stipend process be continued. NMCF has established an application and review process to encourage individuals and organizations representing New

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Mexico's diverse communities to actively participate and provide input to the project. A brief history of the stipend program is provided below.

As a part of the stakeholder process during the development of the RACER project, RAC enlisted NMCF to assist with the distribution of funding to allow stakeholders to fully interact in the project. RAC believed that providing stipends to encourage public participation in the RACER project would offer a number of benefits. The purpose of stipends was to encourage individuals and organizations representing New Mexico's diverse communities to actively participate and provide input to the project. Input to the project required considerable time and effort by interested citizens. The stipend process provided a way for individuals to be partially compensated for their expenditure of resources.

Stakeholders eligible for stipends were private and public entities who were not supported by other grants or contracts to invest time and resources to the RACER project. The objective was to award stipends for specific purposes to individuals or organizations that represent the range of views concerning decisions about risk reduction at LANL. Some of the criteria for awarding stipends included the following:

- Recipients of stipends had to collectively represent a broad spectrum of stakeholders who brought community-based views related to the project and a diversity of skills
- An individual or organization was eligible for only one type of stipend
- Although the specific process for payments was the responsibility of NMCF, payments were not made until awardees had fulfilled the requirements of the stipend. For example, stipends awarded for review of reports were made once the review was submitted
- A mid-year interview with NMCF was necessary to document participation and for re-application for the subsequent year(s).
- Decisions by NMCF were documented and available for public review.

This financial support encompassed several types of stipends of varying amounts that were distributed to stakeholders through an application and review process. Selection of recipients for the awards and disbursement of the funds was determined through a random and neutral process by NMCF. NMCF was involved in neither the technical work nor technical review process. Each award was given for a specific period of time of participation and recipients could reapply following successful completion of their objective. The actual recipients were determined solely by NMCF and were not subject to approval by any other organization. Stipend awards were established for individuals, organizations, educational institutions, and pueblos and tribes as follows:

- Individual stipends were designed for two types of individuals. First, the participatory stipends were for individuals who did not have a technical background but wanted to participate in and provide feedback on the RACER project. They were awarded to individuals who had an interest in the project and who collectively represented a broad spectrum of views among the general public about LANL and its effect on environmental quality and public health. Secondly, the technical report review stipends were designed for individuals who had technical expertise and experience. Stipends were awarded to several individuals that represented a diversity of technical backgrounds and community views among the general public about LANL and its effect on environmental quality and public health.
- Educational stipends were designed for educational institutions or educators who taught subjects that could be related to the project and whose students could assist with areas

such as gathering data, developing scenarios of exposure, and reading documents written by scientists for a general public's level of understanding. Another reason for educational stipends was to introduce young people to the process of open public science and decision making. These educational stipends were awarded to teachers or institutions to assist researchers in gathering data or reviewing specific documents.

- Organization stipends were designed for organizations interested in LANL and its effect on environmental quality and public health that wanted to participate in and provide feedback on the RACER project. These organization stipends were awarded to organizations to attend and actively participate in meetings, discussions, and workshops relating to the RACER project and to review specific technical project reports.
- Pueblo stipends were awarded to pueblos or members of the pueblos. The process for pueblo stipends will be described further after receiving input from representatives of the pueblos.

NMCF and RAC both believed that the stipend process would be an incentive for stakeholders to participate in public forums and public meetings. However, there were very few stakeholders who requested stipends, and monetary compensation did not appear to be a major factor in gaining participation from stakeholders. RAC, however, does believe that the stipends should remain available and used to the extent possible to encourage further participation in RACER.

## Conclusions

This report has provided recommendations for the key parties for increasing and continuing the RACER public communication efforts into the future. It will be critical for the success of RACER for all parties to remain committed to their individual roles and to participate actively with the public. An important element of continuing and improving a successful public involvement process is the potential for actively involving the key parties in a public dialogue on a long-term basis. All parties must work closely with and remain active contributors to the overall public process and to specific activities arranged by NMCF, including meetings scheduled among the technical contributors to the RACER process. Being personally connected with technical workshops, community forums, or informal gatherings in the community can provide assurance to the public that all parties are firmly committed to the RACER process in northern New Mexico both now and into the future.

The goal of the public involvement process has been to create situations where dialogue exists so that all parties know they can express their views, voice their concerns, and have the opportunity to provide feedback to the project to have some effect on decisions. While there are many important components of RACER, it can be described best as a public service process for providing information to help the public understand potential environmental impacts from LANL. RAC has identified recommendations that can be used to enhance public dialogue opportunities with LANL and NMED and to increase public involvement in the RACER process. Moving forward, these elements should be used to promote the greatest public involvement possible for the future success of RACER at LANL.

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# Appendix A.

## Draft Statement of Work for the New Mexico Community Foundation (NMCF)

**Overall Role:** Management and oversight of the Risk Analysis, Communication, Evaluation, and Reduction at Los Alamos National Laboratory (RACER at LANL) project as a facilitator of the RACER information and logistical steward for the project.

**Key Elements:** This scope of work lays out the responsibilities and requirements for the New Mexico Community Foundation and other key parties for successfully overseeing the RACER project into the future. It depends a great deal on the commitment of all key parties. The draft scope of work for NMCF/RACER is organized into five main areas:

- Goals and responsibilities
- Contractual issues
- Communication among key parties
- Continued community involvement
- Maintenance of the technical integrity of the RACER tools (technical steward).

### Goals and Responsibilities

1. Identify the goals and principles of the RACER project under NMCF.
  - a. The overall goal of RACER has been “to develop an open, transparent process that involves community input to decisions to reduce public health risks and ecological impacts from LANL operations.”
  - b. Under NMCF, RACER will be maintained to ensure that the overall and specific objectives are preserved, but with flexibility that allows for the RACER process to evolve and be adapted to other needs as they arise.
2. Identify the roles of NMCF, NMED, LANL, DOE, and other key parties in the RACER process.
  - a. NMCF will administer and oversee the RACER project as an independent entity. This role includes:
    - i. Ensuring there is a transparent, consistent, and objective process for public input into the RACER process and communication between regulators and the general public. The major focus of the RACER process will be the technical database, aspects of stakeholder interactions regarding LANL environmental data and the cleanup process, and community input to the LANL environmental programs throughout the remediation process. LANL operations are considered as they pertain to the cleanup and environmental processes.
    - ii. Maintaining the subcontract with the technical steward, NMSU.
    - iii. Continuing the stakeholder process as requested by all parties by establishing opportunities for regular and on-going communication and interaction with the community at large. (Note that the LANL stakeholder process will continue in large part through the existing NNMCF).

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- iv. Maintaining open communication among the key parties.
      - v. Preparing an annual work plan that outlines the general activities that will be conducted by each of the key parties and lays out the goals for that period.
      - vi. Providing an annual progress report at the end of each calendar year summarizing the accomplishments during that year.
    - b. DOE will be the primary funding source.
    - c. LANL roles include:
      - i. Establishing and maintaining an automated procedure for keeping the RACER measurement database up-to-date with data from LANL and NMED.
      - ii. Using the tools to ensure their continued reliability and communicating with the key parties about the results.
      - iii. Continuing to assess the tools and communicate needs for additional capability to the technical steward.
      - iv. Committing to responsive, timely, and open resolution of data-related issues.
      - v. Actively participating in RACER-related, community-wide programs.
      - vi. Maintaining a contract with NMCF.
    - d. NMED roles include:
      - i. Continuing to assess the measurements database and data analysis tools to ensure reliability and stability of the software.
      - ii. Continuing to assess the tools and communicate needs for additional capability to the technical steward.
      - iii. Solicit and consider input to the RACER process from its perspective as a regulator.
      - iv. Committing to responsive, timely, and open resolution of data-related issues.
      - v. Active involvement in RACER-related community wide programs.
- 3. Establish a firm commitment to the goals and overall principle that RACER embodies from key parties in the RACER process, including the DOE, LANL, NMCF, and NMED.
  - a. Although NMCF is the administrator, a firm commitment to the goals of the project must be maintained from all parties to ensure the long-term success of the project.
  - b. A commitment to continuing the interaction and cooperation by LANL and NMED is particularly important to maximize the benefits offered by the RACER tools described in the current work plan. These benefits include maintaining collocated relationships, consolidating qualifiers and their meaning, reaching consensus on procedures for identifying and including new analytes, and ensuring consistency in reporting of well-characterization data.
  - c. All parties must be viewed and treated with respect so that an evenly balanced process allows the exchange of ideas and differences in a non-confrontational setting.

#### **Contractual Issues**

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4. Establish a funding source and funding process for NMCF to provide management and oversight of RACER that is stable and agreeable to all parties; DOE will be the primary funding source.
  - a. Investigate ways to program the DOE funding so independence is maintained.
  - b. Over time, work to establish investments, both monetary and community based, in RACER from other sources.
    - i. A component of sound RACER funding lies in continuing to make RACER a well known community entity that draws in people from all areas of the community.
    - ii. Continue to explore other possible funding sources including EPA, grants, or working with New Mexico political contacts to establish funding for RACER as line item in federal budget.
5. Establish a funding mechanism for the technical steward at New Mexico State University to maintain the technical database.
  - a. Develop a budget for the technical steward at New Mexico State University.
  - b. Establish a subcontract with NMSU.
6. Set up the contract so all key parties must make a commitment to maintain their responsibilities. If commitments are not met, then NMCF will have the right to terminate the contract.
  - a. Identify and communicate clear guidelines that must be met for all parties to prevent withdrawal by any party.
  - b. NMCF must maintain its integrity and reputation. It is an independent voice in the community, an independent community organization.

#### **Communication among Key Parties**

7. Establish a clear process for scheduling and organizing regular meetings among the key parties.
  - a. Meetings should be held at least quarterly.
  - b. Clear objectives for each meeting with a venue for discussing technical issues that arise will be set prior to each meeting. Topics should include data and data communication, public input mechanisms and experiences, LANL environmental operations/programs status.
  - c. The meeting time and place will be set by NMCF.
  - d. Each of the key parties should be responsible for a meeting.
  - e. A short summary of each meeting should be written and distributed among the parties.
8. Develop clear procedures for obtaining environmental monitoring data that is related to LANL.
  - a. Identify one individual within each key organization that can be the spokesperson or primary contact person if questions arise about an imminent event or change at LANL.
  - b. Establish a regular schedule for communication among these key contact people to ensure that open lines of communication exist at all times so that the burden does not fall on one person or organization (e.g., NMCF).

- c. This applies to follow-up environmental monitoring if an accident or incident occurs at LANL that has the potential or perceived potential to impact the local northern New Mexico population.
  - d. This element is essential for NMCF to maintain its credibility with the community because NMCF must be updated regularly about events or happenings at LANL that may impact the community-wide acceptance of RACER.
  - e. Maintain clear criteria for acceptance of data into RACER.
9. Establish a process that maintains the continuous and smooth operation of the RACER project as individuals within organizations move on.

#### **Community Involvement**

10. NMCF will maintain the overall RACER objectives of providing an open, transparent process that involves community input from stakeholders regarding decisions to reduce public health risks and ecological impacts from LANL operations<sup>1</sup>. NMCF will spearhead communication activities for the public and continue to:
- a. Maintain and develop updates to RACER website.
  - b. Continue to communicate with the public through group e-mails to disseminate information about the project.
  - c. Obtain and consider input from stakeholders in the maintenance of the data analysis and ranking tools.
  - d. Prepare written materials for local newspaper announcements or fact sheets on specific topics, as the need arises.
  - e. Schedule air time at local radio stations when desired.
  - f. Incorporate stakeholder interests into the RACER process without superseding the authority of the regulatory agencies or the operational concerns of LANL.
  - g. Develop alternative methods for communication as the public understanding of the project advances.
11. Assist NMED/LANL with stakeholder information and community involvement programs by providing independent logistical support. This support would include but not be limited to:
- a. Focus groups
  - b. Public meetings
  - c. Community educational programs through local schools or colleges.

#### **Maintenance of Technical Integrity of RACER Tools**

12. Identify the tasks and responsibilities of the technical steward at New Mexico State University.
- a. Maintain the RACER database, data analysis tool, risk ranking tool, decision support tool, and users' manuals.

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<sup>1</sup> Stakeholders are individuals or organizations who have a personal, financial, health, or legal interest in activities, policy, or recommendations that affect their well-being or that of their environment.

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- b. Maintain the web-based application of the RACER measurement database and data analysis tools accessible via the Internet.
  - c. Ensure that the RACER tools are performing properly. No party can alter the copyrighted RACER tools except the technical steward.
  - d. Ensure that data updates from LANL, NMED, and others are properly integrated.
  - e. Ensure that updates to the EPA Preliminary Remediation Guides, applicable state and federal standards, background levels, and other measures of comparison are completed on a regular basis.
13. Provide oversight of the technical steward.
- a. Develop clear procedures for obtaining important information regarding RACER operations, updates of the tools, and data acquisition from the technical steward.
  - b. Develop a regular schedule with the technical steward, either by phone or in person, to meet and discuss updated technical features.
  - c. Establish a process to ensure regular contact between the technical steward and the key parties in this agreement. This could occur at the regularly-scheduled meeting among the key parties.
  - d. Provide an annual progress report to key parties.
14. Maintain the technical proficiency and balance in the RACER process.
- a. Establish a clear and transparent process to evaluate the continued performance of the RACER tools through the technical steward.
  - b. Maintain a technical balance for the tools by supporting a transparent and scientifically-astute peer review process. The peer review process provides a mechanism to:
    - i. Ensure that the best available scientific information is used.
    - ii. Ensure that important data gaps are identified and addressed as part of the project.
  - c. Maintain the technical expertise and scientific proficiency through an intermediate individual or group, if necessary. (e.g., RAC consult with NMCF if local questions arise initially; NMCF has local technical support).