A proposal is an essential marketing document that helps cultivate an initial professional relationship between an organization and a donor over a project to be implemented. The proposal outlines the plan of the implementing organization about the project, giving extensive information about the intention, for implementing it, the ways to manage it and the results to be delivered from it.

A proposal is a very important document. In some cases, a concept note precedes a proposal, briefing the basic facts of the project idea. However, the project idea faces a considerable challenge when it has to be presented in a framework. The proposal has a framework that establishes ideas formally for a clear understanding of the project for the donor. Besides, unless the ideas are not documented in writing, they do not exist. Hence, a proposal facilitates appropriate words for the conception of an idea.Proposals have recently become more sophisticated. This reflects the increased competitiveness and larger resources existing in the NGO sector. The trend of inviting proposals for contracting development programmes began with the allotment of substantial resources for development that triggered off the mushrooming of NGOs around the world.

Business Proposal Ideas

There's a lot to keep in mind when writing a business proposal. Here are a few tips to help you out:

1. **Start with an outline:** Before you dive into writing, outline the major sections of your business proposal and the pertinent information you want to include. This will ensure you stay focused and your message stays intact as you write.
2. **Keep it simple:** While there's no ideal business proposal length, focus on quality over quantity. Keep sentences short and simple, and avoid the use of business jargon.
3. **Stay on brand:** Don't be afraid to let your company's personality shine through in your proposal. Stay true to your brand and show the client what sets you apart from your competitors.
4. **Include data and visuals:** Don't forget to include compelling, quantitative data. When applicable, use visuals such as charts and graphs to enhance the proposal.
5. **Use a call-to-action:** Make sure the reader knows what to do next after reading your proposal. If the reader is ready to take action, your CTA should clearly indicate the next steps in the process.
6. **Create a sense of urgency:** Your proposal should not be an indefinite offer. Give the reader a deadline to act on the proposal to expedite the decision-making process.
7. **Quality control:** Before you send the proposal out, make sure to read and re-read it for any typos or grammatical errors.

Revision checklist for proposals

As you review and revise your proposal, keep the following in mind:

- Use the right format. Remember, for this class, you are writing this proposal in memo format.
- Write a clear summary of (or introduction to) your proposal topic.
- Identify exactly what you are proposing to do.
- Insure that a report—a written document—is somehow involved in the project you are proposing to do. Remember that in this technical writing course we are both practicing writing a proposal like those done in the real world and completing a college-level research project.
- Insure that the sections of your proposal are in a logical, natural order and that you use sub-headers and bullets (and any other formatting styles) correctly.
- Address the proposal to your named audience—not your instructor.

How to Write a Business Proposal

1. Begin with a title page.
2. Create a table of contents.
3. Explain your why with an executive summary.
4. State the problem or need.
5. Propose a solution.
6. Share your qualifications.
7. Include pricing options.
8. Clarify your terms and conditions.
9. Include a space for signatures to document agreement.

Example 1

A Proposal to Research the Storage Facility for Spent Nuclear Fuel at Yucca Mountain

Roger Bloom
October 1997

Introduction

Nuclear power plants produce more than 20 percent of the electricity used in the United States [Murray, 1989]. Unfortunately, nuclear fission, the process used to create this large amount energy, creates significant amounts of high level radioactive waste. More than

30,000 metric tons of nuclear waste have arisen from U.S. commercial reactors as well as high level nuclear weapons waste, such as uranium and plutonium [Roush, 1995]. Because of the build-up of this waste, some power plants will be forced to shut down. To avoid losing an important source of energy, a safe and economical place to keep this waste is necessary. This document proposes a literature review of whether Yucca Mountain is a suitable site for a nuclear waste repository. The proposed review will discuss the economical and environmental aspects of a national storage facility. This proposal includes my methods for gathering information, a schedule for completing the review, and my qualifications.

Statement of Problem

On January 1, 1998, the Department of Energy (DOE) must accept spent nuclear fuel from commercial plants for permanent storage [Clark, 1997]. However, the DOE is undecided on where to put this high level radioactive waste. Yucca Mountain, located in Nevada, is a proposed site.

There are many questions regarding the safety of the Yucca Mountain waste repository. Researchers at Los Alamos National Laboratory disagree over the long-term safety of the proposed high level nuclear waste site located in Nevada. In 1994, Charles Bowman, a researcher at Los Alamos, developed a theory claiming that years of storing waste in the mountain may actually start a nuclear chain reaction and explode, similar to an atomic bomb [Taubes, 1995]. The stir caused by theory suggests that researchers have not explored all sides of the safety issue concerning potentially hazardous situations at Yucca Mountain.

Bowman's theory that Yucca Mountain could explode is based upon the idea that enough waste will eventually disperse through the rock to create a critical mass. A critical mass is an amount of fissile material, such as plutonium, containing enough mass to start a neutron chain reaction [Murray, 1989]. Bowman argues that if this chain reaction were started underground, the rocks in the ground would help keep the system compressed and speed up the chain reaction [Taubes, 1995]. A chain reaction formed underground could then generate huge amounts of energy in a fraction of a second, resulting in a nuclear blast. A nuclear explosion of this magnitude would emit large amounts of radioactivity into the air and ground water.

Another safety concern is the possibility of a volcanic eruption in Yucca Mountain. The long-term nuclear waste storage facility needs to remain stable for at least 10,000 years to allow the radioactive isotopes to decay to natural levels [Clark, 1997]. There are at least a dozen young volcanoes within 40 kilometers of the proposed Yucca Mountain waste site [Weiss, 1996]. The proximity of Yucca Mountain to these volcanoes makes it possible to have a volcanic eruption pass through the spent fuel waste repository. Such a volcanic eruption could release damaging amounts of radioactivity to the environment.

Objectives

I propose to review the available literature about using Yucca Mountain as a possible repository for spent nuclear fuel. In this review I will achieve the following two goals:
(1) explain the criteria for a suitable repository of high-level radioactive waste; and
(2) determine whether Yucca Mountain meets these criteria.
According to the Department of Energy (DOE), a repository for high-level radioactive waste must meet several criteria including safety, location, and economics [Roush, 1995]. Safety includes not only the effect of the repository on people near the site, but also people along the transportation routes to the site. In my research I will consider both groups of people. As far as location, a waste site cannot be in an area with a large population or near a ground water supply. Also, because one of the most significant factors in determining the life span of a possible repository is how long the waste storage canisters will remain in tact, the waste site must be located in a dry climate to eliminate the moisture that can cause the waste canisters to corrode. The economics involved in selecting a site is another criterion. At present, the Department of Energy (DOE) has spent more than 1.7 billion dollars on the Yucca Mountain project [Taubes, 1995]. For that reason, much pressure exists to select Yucca Mountain as a repository site; otherwise, this money would have been wasted. Other costs, though, have to be considered. For instance, how economical is it to transport radioactive waste across several states to a single national site? I will try to account for as many of these other costs as possible.
After explaining the criteria, I will assess how well Yucca Mountain meets those criteria. In this assessment, I will not assign a numerical score for each criterion. Rather, I will discuss qualitatively how well Yucca Mountain meets each criterion. In some situations, disagreement exists among experts as to how well Yucca Mountain meets a criterion. In such cases, I will present both sides. In this assessment, only Yucca Mountain will be considered as a possible site. Although many sites in the United States could meet the DOE's established criteria, I will consider only Yucca Mountain because the DOE is considering only Yucca Mountain [Taube, 1995].

Plan of Action

This section presents my plan for obtaining the objectives discussed in the previous section. There has been an increase of interest in the nuclear industry concerning the Yucca Mountain site because of the January 1,1998, deadline for the DOE. Several journal articles and papers discussing the possibility of Yucca Mountain as a spent fuel repository in our near future have surfaced as a consequence of that interest. These articles and books about the dangers of nuclear waste should provide sufficient information for me to complete my review. The following two paragraphs will discuss how I will use these sources in my research.

The first goal of my research is to explain the criteria for determining whether a nuclear waste repository is suitable. For example, will the rock structure be able to withstand human invasion in the future [Clark, 1997]? What will happen if the waste containers corrode and do not last as long as predicted? Will the natural setting contain the waste? To achieve this goal, I will rely on "Background on 40 CFR Part 197 Environmental Standards for Yucca Mountain" [Clark, 1997], the DOE Yucca Mountain home page [1997], and the book Understanding Radioactive Waste [Murray, 1989].

A second goal of my literature review is to evaluate Yucca Mountain meets those criteria. I will base my evaluation on the sources mentioned above as well as specific Environmental Protection Agency standards. I also intend to research the validity of possible environmental disasters, such as the explosion theory. To accomplish this goal, I will rely on the paper presented by Clark [1997], and on the book Blowup at Yucca Mountain [Taubes, 1995].

Because engineering students are the primary audience for my proposed research topic and may not be familiar with the history of nuclear waste, I will provide a background on past methods used for waste storage. People in the nuclear field with some knowledge of the waste problem facing the industry may be a secondary audience.

Management Plan

This section presents my schedule, costs, and qualifications for completing the proposed research. This research culminates in a formal report, which will be completed by December 5, 1997. To reach this goal, I will follow the schedule presented in Figure 1. Since I already possess literature on the subject of Yucca Mountain as a nuclear waste site, most of my time will be spent sorting through the literature to find key results, and presenting those results to the audience.

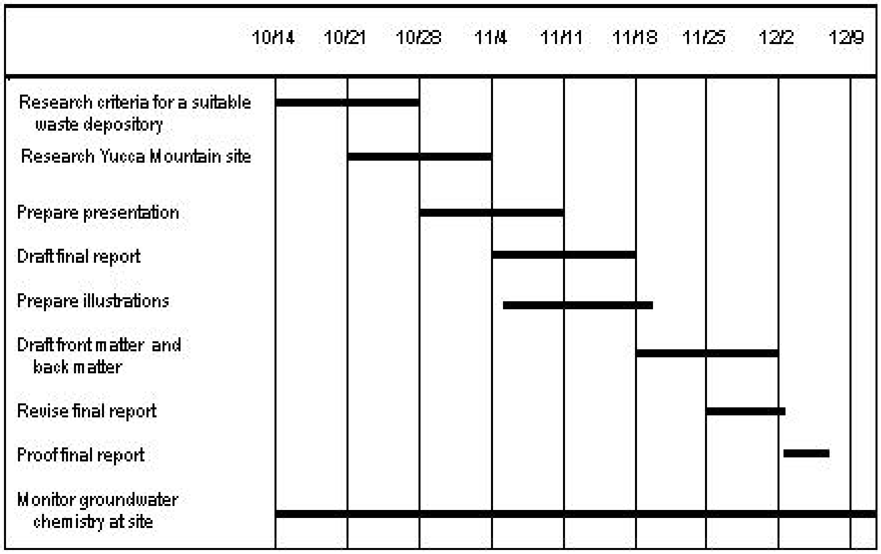

Figure 1. Schedule for completion of the literature review. The formal presentation will be on October 27, and the formal report will be completed by December 5.

Given that all my sources are available through the University of Wisconsin library system, there is no appreciable cost associated with performing this review, unless one takes into consideration the amount of tuition spent on maintaining the university libraries. The only other minor costs are photocopying articles, creating transparencies for my presentation, printing my report, and binding my report. I estimate these expenses will not exceed $20.

I am a senior in the Engineering Physics Department at the University of Wisconsin at Madison, majoring in nuclear engineering and physics. I have taken several classes related to nuclear waste, economics, and environmental studies. I believe that these courses will aid me in preparing the proposed review. For further information about my qualifications, see the attached resume.

Conclusion

More than 30,000 metric tons of nuclear waste have arisen from U.S. commercial reactors as well as high level nuclear weapons waste, such as uranium and plutonium [Roush, 1995]. This document has proposed research to evaluate the possibility of using Yucca Mountain as a possible repository for this spent nuclear fuel. The proposed research will achieve the following goals: (1) explain the criteria necessary to make a suitable high level radioactive waste repository, and (2) determine if Yucca Mountain meets these criteria. The research will include a formal presentation on November 11 and a formal report on December 5.

References

Clark, Raymond L., "Background on 40 CFR Part 197 Environmental Radiation Protection Standards for Yucca Mountain," *Proceedings of the 1997 Waste Management Conference* (Washington, D.C.: U.S. Environmental Protection Agency, 1997).

Kerr, R., "New Way to Ask the Experts: Rating Radioactive Waste Risks," *Science*, vol.274, (November1996), pp. 913-914.

Murray, Raymond L., *Understanding Nuclear Waste* (Battelle Press, 1989).

Roush, W., "Can Nuclear Waste Keep Yucca Mountain Dry-and Safe?" *Science*, vol. 270, (December 1995), pp. 1761-1762.

Taubes, G., "Blowup at Yucca Mountain," *Science*, vol.268, (June 1995), pp. 1836-1839.

Example 2

A Proposal to Review How Geophysical Precursors Can Help Predict Earthquakes

Christopher Gray
February 1995

Introduction

Throughout the world, devastating earthquakes occur with little or no advance warning. Some of these earthquakes kill hundreds of people. If the times, magnitudes, and locations of these earthquakes could be accurately predicted, many lives could be saved. This document proposes a review of how monitoring geophysical precursors can help in the short-term prediction of earthquakes. The proposed review will discuss the physical principles behind the monitoring of three common precursors and evaluate how accurate each monitoring is in predicting earthquakes. Included in this proposal are my methods for gathering information, a schedule for completing the review, and my qualifications.

Justification of Proposed Review

On the morning of April 18, 1906, the population of San Francisco was awakened by violent shaking and by the roar caused by the writhing and collapsing of buildings [Hodgson, 1964]. The ground appeared to be thrown into waves that twisted railways and broke the pavement into great cracks. Many buildings collapsed, while others were severely damaged. The earthquake caused fires in fifty or more points throughout the city. Fire stations were destroyed, alarms were put out of commission, and water mains were broken. As a result, the fires quickly spread throughout the city and continued for three days. The fires destroyed a 5 square-mile section at the heart of the city [Mileti and Fitzpatrick, 1993]. Even more disastrous was the Kwanto earthquake in Japan that devastated the cities of Yokohama and Tokyo on September 1, 1923 [Hodgson, 1993]. In Yokohama, over 50 percent of the buildings were destroyed [Bolt, 1993], and as many as 208 fires broke out and spread through the city [Hodgson, 1964]. When the disaster was over, 33,000 people were dead [Bolt, 1993]. In Tokyo, the damage from the earthquake was less, but the resulting fires were more devastating. The fires lasted three days and destroyed 40 percent of the city [Hodgson, 1964]. After the fire, 68,000 people were dead and 1 million people were homeless [Bolt, 1993].

The 1906 San Francisco earthquake and the Kwanto earthquake were two of the most famous and devastating earthquakes of this century. These earthquakes struck without warning and with disastrous results. If earthquakes could be predicted, people would be able to evacuate from buildings, bridges, and overpasses, where most deaths occur.

Some earthquakes have been successfully predicted. One of the most famous predictions was the Haicheng Prediction in China. In 1970, Chinese scientists targeted the Liaoning Province as a site with potential for a large earthquake. These scientists felt that an earthquake would occur there in 1974 or 1975. On December 20, 1974, an earthquake warning was issued. Two days later, a magnitude 4.8 earthquake struck the Liaoning Province; however, further monitoring suggested a larger earthquake was imminent [Mileti and others, 1981]. On February 4, 1975, the Chinese issued a warning that an earthquake would strike Haicheng within 24 hours [Bolt, 1993]. The people in Haicheng were evacuated, and about 5.5 hours later, a magnitude 7.3 earthquake shook the city of Haicheng. If the people hadn't been evacuated, the death toll could have exceeded 100,000.

Using geophysical precursors, the Chinese have predicted more than ten earthquakes with magnitudes greater than 5.0 [Meyer, 1977]. For example, the Chinese predicted a pair of earthquakes of magnitude 6.9 that occurred 97 minutes apart in Yunnan on May 19, 1976 [Bolt, 1993]. Despite these successes, the Chinese failed to predict the earthquake that struck the city of Tangshan on July 27, 1976; this earthquake killed 250,000 people and injured 500,000 more [Bolt, 1988]. This earthquake wasn't completely unexpected, but the Chinese believed it to be a few years away. Other earthquakes have been predicted, but the predictions didn't have enough precision for warnings to be issued. For example, in 1983, a young geophysicist predicted that an earthquake of magnitude 8 would strike Mexico City within four years [Deshpande, 1987]. Two years later, an earthquake of magnitude 8 did strike Mexico City. Because the prediction was not more precise, no warning was issued and the earthquake took the population of Mexico City by surprise. Other predictions have turned out to be false warnings. For example, an earthquake warning was issued in August 1976 near Hong Kong [Bolt, 1988]. During the earthquake alert, people slept outdoors for two months. No earthquake occurred.

Objectives

I propose to review the available literature on how geophysical precursors can be used for short-term predictions of earthquakes. In this review, I will achieve the following three goals:

1. explain three commonly monitored geophysical precursors: ground uplift and tilt, increases in radon emissions, and changes in the electrical resistivity of rocks;
2. show what happens to each of these precursors during the five stages of an earthquake; and
3. discuss how each of these precursors is used for short-term earthquake predictions.

Geophysical precursors are changes in the physical state of the earth that are precursory to earthquakes. In addition to monitoring geophysical precursors, there are other strategies for predicting earthquakes-in particular, analyzing statistical data on prior earthquakes. Analyzing statistical data on prior earthquakes, however, is solely a long-term prediction technique [Bolt, 1993]. For that reason, I will not consider it.

In my review, I will discuss three common geophysical precursors: ground uplift and tilt, increases in radon emissions, and changes in the electrical resistivity of rocks. Earthquakes occur in five stages as there is a build up of elastic strain within faults in the earth, followed by the development of cracks in the rocks, then the influx of water into those cracks. The fourth stage is the actual rupture of the fault and the release of seismic waves. The fifth stage is the sudden drop in stress in the fault. In this stage, aftershocks occur.

During these five stages, the geophysical precursors follow distinct patterns. For instance, the ground uplift and tilt increases during the second stage as the volume of rock increases. In my review, I will relate how the three geophysical precursors relate to the five stages of an earthquake and how well this relation can be used to predict the oncoming fault rupture.

Plan of Action

This section presents my plan for obtaining the objectives discussed in the previous section. Because of the recent earthquakes in California and Japan, there has arisen a strong interest to predict earthquakes precisely. As a consequence of that strong interest, many books and journals have been written on earthquakes and earthquake prediction. I have gathered five books and several articles on the subject. In addition, there are dozens of books and articles available in the library. These books and articles should provide sufficient information for me to write my review. The following paragraphs discuss how I will use these sources in my research.

The first goal of my research is to explain the physical principles behind monitoring geophysical precursors. For example, why does the electrical resistivity of rocks decrease before an oncoming earthquake? Or, what does a sudden increase in radon emissions reveal about the future likelihood of a massive earthquake? The second goal of my research is to show what happens to each of these precursors during the five stages of an earthquake. To achieve these two goals, I will rely on three books that give an overview to earthquake prediction: *Earthquakes* [Bolt, 1988], *Earthquakes and Geological Discovery* [Bolt, 1993], and *Earthquakes and Earth Structure* [Hodgson, 1964].

A third primary goal of the literature review is to cover the accuracy of monitoring each precursor. By accuracy, I mean how well does the method work in predicting the time, place, and size of earthquakes. This discussion will not include many statistics on the predictions of earthquakes, because at present there just haven't been enough successful predictions to validate these types of statistics. Instead, I intend to evaluate the potential accuracy of monitoring each precursor based on the opinions of experts and preliminary data. To achieve this goal, I will rely on two of my most recent sources: *The Great Earthquake Experiment* [Mileti and Fitzpatrick, 1993] and *Earthquakes and Geological Discovery* [Bolt, 1993].

Should I require additional sources other than the ones I have, I will search for them in the library system at the University of Wisconsin. Should I not be able to find that information, I will modify the scope of my research accordingly.

Because the primary readers for my proposed literature review are engineering students who are probably not familiar with the theories behind earthquakes, I will have to provide selected background information frommy sources. These engineering students already know that earthquakes are devastating. They also know that if earthquakes could be predicted, people would be able to prepare for them and lives would be saved. However, they may not know the different methods of predicting earthquakes. My intent is to inform these students of three methods of predicting earthquakes.

A secondary audience for the review would be non-technical readers who either live in earthquake-prone areas or are affected financially when earthquakes occur. My proposed literature review will provide this group with an unbiased discussion of three methods for earthquake prediction. This discussion, drawing much from overview chapters in *Earthquakes, Animals and Man* [Deshpande, 1987] and *California Quake* [Meyer, 1977], will put into perspective how accurate, or inaccurate, the named methods are and what hurdles face engineers who try to predict earthquakes.

Management Plan

This section presents my schedule, costs, and qualifications for performing the proposed research. The proposed research project culminates in a formal report that will be completed by December 6, 1995. To reach this goal, I will follow the schedule presented in Figure 1. Because I already possess several books and articles on earthquake prediction, most of my time will be spent sifting through the information, finding the key results, and presenting those results to the audience.

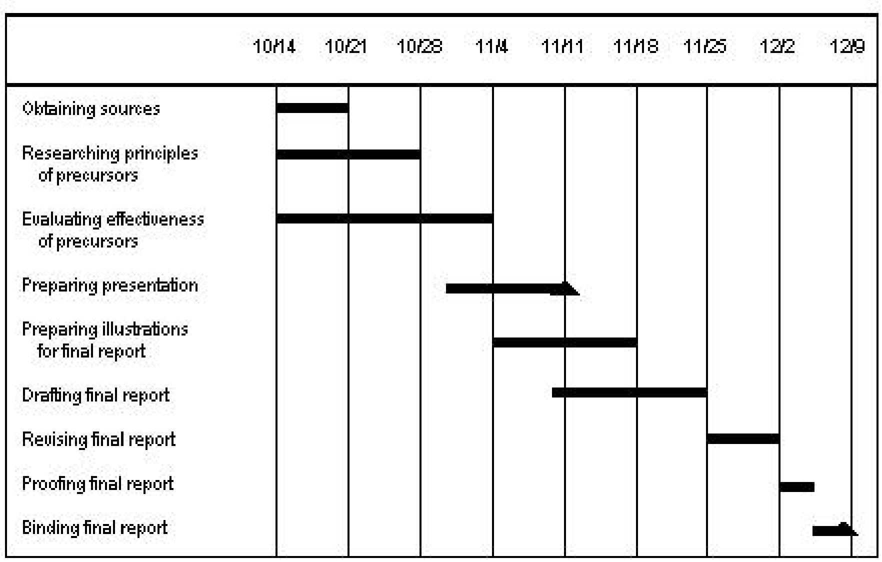

Figure 1. Schedule for completion of literature review. The two triangles represent milestones for the project, the first being the formal presentation on November 11, 1996, and the second being the formal report on December 6, 1996.

Given that I can obtain all my sources for the literature review from the library, there is no appreciable cost associated with performing this literature review. The only costs, which will be minor, are for copying articles, printing the review, and spiral binding the review. I estimate that I can do these tasks for under $10.

I am a senior in the Geological Engineering Department at the University of Wisconsin at Madison. In my undergraduate courses I have taken rock mechanics, soil mechanics, geophysics, and stratigraphy, all of which have included the principles of seismology and stress-strain relationships. In addition, I have taken field courses on structural geology that have introduced me to subsurface behaviors. I believe that these courses and my hands-on experience will aid me in assimilating the proposed literature review. For further information about my qualifications, see the attached resume *(not attached on this web site)*.

References

Bolt, Bruce A., *Earthquakes* (New York: W. H. Freeman and Company, 1988).

Bolt, Bruce A., *Earthquakes and Geological Discovery* (New York: Scientific American Library, 1993).

Deshpande, Prof. B. G., *Earthquakes, Animals and Man* (Pune, India: The Maharashtra Association for the Cultivation of Science, 1987).

Hodgson, John H., *Earthquakes and Earth Structure* (Englewood Cliffs, NJ: Prentice-Hall, 1964).

Meyer, Larry L., *California Quake* (Nashville: Sherbourne Press, 1977).

Mileti, Dennis S., and Colleen Fitzpatrick, *The Great Earthquake Experiment* (Boulder, Colorado: Westview Press, 1993).