Review of the United States Environmental Protection Agency Superfund Technical Assistance Grant Program

by

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Technical Report EWR-5-97
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June 11, 1997

Prepared for Friends of Blue and Fairview Lake under support of the U.S. Environmental Protection Agency
TAG Program
Website: http://www.ce.pdx.edu/~wellss/pubs/fairview

Table of Contents

Introduction

The EPA Technical Assistance Grant Program has been around for several years, but there are not many examples of its use in the Pacific Northwest from which citizens can learn from when considering applying for a Technical Assistance Grant. The EPA program is designed to provide citizens with technical assistance in understanding the issues related to a Superfund site (or proposed Superfund site) in their community. This report provides an overview of the Technical Assistance Grant Program with information on applying for the grant, selecting a Technical Advisor and managing the grant. Additionally two case studies are reviewed in order to provide some examples of the process and provide a better understanding of the steps involved for new communities interested in utilizing this EPA program. By examining both the TAG process and some examples of its implementation, interested citizens will be better prepared for the grant process, the efforts involved, and the benefits of the grant program.

Technical Assistance Grant Program

The U.S. Environmental Protection agency created the Superfund Technical Assistance Grant (TAG) Program to help communities and citizens learn about important issues, which affect their community due to a Superfund site. The program allows the community to get involved in the Superfund Program to respond to concerns and risks related to a site. The TAG Program provides funds for qualified community/citizen groups affected by a Superfund site to hire a Technical Advisor to help interpret and comment on site-related information and reports. The Technical Advisor would review documentation, interpret site-related information, and then disseminate this information to the community. In turn, the community would have a better understanding of the site-related issues and the cleanup process.

The grant process for the Technical Assistance Grant Program can be overwhelming to citizens who have not been involved with a grant process before. Descriptions of the various aspects of the program have been outlined to provide some insight into the process. Some of the information presented is further explanation of information presented in four handbooks published by the EPA regarding the Technical Assistance Grant Program. References to these handbooks are included at end of this report.

Eligibility

In order for the citizen group to be eligible to apply for and receive a Technical Assistance Grant, specific criteria need to be met.

1. The hazardous waste site affecting the citizen group must be listed on or proposed for listing on the Superfund National Priorities List.
2. The EPA must have started the response action phase of the project for the site by setting aside money for cleanup measures.
3. The citizen group must be incorporated as a nonprofit organization for the purpose of addressing issues at the Superfund site. If the group is not incorporated, an application may still be submitted, but if the group is awarded a grant, they must show evidence of filing for incorporation. The group must also be incorporated by the time the first Reimbursement Request is submitted to the EPA. Note that the costs associated with incorporation are reimbursable with TAG funds if awarded a grant.

Financial Requirements

As part of the TAG Program the citizen/community group (CG) must provide 20% of the total costs of the technical assistance project. The TAG Program awards grants on a three-year budget period with a maximum limit for the period set at $50,000. If the community group is awarded the maximum amount they must provide 20% of the total project costs, where 80% is the federal grant source of $50,000. To meet this requirement the EPA allows the citizen group to utilize in-kind contributions and group funds. Examples of in-kind contributions are volunteer services, contributions of supplies, and cash the group spends on products or services. In order to count volunteer services, the community group would need to keep track of the hours donated and a base rate at which the volunteer hours are valued.

A community group can get a waiver from the financial requirement under unusual circumstances, which would need to be demonstrated to the EPA. An example would be if the affected communities were undergoing financial hardship. To request the waiver, the citizen group would need to submit a written request statement with the application materials.

In addition to the financial requirements, there is also an administrative cap of 20% on the total TAG budget, which includes the federal funds' and the group's matching contribution. The administrative cap on the grant is designed to ensure the majority of the funds provided will be used for community technical assistance.

Group's Demonstrated Capabilities

As part of the application process the EPA will be evaluating the citizen group's capabilities to manage a grant adequately and responsibly. This would be partially established by the citizen group's plans for establishing a grant management system, the group's scope of work for the project, and information about the CG's past project experiences. Additionally, the EPA may decide to set up a meeting with the group to get a better understanding of how the group operates and to clarify any details of the application submitted or the hazardous waste site in question.

In addition, the EPA may also evaluate the group's ability to meet deadlines and complete projects, which would be required by the EPA through submitting regular progress reports or holding community meetings. The EPA will also review whether the group has established adequate procedures for financial accounting and auditing of the grant funds. The group's ability to raise contributions may also be a factor in reviewing the group's capabilities. Lastly, the EPA will evaluate whether the group complies with civil rights and equal opportunity employment laws.

When to Apply

Technical Assistance Grants are available anytime during the cleanup process, but the sooner in the process the citizen group applies the more beneficial it is if they receive a grant. The earlier a Technical Advisor can review and comment on reports such as the Remedial Investigation and Feasibility Study for the site the more prepared the community and Technical Advisor will be for the subsequent steps in the cleanup process.

The general process for the grant program can be separated into three phases: applying for the grant, selecting a Technical Advisor, and managing the grant. The first phase of the process is applying for the grant and receiving the TAG award from the EPA. The next phase is to determine the community's technical needs for the site and use this information to select a Technical Advisor. Once a Technical Advisor has been chosen and a contract signed then the work begins for both parties on meeting the community group's scope of work as outlined in the grant agreement. Through the rest of the grant budget period the CG would continue to manage the grant and work with the Technical Advisor. At the end of the budget period the CG has the option of applying for additional funds to continue the work or terminate the grant after the budget period closes.

Applying for the Grant

Flowchart 1 entitled "Technical Assistance Grant Process" shows the process for applying for a TAG. This process is also described below.

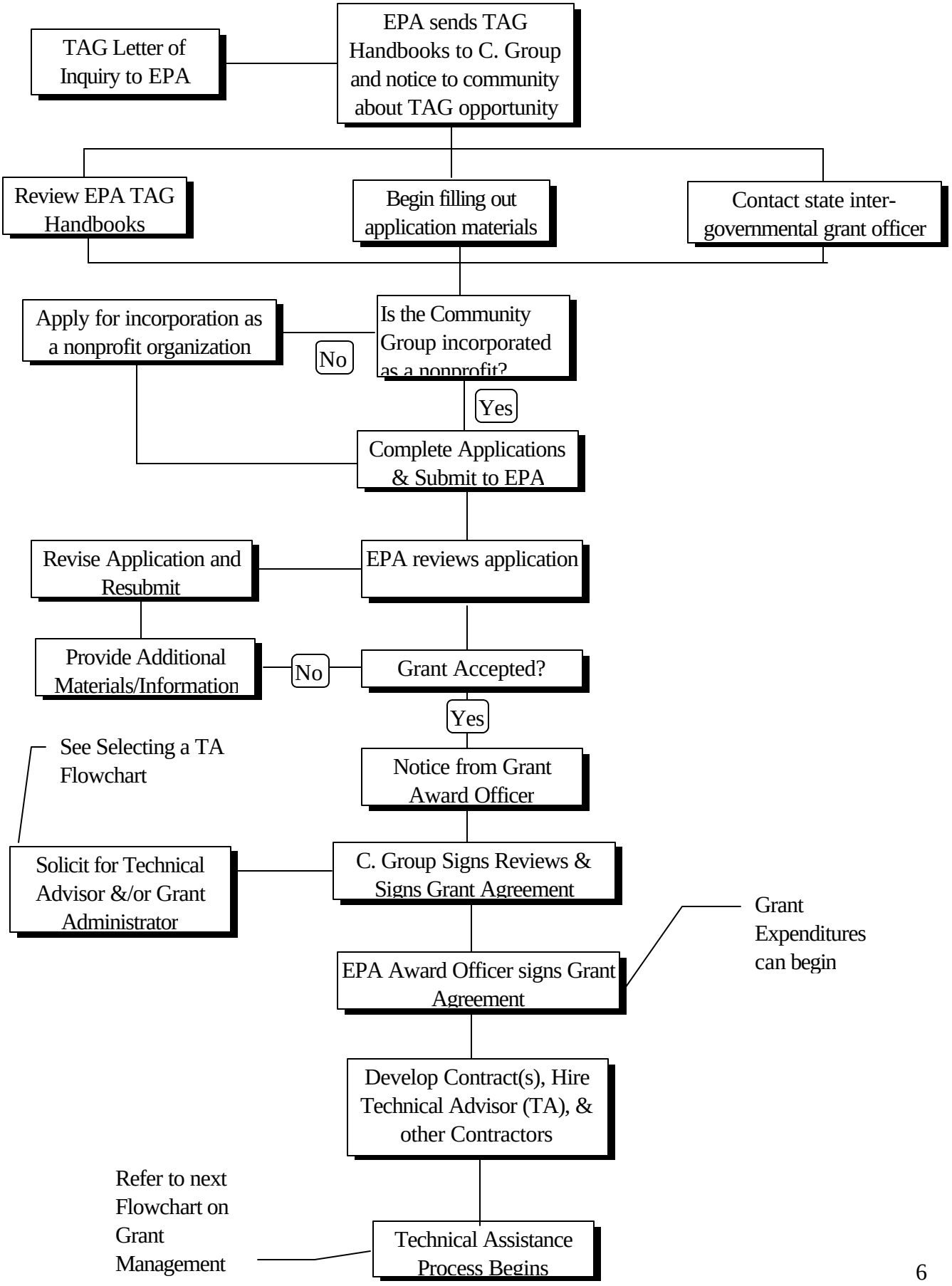
Applying for the Technical Assistance Grant begins by submitting a letter of inquiry or phone call to the EPA to request application materials and information about the program. In some cases the EPA may solicit the community through newspaper advertisements to encourage citizen and community groups to come forward and apply for a TAG.

Once the EPA has been notified of a group's interest in applying for a TAG, the EPA will then provide 30 days for other potential groups to come forward and express an interest in the TAG Program. During this time the initial group can begin filling out application materials. If after 30 days there is more than one group interested in receiving a TAG the EPA will encourage these groups to combine their efforts and create a sole incorporated nonprofit organization for the purpose of the grant. Since only one grant is allowed per site it is to the advantage of all groups to work together. By multiple groups working together for the purpose of the TAG, more community members would be represented by the coalition organization, and the work generated by the Technical Advisor would be disseminated to more people. If a coalition between several groups can not be achieved, each group is given 30 days to submit their application materials. After the EPA review process, only one of these groups would be selected to receive a grant.

The EPA has printed a series of handbooks for the TAG process which include example forms which have been filled out and blank forms which can be used when applying. The booklets also provide more specific details on filling out the application forms. Before completing the applications, the CG should review these EPA handbooks.

While in the process of completing the application, the community / citizen group (CG) should contact their state intergovernmental grant review person and notify them of the CG's plans to apply for the EPA TAG. In some states the state government needs to know what grant funds are coming into the state. The intergovernmental review person should be able to tell the CG what requirements need to be met, if any, and whether a copy of the application needs to be submitted to the state. This should be completed while applying for the grant because it may require up to 60 days to fulfill any state requirements and the EPA can't process the application materials unless there is evidence that the application was sent to the state. It is important to note the EPA does not need to hear back from the state to begin processing the application, but the EPA can't award a grant until the state has responded to the application materials submitted by the CG.

Flowchart 1: Technical Assistance Grant Process



At this time during the process, if the CG is not incorporated as nonprofit organization, they should begin the process of applying and inform the EPA that the process has started. Once the application materials have been completed several copies should be made. At least one copy should be kept for the CG's records. Then the original application materials and two copies should be submitted to the EPA. The EPA's review of the application materials will take approximately 30 days and within this time they may contact the CG to set up a meeting or to request further information.

The EPA will then send a written notice to the CG to notify them whether they will receive a grant. If the grant is approved, the EPA will have the EPA Grant Award Officer send the CG an award agreement, which must be signed by the individual in the CG, who will be responsible for the grant. This must be completed within three weeks of receiving the grant agreement and then resubmitted to the EPA. Once the EPA receives the signed agreement, the Grant Award Officer will sign it and then expenditures against the grant can be made. The only exception to this is if the community group has expenses towards incorporation as a nonprofit; these can be applied to the grant even though they occurred before the grant agreement was finalized.

Grant Administrator

Although the majority of the procurement process described below focuses on selecting a Technical Advisor for the CG, the same process can be used to select a grant administrator. The same procurement rules that are established for selecting a Technical Advisor would also apply when selecting a paid grant administrator. If the CG is interested in having someone with past experience manage the grant and keep financial records then the CG can hire someone to conduct these activities. The only additional limitation on selecting a grant administrator is there is a 20% administrative cap on the grant so hiring anyone to manage the grant would need to fit within this 20% and allow for other administrative expenses to be covered.

Selecting a Technical Advisor

The next step in the TAG process is to select a Technical Advisor by developing a request for proposals (RFP), i.e., a solicitation for technical work tasks. In selecting a Technical Advisor, there are two methods, which can be used, competitive and noncompetitive, but regardless of the method there are some specific steps the CG should keep in mind when identifying technical work needs and determining the most appropriate Technical Advisor for the contract work. These steps are illustrated in Flowchart 2 entitled "Selecting a Technical Advisor (TA), Competitive Selection Method" and Flowchart 3 entitled "Selecting a Technical Advisor (TA), Noncompetitive Procurement Method". The CG should review what they know about the hazardous waste site and determine the questions and issues they would like addressed for their community. Additionally they may want to research other Superfund sites to determine if a CG has already utilized the TAG Program for a site with similar issues. The research conducted will provide the CG with more insight into what expertise to look for in the Technical Advisor candidates and what additional qualifications will be required. Below is a list of some of the areas of expertise a Technical Advisor may need. This is not an all-inclusive list and will vary considerably depending on the nature of the site under study. The Technical Advisor will most likely be a group of people with varying expertise.

Areas of Expertise

Chemistry - Environmental Chemistry	Engineering (Civil, Environmental or other)
Toxicology	Epidemiology
Hydrology - Hydraulics	Soil Science - Geology
Liminology	Meteorology
Biology - Environmental Biology	Aquatic Ecology

In addition to the Technical Advisor candidates' expertise, it is important to ensure they have the appropriate qualifications to meet the technical work elements outlined in the solicitation developed (see below). A list of required qualifications for any Technical Advisor is outlined below and can be found in the EPA Superfund TAG Handbook: Procurement Using TAG Funds.

Technical Advisor Qualifications

- A demonstrated knowledge of hazardous or toxic waste issues.
- Academic training in relevant fields for the site in question.
- The ability to translate technical information into terms the public can understand.
- The technical qualifications, financial resources and experience necessary to carry out the required tasks outlined in the solicitation successfully.
- A successful performance record for completing previous work projects.
- Adequate accounting and auditing procedures to control funds properly for the project.
- A demonstrated compliance or willingness to comply with civil rights and equal opportunity laws, and other related statutory requirements outlined in 40 Code of Federal Regulations (CFR) part 30.

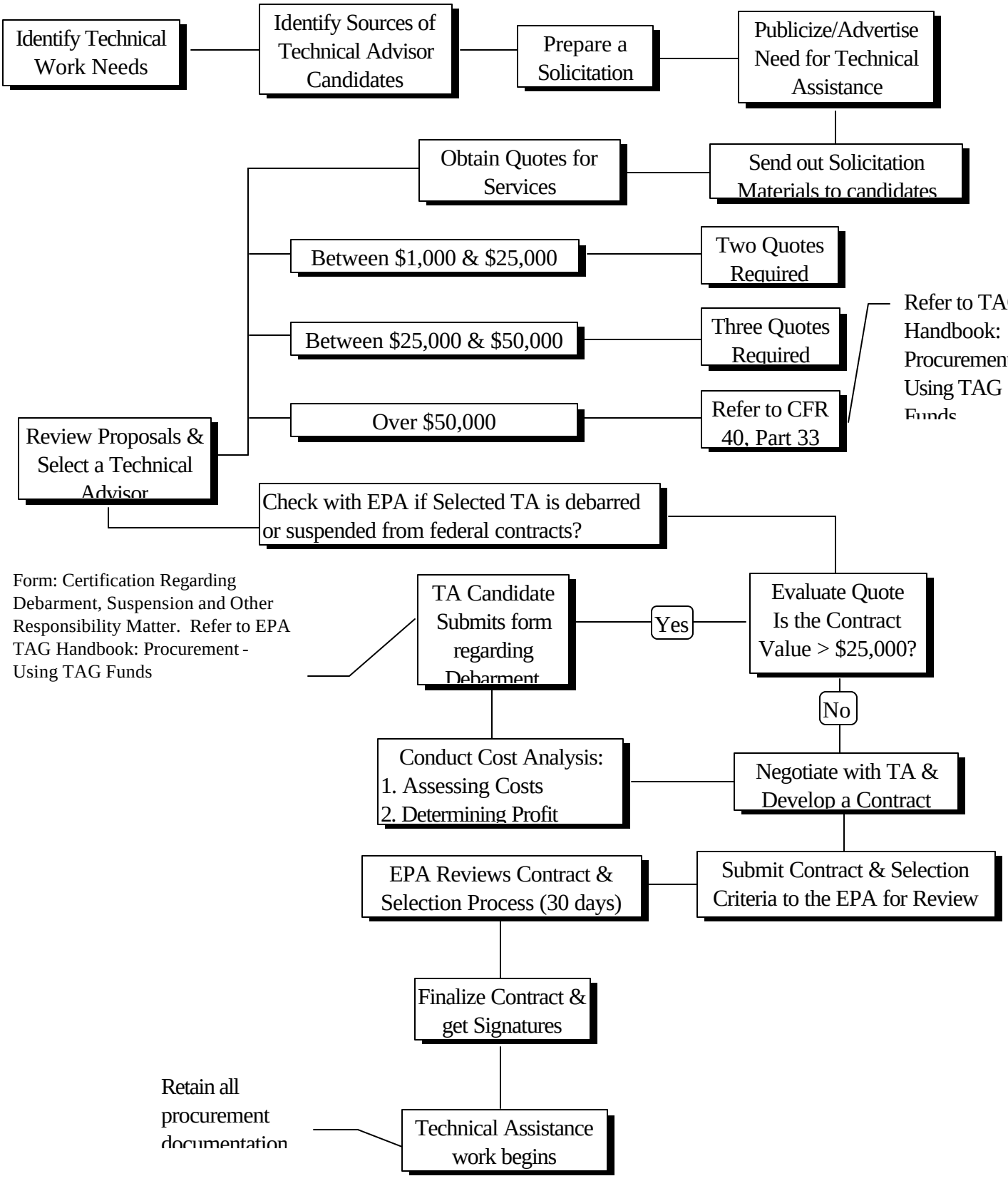
Additional qualifications:

- Ability to design and implement technical presentations for community groups.
- Past experience working with community groups.
- Possess foreign language skills if appropriate for the community affected by the site.
- Well-organized and able to handle multiple tasks at any given time.

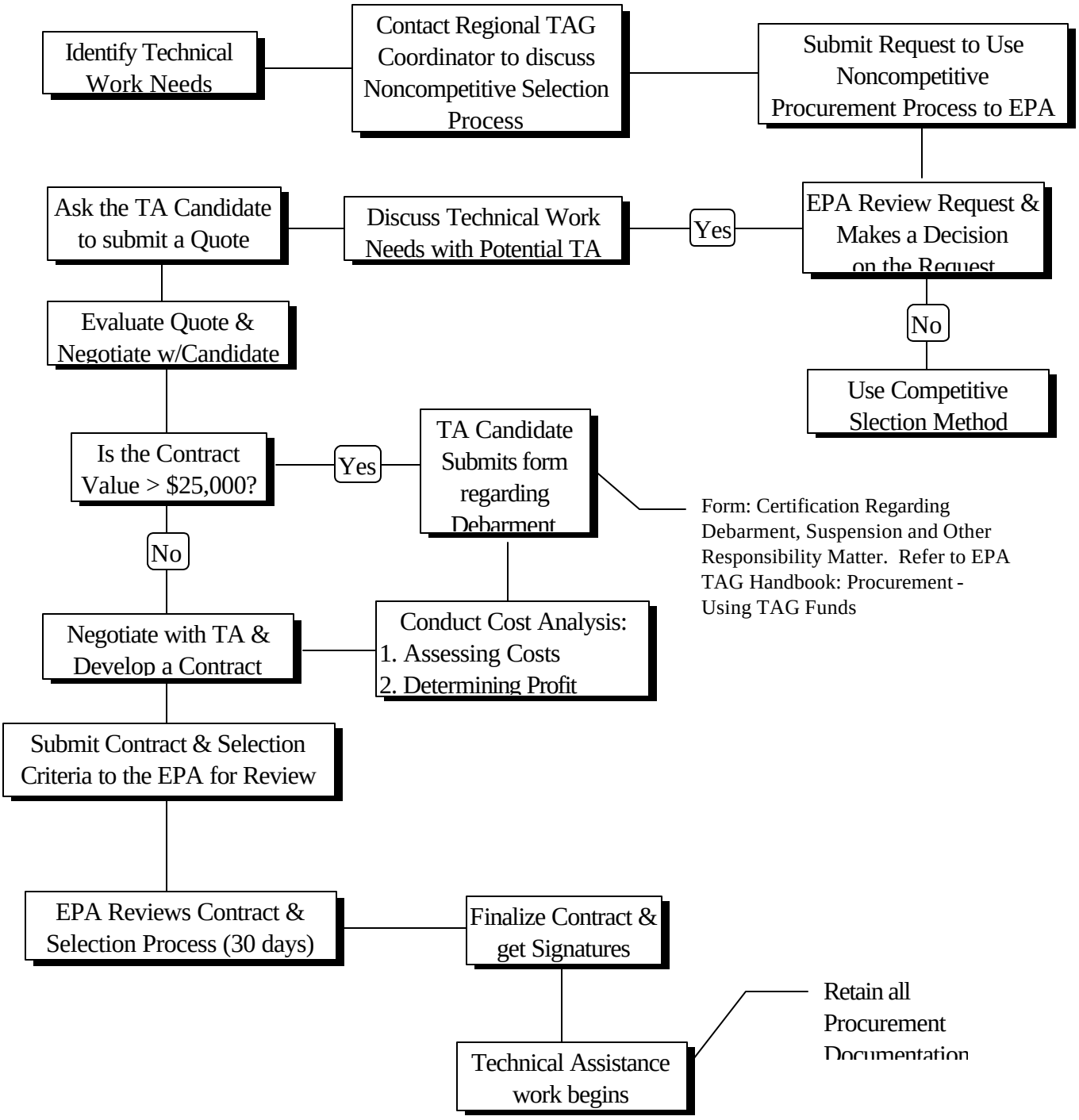
Another approach which will help the community determine the skills, qualifications and expertise the panel should have is to examine some of the possible tasks the panel may conduct for the community. The EPA provides an "exhibit list" which provides some potential work tasks in the EPA handbook on applying for the grant. Some examples of these tasks are:

- Interpreting site-related documents and presenting those results to the CG and/or larger community.
- Provide a technical response and comments to proposed cleanup measures by the state or federal agencies or the potentially responsible parties (PRPs).
- Provide summaries of technical information in laymen's terms for the community to use in raising awareness about the hazardous waste site and related issues.
- Work with the CG to answer questions from the local community affected by the site.
- Review technical documents regarding the site and comment on potential weaknesses in the proposals or work plans which may result in potential health threats to the community, a misunderstanding of the natural dynamics at the site, or an incorrect estimation of effective cleanup approaches or times frames.
- Work as a liaison between federal or state agencies and the community to understand better the cleanup process.

Flowchart 2: Selecting a Technical Advisor (TA) Competitive Selection Method



Flowchart 3: Selecting a Technical Advisor (TA) Noncompetitive Procurement Method



- Assist the community in developing brief informational sheets to explain various aspects of the hazardous waste site clearly and concisely.
- Work with the community group to develop newsletters to keep the larger community affected by the site informed of the progress in the cleanup process, the CG's work and the Technical Advisor's work.
- Provide testimonial at public hearings on behalf of the CG to respond to technical issues related to the cleanup process.
- Review how the Remedial Action phase of the cleanup process is progressing.
- Review accuracy and conclusions developed in the Remedial Investigation and Feasibility Study for the site.

There are two ways in which a Technical Advisor can be selected for meeting the needs of the CG through the TAG Program. The first method is a competitive method for selecting a Technical Advisor that dictates a minimum number of quotes the CG must receive based on the value of the potential contract. The other selection method, the Noncompetitive Selection Method, is used when it is clear to the CG there is only one possible candidate for meeting the CG's technical needs.

Competitive Selection Process

The first step in selecting a Technical Advisor is to identify the technical needs of the CG and larger community for the site. The technical needs will be partially dictated by the nature of the hazardous waste site, and partially by the concerns of the community. After the technical needs have been identified the CG should then identify potential sources of Technical Advisors such as consulting firms or academic institutions. Then a solicitation (request for proposals) should be developed to clearly state the technical needs and a time frame over which work tasks should be conducted. The solicitation for proposals should include a specific set of elements in order for the CG to review adequately the proposals and select a Technical Advisor. Potential solicitation elements are:

- A description of all the services needed including tasks related to working with the community.
- A timetable for when these tasks are to be completed and when specific milestones in the project should be reached.
- Added to this timetable would be any kind of delivery schedule of technical work products such as reports or factsheets.
- The total estimated hours for completing the work elements described above should be outlined.
- The deadline and location for submitting the proposals should be specified. The proposals should be sent to one person or address in the CG.
- A description explaining any conflict of interest issues on the part of the candidates should be submitted with the proposal.

Once the solicitation has been developed the CG needs to publicize the information so potential candidates are aware of the request for proposals. If the group has already investigated potential sources of Technical Advisors then this information can be used to solicit the potential candidates. Additionally, the CG needs to be prepared to send out the solicitation to potential candidates and answer any questions by potential candidates. Once the proposals have been received, the CG can begin the process of evaluating them based on the CG's already established criteria.

For the competitive selection process, the EPA requires at last two quotations for contract bids between $1,000 and $25,000 and a minimum of three quotations for contracts valued between $25,000 and $50,000. If the contract is valued at over $50,000 the CG should contact their Regional EPA Grant Coordinator for the grant and refer to the EPA TAG Handbook: Procurement - Using TAG Funds because other federal regulations apply for these larger contracts.

Regardless of the value of the contract the CG should contact the EPA to determine if any of the candidates are on the master list of debarred or suspended contractors. If the contract in question is valued over $25,000 the potential candidate(s) need to submit a form called "Certification Regarding Debarment, Suspension, and Other Responsibility Matters" with their proposal which would eventually be forwarded to the EPA. In addition, for contracts over $25,000, the CG will also need to conduct a cost analysis to assess the cost estimates in the proposals for appropriateness and for determining profits estimated in the proposals. For more information on conducting the cost analysis, refer to the EPA TAG Handbook: Procurement -Using TAG Funds.

While the citizen group is in the process of reviewing the proposals and selecting a Technical Advisor, all of the criteria used to eliminate candidates and select a Technical Advisor should be documented and saved. After the CG has selected a Technical Advisor they should notify the candidate and send notices to all of the unsuccessful candidates. At this point the CG and selected Technical Advisor can negotiate any details related to developing a contract. For information on suggested elements to include in a contract, see the following section on using the Noncompetitive Selection Method.

If the contract value is over $1,000 then a copy of the proposed contract and documentation from the selection process should be forwarded to the EPA for review. The EPA will review the contract to ensure all of the necessary clauses are included (as outlined in the sample contract in the procurement handbook). Based on the review the EPA may suggest some modifications to the contract. Once any modifications are made to the contract, it can be finalized and signed by both the Technical Advisor and the CG. Once signed, the Technical Advisor can begin working on the project tasks and the CG can focus on managing the grant and any community activities related to the site. After the Technical Advisor selection process has finished it is important that the CG keep all the documentation related to selecting the Technical Advisor and any contract information.

Noncompetitive Selection Process

As in the case of the competitive selection process, the CG needs to identify the technical work they would like the Technical Advisor to accomplish. Before proceeding with this procedure, the CG should contact the Regional EPA TAG Coordinator to discuss the noncompetitive process and determine if it is appropriate for the CG to use. Based on this discussion, if the EPA agrees the situation may warrant the use of the noncompetitive process, the CG would then submit a formal Request to Use the Noncompetitive Procurement Process to the EPA. (Refer to the EPA handbook on procurement). This form will need to be completed with an explanation for using the noncompetitive process to select the Technical Advisor. If the EPA approves the request, the CG would then discuss with the potential Technical Advisor their technical work needs and any EPA requirements.

The next step requires the potential Technical Advisor to submit a proposal to the CG that would meet the technical requirements discussed above. After this initial proposal is submitted the CG may then wish to negotiate an agreement further with the potential Technical Advisor. Regardless of the value of the contract, the CG needs to check with the EPA to determine if the candidate is on the master listed of debarred or suspended

contractors. Also, like in the competitive selection process, if the contract is valued over $25,000, the potential Technical Advisor needs to submit the form titled "Certification Regarding Debarment, Suspended and Other Responsibility Matters" to the CG which then goes to the EPA. In addition, the CG would also have to conduct a cost analysis for the proposal. This would assess the costs estimated in the proposal to determine if they are appropriate and would provide an appropriate estimation of profit. All of the information that related to the review process for selecting the candidate should be documented (regardless of the value of the contract).

At this point in the process, the CG can work with the selected Technical Advisor to develop and negotiate a contract to conduct the described work. The contract should have the elements described below as listed also in the EPA handbook on procurement. First, the contract should have a section on the nature, scope and extent of work to be conducted by the contractor. This will establish a set of agreed upon work tasks for the contractor to complete and will help in evaluating the contractor's performance at a future date. A timeline for completing these tasks and work elements should also be written into the contract to ensure the CG gets the agreed upon products and services in a timely manner. The total cost of the contract needs to be specified, and any other detailed cost estimates should be outlined as well. Payment provisions should be included in the contract, but before developing this part of the contract the CG should contact the EPA to get a better understanding of how the reimbursement process will work and how the CG will handle paying the contractor. The contract needs to include provisions for an option to extend the contract or to terminate the contract under specific circumstances. While in the process of negotiating the details of the final contract with the Technical Advisor, the CG needs to determine whether a labor-hour or fixed price method is going to be used for the contract. Finally the EPA recommends the CG review the sample contract in the their handbook on procurement to ensure specific clauses are included in the contract.

If the contract value is over $1,000 the proposed contract and documentation related to the negotiations with the Technical Advisor need to be submitted to the EPA for review before the contract can be finalized. The EPA will review the materials to ensure specific clauses are incorporated into the contract and to evaluate whether the contract will meet the CG's needs. In addition they will review the proposal and cost justification process. Once this review has been completed and any necessary modifications are made to the contract, it can be finalized. When the final version of the contract has been written the technical assistance contractor and the CG should sign it. If the contract in question is less than $1,000 it does not need to be reviewed by the EPA, but the EPA should be informed of any proposed contract in case they have suggestions or would like to review it. As mentioned in the competitive selection process all documentation related to the selection process and contract development should be retained.

Utilizing Small Businesses and Businesses owned by Minorities and Women

Because the CG is utilizing federal funds through the TAG Program for technical assistance work, the CG needs to make a positive effort to use small, minority owned, or women owned businesses. If the CG needs help in locating any of these types of firms, they should contact the Regional TAG Coordinator. Additionally the CG could check with their local Chamber of Commerce for information on these firms. The EPA handbook on procurement provides details on how these businesses are defined, and lists a set requirements which must be followed in rural areas to ensure qualified small businesses are used whenever possible.

Record Keeping

Throughout the process of selecting a Technical Advisor regardless of the method used, the CG needs to maintain accurate records of the process. The review process of the Technical Advisor proposals should be well documented along with reasons for eliminating any candidates. Any materials related to developing the solicitation should also be documented and saved. Any cost analyses conducted or negotiations with Technical Advisor candidates should be documented as well. These records should be retained and safeguards should be taken during and after the selection process to ensure business information such as rates and fees submitted by contractors remain confidential. The basis for making the final selection of the Technical Advisor should be documented and any issues negotiated with the selected candidate in developing the contract should also be included. The CG should also provide a written justification in their records for the type of contract used, labor-hour or fixed price. Lastly, the EPA requires the CG to document a sincere effort to use small, minority owned or women owned businesses.

Managing the Grant

Once the Technical Advisor has been selected and their work has started, the CG begins the grant management phase of the TAG Program. This phase of the process takes place in parallel to the Technical Advisor activities and events related directly to the site. There are three main types of activities, which will take place during this phase:

- EPA Tasks for the grant
- Community Group Activities
- Grant Activities.

Refer to flowchart 4 entitled "Managing the Technical Assistance Grant" for additional information.

EPA Tasks

As part of the grant agreement with the EPA, Progress Reports need to be submitted by the CG on a quarterly basis. The Progress Reports should be only a couple of pages in length and should describe the progress achieved over the past several months and whether the activities are fitting within the approved time schedule and budget. Any problems encountered or anticipated in the future should be outlined as well. Lastly, the CG should provide a list of anticipated activities for the next quarter. The CG could also include with the report any products developed by the Technical Advisor or CG to demonstrate their progress. These reports are submitted to ensure the EPA is updated on the community activities related to the hazardous waste site, to assess whether the grant schedule is on track, and to provide a vehicle for the EPA to offer suggestions or provide assistance along the way in the TAG Program.

The CG needs to submit Reimbursement Requests to the EPA on a quarterly basis as well. If the CG has more than $500 in expenses in a given month the Reimbursement Requests may be submitted more frequently. For more information on the Reimbursement Requests see the section on Grant Activities.

Annually in October the CG is responsible for providing an Annual Minority Owned Business (MBE) Report. This report is designed to report the amount of money in any contracts that went to MBEs. Even if the CG did not hire an MBE, the report should still be submitted to the EPA so they have annual records reporting the

amount of money that went to MBEs. The form used to report the information is called "MBE/WBE Utilization Under Federal Grants, Cooperative Agreements and Other Federal Financial Assistance" (SF334).

An annual Financial Status Report needs to be submitted within 90 days after the grant anniversary date using form SF269. This report should include details on expenditures over the past year, and it allows the EPA to assess whether the CG is meeting the targeted budget outlined in the grant agreement.

The TAG covers a three-year budget period. When the budget period comes to a close, several additional reports are required in addition to the ones mentioned above. A Draft Final Project Report by the CG is due within 90 days before the closing date of the grant budget period. This report should be approximately three to four pages in length, and provide a complete summary of the CG's activities over the entire budget period. Descriptions of the activities and the progress accomplished should be related back to the project's purposes and objectives established in the grant agreement.

A final version of the Final Project Report is due within 90 days after the close of the grant. The final version should be a refined version of the draft report, incorporating any suggestions or comments from the EPA's review of the draft. Additionally the CG may want to include any key products developed by the Technical Advisor or CG that help illustrate the achievements over the course of the budget period. The EPA handbook on managing the grant provides a sample table of contents for the final report.

A Final Financial Status Report needs to be submitted to the EPA within 90 days after the end of the project period or termination of the grant. When this report is generated all payments should be made to contractors and other service providers, and there should be no outstanding financial transactions. The report should also include a summary of any unspent funds from the budget period. This report provides the EPA with a summary of the grant expenditures over the budget period and allows them to evaluate it against the budget initially established in the grant agreement. The EPA handbook on managing the grant provides further details on what should be included in this report.

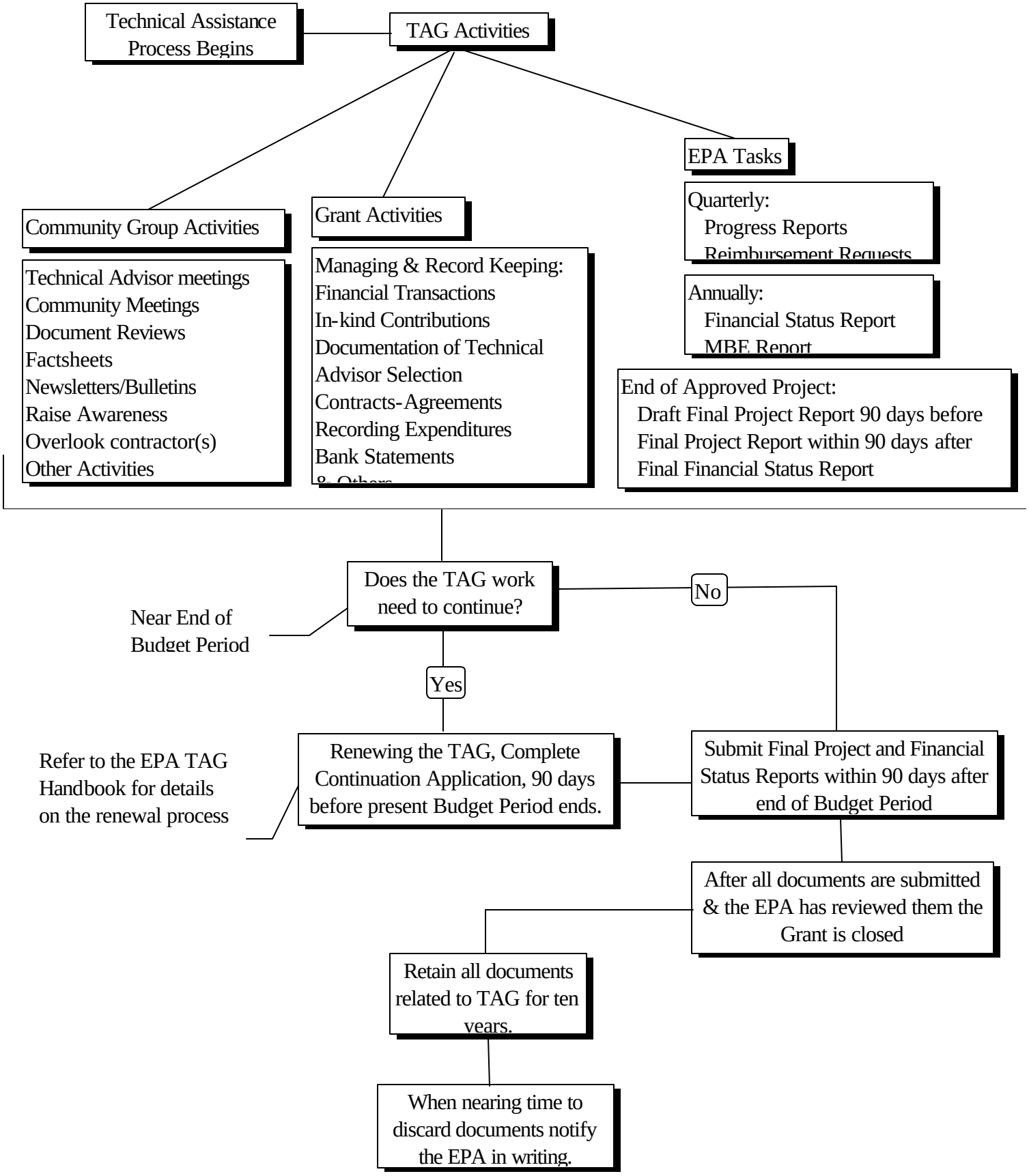
Grant Activities

The CG is responsible for keeping track of and managing all of the financial transactions related to the grant. As mentioned above, Reimbursement Requests are submitted to the EPA quarterly unless monthly expenses exceed $500. When submitting the Reimbursement Request, the EPA may take 20 to 30 days to pay the money to the community group. The CG should to remember that reimbursement expenses and group contributions to meet the matching community requirement are not valid until after both the EPA and the CG have signed the grant agreement. The CG should require all of their contractors to submit billing packages to the CG when requesting funds. The billing package will include information on such items as contractor expense records and progress reports. The CG can then use this information to assist them in writing Reimbursement Requests to the EPA, and to check on whether the CG is adhering to planned budgets and schedules established for the project.

The CG also needs to keep an accurate accounting and record keeping system. The accounting system should be able to keep track of all in-kind contributions, bank account records for the community group, and administrative expenses to ensure the 20% administrative cap on the grant funds is not exceeded. The accounting system should also have a ledger showing all financial transactions completed with supporting

documentation and receipts. The CG needs to have a bank account in the name of the group because the EPA writes the reimbursement checks in the name of the CG. The CG would then need to keep all bank records and canceled checks as part of the grant documentation records.

Flowchart 4: Managing the Technical Assistant Grant



A management system for the overall grant administration needs to be established for the CG. For example, the system should ensure all funds, property, and resources for the project should be used for authorized purposes only (related to the grant project activities). Additionally, the management system should include conducting internal audits of the financial records, and the audit results should be kept as part of the grant records. Internal audits should be conducted at least once every other year.

In addition to developing a grant management system, the CG needs to maintain records on many of the activities they conduct throughout the project budget period. The list below provides some examples of the records that should be kept by the CG.

- Records of all expenditure amounts and settlements
- Grant products and reports, i.e. Quarterly Progress Reports
- Documentation on how the CG selected the Technical Advisor
- Copies of the grant application, the grant agreement, and any grant amendments
- Accounting book and records
- Records of all in-kind contributions, labor, supplies etc.
- Copies of all bills paid by the CG
- Records of nonprofit status
- Procurement documents related to contract or solicitation negotiations
- Copies of any contracts awarded
- Copies of any documents or correspondence sent to the EPA (in case they are lost in transit)
- Documentation of the CG's effort to utilize SBEs, WBEs, and MBEs
- Others

All of the records generated from the TAG Program must be stored for a minimum of ten years after the close of the grant. Before the CG plans on discarding the documentation after ten years they need to send a written notification to the EPA to inform them of their plans.

Community Group Activities

Besides the activities mentioned above the CG will have their own set of activities to conduct during the project period. These activities may be either to keep in touch with the Technical Advisor's progress, to learn about results from the Technical Advisor, or to keep the larger community informed of the activities taking place related to the hazardous waste site.

Technical Advisor/Citizen (Community) Group Relationship

Depending on the contract established between the CG and the Technical Advisor, it will be important for the CG to keep informed of the progress of the Technical Advisor. A framework should be developed for communication between the CG and Technical Advisor to keep the CG informed of progress and activities and for planning future activities.

The CG may want to hold regular group meetings to keep group leaders and/or the whole group informed of the Technical Advisor's activities and events related to the site. Additionally, the CG may want to have regular

meetings / open houses with the larger community to keep local residents affected by the site, who are not active in the CG, informed about site-related issues.

At specific milestones in the project, the CG may want the Technical Advisor to attend or host a community meeting to allow residents and community members to ask the Technical Advisor questions about the site related issues. This would also be an opportunity for the Technical Advisor to present findings or recommendations from the technical document review. The CG would need to be able to advertise these meetings to the community and notify key residents affected by the site to encourage them to attend these meetings to learn more about the hazardous waste site.

The CG could also inform the community about the Technical Advisor's progress and other site-related issues by creating regularly published newsletters, periodic bulletins, and brief informational factsheets to be distributed. The CG needs to be able to overlook the activities of any hired contractors to ensure their needs are met. Lastly, the CG needs to be able to take the lead in disseminating information to the community from the Technical Advisor or other sources.

Grant Amendments, Continuation & Termination

Grant Agreement Amendments

If the CG at any point in the TAG process feels the project objectives or funding need to be modified in the grant agreement, the CG should contact the EPA Award Officer. Changes in the objectives or funding can only be done through a formal amendment to the grant agreement and must be negotiated and signed by the EPA Award Officer. Before implementing any changes of this nature the CG should discuss them with the EPA Regional Office because the EPA is not obligated to provide additional funds or modify the grant agreement.

Grant Renewal / Continuation

The TAG Program works on a three year budget period with a maximum award given of $50,000 for the three years. Depending on the circumstances of the site the total project period for technical assistance may last more than one budget period. There are two common scenarios that may result in the CG renewing the TAG. One scenario is at the end of the grant budget period if the CG still has money left over and feels there is a need for additional technical assistance. In this case the CG can submit a continuation application (SF424) to the EPA. The other scenario; at the end of the budget period the CG may feel there is still a need for technical assistance after the grant period has ended even though there will not be any funds available. For this case the CG would need to apply for a grant continuation with additional (new) funding. A continuation application (SF424) would need to be submitted to the EPA along with a waiver form to exceed the $50,000 limit for the site if the CG had already received $50,000 in the first budget period. In order to apply for a waiver for additional funds beyond $50,000 the site must be on the National Priorities List for Superfund sites, and not proposed for listing. For additional details on exceeding the $50,000 limit refer to the EPA TAG handbook on managing the grant.

Applications for grant continuation should be submitted 90 days before the close of the current grant budget period to ensure the EPA has sufficient time to evaluate the application and the latest grant reports for the current year. The review process will consider the complexity of the site in question, site-related issues, and how successful the current grant was managed by the CG. The application should be submitted along with any Progress Reports for the current budget period and an estimate of the Financial Status Report for the current

year including any estimation of unspent funds by the ending date of the grant. A new budget should be outlined in the application, and a new statement of work should be developed as well for the application. If the grant is a continuation to use unspent funds, then the statement of work may be simply a continuation of the statement of work from the current budget period.

If the CG needs additional technical assistance and wishes to retain the same contractor, the procurement process does not need to be completed again. A new contract would need to be developed or amendments added to the original contract to reflect the new budgets, time periods, and an updated scope of work if necessary. If the scope of work changes for the grant renewal, then the CG needs to evaluate whether the present contractor has the necessary skills and expertise for the new tasks. If the contractor does not have the expertise to perform the new tasks, the CG will need to repeat the procurement process and select a new Technical Advisor.

Case Study 1: Groundwater Contamination in East Multnomah County, OR

Background

The Groundwater Contamination in East Multnomah County was proposed for listing on the National Priorities List for Superfund sites. The Friends of Blue and Fairview Lake, a citizen activist group, applied for and received an EPA Technical Assistance Grant (TAG) and contracted with Portland State University faculty and staff to serve as the Technical Advisor and provide a review of the issues related to the contamination site. For additional information on this project refer to Appendix A at the end of this report for a copy of the technical review report produced by the panel at Portland State University.

Site Location

The groundwater contamination is located in the Cities of Fairview and Gresham in East Multnomah County, Oregon, which is in the eastern part of the Portland metropolitan area. The region of groundwater contamination can be found within a 2.5 square mile region bounded by NE Halsey Blvd. to the south and the Columbia River to the north. The study region is also bounded by NE 178th to the west and by NE 223rd Ave. to the east.

The Interlachen neighborhood consists of approximately 150 households, which rely on groundwater produced from three wells in the area. The Lachenview well is located on the north edge of Fairview Lake at the east end of the Interlachen community and is the only well that draws groundwater from the Troutdale Sandstone Aquifer (TSA). At the present time the well is believed to also be drawing water from the Sand and Gravel Aquifer (SGA) as well, but it has not been verified. The Interlachen well is located on the north edge of Fairview Lake, at the center of the neighborhood. The West Interlachen well is located on the north edge of Fairview Lake at the west end of the Interlachen community. Both the Interlachen and West Interlachen wells draw groundwater from the SGA. These wells can be found east and north of the groundwater contamination plume described above.

Site History

(Excerpted from Appendix A)

The Boeing of Portland Site

In 1963, the first manufacturing building was constructed by Electronic Specialty Company (ES Co.) a major subcontractor to The Boeing Company at the time. In 1969 the ES Co. was acquired by International Controls Corporation, which in turn transferred the Portland plant to a Boeing subsidiary, Radiation International, Inc. By 1979 Boeing was the sole owner of the facility property and improvements. In 1979 and 1980, Boeing constructed a wastewater pre-treatment plant, employee recreation areas, and building 85-105, used for parts assembly and storage.

From 1981 to 1984, Boeing utilized a surface impoundment for the temporary storage of rinseate from electroplating and metal finishing operations prior to transfer to the wastewater treatment plant. Upon closure of the impoundment in 1985, a Detection Monitoring Program was implemented as required by DEQ. Six groundwater-monitoring wells, installed around the perimeter of the impoundment, were monitored from January 1986 to July 1987. Contaminated groundwater was found with high levels of trichloroethylene (TCE), 1,1,1-trichloroethane (TCA), and methyl ethyl ketone (MEK). The monitoring program revealed that other point sources were suspected due to the elevated levels of contaminants detected in upgradient monitoring wells.

The Cascade Corporation Site

The Cascade facility was constructed from 1955 to 1956 for the purpose of manufacturing forklift truck attachments. At the time the facility included a waterfall paint booth, a parts assembly area, a maintenance shop, an assembly area for hydraulic cylinders, two underground storage tanks (USTs) for gasoline storage, and offices. In 1961, Cascade installed a vapor degreaser near the hydraulic assembly area for the purpose of cleaning metal parts with TCE. The degreaser was used continuously until 1975 when it was removed, and TCE usage was discontinued.

Operations expanded to include nickel and chrome electroplating in 1963. Chrome and nickel plating operations were discontinued in 1978, but nickel plating was resumed from 1982 through 1986. In 1966, another facility expansion included carburizing of forklift attachments, which continued until 1985, when carburizing was replaced by purchasing tempered steel.

In 1971, two underground storage tanks were installed to store waste coolant and oils. Cascade installed a cutting bin drainage system in 1979 that collected coolant lubricant drippings from metal cuttings for transfer to the waste coolant tanks. The waste coolant tanks and cutting bin drainage system were decommissioned in 1988 under the supervision of DEQ. At that time, approximately 50 cubic yards of contaminated soil was removed and disposed of at an off site facility. In the fall of the same year Cascade received a Consent Order from DEQ to conduct additional investigations into the nature and extent of contamination.

The Players

- Friends of Blue and Fairview Lake - A nonprofit citizen group active in issues related to the proposed Superfund site and recipient of an EPA TAG.
- Portland State University - Hired by the Friends of Blue and Fairview Lake to provide technical assistance and serve as the group's Technical Advisor through the TAG Program.

- Department of Environmental Quality, DEQ - The state agency working with the potentially responsible parties (PRPs) to develop cleanup schedules and plans for the site. Working with the EPA to manage the project.
- Environmental Protection Agency, EPA - The federal agency which designated the site as a proposed Superfund site, and approved the TAG Program funds for the friends group mentioned above.
- Cascade Corporation, Inc. - One of the potentially responsible parties (PRPs) for the contamination at the site, located in the southern area of the study region.
- The Boeing Company, Inc. - The other PRP for the contamination at the site, located in the western area of the study region.
- EMCON - The consulting firm hired by the Cascade Corporation to provide engineering and design work related to the site.
- Landau Associates, Inc. - The consulting firm hired by The Boeing Company to provide engineering and design work related to the site.
- City or Portland, Water Bureau - The agency that controls the backup water supply for the City of Portland, which consists of a wellfield near the contamination site.

Jurisdiction Relationship

The contamination site is in an area with several geologic layers. The top layer is called the Troutdale Gravel Aquifer and does not cover the entire study region. Below this layer is a confining geologic unit and a second aquifer called the Troutdale Sandstone Aquifer. Because of the geologic characteristics of the site and location of the two contamination sources the cleanup plan has been broken down into several components with oversight by two different agencies. Issues related to the contamination in the Troutdale Gravel Aquifer (TGA) at the Boeing Company and the TGA cleanup plan fall under the EPA to administer oversight. For the Troutdale Gravel Aquifer at the Cascade Corp. site, the DEQ is responsible for overseeing the work done to cleanup the site. For the Troutdale Sandstone Aquifer, regardless of the origin of the contamination, DEQ is responsible for overseeing the cleanup.

Chemicals of Concern

The following compounds are listed as Chemicals of Concern (COC) for the groundwater contamination at the project site indicating they may pose a threat to the community's health. The original chemicals are chlorinated solvents, such as PCE and TCE, which were used at both sites in vapor degreasers or to clean metal parts. Some chemicals listed are degradation products of PCE and TCE. For more information on the chemicals of concern for the study region also refer to Appendix A.

- Tetrachloroethylene (PCE) has been detected in 52% of the groundwater samples and 5% of the surface water samples, with most exceeding the Maximum Concentration Limit (MCL) of 5 ppb.

- Trichloroethylene (TCE) has been detected more often than any other chemical, and can be found in high concentrations in the groundwater, both on and off-site. This contaminant has been detected in 79% of groundwater samples and 69% of surface water samples.

- Cis-1, 2-dichloroethene (DCE) has been detected in 71% of groundwater samples and 60% of surface water samples including local surface springs.

- Vinyl chloride, the most toxic of the degradation products of PCE and TCE, has been detected in 11% of groundwater samples, frequently above the MCL of 2 ppb, but has not been detected in several local surface springs.

- Chromium, a heavy metal, has been found in 13% of groundwater samples and in the soil at the site, but local surface springs do not seem to be impacted by chromium.

- Manganese, also a heavy metal, has been found in 41% of groundwater samples, and can be found mainly in areas where volatile organic compounds have been detected.

- Other Compounds such as TCA, MEK, Toluene were used extensively on-site, but have not been classified as a COC since these are based only on groundwater concentration and not soil concentrations.

Public Health Concerns

Public health concerns related to the site involve the potential exposure in the area to the chemicals of concern through three pathways. The first is from drinking well water from the aquifers, which are contaminated with some of these compounds. The second pathway involves exposure to the compounds through direct contact with the soil or surface water bodies. Many local residents use the surface water bodies in the area for swimming, fishing and water recreation in general. The third pathway is inhalation of the compounds from either volatilization from surface water bodies or through cleanup measures, which involve volatilizing the compounds using air strippers. Community members have also been concerned about ecological risks to wildlife and aquatic life.

Timeline of Events

The timeline is designed to show some of the key events and documents generated concerning the groundwater contamination site. This list is not intended to be comprehensive.

Groundwater Contamination in East Multnomah County General Timeline

10-Mar-94	Phase 3, RI/FS, Troutdale Gravel Aquifer, Parts 1 & 2 released.
17-Nov-94	Final Remedial Investigation and Feasibility Study Work Plan for the Troutdale Sandstone Aquifer released.
1-Mar-95	Community Relations Plan for EMC Groundwater Contamination issued.
14-Jul-95	Public Health Assessment for EMC Groundwater Contamination released.
6-Oct-95	RI & Endangerment Assessment, Troutdale Sandstone Aquifer, Parts 1 & 2 released.
15-Jan-96	Phase 3, RI/FS, Troutdale Gravel Aquifer, Part 3 released.
31-Jan-96	TSA Sandstone Gravel Aquifer Data Gap Investigation and Interim Removal Measure Report issued.
Apr-95	EPA announced opportunity for Technical Assistance Grant.
Apr-95	Friends of Blue and Fairview Lake applied for grant.
Jun-95	Friends of Blue and Fairview Lake met with EPA and DEQ to discuss site issues and the grant application.
11-Oct-95	EPA awarded TAG to Friends of Blue and Fairview Lake.

6-Jan-96	Friends of Blue and Fairview Lake solicited bids for contracts to serve as a Technical Advisor.
Jan-96	Portland State University and other organizations submitted proposals.
Mar-96	Portland State University selected as Technical Advisor by Friends of Blue and Fairview Lake. Contract details negotiated between Friends of Blue and Fairview Lake and PSU Technical Advisor panel chairperson.
18-Mar-96	First panel meeting with the community held at PSU.
16-Jun-96	Preliminary letter sent to DEQ with PSU Panel findings on technical work done thus far by the potentially responsible parties.
Aug-96	Documents released by DEQ and EPA: "Summary of Proposed Cleanup Plan for the TGA at the Cascade Corporation Site", "Summary of the Proposed Cleanup Plan for the TSA", and the staff reports for each proposed cleanup plan.
1-Sep-96	Beginning of the public comment period for the proposed cleanup measures.
4-Sep-96	DEQ held an informational meeting at PSU for the panel, community and responsible parties about the proposed remediation plans.
17-Oct-96	Panel held a meeting with the community, DEQ, and responsible parties to provide comments on the proposed plan for remediation of the groundwater contamination. Informational factsheets and the Panel's final report were presented.
28-Oct-96	Panel letter and final report submitted to DEQ regarding points of concern on the proposed remediation plans and on the previous technical work done (Appendix A).
30-Oct-96	End of the public comment period for the proposed cleanup measures.
Dec-96	DEQ released the Remedial Action Record of Decision for the East Multnomah County Groundwater Contamination, Troutdale Sandstone Aquifer.
Feb-97	News bulletin developed for the Friends of Blue and Fairview Lake to raise awareness in the community.
Mar-97	EPA released the Statement of Basis for The Boeing Portland Facility, Troutdale Gravel Aquifer.
14-Apr-97	Draft Remedial Design and Remedial Action Work Plan, Troutdale Sandstone Aquifer was issued.
Apr-97	DEQ provided comments to the responsible parties on the draft Remedial Action Work Plan.
5-May-97	DEQ released comments to the Draft Remedial Design and Remedial Action Work Plan.
15-May-97	Panel reviewed and submitted comments on the EPA's Statement of Basis, the Boeing Portland Facility, Troutdale Gravel Aquifer.
May-97	Panel reviewed Draft Remedial Design and Remedial Action Work Plan for the TSA and DEQ's comments on the Work Plan.

Technical Advisor Role

The purpose of the panel at Portland State University was to provide technical assistance to the community to review and evaluate the work done by consultants and agencies for serious flaws, which could jeopardize the community's water supply and surface water system. Additionally the panel will work with the Friends of Blue and Fairview Lake to educate the community about the nature of the contamination. Lastly the panel will make recommendations to the community to protect their water supply and surface water system, and comment on technical documents to the DEQ and the EPA on behalf of the Friends of Blue and Fairview Lake to express technical concerns revealed in the review process.

The panel consisted of six people from Portland State University and for the first year one person from an outside consulting firm. The list below provides a general description of each of the panel member's expertise in their respective fields. The expertise of the Technical Advisor will vary depending on the site characteristics and the needs of the community.

Portland State University Panel

- Scott A. Wells, Professor of Civil Engineering, chairperson, surface water contamination transport
- ShuGuang Li, Assistant Professor of Civil Engineering, groundwater contamination transport and modeling
- Marvin Beeson, Professor of Geology, geologic stratigraphy
- Michael Cummings, Professor of Geology, groundwater geology and geochemistry
- Richard Pratt, Professor of Environmental Sciences and Resources, environmental toxicology
- Robert Annear, Graduate Research Assistant, Department of Civil Engineering, environmental and water resources engineering, public involvement
- Karann Brandt , PRC Environmental Management, Inc., contamination assessment and risk management

Panel Activities & Work Tasks

Technical Review, Document Collection

Since the proposed Superfund site has been under investigation for over ten years prior to the panel at PSU taking on the role as Technical Advisor, many documents have been produced and were needed for review. Due to the large number of documents it was necessary to identify which documents would be vital to understanding the technical developments that have occurred over the site's investigation period. By using these documents, the panel would be able to familiarize themselves with the technical issues in a reasonable time frame. The document research began by visiting the Rockwood Public Library, which was near the contamination site and served as a public repository for technical reports.

The documents obtained from the Rockwood Public Library started the core of the technical report library, which was to be built at PSU. This "new" library was designed to facilitate the panel review process by making the documents very accessible to the panel. Additionally, the new library would provide another site where the documents would be accessible to the public.

A bibliography of the library's contents was created and updated in a database as the library grew. The database was generated to keep the reports organized and to allow each panel member to know the contents of the library without actually going through the library. The database would also allow panel members to search for documents of interest in the library. If the library did not have the report, then it could be requested and added to the list of documents to be obtained. This approach facilitated the document review and acquirement process for the panel by allowing requests to be made through electronic mail and searching the library by computer.

Although the library contained many of the documents that were generated by the various parties involved with the site, the collection was far from complete. The next step was to talk with the DEQ about identifying some of the key documents for review. A DEQ representative and a panel member went over the bibliography from the Community Relations Plan to identify the key documents which should be obtained and reviewed by the panel. The Community Relations Plan report was chosen because it was the most comprehensive and recent document

concerning the site at the time, which contained an extensive bibliography of past work regardless of source. Based on this discussion a list of additional documents was created.

The document list was then broken down by the authors' names. A panel member then contacted the various authors and requested assistance in obtaining copies of the documents. Almost all of the documents generated concerning the site have become public domain information due to consent order agreements worked out with the PRPs and the DEQ or the EPA. First the consulting firms for the PRPs were contacted to request copies of the documents, but in order to release the information to a third party it became necessary for the panel to get direct permission from the PRPs.

Because the TAG budget for the first year had only set aside a specific amount of funds for copying expenses and acquiring the documents for review, it was important to ensure the panel stayed within this budget. There was still a large number of documents to be obtained for review so one of the panel members sent a direct letter to the two potentially responsible parties asking for permission to get copies of the documents from the consulting firms. Additionally the PRPs were asked if they would be willing to donate copies of the documents to keep down grant expenses for copying. Additionally, this letter was used because the Technical Advisor was an outside party reviewing the technical issues related to the site. One of the two PRPs provided the documents requested for no charge.

In order to get the remaining documents several additional approaches were taken. Due to the Freedom of Information Act the panel was able to obtain EPA documents related to the site for free and allowed to review the documents before copies were generated to ensure the appropriate information was obtained. In addition, the DEQ allows citizens to visit their office in downtown Portland to view documents. The panel was able to work with DEQ and establish a level of working trust which allowed the panel to temporally remove copies of the documents from the DEQ office and have copies made for the panel to add to their library.

By utilizing all of these approaches, a library of almost 200 (presently over 200) technical documents was created for the panel to use in their review process. During the document collection and review process, if panel members had specific requests for technical documents not already on the list to be acquired they could have them added to the list. An attempt was made to try to acquire the requested documents as soon as possible. Since the initial document collection, as new documents were released the panel was able to obtain a copy from DEQ. As more documents were added to the library the bibliography database was continuously updated. Key documents such as the proposed cleanup measures for the site were added to the library and copies were generated for the panel members to review them as soon as possible since the comment periods were brief.

Technical Review

Once documents were obtained, the panel began the process of reviewing the past technical work. The purpose of this review was to look for any potential weak areas in the technical assumptions or conclusions made in the work which would lead to potential hazards for the Interlachen community or the larger community affected by the site. Additionally, the review covered potential weak areas that would influence future work such as the development of the proposed corrective measures for cleaning up the site. Below is a list of some questions, which the panel examined when conducting the technical review and addressed later in their report to the community.

Questions Examined

- Were there enough data to draw conclusions about the nature of contamination, its extent, and remediation efforts?
- Has the Sand & Gravel Aquifer already been contaminated and if not, how can it be prevented?
- Was the mathematical model of the groundwater hydraulics and contaminant transport a good indicator of future management scenarios? Was the model calibration reasonable? How could the model be improved to be more accurate?
- Was the geologic characterization in the model accurate? How does the confining geologic layers influence the management of the plume?
- Were the existing and proposed remediation efforts a reasonable protection to the Blue and Fairview Lake community?
- Have the risk assessments performed been appropriate and has anything been overlooked?

As part of the review process the panel met on a relatively regular basis and panel members focused their review efforts in areas related to their expertise. The panel meetings were used to bring the various aspect of the groundwater contamination review together and provide an overall picture of the work that had been done at the site. The panel meetings were also used to brief one another on issues such as the geologic stratigraphy of the area, groundwater-modeling efforts, toxicology issues and remediation strategies for the site already in progress. These briefings allowed each panel member to become familiar with issues and interactions at the site not directly in their field of expertise, but important to the overall technical review.

The panel used electronic mail extensively to submit comments or findings throughout the review process to the chairperson or other panel members. Additionally electronic mail was used to schedule panel meetings quickly, exchange data, submit elements of the final review report to the chairperson, discuss issues and request documents. Electronic mail allowed direct communication of ideas and comments rapidly, and reduced the amount of time panel members need to spend on the more logistical side of working on a panel. In turn the panel member could spend more time focusing on the actual review of the technical documentation and creating the review report.

In addition to the panel reviewing the technical work by the PRPs, DEQ, and others, the panel provided a preliminary set of findings to DEQ in June of 1996 before DEQ released their proposed cleanup plans for the site. By submitting these preliminary findings before DEQ released the cleanup proposals, the panel was aiming to inform the DEQ of these concerns so they might be addressed in the cleanup proposals.

Once the cleanup proposals were issued (refer to timeline), the panel began reviewing and commenting on them. This review process along with the technical review conducted earlier culminated in a report on the groundwater contamination to the community, which made several recommendations concerning the technical work and the proposed cleanup measures. The report was issued during the public comment period to allow the CG to review the report, learn about the panel's conclusions and recommendations, and then be able to testify at a DEQ public comment session held before the close of the comment period.

Panel Products

The panel created several products over the first year of the TAG Program. As the panel continues to work with the community, future products will be developed to assist in the process of educating the community about the nature of the contamination and issues raised from reviewing new documents.

- A technical report was generated by the panel to provide the community with a concise summary of the issues related to the contamination site and provide a list of recommendations based on the panel's findings from the technical review process. See Appendix A.

The technical report was a useful document to the community for several reasons. It provided the community with a brief summary of the issues related to the site. Although the document was slightly over 50 pages, it covered many topics of interest to the community without getting overly detailed. The report also included a bibliography of all the documents in the library at Portland State University, which were used in the review process. A glossary of terms was supplied in the report to identify terminology, which may not have been familiar to community members. Background information about the site and how the contamination occurred in the first place was provided and the introduction provided information about how the technical work was possible for the Friends of Blue and Fairview Lake. Additionally, the report included a section that allowed the community members to have written questions submitted to the panel, answered and documented in the report.

- Non-technical information sheets and factsheets, based on the technical report, were created for the community to help notify other citizens about the nature of the contamination.

The Interlachen Community factsheets generated were produced out of the technical report and were designed to present some of the key information to the community in an even shorter format. A series of 12 factsheets were designed to provide an easy to read overview of the issues related to the site, the proposed recommendations by DEQ, and the conclusions and recommendations of the panel. The factsheets were designed to be brief one page informational sheets for the Friends of Blue and Fairview Lake to use in raising awareness in the community. These sheets could be used by the CG for their own community meetings or for their own newsletter to inform local residents not involved with the CG about the site. The factsheets can be found in Appendix B.

- A preliminary findings letter sent to the DEQ based on the technical review of previously conducted work by DEQ, the PRPs and others.

This first letter sent to DEQ was designed to notify DEQ of the work the panel was conducting on the site and to illustrate some of the panel's immediate concerns. The letter was sent out before DEQ released their proposed cleanup measures for the Troutdale Gravel Aquifer at the Cascade site and the Troutdale Sandstone Aquifer.

- A response letter from the panel to DEQ concerning DEQ's Cleanup Proposals for the groundwater contamination in the Troutdale Sandstone Aquifer and the Troutdale Gravel Aquifer at the Cascade site.

The panel submitted a second letter to DEQ with their list of concerns and recommendations on behalf of the Friends of Blue and Fairview Lake. The letter contained the recommendations incorporated into the technical

report, but through the letter the list became part of the official record of comments to DEQ concerning the proposed cleanup measures, leading to a DEQ response to the comments in the Record of Decision for the site.

- A letter of response and a comment report were sent to the EPA concerning the proposed corrective measures for the Boeing Portland facility, Troutdale Gravel Aquifer (TGA).

The EPA was the responsible agency for overseeing and establishing the cleanup measures for the TGA for the Boeing Portland Facility. The panel reviewed the Statement of Basis for the site, which described the proposed cleanup measures, while keeping in mind the other cleanup plans proposed by the DEQ. This brief report was designed to provide the EPA with a list of concerns on the proposed cleanup measures. The letter and comments from the panel became part of the official record of comments for the cleanup measures requiring the EPA to respond to these concerns in the Record of Decision for the site.

- A news bulletin for the Friends of Blue and Fairview Lake to use for widespread distribution to the community affected by the site.

Based on the review report created in October of 1996 by the panel a brief 2-page news bulletin was created specifically for raising widespread awareness with the community about the site contamination. The bulletin covers a summary of the panel's work and conclusions from the report plus contact information, and a small map illustrating the location of the contamination plume relative to major surface features. The bulletin was reviewed by several members of the Friends of Blue and Fairview Lake to improve its readability and ensure all of the material would be well understood by the community. The advantage of this approach for the CG was to have an extremely brief newsletter that could be mass-produced inexpensively to inform more people about the groundwater contamination. According to an interview with members of the Friends of Blue and Fairview Lake, the bulletin was delivered by hand to more than 300 households in the site area.

- A website was developed to provide the Friends of Blue and Fairview Lake with another resource of information.

The panel used some of the documents they generated to develop a website as an additional resource. For example Appendix A and Appendix B can both be found on the website. The goal is to provide the larger community with another way to learn more about the groundwater contamination site and some of the work being done at the site. The website also provides the community with periodic updates on some of the products created through the panel's work.

Community Meetings

The panel at Portland State University held two of their own community meetings with the Friends of Blue and Fairview Lake and other community members. Additionally the panel also hosted a third meeting at the University for DEQ.

The first community meeting held with the panel was an initial meeting to introduce the community to the members of the panel. Additionally this meeting gave the community an opportunity to learn about the site contamination and the activities the panel would be conducting for the Friends of Blue and Fairview Lake and the community. The meeting consisted of one of the leaders of the Friends of Blue and Fairview Lake introducing the panel chairperson, who then gave a brief presentation introducing some of the site issues to the

community and described the nature of the contamination. Then each panel member was introduced and his or her expertise was presented as it related to the site review work. The event was held at PSU in an informal setting for the community where food and drinks were provided.

The next community meeting was held at PSU but was conducted by DEQ. After the release of the two proposed cleanup plans, DEQ held a meeting at PSU to present the proposed corrective measures for both sites in the study region. DEQ provided some background to the site contamination and reviewed the proposed corrective measures selected for each site and discussed why they were chosen. The benefit of this meeting was to allow the DEQ to explain the proposed cleanup plans for both sites during the public comment period so when citizens testified at the two public comment period hearings they would be well informed about the proposed plans. The DEQ also hoped to answer any questions the citizens or any other parties might have about the plans rather then waiting until the public hearings were conducted. By locating the DEQ presentation at Portland State University, the meeting would be held on a third party's grounds to help instill a sense of objectiveness in the meeting proceedings. After the presentation was completed, a formal question and answer session was held allowing anyone in attendance to ask DEQ questions about the proposed plans. Then at the close of the question and answer period the meeting was formally concluded, but the representatives from the DEQ were available to talk with anyone informally and address any additional concerns or questions.

The second community meeting the panel held was in October of 1996 before the end of the public comment period on DEQ's proposed cleanup plans. The meeting was held at the Blue Lake Park House which is a public building located near the residents affected by the site. The main purpose of the meeting was for the panel to present their findings, conclusions and recommendations to the community. Copies of the panel review report were presented at the meeting along with copies of the informational factsheets and a copy of the letter sent to DEQ.

The meeting began with a brief introduction by a representative from the Friends of Blue and Fairview Lake. Then the chairperson of the panel began the presentation by providing a history of the review process, descriptions of the goals of the review, and a description of the panel products. Then each panel member was introduced and provided a brief presentation of their findings relative to their field of expertise. The following topics were presented: groundwater modeling, geologic stratigraphy, geochemistry, toxic risk assessment, and a review of the response to DEQ's proposed cleanup plans. After the presentations were completed there was a question and answer period providing anyone with an opportunity to ask the panel members about their findings and recommendations. Representatives from all of the interested parties were present as well as citizens who live in the area. The Friends of Blue and Fairview Lake provided light fare and drinks for those in attendance and at the close of the meeting informal discussions took place which allowed attendees to talk one-on-one with the panel members. Based on an interview with several members of the Friends of Blue and Fairview Lake, they found this community meeting very beneficial for several reasons:

- The panel was able to tie all of the information about the site together and present it so the community could understand it, and inform them about the proposed measures for the site.
- The materials provided at the meeting gave the community information for future reference.
- The panel was able to review and present issues of concern regarding the site that the community group would not have thought of themselves.

Raising Awareness - Other Activities

In addition to the activities above, several other activities were conducted which were either facilitated by the panel or conducted in partnership with the Friends of Blue and Fairview Lake. At the first community meeting, held at PSU, the Friends of Blue and Fairview Lake arranged to have the meeting videotaped. Then for the second community meeting, held at the Blue Lake House, one of the panel members assisted the community group in having a third party videotape the meeting. The goal behind videotaping the meetings was to provide an additional tool for the community group to educate others in the local area about the contamination and how it affects the residents. The Friends of Blue and Fairview Lake could also use the videotape to develop their own video to inform others outside the local community about the activities related to the site. For example, if an environmental group were interested in learning more about the nature of the contamination, the videotape would provide an excellent resource of information. The downside to this approach was the video footage recorded at the second community meeting was not a good quality recording, which made it less useful. Additionally the work involved with editing video footage and arranging it for other uses can be costly and time consuming.

Another task conducted by the panel was to develop flyers and agendas for the community meetings, and the DEQ meeting at PSU. The flyers were rather straight forward, but were important for the Friends of Blue and Fairview Lake to encourage as many citizens as possible to attend the meetings. The idea was to provide key information about the meetings and use the PSU logo to bring a certain degree of objectiveness to the meeting flyers and to illustrate to the community members the meeting would be filled with factual information regarding the groundwater contamination. By providing this simple service for the CG, a certain level of integrity and objectiveness was put forward with the meetings which would hopefully encourage more citizens to attend.

The chairperson of the panel also testified in front of the Portland City Council on behalf of the Friends of Blue and Fairview Lake to explain the panel's conclusions from the technical review and their recommendations regarding DEQ's proposed cleanup plans for the site. This testimony was conducted to inform the City of Portland about the influence of some wells in the Portland Wellfield on the contamination plume. Since some of the wells in the Portland Wellfield were close to the contamination plume, their activation could seriously influence the plume's migration. The Friends of Blue and Fairview Lake asked the panel chairperson to testify because the CG wanted to ensure more credibility and a third party objective point of view on the issue when expressing their concerns to the Portland City Council.

Community - Panel Communications

Between the community meetings, it was important for the Friends of Blue and Fairview Lake to be in touch with the panel's activities during the review process. This would allow the community to understand the issues developing through the review and be able to assess the project progress when reporting to the EPA on a quarterly basis. To facilitate the involvement of the community group several actions were taken.

The panel chairperson served as the main contact between the panel and the CG and frequently touched base with the CG by phone or brief informal meetings. Additionally, key members of the Friends of Blue and Fairview Lake were invited to the panel meetings to sit in on the latest developments of the review. Frequently, after the panel meetings the panel chairperson and the graduate student on the panel would meet with the citizens to answer any questions about the meeting or address other concerns. The entire panel made themselves available to the community to answer any questions or talk about site-related issues. The panel

meetings in general were informal with coffee and tea served and was designed to work out details of the review process as described above.

Additionally, while in the review process the panel also had citizens submit questions regarding the groundwater contamination site. The panel answered these questions and then forwarded them back to the Friends of Blue and Fairview Lake for their next Friends meeting.

Future Work

Below is a brief list of some of the major work pieces the panel will be conducting in the near future, and should not be considered a comprehensive list.

- Provide comments on the DEQ Record of Decision (ROD) for the Troutdale Sandstone Aquifer.
- Create a graphical visualization tool of the aquifer system for the site region.
- Generate a graphical visualization of the plume over time for the contamination region.
- Review and comment on future documents, as they become available.
- Letter reports to interested parties and community reports for newsletters
- Participate in public forums on an as-needed basis, as new information becomes available.

Case Study 2: McCormick & Baxter Creosoting Company Site

Background

The McCormick & Baxter Creosoting Company Plant can be characterized by groundwater, soil, and sediment contamination along the Willamette River. The University Park Neighborhood Association and the Friends of Cathedral Park Neighborhood Association formed the Willamette Associates for Kindness to the Environment in University Park, WAKE-UP, for the purpose of addressing site-related issues at the McCormick & Baxter Creosoting Company plant facilities. WAKE-UP then created a Community Advisory Committee to handle details related to the site contamination. The CAC then used a TAG from the EPA to hire a Technical Advisor to review technical documentation and provide guidance related to the Superfund site.

Site Location

McCormick & Baxter Creosoting Company operated a wood treatment plant in North Portland. The site consists of 43 terrestrial acres and another 15 aquatic acres. The site is located along the Willamette River just upstream from the Burlington Northern Railroad Bridge. The citizen group mentioned above represents several communities in the vicinity of the site who may be potentially affected by the contamination.

Site History

The McCormick & Baxter Creosoting Company operated the wood treatment plant on the site from 1944 to 1991. The company was founded during World War II to produce treated wood products with their first cylindrical pressure chamber for treating wood constructed in 1945. Several other chambers for treating wood with various chemicals were constructed in the 1950s. An additional treatment facility was built in 1968 to treat wood with Cellon but its use was discontinued in 1988.

Wastewater from several plant processes was discharged to the Willamette River between 1945 and 1969. In addition, other by-products of plant operations were discharged to the disposal trench located in the southeastern portion of the site. The company experienced two major spills at the site in 1950 and 1956, both of which occurred near the tank farm on the site.

Some stormwater discharges from the site were permitted under a NPDES permit in 1971, but other storm water discharges were unpermitted and were discontinued as part of the DEQ's effort to implement interim site stabilization activities. The waste disposal area in the western portion of the site was used between 1968 and 1971 to dispose of plant operation sludge and wastes. After 1978 the wood preservative sludge was disposed of off-site using a permitted hazardous waste disposal facility and procedures. Underground storage tanks used for storing chemicals, gasoline and diesel fuel were removed after 1985.

In 1988 McCormick & Baxter filed for Chapter 11 bankruptcy, and in 1990 DEQ assumed responsibility for completing investigations and cleanup activities at the site. In 1991 the company's lending institution took control of its assets and the company ceased operations. Later in the same year DEQ began implementing interim remedial activities at the site to prevent any more chemical releases.

The Players

- Department of Environmental Quality, DEQ - The lead agency for development and oversight of the RI/FS, the proposed cleanup plan, and the site ROD.
- Environmental Protection Agency, EPA- The federal agency which placed the site on the Superfund National Priorities List, provides funds for cleanup, and awarded the TAG to the community group called WAKE-UP.
- SJO Consulting Inc. - The Technical Advisor hired by WAKE-UP using the Technical Assistance Grant to review technical documentation and provide assistance to the community.
- Willamette Associates for Kindness to the Environment in University Park, WAKE-UP - A community group representing citizens affected by the site who received an EPA TAG.
- University Park Neighborhood Association - One of two community groups which formed WAKE-UP.
- Friends of Cathedral Park Neighborhood Association - The other community group that helped form WAKE-UP.

Jurisdiction Relationship

The Department of Environmental Quality is the lead agency for implementing cleanup measures at the site and for instituting remedial investigations, feasibility studies and interim corrective measures at the site. The DEQ and the EPA are working together under a cooperative agreement established in 1995. The EPA is providing funding for the site cleanup since it has been listed as a Superfund site on the National Priorities List.

Chemicals of Concern

Below is a list of chemicals of concern for the site based on historical activities, but should not be considered a comprehensive list.

- carcinogenic & noncarcinogenic polycyclic aromatic hydrocarbons (PAHs)
- chlorinated phenols - such as PCP, tetrachlorophenol, and trichlorophenol
- dioxins./furans
- hexaclorobenzene
- arsenic
- chromium

Public Health Concerns

The main public health concerns regarding the site are related to exposure to the chemicals of concern through three major pathways. There is concern the contaminated groundwater could migrate off site and hypothetically (no drinking water wells in the area presently) contaminate drinking water supplies resulting in potential human ingestion of the chemicals. Additionally, there is concern people may ingest the chemicals through eating fish exposed to the contaminants in the Willamette River. A second pathway of concern is through direct contact to the chemicals via contaminated soil or sediments at the site. The third pathway of concern is through inhalation of dust particles from future uses at the site or from exposure during remedial activities.

Timeline of Events

The timeline is designed to show some of the key events and documents generated concerning the McCormick & Baxter Creosoting site. This list is not intended to be comprehensive.

McCormick & Baxter Site General Timeline

1944 - 1991	McCormick & Baxter Creosoting Company operated wood treatment plant.
1990	DEQ investigates extent of contamination.
August, 1990	Open house held prior to investigations for the project activities and schedule of objectives.
1991	Plant closes and cleanup taken over by DEQ.
Summer 1991	Community work group formed with local neighborhoods and environmental groups, met 5 times. Three presentations were done by DEQ about the issue to community groups.
1992	DEQ met with the community work group 2 times. Two presentations done by DEQ about the issue to community groups.
September, 1992	RI/FS completed for the site for DEQ.
Dec-92	DEQ releases proposed cleanup plan for McCormick & Baxter Creosoting Company Site.
January, 1993	DEQ gives public notice of 1992 proposed Cleanup Plan, Comment period opens.
26-Jan-93	DEQ Public Comment meeting for the proposed cleanup plans.
2-Feb-93	DEQ hosts second public meeting to explain details on the proposed cleanup plan.
8-Mar-93	Comment period on proposed cleanup plan closes.
May-93	Community work group starts meeting quarterly.
1993-1994	DEQ delayed implementation of the cleanup plan based on 1992 proposal pending listing on the NPL as a Superfund site.

1994	DEQ implemented remedial actions at the site to reduce spread of contamination.
1994	Site put on Superfund National Priorities List now managed and funded by EPA and DEQ.
1993 - 1995	DEQ gives several more presentations about the site related issues for community groups.
23-Jan-95	Community Relations Plan for the McCormick & Baxter Creosoting Site, DEQ.
30-Oct-95	DEQ/EPA issued proposed plan for cleanup and Revised RI/FS report.
6-Nov-95	Public comment period begins for proposed cleanup plan for the site.
18-Nov-95	WAKE-UP holds a public forum and open house (Review of the Cleanup Proposal).
28-Nov-95	Public meeting held by DEQ and EPA regarding the proposed cleanup plan.
16-Jan-96	Public comment period ends for the proposed cleanup plans for the site.
16-Jan-96	Review Report on the McCormick & Baxter Creosoting Site Proposed Cleanup Plan and FS using a Technical Assistance Grant from WAKE-UP released.
Mar-96	Record of Decision McCormick & Baxter Creosoting Company Portland Plant by EPA and DEQ.

Technical Advisor Role

The focus of the Technical Advisor for the McCormick & Baxter Creosoting Company site was to review the proposed cleanup measures and feasibility study for the site and educate the community about the nature of the site contamination. The Technical Advisor's work culminated in a review report, which was approved by WAKE-UP and forwarded to DEQ as an official set of comments on the proposed cleanup measures.

Panel Activities & Work Tasks

Technical Review

Although there may have been many activities conducted by the Technical Advisor for WAKE-UP, this report focuses on the activities related to the proposed cleanup measures for the McCormick & Baxter site. The proposed cleanup measures were released for public comment at the end of October in 1995. The Technical Advisor then reviewed the proposal in detail and held a community meeting with members of WAKE-UP and others. At the end of the presentation period there was an opportunity for the citizens to ask the Technical Advisor questions about the proposed cleanup plan. At the close of the meeting the community members were able to record their comments on DEQ's and EPA's proposal on a flip chart which was then included as an appendix to the review report later published by the Technical Advisor.

As part of reviewing the proposed cleanup measures and addressing some of the concerns of the local residents, the Technical Advisor (SJO Consulting) conducted research in several areas. Their research focus covered low dose exposure to dioxins, cancer cluster analysis protocols, epidemiology, and a review of the feasibility of cleaning up other wood treatment Superfund sites. The review report consisted of 36 recommendations for DEQ to incorporate or consider before moving on to the Record of Decision for the site cleanup plan. Of those recommendations, two resulted in significant changes to the proposed plan when the ROD was developed.

The first significant change was based on a recommendation which suggested the Feasibility Study should clarify how the risk assessment was assigned to the total PAH cleanup level. In response the DEQ modified their remedial action cleanup level for carcinogenic PAHs from 500 mg/kg to 100 mg/kg. Additionally through reevaluating the field screening data and the laboratory tests conducted DEQ decided to use total carcinogenic PAHs as the remedial action level to allow a better estimation of the PAHs present in the system.

The second change to the proposed plan resulted from the determination the Alternate Concentration Limits (ACLs) for PAHs; PCP and dioxins/furans exceeded the solubility limits for these chemicals. The calculated ACLs also conflicted with one of the RAOs, which specifies that discharges to the river should be minimized and in the case for heavy metals the ACLs were well above the maximum concentration limits detected in the groundwater. As a result DEQ lowered the ACLs for metals.

Panel Products

The main product generated by the Technical Advisor for the CG WAKE-UP was the Review Report on the proposed cleanup plan and feasibility study for the site. As mentioned above the report consisted of many recommendations based on concerns from local citizens and from reviewing the proposed plan. The report was generated on behalf of WAKE-UP and submitted to DEQ as a list of formal comments to the proposed plan during the comment period. This in turn resulted in the DEQ responding to these comments in the ROD.

Community Meetings

WAKE-UP held several community meetings to get input from local residents affected by or concerned about the site contamination. At these meetings the community was given the opportunity to make comments in writing about the proposed cleanup measures and the feasibility study conducted. The comments, which came out of these meetings, were then used to direct the work conducted by the Technical Advisor and develop the review report described above.

Additionally, the Technical Advisor and the head of the CG, WAKE-UP, co-hosted at least one of these community meetings. At this meeting the community was introduced to the proposed cleanup measures for the site and was given the opportunity to ask the Technical Advisor questions.

Conclusions

TAG Program

Based on the review of the TAG process several conclusions can be drawn from the review presented. The TAG Program can be an overwhelming process for new groups getting involved in a Superfund site or proposed Superfund site. The EPA handbooks provide many of the details needed to complete the application process, select a Technical Advisor and manage the grant but the handbooks need to have more information about the TAG process from a larger perspective. This could include providing flowcharts similar to the ones created in this report to better explain the steps necessary in the TAG process and to show the CG where several steps in the process occur in parallel. In discussing this issue with the Friends of Blue and Fairview Lake, members of the group felt the process was at time "mysterious" because they were unsure of what steps to follow or how to keep on a project reporting timelines. Additionally, several points in the handbooks need to be clarified further and discrepancies between the books should be resolved

Aside from the confusion the CG experienced in the applying for the grant, the Friends of Blue and Fairview Lake repeatedly complimented the EPA, in an interview, on their efforts to provide assistance by answering questions the citizens had about the process. One way this system might be improved to make it easier for both parties is to show community groups case studies of TAG Programs for other sites. The purpose of these case studies, whether shown on videotape or provided in a report, would allow the CG to get a better idea of the necessary steps in the process and to get a better understanding of the documentation and EPA reporting requirements. This would help the CG members understand better what information the EPA may be asking for in a particular report or on a form. Case study reports would also give the CG an idea of what administrative responsibilities are necessary for the grant program and allow them to plan from the start how best to approach managing and carrying out the project.

By providing materials such as flowcharts of the process, videotapes explaining the process or case studies, and documented case study reports, a CG would get a considerable insight into the grant process even before the Technical Advisor is selected. This might resolve many questions that the citizens contact the EPA for and could possibly result in more accurate documentation being submitted to the EPA from the beginning of the grant budget period.

Another proposal to assist the CG in smoothly progressing through the grant process might be to have a one time TAG Program introduction training session to teach the grant recipient about the work involved in the grant process during the budget period. This type of training would provide all of the CG members involved with managing the grant with the same information on how to proceed.

Another aspect of the TAG process involves the community group's ability to organize and manage the grant. The community group should be well organized from the beginning of the TAG process and clearly designate specific people to handle tasks for the group. This will ensure such things as Progress Reports are done consistently and accurately on time for the EPA. It would allow this person to become efficient at writing the Quarterly Progress Reports, reducing the time spent on them, and allowing other members to focus on various other tasks. By establishing a system of documentation, storage and handling, and putting someone in charge of it will allow documents to be retrieved efficiently and stored safely. If the documentation related to the grant is maintained by several different people or not kept in a central location material could become misplaced through filing or lost all together.

Interlachen Community

So far the TAG process for the proposed Superfund site in East Multnomah County, Oregon has been progressing well. The Program has been successful in proving meaningful technical review results to be utilized by state and federal agencies involved in the site and for the community group to learn more about the site and disseminate the information to the community.

There are several areas where the TAG process for the groundwater contamination site could be improved. It would be to the advantage of the CG to brief the panel members of their efforts to raise awareness in the community. Based on reviewing the activities over the past year, it is not clear how successful the efforts by the Friends of Blue and Fairview Lake have been at educating a wider group of citizens. There also has not been much discussion about the techniques used to try to achieve this wider dissemination of information and

education of site related issues. By the Friends of Blue and Fairview Lake providing more details to the panel about their efforts to educate the community, the panel may be able to offer suggestions on new approaches or materials which could be utilized to disseminate factual information about the site. The panel may even be able to come up with some simple tools or materials that may help the CG reach more citizens who are affected by the site. Trying to reach out to more citizens and get more involvement in the site is a long process of trial and error to determine the most effective means for a specific community. There is potential for more partnership between the CG and the panel on this issue.

One of the key aspects of the TAG Program is the technical panel interpreting and explaining to the community the important issues related to the site in a way that the community can understand it. The panel at PSU has done a good job at educating the citizens by hosting several community meetings, developing informational factsheets for the community, and allowing community members to sit in on panel meetings. One idea, which might help this process further, is when the panel holds community meetings to present findings or discusses technical issues; each panel member who makes a presentation should create lecture note sheets for the community members in attendance. The lecture note sheets would consist of a brief page or two of the main points, in bullet items a presenter is making before the community group and then provide space for the citizens to take notes. Additionally, the note sheets would include contact information about the presenter. This type of information would allow a person to follow the presentation better, take notes on specific points presented and provide a reference for them after the meeting has ended. The lecture note sheets would be kept simple and straight forward, but complete enough to include the key points of each presentation. If more than one presenter will be speaking, then separate lecture notes should be provided for each presenter along with individual contact information.

Although over the past year the PSU panel has been serving as the Technical Advisor for the CG and has been actively participating in events related to the site, the panel is not in the communication loop for new information. This new information may include data, findings, upcoming reports or events in the project. After one year, the panel is familiar with the site-related issues, but state and federal agencies and the local parties involved do not notify the panel or the CG about new information or events until they are about to occur or the next step has already started. A case in point is the release of the Statement of Basis by the EPA for the Boeing Portland Facility, Troutdale Gravel Aquifer. The community group and the panel were not aware of when this document was being released until after the public comment period had started. Additionally when new well data are taken in the field, the panel is not informed of the results of these tests unless it is by word of mouth. Although the respective agencies are not required to notify the CG or the panel, it would be in their best interest to facilitate the project's cleanup process for the site by assisting in keeping all of the parties involved in the site up-to-date.

In comparing the two case studies, the approaches used by each Technical Advisor in reviewing the proposed cleanup measures for the respective sites was considerably different. The Technical Advisor for WAKE-UP seemed to focus more on the direct concerns of the affected citizens and less on researching potential weak points in the proposed plan independent of specific inquiries by the citizens. For example, most of the technical work conducted by the Technical Advisor for the Friends of Blue and Fairview Lake covered issues the community may not even have thought of or had the expertise to investigate. These conclusions were in addition to concerns already expressed to the panel earlier and incorporated into the broader picture of the review process. The review report for WAKE-UP focused more directly on the immediate concerns expressed by the citizens and can be seen by comparing the list of recommendations to the appendix of citizens' comments

from the open house. Each approach has its own merits, but the approach conducted by the Technical Advisor for the Friends of Blue and Fairview Lake was more comprehensive. It should also be noted though due to the review conducted by the Technical Advisor for WAKE-UP two significant changes were made in the ROD from the proposed cleanup measures. The recommendations from the Technical Advisor for the Friends of Blue and Fairview Lake resulted in three significant changes to ROD for the Cleanup measures related to the TSA.

Overall there were several key points which all community groups should consider while applying for and managing a TAG.

- The CG should be well organized, maintain an accurate management system for the grant, and retain all documentation generated.
- The more information the CG can learn about the process from the start the faster the group will gain experience in the TAG Program and process.
- The CG should utilize as many resources as possible to learn about other TAG community groups' experiences, the various sources of Technical Advisors and what expertise a Technical Advisor should have for their site.
- The CG should feel comfortable contacting the EPA to ask questions about the process or to request further information.
- The more research the CG conducts the more well prepared the group will be for the TAG Program's demands.

When the CG selects a Technical Advisor, it is important they conduct the review carefully. As part of the review process the CG needs to ensure a potential Technical Advisor meets their interpretation and technical needs. The CG needs to feel comfortable working with Technical Advisor and willing to discuss any technical issues, which develop during the technical review. The Technical Advisor should also be willing to go beyond what the community directly sees as concerns. Due to the scientific expertise of the Technical Advisor it is possible they will discover issues of concern while conducting the technical review which the community may not even be aware of as a concern. Both the Technical Advisor and the CG need to also be able to communicate well and often to ensure each side needs are met in the contract. The more the CG works directly with the Technical Advisor the more likely the products and services from the TA will be useful to the community, and to the state and federal agencies involved at the site.

Overall, the TAG process can seem overwhelming never mind the issues related to the Superfund site itself. It is important for the CG to recognize there are resources available to assist them through the process. The CG should also recognize a proactive role is needed in managing the grant and working with the Technical Advisor. This will ensure both will work smoothly and the results will clearly benefit the community at large affected by the site.

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Groundwater Contamination in East Multnomah County, Interlachen Community Fact Sheet Series. Prepared for the Friends of Blue and Fairview Lake by Robert Annear as part of the Portland State University Technical Advisory Panel. October 28, 1996 (See Appendix B)

2 Interviews conducted with members of the Friends of Blue and Fairview Lake (Jane Graybill, Chris Noble, Jean Riding, and Gale Schulz)

Appendix A

Impact of Groundwater Contamination in East Multnomah County on the Interlachen Community, Technical Report EWR-3-96.

Appendix B

Groundwater Contamination in East Multnomah County, Interlachen Community Factsheet Series