Proposal Reviews

#43: Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine

Cherokee Chemical Co., Inc.

Final Selection Panel Review	
Research and Restoration Technical Panel Review	
Delta Regional Review	
External Scientific Review	#1 #2 #3 #4
Prior Performance/Next Phase Funding	
Environmental Compliance	
Budget	

Final Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP
Final Selection Panel Review

Proposal Number: 43

Applicant Organization: Cherokee Chemical Co., Inc.

Proposal Title: Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine

Please provide an overall evaluation rating.

Fund	
As Is	**-**
In Part	**-**
With Conditions	**-**
Consider as Directed Action	**-**
Not Recommended	**X**

Amount: **$0**

Conditions, if any, of approval (if there are no conditions, please put "None"):

None

Provide a brief explanation of your rating:

The Selection Panel reviewed the letter of support from an Amador County Supervisor but concurs with the evaluation of the Technical Panel, which gave this proposal a summary rating of "not recommended." Regional reviewers gave the proposal an overall ranking of "Medium" and questioned whether the project results would be applicable to (i.e., benefit) the Delta and its watershed, given that acid-mine drainage is not a widespread water quality issue in this system. The external scientific reviewers were particularly concerned that the proposed pilot demonstration study lacked replication and that results from analyses of single 10-gram test samples would be used to characterize 240-ton samples of mining wastes. The reviewers also noted that the proposal lacked sufficient descriptions of (1) project methods, (2) roles and responsibilities of project personnel, and (3) justifications of certain expenses included in the the budget for the proposed project.

Research and Restoration Technical Panel Review:

CALFED Bay-Delta 2002 ERP PSP
Research and Restoration Technical Panel Review Form

Proposal Number: 43

Applicant Organization: Cherokee Chemical Co., Inc.

Proposal Title: Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine

Review:

Please provide an overall evaluation summary rating:

Superior: outstanding in all respects;
Above Average: Quality proposal, medium or high regional value, and no significant administrative concerns;
Adequate: No serious deficiencies, no significant regional impediments, and no significant administrative concerns;
Not Recommended: Serious deficiencies, significant regional impediments or significant administrative concerns.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Superior	**All the technical reviewers provided a good rating. However, there were concerns about proper replication and metal measurement samples and analysis to be conducted. The issue of insufficient replication is critical to identifying the success of this passivation technology as a BMP for abandoned mines. In addition, the environmental compliance reviews had issues. A big question was whether there would be widespread applications of the technology for toxic pollutants of concern in the Bay/Delta watershed.**
-Above average	
-Adequate	
XNot recommended	

1. **Goals and Justification.** Does the proposal present a clear statement of goals, objectives and hypotheses? Does the proposal present a clear justification and conceptual model for the project?

   Goals are clearly outlined. Project is a research pilot program to examine the practical use of the passivation technology.

2. **Likelihood of Success (Approach, Feasibility, Capabilities and Performance Measures).** Is the project likely to succeed based on the approach, feasibility and project team capabilities? Are the proposed performance measures adequate for measuring the project's success?

   Two of the reviewers question whether adequate replication of the treatment cells are being conducted. Some question of the feasibility of increase in scale from a 10 gram sample to a 240 ton sample especially without replication. Two of the reviewers stated that proposal lacked sufficient information on the metal measurements, such as whether total recoverable

and/or dissolved would be measured. Also that dissolved calcium and magnesium should be measured instead of hardness alone.

3. **Outcomes and Products.** Will the project advance the state of scientific knowledge in general and/or make an important contribution to the state of knowledge of the Bay-Delta Watershed? For restoration proposals, is the project likely to contribute to ecosystem restoration or species recoveries in a significant way? Will the project produce products useful to decision-makers and scientists?

   Only one final report is identified. Interim progress reports and meetings should be in the workplan.

4. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

   No cost sharers were identified. Indirect costs were high at 44.3%. Two reviewers raised the concern of the project director also being the QA/QC monitor. Also question about the unidentified person who will be the dedicated technician who will be working as the coordinator.

5. **Regional Review.** How did the regional panel(s) rank the proposal (High, Medium, Low)? Did the regional panel(s) identify significant benefits (regional priorities, linkages with other activities, local involvement) or impediments (local constraints, conflicts with other activities, lack of local involvement) to this proposal? What were they?

   Regional review had concerns with techniques that could have applied to other areas. Also, AMD is not a widespread issue in the Delta and watershed, so this technology may not be significant for improving water quality of toxic pollutants of concern.

6. **Administrative Review.** Were there significant concerns about the proposal with regard to the prior performance, environmental compliance and budget administrative reviews? What were they?

   Environmental compliance review is concerned that not enough hours are allocated for completing the mitigated negative declaration.

   No prior performance issue were highlighted.

   No legal and regulatory issues were identified

Miscellaneous comments:

None

Delta Regional Review:

Proposal Number: 43

Proposal Title: Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine

Overall Ranking: **-**Low **X**Medium **-**High

Provide a brief summary explanation of the committee's ranking:

Although the technology to be studied in this project sounds useful, the committee did not see its immediate value to current water quality issues in the Delta.

1. Is the project feasible based on local constraints?

   XYes **-**No

   How?

   This is a pilot study of techniques that have been applied in other areas, so as a pilot study it is feasible. PIs have involvement of landowner and all rights of access necessary.

2. Does the project pursue the restoration priorities applicable to the region as outlined in the PSP?

   XYes **-**No

   How?

   The project will determine whether a promising technology can work to reduce or eliminate acid mine drainage (MR-5). However, acid drainage is not a widespread issue in the Delta + its watershed, so this technology isn't likely to significantly improve water quality and reduce loadings of the toxic pollutants of greatest concern.

3. Is the project adequately linked with other restoration activities in the region, such as ongoing implementation projects and regional planning efforts?

   XYes **-**No

   How?

   Although not directly linked with other projects, the project fits well into regional planning efforts and specifically targeted mine cleanups.

4. Does the project adequately involve local people and institutions?

   XYes **-**No

How?

Owner of the Newton Copper Mine and some local consultants with mine waste experience are PIs. The project has letters of support from several local political entities. Local environmental groups, conservancies, and landowners are being notified.

Other Comments:

This project might demonsrate more immediacy to Delta issues if it were proposed for a Hg mine site.

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **43**

Applicant Organization: **Cherokee Chemical Co., Inc.**

Proposal Title: **Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

None

Review:

Please provide an overall evaluation summary rating:

<u>Excellent:</u> outstanding in all respects;
<u>Good:</u> quality but some deficiencies;
<u>Poor:</u> serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Excellent	**This project left left me with too many uncertainties. A redesign of the study and a revision of the proposal is warranted.**
XGood	
-Poor	

1. **<u>Goals.</u>** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

   Rating: Very Good. The goal or primary objective is straightforward. Some subobjectives or hypotheses are needed to fully flesh out the project. The premise of this project is the coating of sulfides to substantially reduce acidification of the leachate.

2. **<u>Justification.</u>** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

Rating: Very Good. The technology exists at the U. of Reno, one of the collaborators for this project. The early success of this technology warrants some additional attention that this proposal provides.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   Rating: Very Good. The approach of using 3 cells to evaluate the effects of the passivation is okay, although no replication is incorporated into the design.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

   Rating: Good. This pilot study is feasible; however, the restriction to 3 cells is not likely to provide sufficient information on which passivation technique will be the best BMP. I am also curious as to other leachates (other than metals) this coating might cause.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   Rating: Very Good. Quantitative criteria are given.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   Rating: Good. Only a final report is identified. I believe for a project of this magnitude, interim reports or meetings should be conducted.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

   Rating: Good. Only a cursory mention was given of the credentials of the applicants through an identification of patents, etc. The most qualified researcher has allocated only about 10 hrs per week.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

   Rating: Good. The applicants justify the costs for this project. However, I noted that Dr. Mehta will be fulltime, and he is the QA officer. I would think that Dr. Misras credentials would be more important for the success of this project.

Miscellaneous comments:

The biggest shortcoming of this project is in the study design that does not address the issue of replication that could be crucial to identifying this passivation technology as a BMP for abandoned mines. Although not part of this project, I am uncertain of how the wholescale implementation of this coating process can be done without handling the entire spoils.

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **43**

Applicant Organization: **Cherokee Chemical Co., Inc.**

Proposal Title: **Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

None

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;
Good: quality but some deficiencies;
Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Excellent	**The study seems to be valuable given the scale of mining waste problems and acid solubilized metals. The personnel are generally capable and the proposed processes reasonable. The budget contains some questionable issues regarding personnel costs and the roles of the various investigators and consultants. I have raised a few specific issues, mainly devolving, I hope, from incomplete description of methodology. As a laboratory investigator, I shudder at experiments without replication as I have noted in my earlier comments.**
XGood	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

   Yes.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

The existence of data on successful passivation in two pilot plant operations is indicated, but no additional information is presented. For example, which passivation process was used, the Dupont or the UNR or both? Does the proposed study differ significantly from the other pilot plant operations? Is the primary difference only the different wasterock or is it also the testing of the UNR process? This was the only significant question that I had regarding the justification of this project.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   The increase in scale from a 10 gram sample to a 240 ton sample seems large, especially without any replication. It would seem more prudent to establish duplicate treatment cells of perhaps 120 tons each to provide a little better chance to describe variability or to provide data in case of some type of failure of a single cell, e.g. leakage, structural failure, etc. This is not the type of work with which I am familiar, so my concerns may not be justified, but I have them, none-the-less. Is there on-going work of an intermediate scale? Otherwise, I am satisfied with the usefulness of the information to be generated.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

   Except for the problem of no replication, I think the study technically feasible, has a good likelihood of success and of appropriate scale. I have a few specific comments or questions that are included in the miscellaneous comments section that touch upon issues of full documentation.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   Aside from the lack of replication of the treatment cells and the absence of specific mention of all parameters to be measured, the performance measures appear adequate.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   The product of the study should be of value. There is no mention of the cost difference between the two passivation processes. Is that a significant consideration in selecting between the two processes?

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

   The personnel specifically identified appear to be capable of carrying out the project effectively. The primary question regarding this issue is the capability of the unidentified person who will be hired as the "dedicated technician" who "will be working as coordinator." This issue also arises in the cost/benefits comments regarding the roles of this coordinator and Dr. Mehta who is also listed as full time and who will oversee "day-to-day" operations.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

It appears to me that the project calls for essentially two people to work full time on the monitoring and sample collection during the third and fourth quarters of year one. This seems excessive. The overall salary rate for this portion of the budget is $50/hour and may include graduate student hours, this may be excessive. There is no satisfactory description of the role of Dr. Mehta vis-a-vis those of the on-site coordinator and the other two senior scientists, Dr. Misra and Mr. Kravitz. A much better cost/benefit analysis would be provided by budget breakdown identifying individuals with the various task descriptions or even sub-tasks if they could be identified. This, I find, as a major problem with this proposal.

Miscellaneous comments:

1. There is information that suggests for some species of aquatic organisms, the protection afforded to copper toxicity is different for calcium and magnesium. Mere measurement of total hardness is no longer state of the science for adjusting copper toxicity in some cases. For this reason, measurement of dissolved calcium and dissolved magnesium should be made on effluent samples. 2. Is there any information on the long-term stability of the passivation coating? Specifically, I wonder about fracturing under mechanical stress, e.g. from heavy equipment compaction. 3. A more specific list should be provided for "water quality parameters" and "field measurements." 4. It is clear that some thought has been given to the number of samples to be taken for analysis. I question the need for six grab samples from the wasterock stockpile as compared to two from each of the treatment cells. There may or may not be a great deal of variation in the stockpile, but that is not as important as any variation that might occur among the cells. If twelve samples is the cost-effective number for the combined wasterock stockpile and treatment cell sampling, I would recommend taking only three samples from the stockpile and three each from the treatment cells. If analytical results are only available after the cells are loaded, then knowledge of variation in the wasterock stockpile is not of any particular value. 5. Treatment cell wasterock sampling is described as being "random." Some description of the randomization process would be good. In fact, the randomization could be done today. In addition, will the randomization be by cell by load, or by load only. That is, will it be, for example, from load 2 and load 11 for all three cells, or from loads 2 and 11 for cell 1, loads 4 and 5 for cell 2, and loads 6 and 12 for cell 3? Again, I suggest three samples from each treatment cell. 6. There is not enough information given on irrigation of the cells. It is stated that 0.2 inches of "precipitation" will be applied every third day, wind permitting. Over what period of time will this irrigation occur, one hour, six hours? 7. TAL metals analysis is mentioned. Does this include both total and dissolved metals? 8. Does the physical enclosing of the wasterock and the sampling pipe generally preclude transport of fines from the treatment cell? If fines would normally migrate from a full-scale treatment system might they be of some concern, either physically or chemically? 9. If the cells are to be profiled to determine reaction variations with depth, the two samples presumably refer to vertical sampling locations. How many samples (depths) will be sampled at each location? If there is only one sampling location, are two depths sufficient to describe a profile? 10. Figure 7 purports to show a cell filled with wasterock. This picture doesnt show as much wasterock as I had envisioned from the description of the cell and the filling procedure. 11. In describing the PVC liner, the word "contability" is used. I do not know what this word means. I presume it relates to the liners ability to chemically contain the aqueous materials generated by, or added to, the wasterock. 12. The filling of the cells is to be "one cell at a time." Interpretation of this is unclear. For structural integrity one would assume filling by 20 ton allotments in a sequential manner so that lateral forces would be balanced among the cells. This isnt "one cell at a time." 13. Is "meteroic precipitation" the same as "meterological precipitation" or "natural precipitation"? 14. In A4-6 it states that "the cells, which were

prepared to give baseline information, will be treated...." From the previous study description, I thought that there would be only one such cell.

External Scientific: #3

Research and Restoration External Scientific Review Form

Proposal Number: **43**

Applicant Organization: **Cherokee Chemical Co., Inc.**

Proposal Title: **Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

None

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;
Good: quality but some deficiencies;
Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Excellent	**The team had adequate experience. The proposal lacked cost shares, especially the owners of the mine. Unclear, whether reducing the target concentration down to 90% is acceptable to the decision makers.**
XGood	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

   The project goals, objectives and hypotheses are clearly stated.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

   The problem of treatment of streams by AMD pollutants is an issue.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   The study clearly outlines the tasks to be conducted over the 2 year period. The samples to be analyzed for include TAL metals. Does this include total recoverable and/or dissolved metals? It would be best if the proposals specified what metals, methods and criteria would be applicable. More information on the QA sample number and procedures would be helpful. The rest of the approach is clearly specified.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

   Pilot studies have been conducted and demonstrate that passivation is effective in controlling AMD at several mine sites.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   The product is to reduce the target contaminant concentrations by 90%. However, the USEPA guidelines require 90-99%. However, the proposal doesnt have the established Record of Decision to know what the % reduction should be.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   Two expected goals are mentioned. How about the database of the water quality measurements?

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

   The team has adequate experience as a collective whole with AMD projects.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

   No cost sharers have identified. How about the current owners of the mine?

Miscellaneous comments:

External Scientific: #4

Research and Restoration External Scientific Review Form

Proposal Number: **43**

Applicant Organization: **Cherokee Chemical Co., Inc.**

Proposal Title: **Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine**

Conflict of Interest Statements:
I have no financial interest in this proposal.
XCorrect
-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

None

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;
Good: quality but some deficiencies;
Poor: serious deficiencies.

Overall Evaluation Summary Rating	**Provide a brief explanation of your summary rating**
-Excellent	**The proposal is very interesting and will likely result in useful technology. The reduction of acid mine drainage is important, but it is not yet clear how the UNR technique is superior to the Dupont technique.**
XGood	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

   The goals are clearly stated. The project is designed to compare a Dupont process and a UNR process for coating the tailing from mining to prevent acid run-off or draining.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

This program is a research, pilot program to examine the practical use of the passivation technology developed by UNR. It is clear that acid mine drainage is an important environmental issue. The data presented in the proposal justifies the process being examined at the larger scale.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

   The experimental approach is well documented in order to compare the two processes with a control set. There will be a variety of flow rates and a good documentation of the chemical aspects of the process. If it works decision makers will have a tool to treat acid mine drainage, and even the choice of two processes.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

   The project is a scale up of current techniques. The liklihood of success is very good, it will be demonstrated one way or another how the UNR process compares to other techniques.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

   There are clear performance mearsure as documented in section A5. The target is reduce the contaminant concentrations by 90 percent at this site.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

   The ability of two treatment methods to treat acid mine drainage will be tested in a field like setting. Theses techniques should prove useful at other mining sites.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

   The track record is adequate. The team has developed its own technology and have clearly documented that it works at a smaller scale.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

   Costs are typical for such a project.

Miscellaneous comments:

I am concerned about the project director also being the QA/QC monitor. It is typical to have two individuals fill such a role, with the QA/QC individual reporting directly to the overall project coordinator-manager.

Prior Performance/Next Phase Funding:

New Proposal Number: 43

New Proposal Title: Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine

1. Prior CALFED project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

   ERP 01-N21 - Large Scale Pilot Demonstration of Passivation Technology for Restoration of Newton Copper Mine(Laboratory portion funded)

2. Prior CVPIA project numbers, titles, and programs: (*list only projects for which you are the contract manager*)

   N/A

3. Have negotiations about contracts or contact amendments with this applicant proceeded smoothly, without persistent difficulties related to standard contract terms and conditions?

   -Yes -No -N/A

   If no, please explain any difficulties:

4. Are the status, progress, and accomplishments of the applicant's current CALFED or CVPIA project(s) accurately stated?

   -Yes -No -N/A

   If no, please explain any inaccuracies:

5. Is the applicant's progress towards these project(s)' milestones and outcomes to date satisfactory?

   -Yes -No -N/A

   If no, please explain deficiencies:

6. Is the applicant's reporting, records keeping, and financial management of these projects satisfactory?

   -Yes -No -N/A

   If no, please explain deficiencies:

7. Will the project(s) be ready for next phase funding in 2002, based on its current progress and expenditure rates?

   -Yes -No -N/A

If no, please explain:

Laboratory portion of passivation technology commenced in Fall 2001.

Other Comments:

Environmental Compliance:

Proposal Number: 43

Applicant Organization: Cherokee Chemical Co., Inc.

Proposal Title: Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine

1. Are the legal or regulatory issues that affect the proposal identified adequately in the proposal?

   XYes **-**No

   If no, please explain:

2. Does the project's timeline and budget reflect adequate planning to address legal and regulatory issues that affect the proposal?

   -Yes **X**No

   If no, please explain:

   100 hours is not enough time to complete a Mitigated Negative Declaration.

3. Do the legal and regulatory issues that affect the proposal significantly impair the project's feasibility?

   -Yes **X**No

   If yes, please explain:

Other Comments:

Budget:

Proposal Number: 43

Applicant Organization: Cherokee Chemical Co., Inc.

Proposal Title: Pilot Demonstration of the Passivation Technology for Restoration of Newton Copper Mine

1. Does the proposal include a detailed budget for each year of requested support?

   XYes **-**No

   If no, please explain:

2. Does the proposal include a detailed budget for each task identified?

   XYes **-**No

   If no, please explain:

3. Does the proposal clearly state the type of expenses encompassed in indirect rates or overhead costs?

   -Yes **X**No

   If no, please explain:

   only reference found is on last page of Budget Justification.

   Costs appear in yearly budget tables without explanations.

4. Are appropriate project management costs clearly identified?

   XYes **-**No

   If no, please explain:

   See last page of Budget Justification.

5. Do the total funds requested (Form I, Question 17A) equal the combined total annual costs in the budget summary?

   XYes **-**No

   If no, please explain (for example, are costs to be reimbursed by cost share funds included in the budget summary).

17A - $1,071,742.00

Grand Total on Budget Summary; $1,071,742.00

6. Does the budget justification adequately explain major expenses?

   -Yes **X**No

   If no, please explain:

   Project Management addresses only the proposed hire of a technician. Indirect Costs aer noted only as 44%

7. Are there other budget issues that warrant consideration?

   XYes **-**No

   If yes, please explain:

   see Page 18 of the attached proposal, itemD. Cost.

   References two attachments that are not.

Other Comments: