Memo

To: Louise Scott/API

From: Dr. Tom Sale/Research Scientist-Colorado State University/Independent Consultant

CC: Jack Williams/Colonial Pipeline
Bruce Bauman/API

Date: 6/7/00

Re: USA – Peer Review

Introduction

Per your request, I have developed comments on the drinking water component of the API/OPS USA model. These comments are based on materials presented in the May 27-28 public workshop.

General

First, I would like to commend API and OPS for a remarkable effort. The task of identifying USAs is a huge challenge. In particular, the pragmatic constraint of using readily available information makes it difficult to be rigorous in the delineation of USA. Despite the difficulty of the task, I feel that the model does a good job of dealing with uncertainty and identifying locations where extra protection of drinking water sources (from potential pipeline releases) is warranted. While one can find imperfections in the model, I think it is more important to recognize the model as a significant step forward. Furthermore, it needs to be recognized that evolving information and data management tool will provide opportunities for ongoing improvement.

Specific Comments

Liability of USA Designation - I am concerned that the delineation of large tracts of land as unusually sensitive will be controversial. Furthermore, it seems to me that this action may go beyond the intent of the legislation. Property owners, other than pipeline operators, will be impacted. Ensuing controversy may slow identification of USAs and implementation of

protective measures. To minimize this I suggest that the final product of the model be regulated pipelines that lie in USAs. This adds one more filter to the model. The plots of USAs presented in the meeting would be intermediate products that could be used in evaluating the designation of future pipeline alignments. How others choose to use the intermediate products of the model would be an action that they would be responsible for themselves. Perhaps this point should be made in an introductory statement qualifying what the model is and is not.

Model Verification – To the limits of my knowledge, the drinking water USAs for California, Texas, and Louisiana appear reasonable. Polling the other peer reviewers in this regard should provide further verification of the model. As an additional step I suggest that you identify four or more cases (in the test case states) where a pipeline release resulted in irreplaceable, irreparable, irretrievable, and irreversible injury to a drinking water supply. Hopefully the pipeline section that caused the problem will be in a USA. Documented verification of the model will enhance its credibility and utility.

Sufficiency of Surface Water Data – Recognizing the limitations of available data I believe the 5-mile buffer around surface water intakes to be a reasonable place to start. On the other hand, I can conceive of situations where a pipeline release could travel 5 miles along a stream to a surface water intake in a matter of a few hours. If an unrecognized release is drawn into a water treatment plant, it might leave a community without water for an extended period. Whether this would result in irreplaceable irreparable, irretrievable, and irreversible injury to a drinking water supply is difficult to say. Nevertheless, it would be better if surface water USAs were delineated based on travel time from a pipeline to an intake. Unfortunately, this would require data that is not readily available. To address this issue I suggest that operators be directed (in text) to this limitation. Where location specific conditions dictate, an operator could voluntarily treat a pipeline segment outside a USA as though it were in a USA. In addition, it may be useful to identify this issue as something to be considered in future model updates.

Petitions – It is likely that the general nature of the USA model will lead to occasional incorrect (local) designations. Operators and concerned parties should be provided the opportunity to correct designations via a petition. The benefit of a petition process is that it

would allow the overall process to move forward. The downside is that review of petitions and updates of USAs may require a significant level of effort.

Statement of Limitations – To avoid controversy as to the validity of the model I think it is important to rigorously document the models intended use and limitations. For example, this is a screening tool focused on near term identification of pipelines that could impact USAs, it is not intended for other uses, it does not supersede other regulations, its goal is not to protect all source waters, The model is the best that can be done at this time, petitions and updates are avenues for improvement…….

Erring on the Side of Being Conservative - Whenever possible decisions need to err on the side of being conservative. For the most part this is the approach applied in the model. Two exceptions that should be reconsidered are: 1) If the presence of an alternative supply cannot be determined an area is not a USA and 2) If the source aquifer cannot be determined the area is not a USA.

Adequacy of a Three Month Supply – During the meeting the adequacy of a three-month alternative supply was challenged. I agree with the position that this should be expanded to a longer period (e.g. 6-9 months).