

OIL AND GAS PLATFORM DECOMMISSIONING ALTERNATIVES

PUBLIC BRIEFING

October 28, 2009

Southern California Coastal Water Research Project
3535 Harbor Blvd., Suite 110
Costa Mesa, CA 92626
1:00-4:00

Project Team Members Present: B. Bernstein (team lead), S. Swami

OST Staff Present: A. Mace, D. Pietri, L. Rogers

Guests: B. Baird (California Natural Resources Agency)

MEETING MINUTES

1. Welcome, introductions, agenda review

A. Mace opened the meeting with an introduction and welcomed everyone including those participating via phone/webinar. D. Pietri asked for public comment cards for those in the room and explained the agenda. Pietri gave instructions for those on the phone regarding how to make a public comment.

B. Baird provided opening remarks about the state's interest in this issue, described the need for a scientific study to objectively evaluate the various decommissioning alternatives, and discussed the state's progress on this issue to date.

2. Purpose and scope of the project

B. Bernstein discussed the requested scope for this study: to synthesize and make maximum use of existing data on decommissioning in order to create a comprehensive analytical framework to frame future state policy discussions. For this study the project team looked at the full range of decommissioning alternatives, prioritized the various alternatives, and identified their pros and cons. The team also developed a decision-making tool to enable users to analyze various decommissioning alternatives, weight different factors, and compare the costs and benefits of the different options. However, the team was not charged with making recommendations.

B. Bernstein explained that the project team and the Expert Advisory Committee are made up of experts from a variety of fields and interests including fisheries science, engineers, researchers, economists, industry, and government. Bernstein discussed how the EAC has been integral in



providing information and feedback to the project team and generally guiding the direction of the project.

3. Review progress to date

B. Bernstein distributed a flow chart that demonstrated which decommissioning alternatives the project team chose to focus on. Bernstein reviewed the flow chart and discussed the three major options for decommissioning: 1) complete removal, 2) leave in place, and 3) partial removal. Bernstein discussed the complete removal option and mentioned that the Federal Ocean Dumping Act and the London Dumping Convention allow for clean steel dumping in the sea as a means of disposal. The project team also identified disposal in Asia and Mexico as possible on-shore dumping sites.

The project team also completed an exhaustive analysis of partial removal options. In the report the team will discuss the technical, legal, and financial consequences of the artificial reef option. Bernstein noted that in the Gulf of Mexico the states have taken the responsibility for the oil platforms and split the cost savings with the oil company. The decision-making tool will also allow users to determine the costs of each decommissioning option, the avoided costs from selecting the partial removal option, and the share of avoided costs received by the state and the operators under different formulas for allocating these cost savings.

4. Report structure and overview of content

B. Bernstein passed out the table of contents for the report and briefly discussed the contents of each chapter. Bernstein mentioned that the EAC members requested the report include a description of how decisions are made about selecting decommissioning options and that the analysis focus in detail on what happens after a platform has been decommissioned, particularly under the partial removal option.

Bernstein noted that the bulk of the synthesis and analysis of the report are in Chapters 4 and 5. The decision-making tool products are mainly presented in Chapter 4. Within the report data gaps for particular platforms and issues are identified. Bernstein explained that the project team either excluded issues for which there was no data or dealt with certain issues qualitatively. For some issues that related to second or third order impacts or were impacted by larger-scale factors the team decided these were outside of the scope of the report and excluded them from the analysis and only described them qualitatively. Air emissions were dealt with by conducting a case study on the largest and heaviest platform (Harmony), since detailed emission profiles for the heavy-lift vessels and other equipment needed for analyzing each option for each platform were not available. Bernstein also mentioned that socioeconomic effects are often difficult to determine among other larger factors such as the recession and taxes. In these instances the project team did not try and quantify this information but instead left them open as data gaps, with placeholders in the decision-making tool in the event data become available in the future.

5. Demonstrate interactive decision model

S. Swami from Lumina Decision Systems, Inc. presented the interactive decision model using Analytica Software. The model is called PLATFORM. Swami described the benefits of influence diagrams and why the tool is helpful in comparing and contrasting different decommissioning options. The tool can integrate and compare qualitative and quantitative data.

B. Bernstein explained that this tool allows users to go down many layers of detail in order to see the data upon which the model is based, but users need not do so if they prefer to simply define and run comparative analyses. Bernstein also pointed out that there will be a user guide that will complement the tool.

A member of the audience asked how a user might be able to see how the data supporting the various model components was derived. Bernstein replied that for every attribute in the decision model, users can view underlying raw data (for the quantitative model elements) or the set of descriptions of impact levels (high, medium, low) (for the qualitative model elements). The multi-attribute analysis is a method for combining both quantitative and qualitative model elements and deriving an overall score for each option selected. Users can adjust the weights for each attribute (or type of impact) to reflect their individual perspectives or preferences in order to investigate the effect this has on the overall option score.

6. Public comment

Mike McCorkle from the Southern California Trawlers Association commented on the fact that there are no representatives from the commercial fishing industry or commercial passenger industry on the project team or Expert Advisory Committee. McCorkle mentioned that a representative of those industries would be able to answer a lot of questions that others on the panel may not be able to answer. McCorkle also asked a question about the impacts of a complete removal option on the spot prawn fishery. McCorkle explained that spot prawns are the largest fishery in many areas adjacent to platforms and that spot prawns like the mussel mounds that collect around platforms. McCorkle asked what will happen to the spot prawn fishery and the fisherman if the platforms are completely removed. McCorkle also asked about shell mound disposal given that the 4H removal (which occurred over a decade ago) had still not made a decision about what to do with the mussel mounds.

B. Bernstein responded that the project team would not make specific recommendations on these types of issues in the report, though they would provide necessary information for state decision-makers to make decisions on these types of topics.

Linda Fernandez from UC Riverside (who is a member of the Expert Advisory Committee) asked the method for displaying time in the decision tool. Fernandez suggested that if cost estimates from the data are indicated through a spreadsheet it would be helpful to know the base year of the data and to label the base year on the spreadsheet. Fernandez expressed concerns about adding total cost categories together from data taken from different years, and provided the

team with detailed suggestions for dealing with these issues Fernandez asked a final question about why the project team did not try and determine permitting costs.

B. Bernstein responded that the project team used MMS 2004 cost estimates. Bernstein also explained that no inflation had been taken in to account. In regards to the permitting question, Bernstein explained that the project team spoke with local and state agencies and permitting costs for large projects such as these are often negotiated on a case by case basis. Because of this the project team did not feel comfortable providing a set cost for permitting at the state and local level and only input the permitting costs included in the MMS 2004 cost estimates.

C. Fusaro mentioned that for data on local permitting costs, the project team could get baseline data from the 4H rigs that were removed in 1996.

Tom Raftican from the Sportfishing Conservancy asked how the decision model assigned weights to the different parameters. Raftican also asked about measuring water quality impacts, the removal of mussel mounds and how baselines for trawls determined.

B. Bernstein responded that the project team included default weights for different parameters which users can easily change as they use the model. To the second question, Bernstein responded that for qualitative issues the project team had to make broad generalizations and that it depends on the case. Bernstein also noted that if shell mounds are removed there will be water quality issues. To the final question, Bernstein responded that baselines are based on available data. For impacts that are dealt with qualitatively, the team used the available information to describe best, most likely, and worst case scenarios and included this information in both the report and the model.

A. Mace asked if there were any further questions from the audience or on the phone call. No other comments were provided. Mace thanked everyone for attending.

END OF MEETING

The following comment was received just after the meeting ending:

Linda Krop from the Environmental Defense Center submitted comments via e-mail and telephone after the meeting. Krop explained that there are still data gaps although the report is supposed to be used as a decision-making tool. Krop expressed concerns that the data gaps render the use of the model premature and would like to see more emphasis on using this process to gather and analyze necessary information. Krop was surprised and disappointed to hear that the consultant was limited to using existing data. Krop also expressed concerns with the qualitative nature of the inputs, and suggested that the information should be more empirical and quantitative, and the qualitative judgments should be made later based on empirical data. Krop explained that the model lacks certain filters such as legal or regulatory requirements. Krop noted that there is too much variation in the inputs which may skew the analysis for the decision-makers. Krop also mentioned that the study should be based on an ecosystem context rather than

looking at individual platforms. Finally, Krop asked whether the Attorney General will review the study and provide input regarding liability issues.

B. Bernstein responded that the project's time and budget constraints precluded gathering new data, except in two limited instances (i.e., emissions estimates for the Platform Harmony case study and very rough, generic dredging cost estimates for removing shell mounds). Gathering new data needed to fill any one of the significant data gaps (i.e., full emissions estimates for all decommissioning options for all platforms, diver and submersible surveys of fish and invertebrate populations on several platforms that have yet to be monitored, volume estimates of shell mounds under several of the platforms, and econometric analyses (including contingent valuation surveys) of decommissioning's impact on the regional economy) would have required a project budget many times the one we had available. Also, for several of the issues that were dealt with qualitatively (e.g., water quality, marine mammals, birds), there is a substantial amount of background data and information, both from southern California and other regions. These data were used extensively in the qualitative analysis and to create the scaled levels of potential impact. To the greatest extent possible, qualitative assessments were thus based on empirical data. In terms of legal or regulatory requirements, the options included in the model are all available under current regulations. The report itself contains a very detailed description of legal and regulatory requirements and the ways in which these could affect the choice among decommissioning options. Bernstein reiterated his earlier comment that the model and the report are intended as complementary pieces of one overall product and that neither is intended to be used completely independently of the other. In terms of variation in the inputs to the model, quantitative inputs (e.g., costs, fish and invertebrate populations on the platforms) are based on the most complete and recent empirical data and cannot be adjusted by users. Qualitative inputs (e.g., scaled levels of impact for certain attributes) are based on a thorough review of the best available research and assessment. Whatever variation is present in these inputs is inherent in the available data and information and the team did not consider it part of their role to make judgments or decisions to lessen this variation, since this would therefore bias the inputs to the model and the report's assessments. Finally, a representative of the Attorney General's office was interviewed during the team's information gathering process.