

OBTAIN CONTINUOUS QUALITY PERFORMANCE FROM CHEMICAL SUPPLIERS

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ABSTRACT

Follow me on a venture through the mystic of the "black box" in the chemical business. A portion of the paper will be directed toward the process of selecting a chemical company that will provide the most effective way of solving problems. The cost of chemical is insignificant compared to the side effects resulting from a poor chemical program. The following topics will be directed toward the process of selecting a chemical company that will provide the most effective method of solving problems through Continuous Quality Performance.

- Increase service from chemical suppliers
- Decrease chemical costs
- Get best results from the chemical process
- Evaluate the cost of a poor chemical program
- Get chemical companies to compete for the business
- To Bid or *Not to Bid* - There is no question

INTRODUCTION

During my early years in the chemical business, there was always something mysterious about oil field chemicals. For some reason, we never had the complete answer as to how and why chemicals worked the way they did. The client was kept even more in the dark when he could not get the right answers on the mystic of the business since the salesperson could not supply the answers. Each chemical company compounded the "black box" syndrome by having their own unique way of numbering the products. In fact, even the water analysis reports chemical companies supply are different. There were very few training programs on oil field treating chemicals and consequently, the mysterious "black box" was still with us.

Many years ago, after a lot of experience in the patch, the black box was opened and what a surprise it was to discover that there is no mystery involved in the oil field chemical business. For many years, we were searching for answers to the wrong questions. We kept trying to analyze the chemical rather than reviewing the chemical process. It is not just the product that obtains the results - it is the entire chemical process. *This paper will revolve around taking the mystery out of the chemical business so that the operator will have a better understanding on how to obtain Continuous Quality Performance from chemical suppliers.*

The Black Box Talks Back

- All corrosion inhibitors work - the trick is to get the chemical to the problem.
- The emulsion breaker chemical is only as effective as the equipment that is available.
- Scale squeeze jobs are only as good as the process used, not the chemical alone.
- Do not purchase just a chemical to solve the problem.
- There is no magic in the chemicals; the magic is in the application, the people, the process.

These may appear to be brash statements and by now there are probably numerous research people who are quite upset over these comments. *The reason it is so imperative that a commitment of Continuous Quality Performance from the chemical suppliers is the realization that it is not just the product that produces an effective chemical process.*

Evaluating The Cost of Poor Chemical Programs

Before we get into the process of selecting the most effective chemical company, we must first review the cost involved in a poor chemical program. The first consideration, of course, is the cost of the product. During the downturn, emphasis was placed on cost per unit rather than cost performance. The side effects of conducting business in this manner was astronomical. Many chemical programs were eliminated, particularly on the water treating side. The cost of a poor chemical program can be measured not only in the high costs of chemical, but by harmful side effects, such as:

- Lost production
- Reduced equipment life
- Increased cost in additional treatment facilities
- Formation damage
- Loss of disposal wells
- Plugged injection wells
- Reduced effectiveness of a water flood.

Evaluating the cost of poor chemical programs

In reviewing the chemical performance, consider not only the product, but also the following side effects that can result in long term costs to the producer. Listed are seven rules of thumb to follow when reviewing the present chemical program or initiating a new program. ***Keep in mind there are exceptions to these rules.***

- (1) Review the costs of injection well workovers before eliminating the present program or implementing a new water treating program.
- (2) Before changing the downhole corrosion program, obtain enough data to conduct a study on the effectiveness of the present program, including rod parts and **tubing failures**.
- (3) Invest in equipment whenever possible instead of chemical, ie; the cost of an additional water tank, properly designed, should reduce the amount of scale and corrosion inhibitor needed to treat the system.
- (4) Water clarification chemicals, when improperly applied, will act as a plugging agent in injection wells.
- (5) Certain types of corrosion inhibitors will act as emulsifiers and create problems in the oil treating process.
- (6) Never use a water soluble surfactant in downhole corrosion treatment as it will result in solids and oil carry-over into the water treating facilities.
- (7) Never use a water soluble corrosion or biocide in a producing oil well.

This list can go on and on. As chemical programs are reviewed, keep in mind that chemical is not the solution to every problem, and there are times when it may create problems.

TO BID OR NOT TO BID there is no question

Horror stories have been related concerning costs involved in the oil producers placing their entire chemical program on a bid basis. If a cheap chemical program is desired, put the field on bid. If the goal is an effective chemical process with desired results, have the chemical companies compete for the business.

One chemical supplier made a classic statement when a client said, "I'm still having bad oil on the battery you are treating. The salesman's answer was, "I am aware of that, but do you realize that we provided bad oil cheaper than our competitor did?" ***By instituting an environment of competition among chemical suppliers with a clear understanding of goals and objectives, Continuous Quality Performance from chemical suppliers is attainable.***

Bidding the chemical program is unnecessary and ineffective.

Increase service and decrease chemical cost

Implementing a competitive situation and an efficient monitoring process should result in a decrease in total chemical costs. There may be a few snags, however, if we confuse service and attention. There is a definite difference between the two. Service is establishing goals and criteria agreed upon by both parties that are necessary to produce positive results. The monitoring process is part of service that has been agreed upon in order to reduce corrosion related failure rates, and improve water quality.

Attention is having the suppliers do meaningless work such as running coupons because the client feels it is necessary to have coupon reports in the files, or running water analysis so that they too can be filed. Let Continuous Quality Performance from the chemical suppliers determine the type of service necessary. There are occasions when water analysis should be performed periodically - that is a service. Having unnecessary coupons or analysis run is attention - that is expensive, both for the client and the chemical suppliers.

Reduce overall chemical expenditures

The objective of Continuous Quality Performance from the chemical suppliers is to provide results at a minimum cost. Perhaps the worst scenario that can occur is to demand an overall decrease in chemical expenditures. This type of business philosophy can result in a breakdown of the entire chemical treating process. There are numerous horror situations that occurred during the late 80's when producers demanded an across the board decrease in chemical expenditures. In some cases, six years later, there has been an increase in capital expenditures revolving around replacing tubing or casing, and in some cases, drilling new producing and injection wells. There are two basic methods that can effectively be used to decrease chemical expenditures and maintain effectiveness, and in some cases, increase results from a chemical program.

- **Total System Audit** by an outside consultant is perhaps the most effective method of decreasing chemical expenditure and obtaining continuous quality performance. A consulting firm can effectively evaluate the system, the product and with the aid of the producer, can set goals and criteria for the chemical suppliers to meet. During the first week of a recent Total System Audit conducted by SEVICO, Inc. chemical expenses were decreased by \$200,000 and it is anticipated that the total chemical expenditure will be decreased by \$500,00 with improved results.
- **Chemical companies competing for the business:** If there is a good business relationship with several chemical companies, have two or more companies conduct a field evaluation and provide recommendations as to cost and performance.

Selecting the most effective and economical chemical suppliers

Perhaps one of the most difficult challenges in the oil industry today is selecting the most effective and economical chemical companies available. This could be due to the "mystery of the black box". There are many factors to consider such as the product, people and the company. Get to know the people in the service company you are doing business with or intend to do business with. Learn their work habits, find out about their integrity and their commitment to your company and the oil industry. The decision should be based on the merits of the entire company, not solely on the personality of the person you will do business with. Following are some rules of thumb to consider when selecting a chemical supplier:

- (1) **Personnel:** Know the key personnel of the chemical suppliers. The local representative is responsible for the day to day operation of the chemical business. The field manager of the chemical suppliers orchestrates the entire chemical process for his company at that location. Know the local field manager.
- (2) **Back-up:** What resources do the chemical suppliers have in the form of research and technical expertise. If a unique and difficult problem arises, are the necessary resources available to solve the problem?
- (3) **Long term commitment:** We are not against doing business with a Mama and Papa operation, however, in today's economy, it would be to the best interest of the oil producer to do business with suppliers that have manufacturing capabilities, adequate environmental response, field resources and financial resources.
- (4) **Distribution operations:** Regardless of how successful the chemical process is, it is not effective unless the product is delivered on time, every time. This is particularly true in the area of truck treating. Inquire about the quality of the supplier's drivers and type of back up that is available. Keep in mind that the quality of treatment should be uppermost, not quantity. Bickering over truck charges will only result in what is paid for. Ask for the newest truck and best driver and pay for them. It is well worth it.
- (5) **Field resources:** Turn around time on water analysis is vital. Water analysis should be run locally so immediate response is available should there be a problem.
- (6) **Experience:** Again, it is not the quantity of people who will work on specific problems; it is the quality involved in how quickly a problem can be solved. The most important factor, however, is the capability of the local personnel to make the chemical process fire proof. (problem proof)
- (7) **Competition:** Oil industry service companies thrive through competition. Make that work in your favor. Promoting a competitive atmosphere means any supplier is subject to gaining or losing business, consequently eliminating complacency. Who loses when a supplier becomes complacent? You, the buyer does.

There are four components necessary to obtain Continuous Quality Performance from a Corrosion Treating Process. Each of these can stand on its own merit, however, they must all work in unison in order to provide optimum results.

■ **PRODUCT**

■ **PEOPLE**

■ **TECHNOLOGY**

■ **MONITORING**

PRODUCT

Product alone will not provide Continuous Quality Performance from a chemical treating process. **Some companies will market a miracle product that can bounce through the field and solve all problems. This is a myth. There is no such animal.** We agree that some products are more effective than others when applied correctly, however it is the total process that is important in the chemical treating process. We recommend that prior to implementing a chemical treating process, the effectiveness of the product be qualified by lab testing or case histories.

PEOPLE

As in all organizations, the quality of people employed is a key to the quality of service obtained. The companies's business philosophy and commitment to the industry are all important ingredients in selecting a service company. However, the commitment and dedication on the part of the local field representative and field manager should pack a larger impact in the decision of choosing a chemical supplier. These are the individuals who will be working with you and your company toward solving day to day problems.

TECHNOLOGY

The definition of technology in the chemical industry can be defined as getting the product to the problem. Regardless of how thorough the product selection is, or how effective the chemical personnel are, Continuous Quality Performance will only be obtained if the product gets to the problem. The chemical suppliers' technical expertise is an important ingredient in the chemical treating process. The product application, however is not the sole responsibility of the local sales force. Other factors are involved such as the distribution operation to deliver the product on time, every time, truck treating operations to correctly apply the product on time, every time and follow up reports to assure the client that the entire process has been completed.

MONITORING

The monitoring procedure will close the circle in obtaining Continuous Quality Performance in the Corrosion Control Process. Monitoring should be conducted on a monthly basis with goals that have been agreed upon by both the client and the chemical suppliers. In establishing an effective monitoring process, we recommend the following steps be taken:

- Statistical data to determine the history of the chemical treating process should be gathered and graphed.
- Establish realistic goals based on data obtained.
- There should be an understanding that if the established goals are not met, the chemical supplier can and will be replaced.
- Graphs and goals should be reviewed monthly by the Steering Committee and chemical suppliers.

CONCLUSION:

There is really no mystic or witchcraft in the chemical business. Results revolve around hard work and dedication on the part of the client and the local chemical representatives to help solve day to day problems occurring in the oil industry. By closing the circle of the four major components in an effective chemical treating process, Continuous Quality Performance can be obtained from the chemical suppliers. An alliance or partnership agreement is obtained by setting goals and working as a team to solve existing problems and preventing re-occurrence. Once the criteria is set and agreed upon by both the client and supplier, the alliance or partnership agreement will provide results at the most economical cost available.

