

# Libya: Redefining Challenge

Gordon Mahovsky, Project General Manager, RASCO Project

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## SYNOPSIS

This case describes the \$1 billion expansion of a petrochemical facility in Libya. The case presents the impact of international politics on project planning and execution due to the United Nations' sanctions on Libya and the civil war in former Yugoslavia. The direct effects on communication, travel, logistics, and human resource maintenance are discussed as well as other issues such as cultural differences. The paper does not go into the technical aspects of the plant but concentrates on the challenges and creative methods for dealing with unplanned obstacles in the running of the project.

## LEARNING OBJECTIVES

After reading the case and answering the questions provided, the students will be able to:

- understand how to deal with uncontrollable factors
- understand the impact of international politics and the internationalization of the world economy
- realize the importance of human relations on projects
- gain a better understanding of the project manager's code of ethics.

## DISCUSSION QUESTIONS AND POSSIBLE ANSWERS

1. Due to political changes, the management of this project was faced with completely different challenges than it initially perceived. If, as a project manager, you are going to be involved with an endeavor with this characteristic, what management model would best suit your needs?
  - a. To face new and non-controllable factors, the project should monitor these factors through use of a model such as that presented in Chapter 7, *Strategic Issues in Project Management*, of *Project Management: Strategic Design and Implementation*, 2nd ed., by Cleland. The output of this process can even include the generation of a new project. The process aims to deal with the effects of the non-controllable factors and the redefinition of the initial project phase. The management of project strategic issues can, according to Cleland, follow four phases: (1) identification of the strategic issues; (2) assessment of the strategic relevance; (3) analysis of the action required; and (4) implementation of the action selected to contribute to the resolution of the issue.

2. Human resources are discussed in this case, both from the staff/office and field staff/construction point of view. What are the difficulties and differences in managing these two different groups?
  - a. The construction and field workers are able to see the project progress and gain satisfaction simply by witnessing this progression. Likewise, they have a rigorous but predefined work schedule (i.e., the Canadian group's seventy-two days in, twenty-one days out), which is clear. On the other hand, the office staff may see no other progress than the flow of paper through the office and staff jobs tend to be a regular weekly routine. The office staff may then need day-to-day incentives: recognition, luncheons, and other simple motivational techniques.
3. Can uncertainty such as the international political uncertainty described in this project be scheduled? When should the project management identify and evaluate such risks?
  - a. It is very difficult to schedule for such risks. It is very difficult to foresee when such events as "international incidents" will cause problems for a project. However, these risks can be estimated during original project analysis and a determination can be made as to whether the project is worth the risk involved and what effects the incident will have on the project. Project risk management is discussed in *PMBOK Guide*, Chapter 11. Different techniques such as a decision tree, which considers the different possible outcomes and assigns probabilities and costs to these outcomes, can be used in the analysis of such risks.
4. The author mentions the procurement, transportation, communication, travel, and human resource problems faced in the course of the project. Among all of these problems listed, why did the job satisfaction and staff motivation become the priority of the project?
  - a. Project management was really only able to address the problems of human resources. All of the other problems listed were outside of the scope and abilities of project management to address. For example, project management had no control over the airlines, telephone companies, or political climate.
  - b. The morale of the project team is a key factor, especially when a project faces impediments and interference from non-controllable sources.
5. This case does not mention any problems in dealing with the Libyan government despite all of the international unrest surrounding Libya. How might the project management have successfully "sold" this project to the government?
  - a. Economics. This project meant a great deal of money to Libya, both at the time of the project and in the future. Also, it allowed economic contact with non-United States First World countries. These motivations should have made it easy to explain to Libya, as a project stakeholder, the importance of the project.
6. The author ends the case with the phrase: "This project has demonstrated that, more than anything, people have made the difference and that the

most powerful tool in project management today still remains to be the human mind." Do you agree with this statement?

- a. With almost 100 percent certainty, yes. People are the core of all projects. People make all projects possible.

### ADDITIONAL DISCUSSION POINTS:

The globalization of the world's economy and the restrictions on business in dealing with some countries such as the Libyan and Iranian United Nations' sanctions or the United States' embargo on Cuba have a great effect on project management. As a project manager dealing with these situations, how is one required to act? Should one attempt to work within the laws or find methods to get around the restrictions? Have the students research and discuss such regulations as the Helms-Burton Act, or other similar global sanctions, and the reactions of different stakeholders to them.

Discuss how PMI's Code of Ethics for the Project Management Profession relates to these questions (see Appendix A).

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## ABSTRACT

This paper describes the impact of international politics on project planning and execution. The direct effects experienced on other peripheral issues such as communications, travel and logistics, human resource maintenance, and cultural differences are also discussed.

The outbreak of civil war in the former Yugoslavia, coupled with the imposition of United Nations sanctions against Libya, have had a dramatic effect on the ability of both the owner and contractors to maintain project momentum. These events have significantly altered the original project execution plan and schedule, and to date the political situation can best be described as anything but helpful. It has challenged the very heart of our project management control system.

## INTRODUCTION

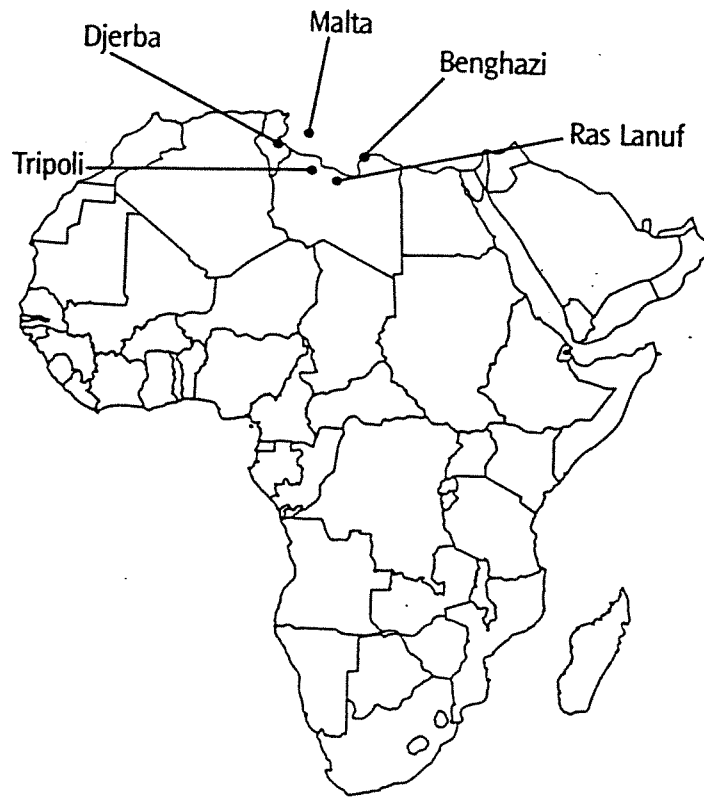
In 1990, Monenco AGRA Inc. was awarded a contract for a \$1 billion ethylene unit downstream expansion in Libya for the Ras Lanuf Oil and Gas Processing Company—the RASCO project. Although Monenco had been working on numerous industrial projects in North Africa and the Middle East, the RASCO Project was the first major hydrocarbon project to be undertaken by the company in this part of the world.

Ever since the onset of activity, the concepts of challenge and project management have certainly taken on new meaning. The traditional issues of scope definition, change order management, and project controls have proven to be quite routine and fade in order of difficulty to international politics and the normally peripheral issues such as communications, travel and logistics, human resource maintenance, and the management of cultural differences. The objective of this paper is to share some of these unique experiences.

## THE PROJECT

The project is located at an existing refinery complex at Ras Lanuf, Libya, on the Gulf of Sirte. Figure 1 shows the location relative to the major centers of Tripoli and Benghazi.

At present, the unit produces both refined crude oil and ethylene products. The desire to increase the value-added potential of the complex has prompted the owner to add ethylene downstream units consisting of both petrochemical and polymer units which include:



**FIGURE 1**      **PROJECT LOCATION**

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- petrochemical units (LSTK-1) (to be awarded)
- polypropylene unit (LSTK-2) (to be awarded)
- polyethylene unit (LSTK-3) (Korea/England)
- tank farm and flares (Package A) (Korea)
- polymer handling and film plant (Package B) (Korea)
- desalination unit (Package C) (Italy)
- nitrogen unit (Package D) (Germany)
- hydrogen unit (Package E) (to be awarded).

## SCOPE OF WORK

The essence of Monenco's activities being performed under this contract can be summarized as follows:

- owner's representative and overall project management
- engineering
  - detailed design of utilities and interconnecting facilities between new units and existing units
- tendering
  - including subcontract negotiations
- procurement
  - procurement of materials for the interconnect facilities
  - inspection and expediting of subcontractor supplied equipment and materials
- coordination of all EPC activities on the project
  - review and approval of subcontractor design
- on-site construction management.

When considering the size and complexity of the new units to be added and the all encompassing scope of work, the project team faced an enormous challenge, even under normal circumstances. Circumstances, however, turned out to be anything but normal and serve as proof to the fact that project management must be adaptive and innovative in order to meet the challenge of the unexpected.

## INTERNATIONAL POLITICS

International politics, more than any other single factor has affected almost every aspect of the RASCO project. Its effect on the traditional key control parameters of cost and schedule are immense. Its effects, direct and indirect, on the seldom mentioned issues of communications, travel and logistics, human resources, and cultural differences have added complexity to an already intricate situation.

When Monenco was awarded the RASCO project, tendering activities had advanced to the point when LSTK-1, the petrochemical complex, was nearing the award stage. When the bid evaluations and follow-up clarifications were completed, the contract was awarded, and made effective, to Engoinvest, an engineering company from the former Yugoslavia. As final preparations for contract kickoff approached, so did civil war. Efforts were made, time and again, to honor contractual obligations by both the owner and contractor, but eventually all efforts succumbed to the ravages of civil war, and resulted in the termination of the contract.

This was a serious setback to the project. The petrochemical complex, comprised of units to produce MTBE, Benzene, Butene-1, and Butadiene were the front end of a major expansion and should have been the first to be implemented. Bringing a contract from the initial bid stage through technical and commercial evaluations and arrangements of the letters of credit and bank guarantees had taken an average of twenty-seven months as a result of a very regimented bidding process. Similar concerns also arose in the early stages of the polyethylene unit LSTK-3 when political friction seemed to be on the increase between North and South Korea. However, the situation stabilized and that contract remained intact.

The United Nations sanction in 1992 dealt another major blow to project execution. There was a lengthy period during which the impact of the sanctions could not be defined. Any supplier with United States affiliations was susceptible to the effects of the sanctions. Existing lump sum, firm price contracts had been awarded based on selected suppliers, and there was now a danger of certain vendors not being able to continue supplying materials and equipment to the project. For some suppliers, production schedules were impeded, causing no end to contractual disputes regarding time to deliver.

For packages that were midway through the bidding process, delays were encountered as a result of the uncertainty of the impact of the sanctions. Suddenly, some "approved bidders" were no longer eligible as suppliers for goods and services to the project.

Alternate vendors had to be found in some cases while bidders struggled to maintain quoted prices and deliveries. The tendering process had turned into a project manager's worst nightmare. Arrangement of financial instruments,



**FIGURE 2** MAIN PROJECT OFFICE LOCATIONS

such as letters of credit and bank guarantees required by the contracts, became inordinately complicated, resulting in further delays.

The cessation of air transportation into Libya added another twist that had not been envisaged at the start. Workers on fixed rotation schedules saw their time at home decreased by increased travel time. Employees became concerned about being able to travel home quickly on family matters. The logistics of shipping materials and equipment to site had to quickly change to meet the new political scenario.

From the very early stages of the project it became obvious that the original job schedule of twenty-eight months would never be realized, and the challenge of maintaining positive momentum was going to be immense.

## COMMUNICATIONS

Communications, both personal and interoffice, are the heart of every successful project. Whether good or bad, they are always a factor. On the RASCO project, communications have been a critical issue, since project activities to date have been executed from offices scattered around the globe—Canada, England, Germany, Libya, Italy, and Korea. Figure 2 shows the location of these offices.

Global interoffice communications outside of Libya have been quite normal—phone, fax, telex, and computers. Communication links to site have not proven to be as reliable. Delays from two to three hours up to several days have been encountered. Receiving or sending correspondence by

fax, although the preferred method, has been subject to the same problems as phone lines. Telex, surprisingly, has proven to be the most reliable and is still used today for the majority of incoming correspondence from the owner. Courier service is reliable, but slow. Calgary to Ras Lanuf, for example, is typically ten days.

The turnaround of documents and drawings to meet the contractual approval schedules between owner and contractors has been a major cause for concern. Typical approval cycles are twenty-one days, but this remains to be an enormous task. One solution attempted was the electronic transfer of drawings via the Internet. This has been tried and has worked very well between the contractor's and Monenco's offices, however, E-mail transfer to site is not possible. The traditional method of document submission by courier was therefore maintained.

Due to the volume of correspondence that accompanies a project of this size and complexity, an electronic mail distribution system was introduced in house. Up to 150 pages of correspondence are faxed daily to the Calgary office from around the world. With this system, the need for hard copies was greatly reduced and distribution to project staff made far more efficient. The system improved the staff's ability to retrieve records needed during the day-to-day administration of the project. Significant savings were realized in reproduction costs.

## TRAVEL AND LOGISTICS

Of all the things that are affected by international politics and which have a direct bearing on the project staff, a major one is travel—getting to and from the job site. When Monenco initially took over the RASCO project, travel to site was quite simple. Following a direct flight to Malta, the necessary visas were obtained, after which the journey would be continued the next day by air to Tripoli. After that, another one-hour flight on the following day was all that was needed to arrive at Ras Lanuf. An alternate route through Benghazi was also utilized, which was an easy three-hour drive to the site.

The introduction of the United Nations' sanctions in 1992 brought an immediate halt to this routine. Travel now is usually through Tunisia where the applications for entry visas are submitted. This can be one to three days, depending on many factors. Once visas are obtained, it is a short flight to Djerba and another overnight stay. From there, Tripoli is typically a five-hour drive assuming an easy Tunisia/Libya border crossing. From Tripoli, it is another eight-hour journey by car to Ras Lanuf.

In the early stages of the project, ferry service was also available between Malta and Tripoli. Although the service supposedly operated on a regular schedule, delays of up to three days in departure from Malta were sometimes experienced, adding more difficulty to the fourteen-hour crossing. However, this alternate travel mode was available if flights were missed or canceled in Malta.

The ferry service was in operation until mid-1995 when an international incident in Malta caused the service to be canceled. It resumed in January 1996 for a short time only, to be shut down again in March 1996. For construction staff on rotation, the journey remains an arduous task.

Visas for allowing entry into Libya can be obtained in either Malta or Tunisia. Monenco staff presently obtain their visas in Tunisia, although Malta had been used until late 1994. Both ninety-day business visas and permanent resident visas have been used, although the latter is probably the best arrangement for site construction staff.

Traveling to and from the job site does require more planning than usual due to the complexities of routing and the various modes of transportation. However, international travel is interesting and seeing new places and people has been exciting for the staff. A little known fact is that Libya has some of the best preserved Roman ruins in existence, another bonus to the traveler!

## HUMAN RESOURCE MAINTENANCE

Maintaining momentum on a project is not just a matter of tight schedule control and man-hour monitoring. On a project which is subjected to many delays and interferences from factors beyond the control of the project team, morale becomes a very important consideration. Job satisfaction and staff motivation quickly become a priority with project management and are usually issues which are very difficult to handle.

In theory, people exert work effort to achieve task performance and as a result expect to receive work-related satisfaction. However, hard work has not necessarily meant achieving goals in a timely manner. Monenco has been fortunate in that most of the home office, and to a great extent the construction team, are permanent staff. As new opportunities within the company arise, most staff view the experience on the RASCO project as a stepping stone to these new opportunities and view the project assignment in this light.

Revisiting design concepts several times over has been unavoidable in certain situations, and the discipline learned from this has provided the stamina to endure the many road blocks prohibiting efficient execution of the scope of work.

The elongated project schedule has presented other problems relative to staff rotation and replacement on the project. Job history has become very important to all team members and having to recall earlier decisions made on design philosophy, contract negotiations, or on contract change requests is a frequent occurrence. As contract schedules extended, it became increasingly important to maintain the same project staff in the same capacities. Staff burnout, therefore, became an issue which had to be addressed by project management, especially in the home office. Field staff seem to be less prone to this phenomenon since construction activity produced changes on the job site, imparting the feeling of accomplishment.

Field staff have faced increased difficulty in making the most of their turnaround leave due to air travel restrictions into Libya, as previously outlined. Increasing travel time by one or two days only adds to an already stressful situation.

Monenco has been fortunate in that more than half of the home office team has been on the project from the beginning. Staff turnover in the field has been even less than the home office. LSTK-3 is nearing mechanical completion, Packages A, C, and D are well advanced, and both Packages B and Interconnect construction are progressing well. The fruits of their labor are in sight and this certainly appears to make a difference.

## CULTURAL DIFFERENCES

The RASCO project has been an education in human relations and diplomacy. The job has brought together people from over a dozen countries and an even greater number of ethnic backgrounds.

With English as the official contractual language, communication, both written and oral, has provided challenges of its own. The word "yes" more than likely means "maybe"; "soon" has come to mean "sometime in the future"; and "on schedule" has had its own day in the sun. Contractual negotiations have become bogged down at times, certainly attributable to misunderstanding to some degree. Technically, P & ID reviews have been exceptionally difficult, highlighting the fact that both written and verbal communication can be equally challenging.

One eye opener on-site has been the various hiring practices undertaken by the different construction contractors, especially concerning allowable staff turnaround time for R&R. For Canadian and European companies, typically seventy-two days in and twenty-one days out has been the norm. This contrasts with other contractors' staff turnaround schedules of six months. Craft labor turnaround can run as long as one year and has been extended to overall job duration in some instances.

Work schedules have been established at ten hours per day, six days per week, with Friday being the designated day off. Overtime is allowed by special approval only. In spite of all the differences that exist, the work ethic on-site has been commendable. Cooperation among the various contractors is always prevalent and spills over into off-the-job activities. One can always count on help, if needed, for in-country travel, vehicle maintenance, assistance with visa applications, or whatever the need may be.

## CLOSING REMARKS

The RASCO project has provided a most demanding and challenging environment in which the project team has had to demonstrate its ability to achieve project objectives, at times in the most difficult situations. International politics and its underlying effects on all aspects of the job is an ongoing issue to be faced daily. The difficulties associated with interoffice communications, travel, and logistics have been circumvented to a large degree. Rethinking of the manpower staffing plan, with a focus on maintaining job motivation and satisfaction, remains an important ongoing task. The opportunity of working with many different cultures around the world has certainly been a maturing experience for the staff which will, without a doubt, produce only positive results in future careers.

It is interesting to note that in meeting all of the challenges discussed in this paper, solutions have not been found in textbooks, project management software, latest research, or any other space-age adaptation. This project has demonstrated that, more than anything, people have made the difference and that the most powerful tool in project management today still remains to be the human mind.

## Study Questions

### LIBYA: REDEFINING CHALLENGE

1. Due to political changes, the management of this project was faced with completely different challenges than initially perceived. If, as a project manager, you are going to be involved with an endeavor with this characteristic, what management model would best suit your needs?
2. Human resources are discussed in this case, both from the staff/office and field staff/construction point of view. What are the difficulties and differences in managing these two different groups?
3. Can uncertainty such as the international political uncertainty described in this project be scheduled? When should project management identify and evaluate such risks?
4. The author mentions the procurement, transportation, communication, travel, and human resource problems faced in the course of the project. Among all of these problems listed, why did the job satisfaction and staff motivation become the priority of the project?
5. This case does not mention any problems in dealing with the Libyan government despite all of the international unrest surrounding Libya. How might the project management have successfully "sold" this project to the government?
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