

PHOTO-KEEPING THE HOUSEKEEPING

[Cases of SF5S approach for HOWIMP implementation in Nepal]

Prof. Dinesh P. Chapagain

*Kathmandu University School of Management
NEPAL*

I. Background

In this paper, first I would like to briefly introduce Nepal as a Nation and the Nepalese way of managing organization. Then I will explain an approach developed as SF5S approach applicable for human oriented workplace improvement programs. After this, I will present three successful cases of the SF5S approach in three different industries in Nepal. At the end, I will draw some conclusion from my personal experience in this process.

II. Nepal and the Management Style

In the northern part of the south Asian region, lies a slightly rectangular shaped country, NEPAL, recognized all over as a never-colonized Himalayan Kingdom where the tallest peak of the world, "Mt. Everest" stands, where, "Lumbini", the birth place of Gautam Buddha exists, where the brave "Gurkhas" live, and interestingly, whose "double triangle" shaped national flag is unique in the world. Our glory, thus, is purely a historic and static in nature.

1. The Demography

With 147 thousand square kilometers of land area, Nepal is ranked 45th in size in the world as reported by United Nation, and third largest after India and Pakistan among the seven South Asian nations. Its land area is almost about the same as that of Bangladesh. It is a landlocked country sandwiched between two large and dynamic developing countries of the world- India and China. The country, with about 24 million people is 78th in the rank among the countries in the world, and fourth after India, Pakistan, and Bangladesh among the South Asian nations. Nepal has a great variation in its topography and diversity of weather and climate. The country experiences tropical, meso-thermal, micro-thermal, taiga and tundra type of climate. Topographically, the country can be divided into three levels - Mountain, Hill and Terai.

The country is divided into 75 administrative districts. Nepal was virtually a closed country till 1951, but had a short democratic stint of nine years between 1952 and 1960. From 1960 till 1989 it experienced a non-political, single party monarchical *Panchayat* system. In 1989, democracy was restored in Nepal with the adoption of constitutional monarchical, multi-party and socialist system.

2. The Economy

Nepal is an agricultural country with more than 81% of its economically active population engaged in it, and contributing to 39.18% share in GDP. The contribution to GDP of different industrial groups for the year 1999/2000 shows that after agriculture, the service sector comprised of trade, restaurants and hotels, finance, real estate, transport, communication, social services, construction, etc. has 50.83% share, and manufacturing has only 9.99% share. The figure shows that the country still depends on the primary sector, while the tertiary sector is developing very fast. The secondary sector, i.e., manufacturing - the sector where Japanese experienced a lot with its Japanese style management - has not grown in Nepal and does not provide a significant share in the country's GDP. Manufacturing sector is very small in Nepal, out of total 11 million economically active population only 636 thousand [5.78%] people are working in the manufacturing sector.

3. The People

Nepalese people are, in general, heterogeneous in nature. However, certain common characteristics can be observed. Here, it is worth mentioning certain typical characteristics of Nepalese people.

- a) Most Nepali people live in joint families, and the eldest of the family always guides the younger members.
- b) Nepali people are generally reluctant to speak about problems.
- c) Nepali people are comparatively honest and sincere.
- d) The education level of the Nepali people is generally very low.

- e) Nepali people do not show much homogeneity in terms of language, ethnicity and religious matters.
- f) Nepali people can work hard even in difficult conditions.

4. The Management

In Nepal, the number of joint stock companies and multi-national companies is very few. The majority of the industries in Nepal, whether in manufacturing, travel and tour, transportation, utility, etc. are operated and run by Nepalese managers, who are mostly the owners themselves. Management in Nepal can be distinctly separated by ownership: the government-owned corporations and private-owned family businesses. Some noteworthy styles of managing companies in Nepal are given below.

a) Corporate Identity

Characterized by political interference domination in public corporations. The general manager is generally a political appointee. No corporate identity. Low wage earning employees prefer to have extra cash for food instead of wearing uniforms. In private sector, the scope for corporate identity not yet recognized.

b) Management Decision Making Process

In governmental and public sector, the lengthy process called "*Tippani*", very similar to "*Ringi*" system exists. In private sector, centralized, i.e., completely owner-decision system exists.

c) Quality System

Export is limited to carpet, garment, pashmina and some handicrafts from private sector. Quality assurance system in these sectors exists. TQM and TPM do not exist. QCs exist in some companies. Only four companies have been accredited with ISO 9000 so far.

d) Workplace Improvement and Problem Solving Technique

Knowingly and unknowingly many companies of Nepal practice some approaches quite similar to Japanese [5 "S", 3 "M", 5 "W" and 1 "H", 5 "Why"s, etc.], not as a one-piece formula but on a piece-to-piece basis.

e) Human Resource Development

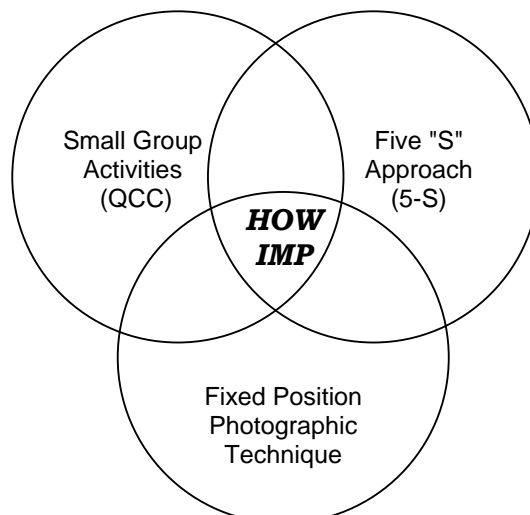
Specialization is mostly demanded, In public sector, training is considered very important. In private sector, tendency of hiring trained personnel rather than investing on training exist. Seniority based promotion and wage system exists.

f) Labour Relations

Politically oriented 2 to 3 unions exist in all companies. Collective bargaining scenario appears, when political problems exist in the country. Industrial relations is relatively not so poor.

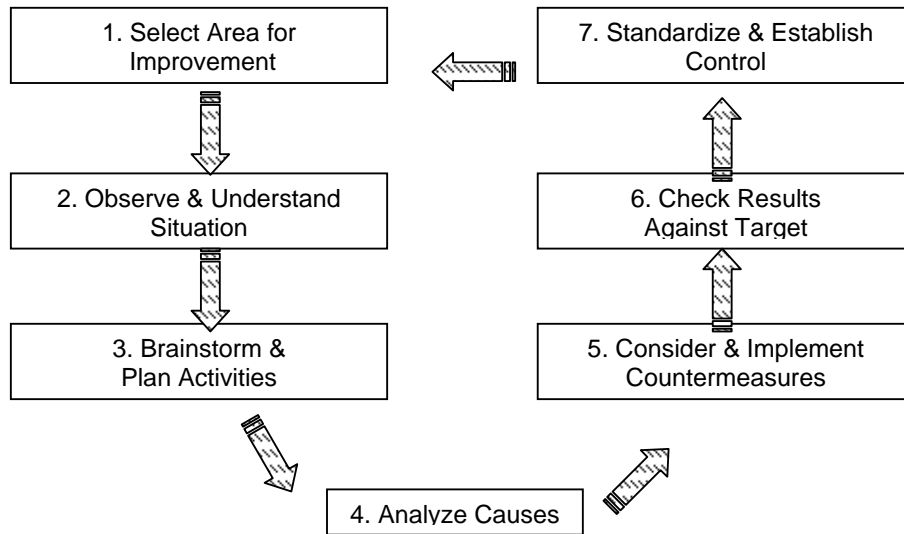
III. The SF5S Approach

Three components of Japanese style management are blended together to develop a working concept for Human Oriented Workplace Improvement Program (HOWIMP). This concept is gaining popularity in Nepal, and is giving benefits to them, wherever it is applied.



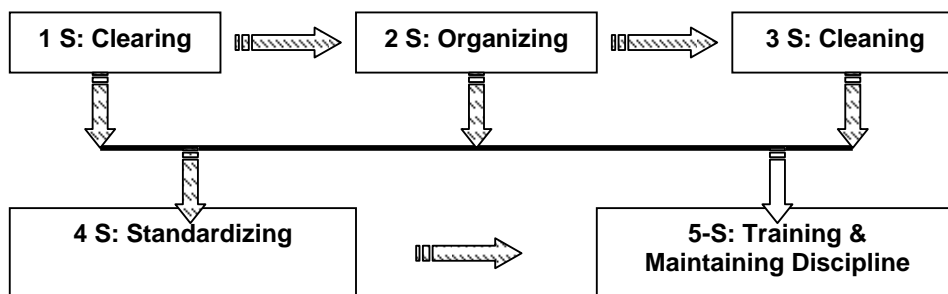
1. Small Group Activities (QCC)

The world-renowned small group activities or Quality Control Circle activities (QCC) are conducted. A small number of volunteer participants from the same workplace are trained for workplace improvement, and meetings were conducted at regular interval to identify, analyze and solve their workplace problems. They are asked to follow the following sequence of activities for identifying, analyzing and solving their respective workplace problems.



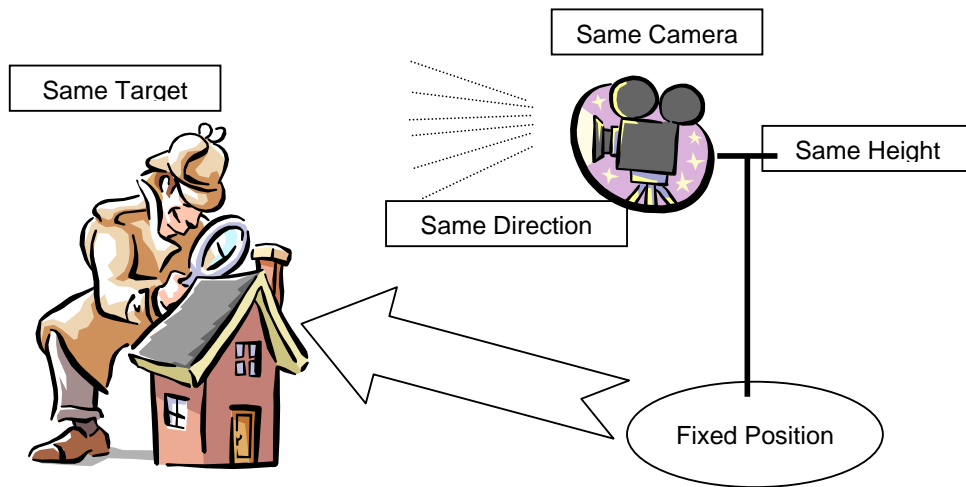
2. Five "S" Approach (5-S)

The 5-S approach, a base line for workplace improvement already recognized by Japanese managers are explained to QCC members. They are explained about the importance of the approach. They were asked to follow-up the following sequence to adopt the 5 - S approach to improvement.



3. Fixed Position Photographic Technique

The universally accepted visual tool, photographs are considered as one of the easiest and most appropriate method of data collection and presentation. The fixed position photographic technique is taught to QC members and motivated for jointly studying the workplace problems through observing photographs. The following picture shows the method to be adopted for fixed position photography. Taking a series of photographs adopting this fixed position photographic technique of a workplace helps to identify problems, analyze and check the improvements.



IV. Selected Cases Of Application

Cases of application of this SF5S approach of solving workplace improvement problems in three Nepalese industries are briefly illustrated here.

1. Mainawati Steel Industries P. Limited, Biratnagar

January 2000 [QMS and 5-S]

About 500 Km. Southeast of Kathmandu, in the industrial city of Biratnagar, under the umbrella of Vishal Group of Nepal, Mainawati Steel Industries P. Ltd. was established in 1997 with the objective of manufacturing, installing and marketing steel sheets, tubes, G.I. pipes, poles and various fabricated items. The management wanted to establish Quality Management System in their plant and acquire ISO-9002 certification. As QMS stands on two basic pillars- documentation and housekeeping, the management wanted to work on housekeeping job together with preparing standard operating procedures document.

For this, management cleared scrapes from the workplace, stacked all raw materials, work-in-process and finished products in appropriate places, and kept the factory premises clean and orderly. But within few weeks, all materials messed up as usual. This not only created frustration to the management but also obstructed the management to prepare the required documents in standard form and implement it to establish QMS in the factory. The management made tremendous efforts to press the workers to maintain discipline and act as per the prescribed procedure for about a year but all in vain. The management handed over this case to a consultant. The consultant enquired about this to some of the serious workers. The reply was "We cleaned not only the worksite inside the factory but also the surrounding areas, but how can we control all our co-workers when the managing director himself comes and urinate (sh!..) on the wall of the factory. How can we help this?"

The consultant suggested the management to implement human oriented workplace improvement program before going directly for preparing standard procedure and ISO certification. The program was initiated on 1st January 2000. A steering committee was formed incorporating Executive Director as a chairman and six department chiefs as members. Four groups were formed in (i) Commercial department, (ii) Black Pipe Production department, (iii) Galvanizing department, and (iv) Fabrication department to work as Quality Control Circle for workplace improvement. They were given training on 5-S approach of housekeeping. One camera was specially bought for this exercise and training given to all members of all groups for fixed position photography. Display boards for photographs were made in the conference cum training room.

After all this preparation, 16 positions (4 each by 4 groups) were identified (step 1 of QC activities) as crucial workplaces that need special attention for housekeeping. The actual observation and understanding the situation phase started with the individual group taking photographs of their selected workplaces with fixed position photographic technique from four corners, marking the cameraman's position and focus position by permanent paint. When all members of a group visited their workplace for photography, it was a remarkable scene with curiosity and motivation on everybody's eyes. These photographs were displayed on the board and brainstorming session initiated by each working QCC members for their respective workstations. They identified the causes of the housekeeping problem, designed the countermeasures and implemented by themselves.

Every week they met and improved the situation. Every month they took photographs of the area from the same position focusing the same object as before. They saw the difference. These photographs were displaced against the previous one and discussions held to identify any improvement required. These photographs served the purpose of data collection and visual presentation. Every members of the circle were motivated to see the improvement made by them. It took nearly six months and six sets of photographs to come to the near ideal situation envisaged by the management. Most important part of this was that the housekeeping job became sustainable, as it was designed and implemented by the workers themselves and not forced by the management. The managing director is now ready to hire consultant to build documents with these motivated workforce. He is now confident that he is going to get ISO-9000 certification.

2. Anupam Foods P. Limited, Pokhara

February, 1998 [TQM and 5-S]

About 200 Km. West of Kathmandu, in the tourist city of Pokhara, the well known father of noodles industry of Nepal, Mr. Phanindra B. Shrestha established one more new noodles plant, Anupam Foods P. Limited in 1998 with the objective of manufacturing and marketing instant noodles of high quality. The management wanted to implement Total Quality Management system in their plant from the very beginning of its operation. In the beginning there was no working procedure. All workers were fresh from agriculture farm having culture of working on the seasonal basis and flexible working hours. It was an arduous task for the management to prepare these workers to work regularly throughout a year with a fixed 8 working hours each day. The plant was operated with the help of only one technical person experienced in the noodles manufacturing. The consultant was hired to fix this problem.

The workforce wanted more training on technical work procedures rather than the tools and techniques of Quality Circle and TQM. At this stage, it was very hard to make them understand the concept of wastage, rework, idle time, productivity and quality.

So, in this case rather than starting with training on QC tools, the training on housekeeping or 5-S was given. A steering Committee was formed with the Chairman of the company and department chiefs. A pilot Quality Control Circle called Workplace Improvement Team (WIT) was formed with 10 interested workers. Production manager was also included on this team. First of all a discussion was held to identify the housekeeping problems. As the plant was new, it was comparatively clean. However, the organization of the workplace was not scientific and the efficiency of the workers was low. A photo session with fixed position photographic technique was conducted. The photo was displaced and discussion among WIP members was held to identify the problems of housekeeping. Immediately everybody noted that the wastage of the noodles is a big problem. How to solve it? All workers were new. The photo clearly shows that there were noodles wastages here and there, scattered all over the floor. No body wanted to see this much of wastage. The members decided to work on this problem.

The photographs motivated these workers to identify the cause of the problem. They measured the wastages. It was 5.1%. They calculated the loss. Oh! They have to reduce it. They began to work out carefully to reduce the wastage. The workers prepared manual to correctly handle the machine and materials in each processes from the raw materials to the packaging machines. They took photographs each month from the fixed position focusing on the fixed object. They met every week and decided to improve the process. They could reduce the wastages up to 1.4% within four months. Thanks to the fixed position photographic technique blended with 5-S approach and Quality Control Circles.

3. Godawari Marble Industries P. Limited, Kathmandu

October, 1996 [EMS and 5-S]

In the eastern part of the Kathmandu Valley, at the beautiful spot near Godawari Botanical garden, a marble quarry is situated. The Godawari Marble Industries was established about two decades back and is run by a renowned business group in Nepal named as MC Group. The objective of this plant is to explore the marble mine, process it and produce a fashionable marble slab to sell in the domestic as well as Indian market.

The industry was facing tremendous pressure from the nearby community regarding the environmental degradation caused by the plant. Being at the capital city, the government of Nepal was taking this matter very seriously and the management was really obliged to improve the environment condition inside the plant, quarry as well as in its peripherals. In October 1996, the management of the industry hired the consultant to make improvement in the situation. Most of the working people were illiterate and introducing any kind of system there was very difficult. The workers were indifference at the development of the plant.

The consultant assisted to form a steering committee, two cross-functional committees and four pilot quality control circles. The Circles were named as Clubs in this plant. Basic training on brainstorming, systematic problem solving, statistical tools and 5-"S" were given to the leaders and vice-leaders of these circles. The clubs started working with four themes, in which one was the housekeeping. There were eight members in the Club called "*Safai Pariwar*" who identified the problem at the Gang-saw area. They worked for six months and kept the area clean and safe to work. They adopted the fixed-position photography techniques to solve the environmental problems adopting 5-"S" approach.

Initially, the club members in a group took photographs of the Gang saw area from four corners, north-east corner, south-east corner, north-west corner and south-west corner. At all these corner point, the position where the photographer stands and the focusing object were marked by paints. Then, the members in their weekly meeting discussed to identify the problem and causes looking at these pictures. After observing keenly on the problem on the photos, root causes were identified, subsequently counter measures were identified, and actions were taken on it. After one month, second set of four photographs was taken from the original marked positions. The photos were displayed together with the first set and discussions held among club members. This time the improvement in the workplace was observed and many new ideas were evolved to improve the housekeeping situation of the gang saw area. After implementing new counter measures, again, third set of four photographs was taken after a month. The photographs showed clearly improvement. At the end of the third month, the fourth set of photographs of the area was taken again from the original marked position. When all four photographs were displayed in the same sheet of paper, all club members were excited to find the improvement.

The four exhibits attached with this paper show how this *Safai Pariwar* adopting SF5S approach organized and kept it environmentally clean the gang saw area in a short period.

- ❖ Exhibit-1: Photos of gang saw area from North-east corner
- ❖ Exhibit-2: Photos of gang saw area from South-east corner
- ❖ Exhibit-3: Photos of gang saw area from North-west corner
- ❖ Exhibit-4: Photos of gang saw area from South-west corner

The area that was covered with mud, stone scrapes, unorganized consumables inventory, tools and fixtures were now placed in order. To make it sustainable, a manual was prepared by the club members. The training on the manual was provided to all workers working in this Gang saw area by the *Safai Paariwar* Club.

This club became an ideal group in the plant, and 12 more clubs were formed for workplace improvement. Almost 75% of the permanent workforce is now involved in Quality Circle activities. Thus, to implement any system in the plant is easy and comfortable for management. At present, the organization is in the process of implementing EMS and acquiring ISO-14000 certificate.

V. Conclusion

The cases presented above suggest that the Human Oriented Workplace Improvement Program (HOWIMP) implemented with SF5S approach can produce benefits to all. And, this approach is gaining popularity in Nepal. The integrating concept of Small Group Activities (QCC), Fixed Position Photographic Technique, and 5-S approach is gaining popularity in Nepal. BISCONS, a development and management consultants is promoting this concept providing training, seminars and consulting services for implementation. The following benefits can be generalized after evaluating the cases briefed above.

1. Harmony among workers developed
2. Clean and safe environment created at the workplace
3. Workers motivated to make continuous improvement at the workplace
4. Workers cooperated to introduce improvement system at the work
5. Work efficiency enhanced due to organized workplace
6. Wastage, cycle time, scrapes and reworks reduced
7. Productivity, and thereby, competitiveness increased
8. Labour relations improved

[Paper presented by the author in International Quality Convention, June 2001 Chennai, India]

EXHIBIT 1

Photos of gang saw area from North-east corner



Date: 4 Dec. 1996



Date: 6 Mar. 1997



Date: 5 Jan. 1997



Date: 4 Feb. 1997

EXHIBIT 2

Photos of gang saw area from South-west corner

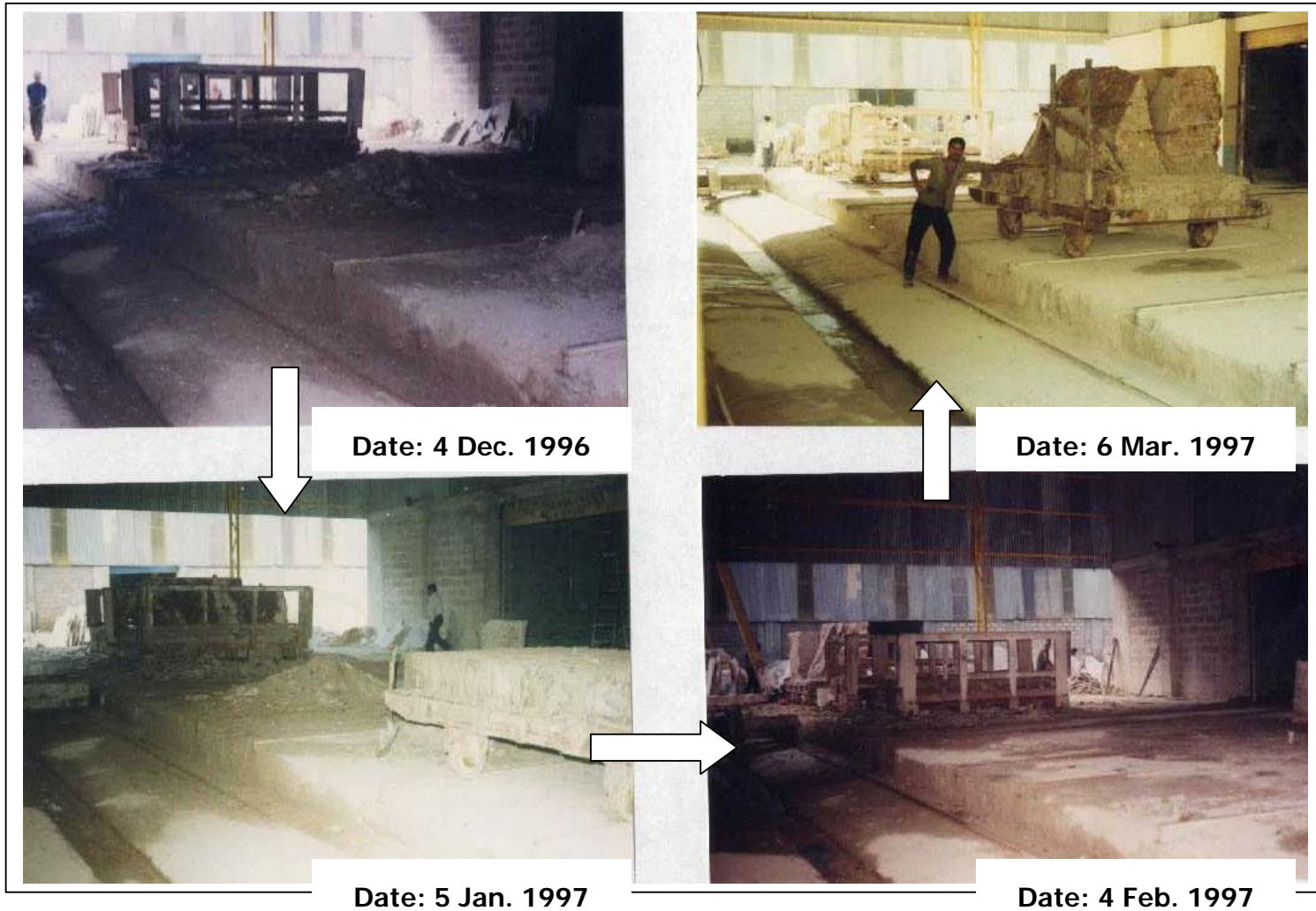


EXHIBIT 3

Photos of gang saw area from North-west corner

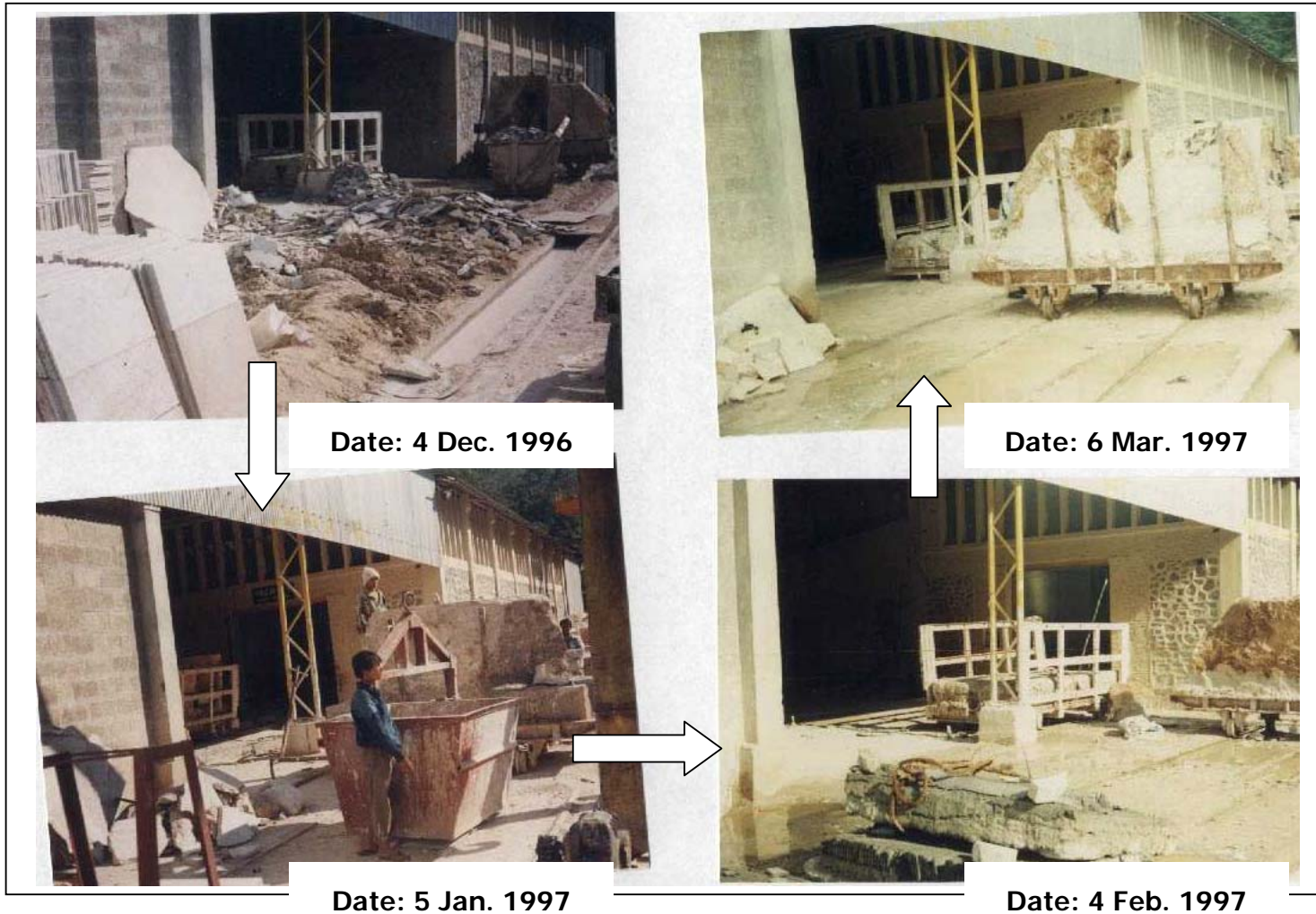
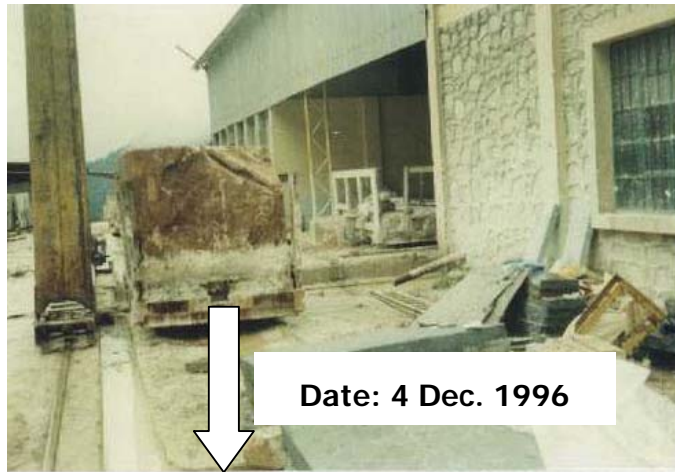


EXHIBIT 4

Photos of gang saw area from South-west corner



Date: 4 Dec. 1996



Date: 6 Mar. 1997



Date: 5 Jan. 1997



Date: 4 Feb. 1997