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**Workforce Participation in Occupational Health &
Safety Management at FMC Technologies Ltd,
Dunfermline**

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EXECUTIVE SUMMARY

OBJECTIVES

The aim of this research was to provide an initial insight, by means of a single case study approach, into issues surrounding the workforce participation (WP) in the management of occupational health and safety. Specific objectives were:

- To conduct an appraisal of the workforce participation initiatives at the case study site.
- To highlight good practice in workforce participation.

MAIN FINDINGS

1) General improvements in the management of occupational health and safety (OHS) at FMC Energy Systems (Dunfermline) have been ongoing for a number of years. Included in these changes was a greater emphasis on direct employee involvement. Further impetus for workforce involvement arose following safety audits, conducted in 1996 and 1998, and a health and safety climate survey, conducted in 2000, which collated the individual views of employees. Although the survey identified good levels of attainment in most aspects of safety management, it became apparent that there was a common perception amongst the workforce that communication and consultation on OHS could be improved. Subsequent initiatives aimed to enhance levels of communication and consultation.

2) Improvements in the level of workforce participation were made such that:

- in 1997 a total of 12 people (4% of the workforce) were directly involved in OHS management;
- in 2005 a total of 112 people (35% of the workforce) were directly involved in OHS management.

The levels of WP that pertain are exceptionally high and reflect a good level of commitment to the management of OHS across the workforce.

3) WP was implemented through a range of discrete mechanisms:

- A safety committee comprised of worker and management representatives from within the workplace.
- A total of 15 autonomous work teams that cover a wide range of health, safety or environment topics (e.g. behavioural safety, manual handling, risk assessment, safety audit).
- 'Health, Safety and Environment Alert Cards' for reporting of safety issues, near misses and recommendation for safety improvements. The level of participation is good with up to 30 Safety Alert cards submitted each month.

In addition, there were a number of means for communicating health and safety issues in a top-down manner. For example, OHS information was provided on all notice boards and archived information was stored on accessible intranet drives.

The range of WP practices used at FMC are reasonably commonplace within OHS. It was apparent, however, that a degree of innovation had been implemented with a view to raising the profile of health and safety, especially in an attempt to engage hard-to-reach members of the workforce. The company introduced:

- large (highly visible) plasma screens to display important safety messages or information;

- small cash/prize incentives to encourage wider adoption of the company's Alert Card system;
- a 'safety moment' (a short discussion of a current safety topic, intended to raise levels of awareness) is introduced at the beginning of all meetings, regardless of the focus of that meeting.

4) Within the available research literature there is relatively little guidance on the practicalities of maintaining participation in a functionally effective manner. Drawing on insights gathered during this study we outline a number of the antecedents for maintaining effective participation.

(i) It is widely recognised that in order to be effective WP needs a supportive milieu in which to function. The present study provided further evidence that effective WP in OHS was based on support and commitment from across the company hierarchy:

- The management team acknowledged the importance of a clearly stated corporate policy on health and safety and / or employee involvement. Although the motivation for improved levels of WP originated locally, the presence of a supportive corporate culture was considered to provide added impetus.
- Day-to-day evidence of management commitment to health and safety is widely apparent, e.g.: the manufacturing manager is the chair of the health and safety committee; members of the management team are present on a number of the OHS work teams; employees commented on the commitment of the management team; and, the budget for health and safety is sufficient to provide a good level of health and safety training for workers.
- A number of interviewees highlighted the importance of a supervisor responsible for monitoring the progress of work teams. In the case of the current study, the production manager and the health and safety officer took direct responsibility for ensuring that work team interest and progress was maintained. Throughout the management team there was a recognition that the advancement of WP requires careful engagement and encouragement of staff. It was felt that there are no quick fixes as outcomes vary in different contexts.

(ii) Securing a degree of worker commitment to WP initiatives is understandably imperative, but in many cases cooperation is not always forthcoming. The interviewees identified ways in which the levels of worker commitment to WP can be instigated and maintained:

- Participants should be carefully selected. Individuals that have a keen or vested interest in health and safety topics have the highest potential to become committed participants.
- The goals that a work team is set and the time frame in which they are expected to deliver those goals need to be carefully considered.
- Although it was recognised that management should provide clearly defined goals, interviewees identified that work teams need some degree of independence, autonomy and access to decision-making.

Acknowledging that levels of interest can change, and to avoid employees feeling that they are committed to initiatives beyond their natural period of interest, team members are asked at regular intervals (e.g. annually) if they wish to continue in their participatory role.

5) Interviewees identified the following key features of the company's health and safety strategy had the potential to improve social learning, industrial relations and channels of communication:

- widely available health and safety information and statistics (e.g. via team briefings, intranet and bulletin boards);
- an open policy to inclusion on health and safety work teams;
- ongoing support and involvement of management;

- the dedication of resources to OHS initiatives and training.
- 6) Management representatives considered that WP in OHS management brought about a number of business benefits. It was considered that participation contributed to improvements in health and safety performance and productivity. In addition, the management considered that WP can lead to enrichment of the work experience, higher motivation and performance, and improve commitment of all parties to the commercial success of the enterprise.

RECOMMENDATIONS

There is a need for further detailed research into employee involvement in the management of OHS. Although this single case study has provided valuable insights subsequent studies should aim to explore the issues in greater depth.

- Research from the current study is based on the views of only a small number of respondents. There is a need to validate these findings on a larger sample of companies to establish the extent to which they are generalisable to other contexts.
- Subsequent research should generate insight into the safety culture (risk attitudes, norms and behaviour) at the company level and its relation to levels of workforce involvement in the management of OHS.

1 INTRODUCTION

1.1 BACKGROUND TO WORKFORCE PARTICIPATION

The Health and Safety at Work Act (HSW 1974) lays down general principles on consultation and representation of employees. These rights have been increasingly accepted, at least in principle, and changes to the health and safety regulations, between 1977 and 1996, established a legal framework which imposes a duty on employers to provide information, enable consultation, and to provide assistance for representatives of their employees. The Safety Representatives and Safety Committees (SRSC) Regulations 1977 came into force in October 1978. However, given their focus on the rights of recognised trade unions to appoint safety representatives, and the absence of trade union representation in a growing number of workplaces, the Health and Safety (Consultation with Employees) Regulations 1996 (HSCE regulations) were introduced, requiring that employers consult with employees not covered by representatives appointed in accordance with the SRSC regulations.

Worker participation in organisational decision-making is widely considered a positive means of improving power equalisation and an important dimension in democratically orientated workplaces. The research literature on related topics offers broadly positive findings concerning the effectiveness of workers' participation in occupational health and safety management (Shearn 2004; Walters 1996). The many justifications cited include: participation of the workforce enables fuller debate; the provision of enriched available information base; acquisition of an increased sense of safety initiative ownership; positive impact upon both quality and productivity at the workplace; and, potential improvements in industrial relations.

Case studies have repeatedly identified the benefits of workforce participation (WP) and devolving day-to-day responsibilities and decision making to employees (Alder et al 2000; Bell & Phelps 2001; Walters et al 2004). Perhaps based on this realisation, evidence is emerging of a trend toward inclusive approaches to work organisation across the UK's industries. In addition, there has been a general shift to more decentralised or delayed company hierarchies, with an emphasis on focused work teams tasked with solving immediate problems.

Encouraged by workforce evidence, recent Health and Safety Executive (HSE) campaigns have highlighted the importance of WP in the management of occupational health and safety. For example, WP and consultation is a key element of the Health and Safety Commission's '*Strategy for workplace health and safety in Great Britain to 2010 and beyond*'. Despite the presence of regulatory guidance on the employee consultation, the content includes no specific recommendations regarding process and facilitation. The following report can be viewed as support for regulatory guidance in that it provides valuable case study information and identifies good practice within a company that have been recognised as a good performer in the management of health and safety.

1.2 BACKGROUND TO FMC TECHNOLOGIES LTD

FMC is an international company with 32 manufacturing plants divided between a total of 16 countries. The company designs, manufactures and services sophisticated systems and products for customers through its Energy Systems, FoodTech and Airport Systems businesses. Good health and safety performance is a core value of FMC Technologies. Their health, safety and environment vision, policy, strategy and management systems identify public and occupational health and safety as central concerns of business performance and improvement. For example, the health, safety and environment policy states:

“FMC Technologies accepts our responsibility to protect the environment and the health and safety of our employees, their families and the public. Health, safety and environmental performance are core values of the Company and will be managed as an integral part of our business to benefit employees, customers, neighbours and stockholders. All of FMC Technologies’ employees are responsible for the Company’s achievement of continuous and measurable improvement”.

The operations in Dunfermline employ 326 staff and 57 contractors (located on site). Recent business growth has meant that more than fifty new employees have been recruited over recent months. The current annual turnover is \$110m, with an annual profit of approximately \$10m. The main business activities are the manufacture and design of wellhead equipment for the oil mining industries. Ninety-five per cent of sales are to the sub-sea market, with eighty per cent of goods for an export market.

Working within the context of a well-defined corporate lead on health and safety, FMC Energy Systems (Dunfermline)¹ set about to improve their safety performance. The upshot of this, over the past seven years there has been an increased level of activity in occupational health and safety management. Although this new revitalised strategy closely shadowed corporate recommendations for risk management, inspiration was derived from a number of external sources of guidance. Notably, the company has drawn on guidance provided by RoSPA² and HSE³. Whereas guidance can provide a useful starting point, it is apparent that the company has identified a need to develop its own risk management practices which reflect the range of contingencies that typify the local work organisation and activity. A considerable amount of time and effort has, therefore, been committed to the development and understanding of risk management. Acknowledging that participation can promote and strengthen social learning, during this period of heightened activity the workforce has been actively engaged in the development of better risk management practices.

Although the main focus for the current research is the nature of WP at the case study site, it was apparent that all health and safety arrangements were systematically managed. A brief description provides useful contextual information. The operations manager and the manufacturing manager have the major responsibility for health and safety. The occupational health nurse, the manufacturing manager and the health and safety officer take care of day-to-day health and safety management responsibilities, such as monitoring of management systems and advising staff. The regular health and safety committee meetings were used as a means to track progress, monitor events and generate recommendations for future strategies. A range of specific health and safety responsibilities (e.g. routine risk assessment and environmental monitoring) were delegated to supervisors, safety representatives, individual workers and work team members. In addition, systems were in place to enable workers to report hazards and incidents and to ensure that remedial action is taken.

Due to the high amount of machining, turning and assembling of parts, the most common workplace injuries are cuts and abrasions. Personal protective equipment and guarding reduce the risk of higher accident rates and prevent the occurrence of more serious incidents, such as

¹ From this point on we will refer to FMC Energy Systems (Dunfermline) as FMC.

² In the case of RoSPA guidance, the company implemented their Quality Safety Audit and actively engaged in a number of award schemes.

³ In the case of HSE guidance, the company carried out the HSE Safety Climate Survey and follow the approach to systematic health and safety management set out in the publication *Successful Health and Safety Management (HS(G)65)*.

entanglement or entrapment. Other risk factors, common amongst engineering plants, are noise, vibration, manual handling, working at heights and moving workplace transport.

With a view to improving levels of accident detection and abatement a number of health and safety initiatives have been implemented over recent years, for example:

- The Dunfermline site has devised its own 'Health, Safety and Environment Alert Card' system. This is a formal reporting system through which all employees can identify safety issues, near misses and provide recommendations for safety improvements; responses are provided within a given time frame (see below).
- The company implemented the Japanese '5s' (sort, systematise, sweep, standardise, and self-discipline) technique for better workplace organisation and management; it is widely recognised that the 5s technique can improve productivity and improve health and safety performance (Wright & Collins 2002).
- A mentoring system for vendors (currently >1000 companies on the supplier list): The intention is to allow vendor companies to learn from the experience of FMC in developing effective health and safety management systems.
- Following a lead given by BP, a 'safety moment' is introduced at the beginning of all meetings, regardless of the focus of that meeting. A safety moment is a short discussion of a current safety topic, intended to raise levels of awareness.

The company has a good track record in health and safety management and has won a range of awards that demonstrate a high level of commitment to good practice. In May 2004 FMC Energy Systems, Dunfermline, were awarded the prestigious Sir George Earle Trophy for excellence in health and safety.

1.3 AIMS & OBJECTIVES

The aim of this research was to provide an initial insight, by means of a case study approach, into issues surrounding the workforce participation in the management of occupational health and safety. Specific objectives were:

- To conduct an appraisal of the workforce participation initiatives at the case study site.
 - To highlight good practice in workforce participation.

1.4 METHOD

The research consisted of a single case study of workforce participation activities at one company site. In order to gather a broad insight semi-structured interviews were conducted with a range of personnel (from senior management to operational staff on the shop floor). The semi-structured approach to data elicitation has been widely demonstrated as offering a potentially rich and valuable insight into individual's experiences and their opinions. It allows the researcher to explore issues about which little is already known, whilst maintaining a desirable level of consistency between interview discussions, thereby allowing comparability between responses. Semi-structured interviews, while based on predefined questions, have the advantage of maintaining flexibility for exploring issues which spontaneously arise during the course of the interview process.

Respondents in this study were selected on an opportunity basis. While there is no transparent reason for the views they expressed to be unrepresentative, it must be borne in mind that the sample size was by necessity small and recruited on a voluntary basis. This approach was predicated by the prevailing resource constraints combined with the need for depth of

investigation in a study of this type. All interviewees have first hand experience in some aspect of the company's WP activities. In all cases the interviewees were able to provide both a general and personal insight into WP. In total seven interviews were conducted. Discussions were audio-taped with permission of those present.

The interview schedules were designed to address a number of issues perceived to be relevant to good practice in WP:

- perception of what constitutes WP in health and safety management;
- the extent to which WP informs the safety management decision making;
- the techniques for maintaining good levels of WP;
- the nature and extent of communication across the workforce;
- the barriers to WP, and effective means for overcoming barriers.

The transcript data collected during interviews with employees were coded and categorised by means of a thematic analysis; the analysis followed conventions outlined by the methodology commonly conceptualised as 'grounded theory' (Strauss & Corbin 1998). This approach provided a means of identifying a set of core issues while providing a framework against which the feedback from individuals and groups could be compared and contrasted.

In addition to the interviews, the researcher was taken on a walk through the site to gain an appreciation of the workplace and the work activities.

2 RESULTS

2.1 THE MOTIVATING FORCES BEHIND WORKFORCE PARTICIPATION

Despite the presence of legislation which imposes a duty on employers to consult with employees about workplace hazards, it is apparent that variable patterns of adoption and implementation exist. Although legislation provisions provide a useful framework for building agreements concerning WP, it is rarely the single motivating force for instigation and wider proliferation⁴. Indeed, with respect to FMC, the presence of the legislative framework was acknowledged, but was considered a relatively minor influence upon the nature and extent of WP.

Unquestionably, FMC Technologies' Health, Safety and Environment corporate programme provided a positive stimulus. Nevertheless the motivation for improved levels of workforce participation was derived from an understanding at the local level that employees should be directly involved if improvements in the health and safety performance were to be realised. Beginning in 1996, the company - encouraged by the manufacturing manager - undertook an overhaul of its OHS management practices and processes. Concerned that the safety committee alone was not an efficient means for managing day-to-day health and safety, inspiration for ways forward were sought.

With a view to gaining a company-wide view of existing OHS performance a RoSPA Quality Safety Audits were conducted in 1996 and 1998. This provided initial stimulation to broaden OHS activities. The focus on employee involvement gathered pace following the execution of an Health and Safety Executive Safety Climate Survey in 2000. The survey, which collated the individual views of employees, provided a perceptual profile of the current safety climate⁵. Although the audit identified good levels of attainment in most aspects of safety management, communication and consultation were identified as areas in need of further attention. One manager provided the following description:

"The HSE committee ran the climate survey. ... There was a lot of comments that came back ... one of the areas it was scathing was communications. So we made a commitment to try and communicate more and to use a lot of different mediums".

Both studies are recognised as being amongst the principal motivating forces for introducing greater levels of employee involvement and consultation in health and safety:

"So, [using the RoSPA audit and the HSE survey] we had a real road map that told us on which areas to work. ... It became very apparent we needed to get more people involved, not just on the committee but actually doing some of the hands-on stuff. ... We spent a long time, probably two or three years, building what we call the foundations, building a lot of the procedures and involving people that, you know, could do bits and pieces".

Having identified key health and safety concerns through the safety audit, discrete tasks were identified and appropriate forms of participation and consultation were sought. The health and safety measures that are in place today evolved over a number of years, with many of the outcomes reached on a carefully managed trial and error basis. Shortly after the survey health

⁴ A recent postal survey of UK companies found that only a minority of employers were aware of Regulations affecting employee consultation on health and safety (Hillage et al 2000, 69).

⁵ Safety climate (or culture) is a short-hand term used for describing the set of people's shared beliefs, norms, attitudes and expectations within a given organisation that relates to minimising the exposure of employees, managers, suppliers and members of the public to dangerous conditions.

and safety was included in employee's personal annual objectives and reviewed as part of the employee appraisal system.

Although the climate survey provided a valuable impetus, the willingness to improve the health and safety performance was deep-rooted throughout the company. Good levels of commitment from both management and workers have been an essential part of the success (see below). The sustained level of voluntary workforce involvement provides ample evidence of the widespread motivation for participation throughout the workforce. The Trade Union⁶ provided additional impetus and support, including employee support and training as well as independent advice on good health and safety practice.

2.2 THE FORMS OF WORKFORCE PARTICIPATION

Over recent years there has been a substantial increase in the number of FMC workers formally involved in OHS management:

- in 1997 a total of 12 people (4% of the workforce) were directly involved in OHS management;
- in 2004 a total of 112 people (35% of the workforce) were directly involved in OHS management.

For the most part, employee involvement includes direct involvement through work teams, committees or formal safety reporting systems.

2.2.1 The Health, Safety & Environment Committee

At FMC the health, safety and environment committee is the main forum through which the management and workforce formally discuss and negotiate health and safety matters. The committee has responsibility for overseeing all health and safety matters. It comprises a mixture of management representatives (usually two), trade union representatives and other workforce representatives (e.g. members of health and safety work teams and company departments). The manufacturing manager is the chair of the committee. The size of the committee can vary - depending on the availability of staff - but it generally involves 12 to 17 representatives from management and the workforce. It is considered that meetings must be held once a month, as this ensures regular feedback and allows sufficient time to initiate any actions or recommendations that arise. Before each committee meeting an agenda is prepared subject to being circulated to members and open to revision. A typical meeting agenda will include discussion of safety statistics; safety reporting (see safety alerts below); work teams' progress; legislative changes; risk assessments; and, new objectives.

Recruitment to the committee meetings is co-ordinated by the management team. There are good levels of participation involving a wide range of employees from across the workforce hierarchy. Previous studies have identified the importance of having management present, to provide approval of any proposed changes, and to provide some degree of legitimacy for the committee (Leopold & Beaumont 1983; Walters & Gourlay 1990). Amongst the interviewees there was a general consensus that management support at committee meetings was valued. In addition, it was identified that the broad level participation enabled the various stances (i.e. management, workforce and trade union) to be brought into some degree of alignment.

Although the research did not involve observations of the committee meeting process, it became apparent from the interviews that there exists amongst those involved a sense of ownership and participation, and constructive working relationships:

⁶ The recognised trade union at this site is AMICUS. There are five trade union shop stewards, all are appointed as safety representatives and sit on the safety committee.

“... when it comes to health and safety, really, everybody feels as though they can just openly speak. It’s not going to get held against you. You are not going to be earmarked as a troublemaker. It is really open. But I think communication is like that through the whole workplace; it’s that kind of company. We’re in this climate for changing things. You are looking at different methods of doing things. And management is right behind this”.

Similarly, the following point of view was representative of the interviewees:

“[Committee members] sometimes have a different opinion. I think it would be a failure if we didn’t have people throwing in ideas [during meetings]. I mean, the management is really open. They take it on the chin, and it’s not taken personally”.

The committee arrangements are reported to be commonplace and straightforward: the committee members define what is topical, what issues need to be shared, what needs to be done, by whom, what resources are needed, what one has to offer, what one expects from others, and who has the power to take what action. Committee discussion proceeds and a process of defining, interpreting, and acting in response continues until arrangements are reached.

2.2.2 Bottom-up communication

Bottom-up participation is intended to inculcate upward problem solving and fulfil a number of objectives, such as to increase the stock of ideas within an organisation, to encourage self-determination and autonomy and to encourage co-operative relations at work.

1) At FMC the most widespread mechanism for bottom-up communication that starts at the shop floor or employee level is the work team⁷. There are 15 different work teams; each team is organised around an important health, safety or environment issue⁸. Participation on this scale demonstrates an impressive degree of motivation and commitment from both the workforce and the management.

Work teams vary in size but they tend to have a core of about 4 or 5 members that carry forward the bulk of the work. All members, when available, will participate in work team meetings, team activities and provide general input to help guide a work programme forward. Although some variation does exist, meetings tend to be held on a monthly basis. The arrangements for the meeting are similar to the safety committee; the one notable exception is that a member of the workforce chairs the meetings. Members of the management team are present in a number of the work teams. Where management are not present on the team, the main mechanisms available to work teams for reporting to the management is via the safety committee and through formal meetings with the management team.

2) ‘Health, Safety and Environment Alert Cards’ are available to employees for reporting of safety issues, near misses and recommendation for safety improvements. Individuals can expect a response within a given time frame, and where appropriate a resolution to the problem. All

⁷ Work teams have functionally similar attributes and outcomes to ‘tool box talks’ and quality/safety circles. The preferred term at FMC being work teams. These forms of communication are premised on democratic notions of participation.

⁸ The full set of teams is: Defibrillator Team, Start Team (behavioural safety), Monthly Audit Team, Machinery Guarding Team, Green Team, HSE Awareness Team, Fire Marshals Team, Risk Assessment Team, Manual Handling Team, Health promotion Team, COSHH Team, RoSPA Audit Team, First Aiders and VDU Assessment Team.

employees are encouraged to participate in the Alert scheme. To promote involvement, all employees that submit a report through the card system are entered into a monthly 'prize draw'; prizes include book tokens, money, etc. The level of participation is good with up to 30 Safety Alert cards submitted each month. Based on the level of employee participation, it is widely considered that the Safety Alert scheme has been a success. Other factors that have added to its success are the simplicity of the design and wide availability of the cards throughout the workplace. Ultimately, the scheme has raised levels of involvement, improved awareness and brought about improvements in the health and safety of the workplace.

3) As mentioned above, the company conduct a number of health and safety audits. Audits frequently include attitude surveys - a form of wide-level 'participation'. Although the level of input is characteristically determined by the design of the survey process, feedback on this scale can act as a valuable means of gaining insight. It is apparent that FMC pay careful consideration to the findings and attempt to address any 'problem areas'. Where follow-up and investigation activities are brought to the attention of the workforce, wide level acceptance and support has been gained.

4) Direct, informal communication between workers, managers and their health and safety advisors is encouraged throughout the company. For example, the management publicise that an open door policy exists, such that employees can feel free to approach management without a prior appointment to discuss any work related issue.

2.2.3 Top-down communication

For practical purposes, the level of involvement on safety committees and work teams has to be restricted. It becomes necessary, therefore, to address the workforce in a top-down manner with the intention to instruct or provide information. In its strictest sense top-down communication does not meet the democratic aspirations of many WP schemes. Nevertheless, top-down communication is arguably an efficient manner of engaging the workforce and conveying messages that require particular actions on the part of the employee. It can also provide a foundation upon which participation can be built.

1) Whilst on a walk through the site it became apparent that health and safety notice boards and large plasma screens are used for keeping the workforce informed about health and safety. The notice boards are regularly updated with important information about meetings, safety requirements and accident statistics. Interviewees acknowledged that unless employees are already engaged in the management of health and safety there is a risk that they may walk past notice boards without paying a great deal of attention. The introduction of highly visible, large plasma screens around the workplace was one attempt to draw people's attention and publicise important health and safety information.

2) For employees that have access to the company intranet, all company related health and safety information can be viewed on-line. The intranet includes archives of committee meeting notes, presentations, safety information, regulatory guidance, etc. It was reported that the information is regularly updated with notifications being sent to employees:

"... the health and safety committee just has an outstanding way of publishing things. They send out minutes and notifications through e-mails then you can get it on intranet sites. So any time I want to go in to health and safety statistics, whether I want to find out the minutes of the last thing that is going on, I can go in find it that way".

As with all sources of information there is a risk that employees do not find the time to familiarise themselves with regular updates. However, interviewees indicated that levels of

awareness were generally good as there exist a number of other means for communicating with the workforce (e.g. plasma screens, department meetings).

3) During interviews there was relatively little discussion of the use of team briefings (conducted by senior managers, line managers or safety representatives) as a means for disseminating of health and safety information. Given that they do exist, the reason for this outcome remains uncertain. It could be that intermittent briefings were not current in the memory and thoughts of the interviewees. Most participants did, however, refer to the practice of introducing a 'safety moment' (see above) at the beginning of all company wide meetings. This was considered to be an effective way of educating employees and an implicit way of enforcing the message that good health and safety management is relevant at all times.

4) There are a number of other sources of OHS information. Notably, the company has an Occupational Health nurse present on site. In addition to regular check-ups, appointments and informal meetings can be arranged at the discretion of employees.

2.3 DEVELOPING & MAINTAINING WORKFORCE PARTICIPATION

Despite participation being a fundamental aspect of any organisation, in order to be successful participation has to be carefully managed. Outcomes of participation can be less than optimal when groups do not share common goals, when conflicts and disagreements are not abated and when supportive relationships are not maintained. Furthermore, it is reported that participatory processes (e.g. work teams, quality circles, etc.) are most likely to fail during the early stages of development (Cotton 1993 p.76). Despite the apparent need for information about the practicalities of maintaining communication in a functionally effective manner there is a lack of guidance reported in the OHS literature. Although attention should be drawn to the difficulties of making any hard and fast rules concerning the management and composition of participatory processes, valuable lessons can be learned from individual case studies. As already identified in the discussion above, FMC have developed a good level of workforce participation. Drawing on insights gathered during this study – in some instances corroborated by the WP research literature - we outline a number of the antecedents for maintaining effective participation.

2.3.1 Levels of Commitment

It is widely reported that the levels of employee and management commitment are important factors that impact on the effectiveness of WP initiatives. The following discussion goes some way to illustrate the level of commitment within FMC Technologies. In addition, based on interview evidence we provide a number of broader insights into ways of strengthening levels of commitment.

2.3.1.1 Corporate Level Commitment

In large companies much of the impetus for organisational practices can originate from the highest management level, and research indicates this can be especially the case with respect to the management of OHS. As outlined above, FMC Technologies have a clearly defined policy on health, safety and environment which originates from the highest echelons. Further evidence can be found in a recent FMC Technologies' health, safety and environment annual report ('HSE focus in all we do', 2004): the report demonstrates the level of commitment to health and safety at the corporate director level. Within this publication the CEO states:

"At FMC Technologies, we believe that achieving outstanding performance is the right way to do business. ... I assure you we will be diligent in our commitment to developing principles and practices for achieving and maintaining world-class [health, safety and environment] performance".

In addition to comments relating to the general health and safety philosophy, the report identifies the importance of the teamwork and participation of all employees. It is recognised at the highest level that WP is key factor in good health and safety practice. The management team at FMC identified that they were positively encouraged by related corporate communications; for example:

“the principles were accepted throughout the company, and we just started to build the involvement. I am not so sure that that’s a lot different than other company locations the way it’s happened, but it’s the combination of the corporate culture and [our] will to do this”.

2.3.1.2 Management Commitment

As is demonstrably the case with all organisational initiatives, the success of any workforce participation initiative rests upon the tangible commitment of management. All interviewees identified that much of the motivation behind WP has originated from the management team. The manufacturing manager was singled out as the major motivating force behind recent improvements in health and safety management, and an arbiter of improved levels of WP.

Day-to-day evidence of management commitment to health and safety is widely apparent. The manufacturing manager is the chair of the health and safety committee. Members of the management team are also present on a number of the OHS work teams. In addition, (see below) the budget for health and safety is sufficient to provide a good level of health and safety training for all staff.

A primary reason for gaining management commitment is that they play a key role in authorising any changes or recommendations that might transpire from employee participation initiatives. One manager identified the level of management commitment to resource allocation for work teams and the initiatives that transpire:

“I carry the budget for [health, safety and environment], so from a monetary point of view then they come back to me, bounce the ideas. Sometimes we talk about if this is really what we want to do, where we want to spend the money; then the answer is whether they can do it. Generally speaking the budgetary side of things is fairly small fry for most of these teams. ... I have never been questioned budgetary about anything we’ve asked for, ever”.

Mentoring and monitoring progress

The company’s developmental, learning process with respect to WP has generated a number of management support practices. Notably, it was realised that someone needs to take the soundings for group morale and motivation. Given their responsibility for health and safety the manufacturing manager and the health and safety officer closely monitor the progress of work teams. For example, levels of attendance will be scrutinised and feedback will be sought from participants. In instances where interest begins to fade a member of the management team will become directly involved.

Providing a supportive atmosphere has been found to be an effective way of stimulating group creativity and driving progress forward⁹. Furthermore, management support is a good way of reinforcing a genuine commitment from managers and identifying that WP is high on the organisational priority list.

⁹ It is commonly considered that when engaging with work teams care should be taken to observe any group sensibilities. For example, managers should aim to avoid accusations of interference.

2.3.1.3 Worker Commitment

It is understandably the case that the success of WP initiatives will depend on the commitment of workers. For example, the research literature indicates that participation will not be effective where employees do not desire a participatory role, are not committed to organisational and OHS goals, or do not perceive the initiative to be within their sphere of interest. Interview discussions provided related evidence: interviewees identified that employee support was not always forthcoming. Through the company's experience of developing work teams and other participatory approaches they were able to provide a number of useful insights and recommendations¹⁰. The interviewees identified four general ways in which the levels of worker commitment to WP can be bolstered¹¹:

1) Careful selection of the participants

During the early stages of development FMC's (already existing) safety committee provided a source of interested participants and a good foundation on which to build subsequent participatory initiatives:

"[At the initial stages] we recognised a lot of good people were wanting to do the right thing on the committee and that's why it was very easy to say we can take this a bit further".

Engaging the wider workforce presented new challenges. In the first instance, participation was encouraged on a voluntary basis. Employees were encouraged to join work teams or actively engage in OHS management in other ways. Where interest was not immediately forthcoming, employees that have demonstrated previous interest in a safety topic, or those employees that might have a vested interest, were asked to consider some level of involvement¹². In most cases, individuals with a keen interest were identified:

"... so apart from finding people that are interested, you need somebody that's got the passion. I keep using that word, but that is what they have. Somebody that is prepared to do a bit more".

In all cases, employees are encouraged to participate on a level that suits their interests and needs. Ultimately, the members of the group have to be motivated by its aims and committed to its objectives.

Acknowledging that levels of interest can change, and to avoid employees feeling that they are committed to initiatives beyond their natural duration of interest, team members are asked annually if they wish to continue in their participatory role.

2) Realistic goal setting

The goals that a work team is set and the time frame in which they are expected to deliver those goals need to be carefully considered. One manager outlined the management team's approach to goal setting:

"In setting expectations for a team, we are realistic on what they can achieve in the first three months or six months. ... You need to let them run at the speed that they want to run at. But it's important to touch back because if it's the morale falling, or

¹⁰ Within the worker participation in occupation health and safety literature, few authors provide any recommendations on approaches for improving levels of commitment.

¹¹ The opinions of those not directly involved within committees or work teams were not addressed during this research. Arguably, these points of view could have broadened our understanding of disincentives to involvement and commitment.

¹² The research literature identifies that some work teams or councils have been criticised regarding the detailed machinery of election and their subsequent 'representativeness'. When instigating WP initiatives related issues should be borne in mind.

*if it's not going as quickly, then, if you don't check and pick them up, it will just fall.
... Which is just about good management, you know".*

Understanding group dynamics can increase the chances of obtaining desirable consequences from the group. When managers understand the group dynamics in organisations, they can use the group more effectively to accomplish the goals of the organisation and of the individual employees.

3) Worker autonomy and influence

Research evidence indicates that workers that have a desire to be involved respond positively to being positioned such that their influence can shape or veto decisions. The findings from the current study provided evidence in support of this contention. Although it was recognised that management should provide clearly defined goals, interviewees identified that work teams need some degree of independence, autonomy and access to decision-making.

Individual members of the work teams and committees indicated that they do feel secure in communicating information and providing suggestions as to what needs to be done. The members mentioned that work teams demonstrate greater commitment and gain wider level acceptance where they have a degree of autonomy from the management. The following view was representative of the employees:

"It's all down to management. It all depends on how management react to the information that these teams give them. The management need to be seen to acting on the information that they are given. Not just from the work group perspective, but from the employees, because we're wanting them to actively take part. They need to see that something is taking place as well. I would say that we have got that in place here, the management structure is very good".

Similarly,

"We want the perception to be that it's driven from the bottom and not from the top. That's what we feel, it would be better, [more willingly] taken on by the employees. Cos, as soon as management get involved, it's 'they're trying to nail me, they're trying to get me to do this'".

4) Participation builds commitment.

A number of interviewees identified a further, closely related issue: participation has the potential to foster commitment to concomitant health and safety matters. As work teams develop, an individual's interest and commitment can become aligned with the emerging aims and objectives of the team. The following response to questions about employee involvement was representative:

"If you get people more involved they are more likely to go along with you. If you're not involved, you feel left out. If you impose something from above, they shut the door".

The general belief was that through the process of involvement individuals could gain a feeling of control which is manifested in greater job involvement.

2.3.2 Training

The effectiveness of participation will be closely tied to the levels of the participant's knowledge and know-how. The criteria for inclusion, therefore, emerge based on participation in particular social settings, and will generally be predicated on technical safety expertise or experience-based expertise. Research findings suggest, therefore, that in many cases, training is a prerequisite for participation. Furthermore, training has been found to influence participant's commitment to make health and safety changes.

FMC provides training to enable fulfilment of work team tasks. For example, manual handling courses were provided for members of the Start (behavioural safety) Work Team. The expertise that they acquire enables them to fulfil their safety-monitoring role. Without appropriate training individuals identified that they would not have the requisite experience and skill, nor would they feel confident about advising colleagues.

One worker recognised that training and education can have an important part to play in improving commitment to health and safety:

“ I think the more information that you give people, or the better educated they are with health and safety, the more they are ready to accept. During the time that I’ve been here, I’ve received training, etc., bla, bla bla. If I hadn’t received that type of education I don’t know whether I would have the interest, and drive for safety as I have. A knowledge of why you’re putting something in place. To me that’s how you progress”.

2.4 COMMUNICATION BEYOND THE SAFETY COMMITTEE & WORK TEAMS

A common criticism of committees, work teams, and representatives is that they can become isolated from the workforce that they are intended to represent. In instances where the work teams fail to communicate their plans and activities, or where ideas are not tested on the wider workforce, the potential benefits of safety groups can be diminished. Equally, the effectiveness of work teams is dependent upon communication with managers.

To avoid isolation and with a view to securing wide level acceptance communication beyond the work team or safety committee is maintained through two main channels of communication:

1) The management-workforce interface

Work teams reportedly maintain regular communication with the management team. As mentioned above, the management play an active role in monitoring the progress of work teams. This has ensured that two-way flow of discussion is maintained. The safety committee meeting also provides periodic opportunities to discuss progress and future objectives.

“It’s important the work team has a point of contact, in our case the safety manager, this helps things to work well. ... The management are very good here. If you come up with an idea and a justification they will listen to you, and enable the team to move the project forward”.

In addition, the management’s open door policy is reported to encourage better communication and more open industrial relations. Management’s awareness of work team activities provided evidence that communications were maintained on a regular basis.

2) The workforce-work team interface

As stated above, communication from the work teams and safety committee to the workforce is conducted through a number of channels. Safety representatives and work team members can provide direct and informal communications with non-member workers. In addition, regular worker briefings (e.g. team briefings) are used as opportunities to raise awareness of work team activities.

Despite their efforts to communicate health and safety issues feedback from the workforce frequently identifies that a minority of staff consider communication to be lacking. In many respects the apparent negative feedback about communication has prompted the management and safety representatives to seek new effective means of communication (e.g. the introduction

of plasma screens, monthly communication packs, etc.). Overall, the company recognised that communication of work team objectives is required if they are to gain wide level support. Of the workers involved in this research there was a consensus that the level of communication between committees, work teams and the mass of employees is sufficient, although in some instances the workforce would be required to take the initiative and to seek for themselves the information that was available. Despite considerable efforts, interviewees opined that amongst non-work team employees, levels of awareness varied depending on an individual's interest or involvement with work team activities.

2.4.1 Industrial Relations

Within all organisations there is a potential for conflict that may be manifested in argument, competition and non-co-operation. For the most part, contemporary, progressive management practices aim to overcome related barriers through the explicit provision and development of collaborative, consensual processes in the workplace. In those areas where management do not claim unilateral authority, and in workplaces where consensual processes are available, it is reported that WP initiatives have the potential to improve industrial relations (Marchington 1996; TUC CBI 2001).

Although at FMC industrial relations appear to be favourable¹³, both management and workforce interviewees spontaneously referred to a 'them and us' culture that exists between the management and the shop floor.

"There is a cultural thing - I don't know whether it is a British thing between shop floor and management - a 'them and us', and we worked very, very hard ... to break that down from a health and safety point of view".

Interviewees identified that industrial relations were being carefully managed, and that a constructive dialogue had been maintained. Although WP is primarily about opening channels of two-way communication and facilitating collective approaches to problem solving, it was explicitly acknowledged that participation and consultation were processes that provide a foundation upon which better industrial relations could be based. Both managers and workers felt that a small degree of mistrust did exist but that consultation over health and safety was viewed positively as one mechanism which had contributed to harmonious industrial relations.

2.5 THE BUSINESS BENEFITS OF WORKFORCE PARTICIPATION

There exists a growing body of evidence that improved OHS performance can have a positive impact on levels of productivity (Mossink & Licher 1998). There is, however, relatively little evidence of the productivity improvements that might be gained through WP in OHS decision making. Each interviewee was asked to discuss any perceived business benefits that have arisen following the increase in levels of worker involvement. Interviewees were able to offer valuable perspectives on its potential for impact. The following point of view was representative:

'I don't think we could be where we are in performance without participation. We clearly have a better performance, less loss time accidents, less injuries, less absentees associated with illness. That's direct. You will see it indirectly in productivity. Quite frankly, a safe workplace and orderly workplace becomes the productive workplace'.

This response provides an important insight. Participation was directly associated with the benefits that arise from good OHS management.

¹³ In addition to the interviewees opinions, good industrial relations were evidenced by favourable work terms and conditions, low staff turnover rates and low absenteeism rates.

In addition, interviewees identified that certain benefits exist for the individual through participation:

'It's not just about health and safety because I think some of the stuff you get out of it benefits the employee because you are enabling people to develop by expanding their experiences'.

Similarly,

'If the individual sees that their idea has been put in place, it's like receiving a pat on the back. It's good for the person'.

The enrichment of the work experience through participation was a recurring theme amongst the interview discussions. Related comments from the interviewees indicated that the process of participation at all organisational levels can result in workers becoming more clearly involved as stakeholders and therefore more committed to OHS management, and accepting of any changes. One manager described the benefits of participation in the following way:

'It's job enrichment, it's employees identifying with the company. It's them feeling that they matter in the scheme of things. You can see it when you walk through a place if people have their heads down and don't look happy, as apposed to some people coming through and waving to you and wanting to share the things. So you do see the benefit in these ways'.

In summary, the interviewees contended that levels of motivation are enhanced by internalisation of objectives, or acceptance via involvement.

The interviews provided evidence that WP (and OHS) featured as part of broader policy changes that include a concern for worker well-being (notably, the principles advocated by Total Quality Management systems). Business culture has shifted in recent years, with many companies recognising the value of retaining existing staff and ensuring that workers are 'healthy, happy and here'. This cultural change is emerging for good reason, within workforces where high rates of staff turnover or absenteeism pertain, companies can incur considerable costs through recruitment, as well as being subject to disruptions in the flow of production¹⁴. With these concerns in mind, many companies aspire to positive staff management approaches. This attitude was clearly expressed by the FMC management-level interviewees. They identified that involving employees was part of a broader agenda aimed at keeping employees interested and motivated. The management were clear that business excellence could be achieved only in a context where the employees are able to contribute to their workplace in a broader context beyond that of their specific job and where their interests are taken into account. Providing a better work environment and fostering good levels of employee involvement was, therefore, considered to be a central feature of the success of the company. In essence, the management consider WP in OHS management to be one process through which to secure the commitment of all parties to the commercial success of the enterprise.

Equally, the managers identified that they desired to work in an organisation where good industrial relations prevail and that employees' well-being is a central business concern. Their opinions were shaped by shared values regarding the rights of workers in democratic societies. In summary, in the case of FMC, the justifications for good levels of WP and consultation seemed to be based on a fusion of pragmatic, fiscal and ethical considerations.

¹⁴ FMC have a good record in these respects: the level of voluntary staff turnover were reported to be very low, at 0.34% / annum (the estimate of average national average labour turnover for the manufacturing and production sector was 6.5% (CIPD 2004)); the average length of service is 11 years.

3 SUMMARY & CONCLUSIONS

This report has presented findings from a study of one manufacturing company, to identify the principles behind their workforce participation initiatives in occupational health and safety. Findings from the case study reveal a range of principles of good practice in WP and provide insight into issues surrounding the development and maintenance of WP.

There exists a high level of employee involvement at the site. A key feature has been the evolution of a work environment in which wide-level involvement and feedback is encouraged. Within this environment both management and employees have increasingly demonstrated improved levels of commitment to WP. Perhaps one of the more inspirational aspects of their approach to WP in OHS management is the restless search for improvement by means of regular progress assessments. At the present time the company's approach to WP is on an advanced point on a learning curve towards successful WP.

The key findings are as follows:

1) General improvements in the management of occupational health and safety (OHS) at FMC Energy Systems (Dunfermline) have been ongoing for a number of years. Included in these changes was a greater emphasis on direct employee involvement. Further impetus for workforce involvement arose following safety audits, conducted in 1996 and 1998, and a health and safety climate survey, conducted in 2000, which collated the individual views of employees. Although the survey identified good levels of attainment in most aspects of safety management, it became apparent that there was a common perception amongst the workforce that communication and consultation on OHS could be improved. Subsequent initiatives aimed to enhance levels of communication and consultation.

2) Improvements in the level of workforce participation were made such that:

- in 1997 a total of 12 people (4% of the workforce) were directly involved in OHS management;
- in 2004 a total of 112 people (35% of the workforce) were directly involved in OHS management.

The levels of WP that pertain are exceptionally high and reflect a good level of commitment to the management of OHS across the workforce.

3) WP was implemented through a range of discrete mechanisms:

- A safety committee comprised of worker and management representatives from within the workplace.
- A total of 15 autonomous work teams that cover a wide range of health, safety or environment topics (e.g. behavioural safety, manual handling, risk assessment, safety audit).
- 'Health, Safety and Environment Alert Cards' for reporting of safety issues, near misses and recommendation for safety improvements. The level of participation is good with up to 30 Safety Alert cards submitted each month.

In addition, there were a number of means for communicating health and safety issues in a top-down manner. For example, OHS information was provided on all notice boards and archived information was stored on accessible intranet drives.

The range of WP practices used at FMC are reasonably commonplace within OHS. It was apparent, however, that a degree of innovation had been implemented with a view to raising the

profile of health and safety, especially in an attempt to engage hard-to-reach members of the workforce. The company introduced:

- large (highly visible) plasma screens to display important safety messages or information;
- small cash/prize incentives to encourage wider adoption of the Alert Card system;
- a 'safety moment' is introduced at the beginning of all meetings, regardless of the focus of that meeting.

4) Within the available research literature there is relatively little guidance on the practicalities of maintaining participation in a functionally effective manner. Drawing on insights gathered during this study we outline a number of the antecedents for maintaining effective participation.

(i) It is widely recognised that in order to be effective WP needs a supportive milieu in which to function. The present study provided further evidence that effective WP in OHS was based on support and commitment from across the company hierarchy:

- The management team acknowledged the importance of a clearly stated corporate policy on health and safety and / or employee involvement. Although the motivation for improved levels of WP originated locally, the presence of a supportive corporate culture was considered to provide added impetus.
- Day-to-day evidence of management commitment to health and safety is widely apparent, e.g.: the manufacturing manager is the chair of the health and safety committee; members of the management team are present on a number of the OHS work teams; employees commented on the commitment of the management team; and, the budget for health and safety is sufficient to provide a good level of health and safety training for workers.
- A number of interviewees highlighted the importance of a supervisor responsible for monitoring the progress of work teams. In the case of the current study, the production manager and the health and safety officer took direct responsibility for ensuring that work team interest and progress was maintained. Throughout the management team there was a recognition that the advancement of WP requires careful engagement and encouragement of staff. It was felt that there are no quick fixes as outcomes vary in different contexts.

(ii) Securing a degree of worker commitment to WP initiatives is understandably imperative, but in many cases cooperation is not always forthcoming. The interviewees identified ways in which the levels of worker commitment to WP can be instigated and maintained:

- Participants should be carefully selected. Individuals that have a keen or vested interest in health and safety topics have the highest potential to become committed participants.
- The goals that a work team is set and the time frame in which they are expected to deliver those goals need to be carefully considered.
- Although it was recognised that management should provide clearly defined goals, interviewees identified that work teams need some degree of independence, autonomy and access to decision-making.

Acknowledging that levels of interest can change, and to avoid employees feeling that they are committed to initiatives beyond their natural period of interest, team members are asked at regular intervals (e.g. annually) if they wish to continue in their participatory role.

5) Interviewees identified the following key features of the company's health and safety strategy had the potential to improve social learning, industrial relations and channels of communication:

- widely available health and safety information and statistics (e.g. via team briefings, intranet and bulletin boards);

- an open policy to inclusion on health and safety work teams;
- ongoing support and involvement of management;
- the dedication of resources to OHS initiatives and training.

6) Management representatives considered that WP in OHS management brought about a number of business benefits. It was considered that participation contributed to improvements in health and safety performance and productivity. In addition, the management considered that WP can lead to enrichment of the work experience, higher motivation and performance, and improve commitment of all parties to the commercial success of the enterprise.

3.1 RECOMMENDATIONS

There is a need for further detailed research into employee involvement in the management of OHS. Although this single case study has provided valuable insights subsequent studies should aim to explore the issues in greater depth.

- Research from the current study is based on the views of only a small number of respondents. There is a need to validate these findings on a larger sample of companies to establish the extent to which they are generalisable to other contexts.
- Subsequent research should generate insight into the safety culture (risk attitudes, norms and behaviour) at the company level and its relation to levels of workforce involvement in the management of OHS.

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