The Petroplus safety, health and environmental (SHE) management system is based around a set of guiding principles that balance the accountabilities of individual refinery managers with the responsibilities and duties of corporate management. It also incorporates processes designed to share good practices throughout different sites, whilst simultaneously allowing individual sites the flexibility to respond to local conditions and legislative requirements.

The challenge for Petroplus Refining Division was to develop a system that would be consistent with the business strategy of a responsive and flexible management structure, and that would also deliver the SHE performance required from a refinery operator in Western Europe. The new system could not afford to become a ‘tome’ to gather dust on corporate shelves, only ‘wheeled out’ to impress regulators. It had to become a living system, and needed to justify its existence by benefiting technicians, contractors, middle managers and corporate executives. It had to promote, rather than stifle, the sharing of energy, knowledge and flexibility of Petroplus employees.

The basis for SHE management
Petroplus Refining Division has established a number of guiding principles for its SHE management system, as outlined below:

- Responsibility for SHE management had to be retained by individual refinery site managers. The management philosophy is to delegate authority to local management, to enable fast and flexible decision making, with minimal head office involvement. This contrasts with the SHE management culture of some former owners, which were strongly driven by corporate requirements.

- The refineries are located in three different countries in the heavily regulated environment of Western Europe. When the refineries were built, it was necessary for the operating companies to establish their own SHE ‘rules’ to ensure safe operation. Since then, Western Europe, and particularly those countries in the European Union, have seen a major growth in the level of external regulation of installations such as refineries. Consequently, it is increasingly appropriate for operating companies to base their SHE standards on the requirements of local legislation, rather than on corporate expectations. This is particularly relevant to Petroplus Refining Division, as it has a wide geographical spread for a relatively small company.

Mike Beanland, ABB Eutech Process Solutions, UK, and Chris Platt, Petroplus Refining Division, UK, outline a new approach towards safety, health and environmental (SHE) management.
Within the Division it is, however, necessary to standardise certain SHE management processes across the three refineries, as this enables management teams to compare performance measures and results across the division. This helps to ensure that corporate decisions can be made that accurately reflect individual site needs and priorities.

Although authority and accountability exist at individual refinery site manager level, it is also necessary, at a corporate level, to ensure that potential risks to the company’s viability and public image are appropriately identified and managed. This is linked to recent guidance on corporate governance, published under the ‘Turnbull Report’.

Operation of a refining division wide SHE management system can provide the basis for sharing good practices. As head office resources are minimised, the processes for developing and then sharing good practices need to be promoted by the individual sites and the structures of the SHE management system.

**SHE management system**

There are a number of models available for SHE management systems, including ISO14001, EMAS, OHSAS18001, BS8800 and HSG65. These systems incorporate similar principles, but use different terminology. They all cover the requirement to establish a policy; to plan, organise, and implement actions to fulfil that policy; and then to measure and review performance and to revise policy, plans, organisation or actions to better meet the policy.

Petroplus Refining Division adopted this principle of ‘plan; act; review’, but felt that it needed reinforcing through the concept of a ‘letter of assurance’. The scope of this letter closely fits with the UK’s ‘Turnbull Guidance’ on the need for focused risk identification and management, to include SHE issues, particularly where assets with major accident potential are concerned. In the letter of assurance, each refinery site manager formally reports key aspects of SHE performance to corporate management on an annual basis. Hence, the letter includes not only incident statistics, but also measures of how well the site is performing at risk reduction. These are the positive, or proactive, measures of SHE performance. The specific topics to be addressed in the letter of assurance include the following:

- Changes in potential liabilities during the year.
- SHE statistical performance, including trends and interpretation.
- Comments on the risk profile of the site and any changes.
- Emerging trends/issues.
- Quantitative performance targets.
- Compliance with company policy and standards as demonstrated by audit programmes.
- Improvement plans and future priorities.
- Non compliance or legal sanctions.

The letter of assurance provides a formal communication of site specific concerns between site management and corporate management, helping to ensure that there is appropriate knowledge of the main SHE risks within the organisation, and of how they are being managed. This is an essential part of effective corporate governance. Furthermore, the process can be used to involve refinery management teams in reviewing the contribution of their activities to improve the risk profile of the site. This might sound ambitious, but in practice has had a very positive response.

Figure 1 shows the cascade of corporate policy, through corporate standards, to local procedures. This is then followed by a ‘feedback’ loop from individual sites, incorporating auditing and the letter of assurance.

Petroplus Refining Division has also established a series of corporate SHE standards as part of the SHE management system. Underwriting each of these standards are statements of ‘essential requirements’ and guidance. Their purpose is to provide specific instruction to each site on the exact areas where management processes and risk control measures need to be in place.

The creation of such corporate standards can lead to excessive control from head office and, in recognition of this concern, Petroplus has challenged the amount and detail of the instructions that accompany each SHE...
standard. For example, the management of certain lifting equipment is subject to specific rules and local standards, and it would be neither appropriate, nor particularly helpful, for Petroplus to create additional detailed corporate standards in this area. Consequently, the decision was made to try not to instruct people about matters with which they already knew they need to comply. Alternatively, the areas addressed by other standards are less well prescribed by local legislation, but nonetheless have the potential for serious incidents; presenting a resultant risk to the commercial viability of corporate Petroplus. An example of the latter is the management of SHE aspects of capital projects. It is particularly important for Petroplus to ensure that SHE considerations are integrated into project requirements from the initial conceptual design stage, through to commissioning and handover, for beneficial operation. This aspect of SHE management is described in some detail in the corporate standards.

The launch
That the SHE management system was to be owned and valued by site personnel was of key importance to the success of this programme. The proposed approach was discussed and reviewed with site personnel at the refineries to test its ability to integrate with local SHE cultures and philosophies, and was modified accordingly. This meant that there was much support from refinery managers and SHE teams, who recognised the potential contribution the system could provide to problems faced daily.

The management system and SHE standards were formally launched in a corporate manual entitled ‘The Green Book’ (Figure 2). This new manual drew favourable comment as site personnel recognised the direct relevance of the contents to their SHE management practices, and understood the need for the company to provide more leadership in this area. Site personnel welcomed the concise nature of the manual when compared with the paperwork other systems sometimes require.

Next steps
The Refining Division SHE management system is still a relatively recent development. It is now necessary to establish the auditing processes fully within the culture of the Division, and to see how the findings to a common protocol compare across the three very different refineries. The audits will be against the requirements of ‘The Green Book’, but will be flexible in content. This is to reflect the structure of the SHE standards, which vary between goal setting and detailed prescription. In the former case, the auditors will need to assess whether the intent of the standard is being fulfilled. This means that auditors will need to have had practical experience of the operation of similar systems to those under review.

The audits are also intended to provide a mechanism for sharing best practice across the refineries. Consequently, it is envisaged that the audits will be carried out by Petroplus personnel from other refineries, together with independent experienced SHE consultants.

The output from the audits will serve two purposes:
- To provide site management with the detailed information needed to create the ongoing improvement plan; an essential part of the SHE management system.
- To provide the objective information required to substantiate statements in the annual letter of assurance.

Conclusion
In a number of ways it was felt that the SHE approach of former owners was unlikely to be appropriate to the needs of a growing company. In common with those former owners, however, as an operator of refineries with large inventories of hazardous materials, Petroplus has recognised its duty to operate in a safe and environmentally responsible manner, and the importance of effective SHE management to the commercial success of the business.

By moving on from the systems of the former owners, and establishing its own SHE management system and a set of supporting SHE standards, Petroplus Refining Division has further developed the process of ensuring effective control of SHE systems at its refineries in a manner consistent with the flexible and responsive culture of the company.

References

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