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# HSE MS and MAPP

It is the intention of the Oil and Pipelines Agency (OPA) that Plumley PSD is operated in a way that prevents harm to people or to the natural environment. To manage this, Health, Safety, Environmental and Quality Management Systems (HSEQ MS) are in place and are regularly monitored to:

* ensure compliance with relevant legislation;
* sustain the major hazard prevention and mitigation arrangements in place in order to control the risks to people and the environment to acceptable levels; and
* deliver high standards of HSE performance consistently and seek to improve these at every opportunity.

This section of the COMAH safety report presents a concise overview of the HSEQ MS for Plumley PSD. Although a brief description of the OPA corporate HSEQ MS is presented, this section focuses primarily on the HSEQ MS arrangements in place at Plumley PSD.

There is the potential for a major accident to occur even at a well-managed establishment. To ensure that the potential for a major accident is kept to a minimum, the OPA has produced a Major Accident Prevention Policy (MAPP) (see Appendix H), and the OPA implements a number of other HSE related policies/procedures, which also demonstrate its commitment to protecting people and the environment including, but not limited to:

* OPA HSEQ Management System;
* Control of Work Procedure; and
* Competence Management System.

The ultimate accountability for the overall health and safety performance of the site lies with the OPA Chief Executive. Responsibility for health and safety at site level rests with the Depot Manager, continuing through the hierarchical reporting chain to the OPA Operations Director, but ultimately is everyone’s responsibility.

## HSEQ Management System Overview

The OPA has a structured framework for managing all its activities which is documented within the OPA HSEQ Management System (Ref. 8.2). The activities on site can affect those who work on site, visit site and those near to site and the HSEQ Management System takes all into account. Since the transfer of Plumley site activities from the MOD to OPA, HSEQ MS arrangements and procedures have evolved and continually developed to reflect relevant industry best practice. The OPA’s current HSEQ MS (Ref. 8.2) is a structured collection of documents and systems which, together act to manage HSE risks to As Low As Reasonably Practicable (ALARP) levels.

At the OPA corporate level, there is a high-level policy, which provides the overarching objectives with respect to the management of HSE risk. Beneath this high level policy statement, the HSEQ MS consists of numerous separate procedures, standards, guidelines, manuals, databases, systems, checklists, forms, etc. which, together ensure that the policy is implemented and its objectives are met (Figure 8‑1).

Some of these corporate procedures such as specific competence assurance procedures and contractor management processes, etc. are consistent across the company. Therefore, they are fully adopted at site level. For other more site-specific activities, site-specific procedures and processes such as fire drills are implemented to safely manage the site.

Figure 8‑1: HSEQ Management System Document Heirarchy



### Corporate Level HSEQ Management System

The OPA has established corporate policies, standards and procedures to set out the expectations for safe operation and ensure consistency of approach across the company. These corporate level arrangements are documented in the OPA HSEQ Management System (Ref. 8.2) and are based upon relevant industry best practice guidance.

The corporate level HSEQ MS comprises the following nine elements:

* Element 1- Leadership and Commitment;
* Element 2- Principals and Objectives;
* Element 3- Organisation, Resources, Responsibilities and Documentation;
* Element 4- Documentation and Information Management;
* Element 5- Communication, Participation and Consultation;
* Element 6- Risk Management;
* Element 7- Work Planning and Procedures;
* Element 8- Performance Monitoring and Measurement; and
* Element 9- Management Review and Intervention.

### Environmental Management System

The OPA Environmental Management System (EMS), Ref 8.36, has been implemented throughout the organisation. Its purpose is to define the environmental arrangements in place to enable the OPA to control environmental risks and to improve environmental performance at its depots.

The EMS applies to all environmental aspects of activities conducted by the Oil and Pipelines Agency across the all the sites, including Plumley PSD as well as Naval Oil Fuel Depots (OFDs) within England and Scotland. These activities include the storage of petroleum products at Plumley PSD and activities, products and services which occur beyond the site boundary and which the OPA can influence, including the actions of suppliers and contractors.

The Depot Manager is responsible for administering the system at a local level e.g. identifying environmental aspects and impacts and setting local objectives and targets.

The EMS has two areas of focus:

1. Environmental compliance; and
2. Environmental sustainability.

The environmental compliance area of the EMS consists of regulatory compliance and monitoring programmes that implement UK and EU requirements, agreements and permits. The list of applicable environmental regulations is defined in the OPA Legal Register, which is hosted by Legislation Update Service (LUS).

The environmental sustainability aspect promotes and integrates sustainability initiatives such as energy and natural resource conservation, waste minimisation, green construction and use of eco-friendly products and services into all phases of work.

The specific goals relating to improving OPA environmental performance in terms of prevention of pollution, compliance with COMAH Regulations, use of energy, water, and fuel efficiency and using environmentally preferable products and services are detailed within the OPA Environmental Policy (Section 8.3.3 and Ref 8.38).

The EMS comprises of an overarching suite of corporate policies. At site level, the corporate policies are developed into site-specific documents. The Environmental Management System Objectives and Targets are in place for Plumley PSD (Ref 8.42) and details the identified objectives and targets for the site and links these to the OPA Environmental Management Policy (see Section 8.3.3) and all identified significant environmental aspects.

Plumley PSD will meet these stated targets through individual programmes developed to provide a systematic process to achieve mandatory efficiencies using the EMS Procedure (Ref 8.36).

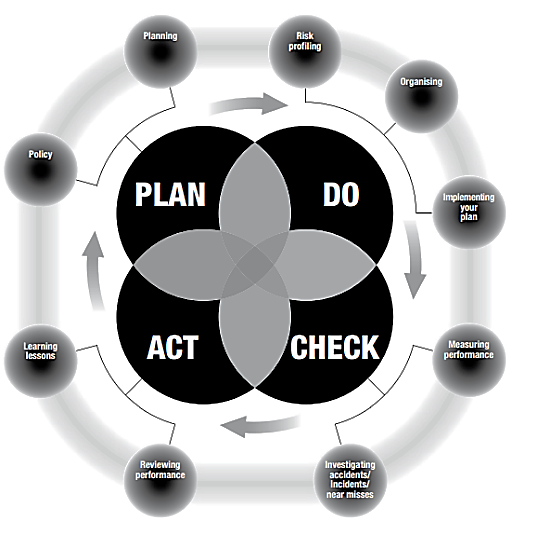
Environmental issues are contained within the Impact & Aspects Register (Ref 8.43).

## HSE MS Model

At the site level, more detailed procedures, systems or arrangements have been developed where necessary, in order to implement the OPA HSEQ Management System and ensure that site-specific major accident hazards are managed effectively.

The various components of the Plumley PSD HSEQ MS can be arranged as defined in the HSE MS model contained in the UK Health & Safety Executive Guidance ‘Successful Health and Safety Management’, HS (G) 65 as detailed in Figure 8‑2 (Ref. 8.1).

Figure 8‑2: HSG65’s Key Elements of an HSE MS



The HSG 65 model is implemented at Plumley PSD and the implementation is summarised via the following key principles:

* A focus on the hazards and effects in all areas of the business and activities critical to HSE; and
* Planning, doing, checking and feedback mechanisms to ensure that the HSEQ MS ‘lives’ as a daily working system.

The remainder of this part of the safety report describes the Plumley PSD HSEQ MS and is organised around:

* The basic HSE MS elements (plan, do, check, act and each stage’s sub elements) which are specified in Figure 8‑2; and
* The Competent Authority’s Safety Report Assessment Manual (SRAM) for safety management system aspects (see Appendix A), which provides internally targeted guidance on the assessment of COMAH safety reports.

## Policy

As a COMAH Operator working within a major hazard industry, the OPA is committed to thorough and effective management of the business to meet or exceed the OPA HSE and Quality objectives with the support of all personnel.

The commitment of the OPA is reflected via the OPA Major Accident Prevention Policy (MAPP), OPA Policy and Commitment Statement and the Environmental Management Policy.

The OPA aims to deliver the commitments made in these policies through the development of strategic objectives, based on the evolving business environment, the need for legal compliance, the aim of continuous improvement and other requirements as appropriate.

### Major Accident Prevention Policy (MAPP)

To meet its obligations to prevent major accidents and to limit the consequences for people and the environment, the OPA has put in place a Major Accident Prevention Policy (MAPP).

The MAPP forms part of the Plumley PSD HSEQ MS and recognises that the control of major accident hazards is an integral part of the business. It reinforces the OPA’s commitment to continuous improvement, to the safety of employees, to the prevention and control of major accidents and to the minimisation of both the risk to the public and the impact on the environment of its activities. The MAPP is included in Appendix H of this safety report.

The MAPP is a written statement of the OPA’s commitment to achieving high standards of safety and environmental performance. It is agreed by the OPA Chief Executive and Chairman, and confirms that the necessary resources will be made available to achieve the commitments outlined in the MAPP.

#### Implementation of the MAPP at Plumley PSD

Plumley PSD complies with and implements the MAPP and other policy statements through implementation of the site’s HSEQ MS arrangements, which provide a systematic framework for achieving the MAPP objectives, checking the outcomes and taking corrective action as appropriate.

Table 8‑1 outlines the corporate MAPP objectives and presents the relevant Plumley PSD HSEQ MS element linking to the relevant safety report section. This demonstrates how the OPA corporate MAPP objectives are implemented at Plumley PSD.

Table 8‑1: MAPP Implementation within Plumley PSD

| **MAPP Objective** | **HSEQ MS Element** | **Safety**  **Report**  **Section No.** |
| --- | --- | --- |
| Commits to taking all measures necessary to prevent major accidents and limit their consequences to persons or the environment. | Policy: OPA Policy & Commitment Statement | 8.3.2 |
| Applies risk analysis methods to identify major accident hazards and scenarios, and suitable control measures to prevent and mitigate the effects of a major accident. | Planning and Implementation: Risk Management | 8.5.2 |
| Uses its Annual Business Plan to set targets for continual improvement; to measure, appraise and report performance on its HSE and Process Safety performance objectives. | Planning and Implementation:   * HSE Planning * Measuring Performance * Audit and Review * Management Review * Continuous Improvement | 8.5  8.5.1  8.6  8.7  8.7.5  8.8 |
| Requires Line Management to demonstrate the delivery of excellent HSE performance both internally and externally, through defined accountabilities and responsibilities within Process Safety Management leadership. | Organising: Organisational Control:   * Allocation of Responsibilities * Definition of Responsibilities   Organising: Effective Communication | 8.4.1  8.4.1.3  8.4.1.4  8.4.6 |
| Promotes honest and open incident reporting and the sharing of lessons learned both internally and externally. | Measuring Performance:   * Incident Reporting * Incident Investigation | 8.6.4  8.6.5 |
| Ensures safety, reliability, and maintainability by design. All new designs minimise the effects of human error and equipment failure and prevent a single-point failure from developing into a system failure. | Planning and Implementation:   * Design Hazard Identification and Risk Assessment * Key Risk Control Systems - Accounting For and Managing Human Behaviour | 8.5.2.2  8.5.5 |
|  | * Key Risk Control Systems – Operational Control | 8.5.6 |
|  | * Key Risk Control Systems – Asset Integrity Management | 8.5.7 |
| Ensures that plant modifications and organisational changes are planned and any changes are performed in a controlled manner. | Planning and Implementation: Key Risk Control Systems – Management of Change | 8.5.8 |
| Provides emergency response preparedness planning in line with the identified major accident scenarios and strives to continually improve these arrangements through regular training, exercises and sharing of lessons learned. | Planning and Implementation: Key Risk Control Systems – Planning for Emergencies | 8.5.9 |
| Provides for the development of competent staff based on the results of risk analysis. | Organising: Personnel Competence | 8.4.3 |
| Requires its contractors to manage Health, Safety and Environment in line with this policy. | Planning and Implementation: Key Risk Control  Systems – Asset Integrity Management: Selection and  Management of Contractors | 8.5.7.5 |

### OPA Policy & Commitment Statement – Health, Safety, Environment and Quality Performance

The OPA has a Policy & Commitment Statement – Health, Safety, Environment and Quality (HSEQ) Performance (see Appendix H) to demonstrate the OPA’s commitment to meet or exceed its HSE objectives while continuously striving to improve its performance.

Accountability for the provision of a safe and healthy working environment is cascaded from this high level statement through all levels of management and staff, via active leadership, sound procedures and guidelines, effective training programmes and good communications.

The statement is agreed by the OPA Chief Executive, and Senior Leadership Team, in addition to other managers.

In support of this statement, the OPA has established enduring goals and fundamental business principles, which are summarised by the following:

* Ensure no harm to people or the environment; by
  + Eliminating hazards and reducing HSEQ risks
  + Fostering a safety culture within our work force and within third parties who carry out work for us.
* Asset improvement and adherence to relevant good practice; and
* Customer commitment – delivering quality, value, capability and service.
* Ensure continual improvement of the HSEQ MS

In addition, the OPA has developed HSE principles, summarised by the following:

* Compliance with all statutory obligations through fulfilment of management responsibility;
* Establishing a safety culture and safety as the first priority in decision-making, day to day operation and maintenance of sites by placing a priority on safety, quality, delivering on time and efficiency;
* Establishing and maintaining effective work procedures and practices that align with the requirements of BS ISO 45001:2018, ISO 9001, 14001 and BS OHSAS 18001 and provide a framework for continual improvement;
* Providing appropriate training for all employees, based on competence requirements for their positions in line with the Competency Management System;
* Creating a safe and healthy workplace through provision of effective line management and listening to feedback from all sources;
* Promoting operational safety by working with industry to seek examples of good practice and benchmarking OPA’s own performance;
* Providing and maintaining effective emergency response procedures, facilities and training;
* Maintaining effective quality and safety performance and effective communication monitoring schemes;
* Consulting with staff, encouraging quality and safety representation and introducing quality and HSE issues into management and communication meetings; and
* Maintaining open and honest relationships with suppliers to ensure that safety or environment concerns are highlighted and resolved in a timely manner.

The OPA has also established HSE-specific strategic objectives:

* To provide continual improvement in HSE processes and procedures to prevent ill health, injury to staff and public and harm to the environment; and
* To create and sustain a generative safety culture where people intervene in unsafe situations, demonstrate visible safety leadership, listen to workers and promote honest and open reporting of unsafe acts and unsafe conditions.
* Ensure all workers have the correct PPE at no cost to themselves.

### Environmental Management Policy

The OPA is committed to the prevention of pollution by aiming to continuously improve its environmental performance through the support and involvement of all employees. To achieve this objective the OPA has developed an Environmental Management Policy (see Appendix H).

The policy is enacted by the development of OPA’s Environmental Management System procedure.

## Organising

Plumley PSD organises the management of major accident hazards through implementation of measures to achieve organisational control, personnel competence, workforce co-operation and effective communication.

### Organisational Control

Organisational control is achieved by:

* Application of suitable management and organisational structures to ensure a top down commitment to stimulate a positive HSE culture; and
* Allocation of roles and responsibilities, and sufficient human and financial resources to effect the prevention and control of major accident hazards.

#### Leadership and Commitment

Successful implementation of the MAPP and the various other components of the Plumley PSD HSEQ MS calls for the commitment of all employees. That commitment begins at the highest level of the OPA and filters down to the general workforce via the OPA Board and Leadership Team, both within OPA corporate personnel and at Plumley PSD specifically. There is a reporting line, which communicates HSE performance all the way to the Chief Executive of the OPA and to the OPA Board.

OPA senior management and supervisory staff provide strong and visible leadership, promoting a culture where all employees share a commitment to HSE.

The OPA Leadership Team demonstrates strong leadership and commitment by allocating sufficient resources to develop, to operate and maintain the HSEQ MS. In turn, the Plumley PSD Depot Manager and line managers ensure that the policies are properly observed by personnel by providing support and adequate resource. Leadership and commitment requirements are assigned to OPA and Depot Managers as part of the specification of their responsibilities (see Section 8.4.1.3 below).

Management leadership and commitment is demonstrated by the following:

* Safety forms an integral part of business planning and management processes – managers are mindful of the HSE risks associated with their business activities;
* HSEQ issues are regular items at Management Team meetings;
* HSEQ issues are regularly discussed at OPA monthly Leadership Team meetings;
* HSEQ related corrective actions and significant findings are reviewed at the Leadership Team meetings and addressed at the regular HSEQ Committee meetings;
* Safety Key Performance Indicators (KPIs) and targets are established, and the effectiveness of the HSEQ MS is monitored by the Management Team through the application of HSEQ auditing and monitoring of KPIs;
* HSEQ information and initiatives are publicised through the monthly Focus Newsletter, which is issued to all staff, who have to confirm they have read it, as well as being briefed by Depot Manager or their Deputy;
* Safety moments are issued weekly at the weekly teleconference, are verbally briefed to depot staff, posted on the noticeboards at each depot and are also available on SharePoint (see Appendix N for an example Safety Moment from a global incident and register of Safety Moments for Q4 2019);
* Safety Alerts are issued on a variable basis dependent on what is happening in the wider industry or within the OPA. Safety Alerts are verbally briefed to depot staff, posted on the noticeboards at each depot and are also available on SharePoint;
* Wider industry Safety Alerts, information and technical notes are received via the Tank Storage Association and are disseminated/briefed depending on subject-matter;
* The Leadership Team participates in and supports HSEQ events (workshops, training, meetings);
* The Leadership Team participates in audits and incident investigations, each month the numbers of open and outstanding audit actions are reported to the OPA Board, and each quarter they are also reviewed at the HSEQ Committee; and
* Individuals are coached and motivated in effective HSEQ management – managers act as role models and provide constructive feedback, safety performance is included in staff appraisals and individuals are held accountable for their HSEQ behaviours and performance.

#### Organisational Structure

A simplified management organisation chart for the OPA is presented in Figure 8‑3 and the Plumley PSD organisation chart is illustrated in Figure 8‑4.

The corporate organisation is headed by the Chief Executive. The Leadership Team comprises the Chief Executive and a number of directors who report directly to the Chief Executive. Staff at the OFDs/Plumley PSD report into the Operations Director, who in turn reports to the CE.

Figure 8‑3: Simplified OPA Corporate Organogram

Figure 8‑4: Plumley PSD Organogram

Depot Manager

Maintenance

Supervisor

As Plumley is a dormant site the roles at Plumley PSD (Figure 8‑4) are supplemented as necessary by centrally based staff (e.g. Engineering, Projects, Assurance) and technical support for maintenance is provided by mobile electrical and mechanical technicians based at the Scottish OFDs. They are also supplemented as necessary by contractors who provide the site with services such as security guards.

#### Allocation of Responsibilities

Roles and responsibilities for the management of major accidents are allocated at an appropriate level within the organisational structures. For example, the MAPP is set at senior management level so there is a top-down commitment and leadership is clearly demonstrated. Other elements are delegated further down the organisation, e.g. site supervisors and authorised permit issuers are responsible for ensuring that the Control of Work system is applied when necessary to control potentially hazardous tasks.

The over-arching OPA HSEQ Policy Statement (see Section 8.3.2) also requires that HSE responsibilities (including responsibilities for management of major hazards) are distributed throughout all levels of the organisation.

#### Definition of Responsibilities

Plumley PSD staff have a job description that outlines their duties, including their general HSE responsibilities and where appropriate their specific duties in relation to major accident management. The job descriptions are defined by the relevant line manager/director in conjunction with the Human Resources Director or Competency Assurance Manager. See Appendix M for an example job description for an EC&I Engineer.

Operating procedures, method statements and maintenance work orders also emphasise key major accident prevention responsibilities of staff when carrying out routine operations and maintenance.

In addition, specific responsibilities for the identification, assessment, prevention and control of major accident hazards at Plumley PSD have been defined in detail as part of the major hazard bowtie analysis reported in Section 7 of this safety report. In particular, a register of safety critical activities at the site is included in Appendix I.

The defined HSE responsibilities of key individuals with respect to major accident prevention as well as occupational health and personal safety are listed below, starting with the relevant members of the OPA Senior Management Team and continuing on to site level roles.

Some of the key individual roles as outlined in Figure 8‑3: Simplified OPA Corporate Organogram and Figure 8‑4: Plumley PSD Organogram have been combined in the descriptions below, as their responsibilities are similar, however this does not reflect their hierarchical position in the organogram.

**OPA Board Members**

The OPA Board ensures that effective arrangements are in place to provide assurance on risk management, governance and internal control.

The OPA Board is specifically responsible for demonstrating high standards of corporate governance at all times, including by using its HSEQ Committee to help the OPA Board to address and seek mitigation on key safety and environmental and other risks.

The OPA Board is responsible for demonstrating process safety leadership and commitment by:

* Periodic review of the HSEQ, MAPP and Environmental policies;
* Ensuring adequate resources for the establishment and maintenance of the OPA HSEQ MS;
* Defining roles, responsibilities, accountabilities and the delegating authorities to facilitate effective HSE management and continuous improvement throughout the Agency; and
* Monitoring and contributing to HSE performance through regular review of HSEQ Committee meetings, review of performance and events, and Depot Leadership Team Visits. Members of the Board have been visiting the sites to increase their visibility and encourage a two-way dialogue.
* Ensure, as far as reasonably practicable, that hazards are eliminated, and risks are reduced.
* Ensure all workers are involved in the continual improvement of the HSEQ MS
* Listen to feedback.
* Protect whistle blowers.

**OPA Chief Executive**

* Accountable for successful implementation of the OPA HSEQ Policy and MAPP and ensure these policies remain relevant;
* Ensures reports on performance of the HSEQ MS are presented to the Board for review and are used to improve the system;
* Communicates expectations for HSEQ performance to all staff and contractors;
* Provides the necessary resources to facilitate the elimination of hazards and the effective reduction of HSE risks; and
* Ensures all employees have a safe environment in which to work.

**Operations Director / Asset Integrity Director / Maintenance Manager**

These roles have responsibilities within their remits (including contractors) to ensure:

* Activities are carried out with due diligence and care with respect to health, safety and the environment, in line with the OPA HSEQ Policy and with a commitment to a generative HSE culture;
* All facilities operate in such a manner as to minimise impacts to surrounding communities and the environment;
* All operations/activities are legally compliant;
* Adequate HSEQ systems have been developed and are implemented at each site/facility, and that resources are provided efficiently and effectively, to assure the effective elimination of hazards and reduction of all associated risks; and
* Expectations for HSEQ performance are communicated to all direct reports and any contractors employed on OPA sites.
* Promoting a safety culture throughout all OPA activities.

In addition, the Maintenance Manager also ensures where maintenance is carried out by contractors, that contractor performance is overseen and monitored to ensure that the contractors’ responsibilities are fulfilled.

The Asset Integrity Director has a number of additional responsibilities including:

* Development, implementation and control of safe and effective asset management monitoring systems, applications and controls appropriate for the Agency’s environment and operational activities;
* Instigation of continuous improvement process to meet compliance with COMAH on existing depot infrastructure, and where possible introduce new technologies to aid process performance, develop project implementation strategies, prepare capital and revenue expenditure budgets; and
* Ensuring asset compliance with all regulatory and statutory provisions for operation and maintenance criteria.

As presented in Figure 8‑3 the Maintenance Manager reports to the Asset Integrity Director who, together with the Operations Director, reports to the Chief Executive.

**Capital Projects Director**

Responsibilities include:

* Ensuring OPA deliver the Capital Projects effectively and efficiently across the assets and driving the team to deliver safe assets against the agreed time and budget constraints;
* Producing planning budget forecasts, in line with OPA’s agreed business strategic plans, for approval;
* Managing the department within approved budgets, ensuring the proper control of costs within projects;
* Holding ultimate accountability for the all aspects of the Capital Projects Team delivery of Capital Projects and providing regular feedback to the OPA Board and other Senior Leadership Team members;
* Leading the Capital Projects Team to design, implement and deliver the objectives of the Capital Projects as defined in the OPA Business Strategic Plan and approved by the Board;
* Ensuring new Capital Projects are COMAH compliant;
* Validating the necessity and cost effectiveness of all major capital investment works and monitoring project progress to completion against clearly defined and contracted safety, time, quality and cost parameters;
* Ensuring compliance of all aspects of the Capital Projects with all regulatory and statutory provisions for operation and maintenance criteria; and
* Ensuring Capital Projects are delivered in line with OPA policies, strategies, processes.

**Human Resources Director**

Accountable for ensuring that:

* Job descriptions are in place that define roles, responsibilities and accountabilities to facilitate effective HS&E management throughout the OPA;
* Adequate and competent resources are provided to the depots through the establishment of a Competence Management System; and
* There are effective two-way communications with all staff, the recognised trade unions and providing support to the management teams to resolve personnel issues.

Responsible for ensuring the:

* Expectations for HSE performance are communicated to all direct reports and contractors employed with the Agency;
* Engagement of the employee’s representatives, either Unions or where not covered by the Union Agreement by the Employee Delegates with the Employee Forum; and
* The recruitment and selection/promotion of staff and management of the Performance Management System.

**Finance Director**

Accountable for ensuring that:

* Only competent contractors are selected for work on the OPA sites;
* Vendor questionnaire forms (short and full form) are utilised and help to inform on the selection of contractors.
* Procurement Clearance Form (PCF) is an award report of the complete tender process undertaken and includes the Procurement Manager’s recommendations. It is submitted for approval to the Procurement Review Group in accordance with the spend.
* Resources for contracts are commensurate with the HSE risks and the necessary controls to manage the risks;
* Contractors who do not comply with the HSE requirements established in the contract are identified and suitable measures are taken to mitigate future use of such contractors;
* Adequate financial provisions commensurate with the level of HSE risk are allocated to the depots; and
* Expectations for HSE performance are communicated to all direct reports and contractors employed with the OPA.

**Engineering Technical Authority Roles**

Engineering technical authority roles incorporate personnel such as the Mechanical Engineer, the Electrical Control & Instrumentation (EC&I) Engineer, Electrical Engineer and the Civil Engineer and are responsible for ensuring that:

* All standards and procedures are developed in compliance with current legislation and good industry practice;
* Only competent contractors are selected and employed on OPA sites;
* All contractor activities are carried out with due diligence and care with respect to health, safety and the environment, in line with the OPA HSEQ Policy and with a commitment to a generative HSE culture;
* All direct reports and contractors comply with all applicable HSE legislation; and
* Expectations for HSE performance are communicated to all direct reports and any contractors employed on OPA sites.

**Compliance & Risk Director**

* Creation of the annual audit plan that clearly sets out all areas to be covered within controlled timings and demonstrates the overall performance of the HSEQ MS.
* Calibration of the effectiveness of auditing and monitoring.
* Provides regular reports on OPA HSEQ performance to the Management Team and HSEQ Committee;
* Reporting direct to the Chief Executive regarding all aspects of HSEQ performance, effectiveness of controls and of the OPA HSEQ MS;
* Reports on resources issues that affect HSEQ performance;
* Assists operations and technical staff in the conduct of HAZOPs, investigation of incidents and identification of corrective action (including follow up to ensure the effectiveness of corrective action);
* Monitors HSE legislation to ensure continued compliance;
* Acts as the focal point for communication with the Competent Authority;
* Provides COMAH support to the Chief Executive, Operations Director, Asset Integrity Director, Capital Project Director and Depot Managers to facilitate the development of safety reports, Internal Emergency Plans, the warn and inform process and emergency exercises; and
* Conducts regular inspections and internal and external management system audits to ensure any non-conformances are recorded and suitable corrective actions are developed and implemented.
* Manage the input and output of incident data to and from the online incident management tool and generate reports.
* Provide technical expertise in process safety and Occupational Health and Safety to all staff within OPA.
* Monitoring communications to ensure they meet the HSEQ MS.
* Ensuring principles of BS ISO 45001:2018 are followed.
* Co-ordinates and controls the OPA’s continuous improvement to support COMAH regulation compliance and drive towards becoming a high reliability organisation; and
* Maintains overall view of risks and combined effects and report on a monthly basis to the Leadership Team.

**Procurement Manager**

Responsible for ensuring that:

* Only pre-qualified and competent contractors are selected for work on the OPA sites;
* Resources for contracts are commensurate with the HSE risks and the necessary controls to manage the risks;
* Contractors who do not comply with the HSE requirements established in the contract are identified and suitable measures are taken to mitigate future use of such contractors; and
* Expectations for HSE performance are communicated to all direct reports and contractors employed with the OPA.

**Process Safety Engineers**

Responsible for:

* Producing COMAH Safety Reports for the depots which are submitted to the Competent Authority;
* Conducting regular site inspections and internal audits to ensure any non- conformances are recorded and suitable corrective actions are developed and implemented;
* Assisting operations and technical staff in the conduct of risk assessments bowtie analysis, HAZID and HAZOP exercises;
* Assisting in the investigation of incidents, identification of corrective action and follow up to ensure the effectiveness of corrective action;
* Managing the input and output of incident data to and from the online incident management tool and generate reports; and
* Providing technical expertise in process safety and Occupational Health and Safety to all staff within the OPA.

**Environmental Health and Safety (EHS) Advisor**

Responsible for:

* Providing site leads with HSSE advice and support in developing systems, processes etc. in line with company policies, procedures and legal requirements;
* Conducting HSSE assurance inspections and audits of all sites;
* Collecting and reporting HSSE performance data to internal and external stakeholders;
* Supporting the development and maintenance of COMAH Safety Reports;
* Supporting the continued implementation and development of the Site Improvement Plan and continuous improvement opportunities;
* Supporting the implementation of new projects to enable safety and effectiveness of design and operations through legislative compliance;
* Supporting the management team in the successful implementation of environmental management systems in accordance with ISO 14001;
* Providing regular reports on HSSE performance data from sources such as the Incident Reporting database to internal and external stakeholders to facilitate learning and continual improvement;
* Supporting the effective standardisation of the Emergency Preparedness process for the Agency;
* Participating in industry forums to promote learning and the sharing of industry good practice;
* Assisting in the selection of improved safety measures/barriers for engineering changes to the assets managed by OPA.
* Promoting the delivery of key health, safety, environment and quality targets and success factors for OPA core business functions, and propose new, more cost effective ways of meeting HSSE and Quality requirements; and
* Assisting to contractors in improving HSSE and Quality performance.

**Competency Assurance Manager**

Responsible for the implementation and maintenance of OPA’s Competence Management System through:

* Managing and maintaining the company policy, standards, and processes for competence assurance;
* Managing and monitoring the Competence Assurance Programme (CAP);
* Collecting and sharing competency performance indicators; and
* Measuring and evaluating training and competence solutions to determine effectiveness.

**All Directors/Managers**

All managers and directors are expected to promote an open culture where staff are empowered to report incidents and share information. They are also expected to ensure that all adhere to the relevant HSE standards.

**Depot Manager**

General Management & Leadership

* Complies with the fundamental principles of the Agency;
* Promotes process safety leadership as the core of OPA’s culture;
* Demonstrates OPA’s Leadership competencies;
* Leads and directs the team to ensure that people individually and collectively achieve their potential in delivering business performance; provides stretching achievable targets for individuals aligned to business goals
* Ensures activities completed are fully compliant with company policies, procedures and legal requirements, particularly safety;
* Develops and maintains positive relationships with the key stakeholders.
* Consistently maintains a professional approach in day to day activities;
* Ensures effective and appropriate communication at all levels within the company;
* Reports on activities and provides relevant management information;
* Maintains high standards of probity and confidentiality;

Finance

* Ensures activities are in accordance with the OPA’s accounting procedures including proper authorisation and timely submission of expenses;
* Adheres to procedures relating to the proper use and care of assets, equipment and materials for which the role has responsibility.
* To be a key contributor in the planning budget forecasts for submission to the Executive Team for approval in line with OPA’s agreed business strategic plans, and to manage within budget.

Operations

* Liaise with key site stakeholders to represent the OPA:

Essar, Inovyn, CLH-PS, Manchester Jet Line, Costain, Penspen, local residents, CA

* PSPI and KPI reporting to the OPA via the Operations Manager.
* Ensure compliance of sub-contractors and site users to the requirements of the OPA Safety Management Systems as defined in the site CoMAH Safety Report.
* Effectively and efficiently manage the sites to ensure that operations and activities on the site do not cause harm to people or the environment.
* Ensure the management encompassing all aspects of maintenance, minor/major works and grounds management to the required standards and relevant good practice.
* Oversee projects and new works.
* Ensure resources and systems in place for effective site security and access control.
* Working in partnership with the OPA HSSEQ Function to implement, manage and maintain the corporate HSSEQ Management System and Standards for the sites.
* Adhoc projects as required.
* In order to be agile in the way OPA uses the skills and knowledge of its people within its Operations OPA operates within a flexible resourcing environment. Therefore, individuals may be expected to undertake tasks in support of other teams from across Asset Management, especially the OFDs.

**Maintenance Supervisor**

Self-Management

* Comply with The Fundamental Principles of the Agency.
* Promote process safety leadership as the core of OPA’s culture.
* Demonstrate OPA’s Leadership Competencies.
* Be a key contributor to the Maintenance Team to support and meet the business and team objectives.
* Lead and direct the Maintenance Team and contractors to ensure that people individually and collectively achieve their potential in delivering business performance, ensure achievable but stretching objectives are set for individuals which are aligned to business goals.
* Ensure activities completed are fully compliant with company policies, procedures and legal requirements, particularly safety.
* Undertake training provided.
* Develop and maintain a professional approach in day to day activities.
* Report on activities and provide relevant management information
* Maintain a professional approach in day to day activities.
* Communicate appropriately with others.
* Maintain high standards of probity and confidentiality.

Operations

* Ensure compliance with Safe Systems of Work (SSOW)at all times by liaison with Site Management reference contractors on maintenance and defect rectification work to have the required SSOW paperwork in place prior to any commencement of work. This includes periodic visits during work to ensure compliance, issuing permits, checking contractors RAMS and completing Gas Test checks.
* Access to Agility OPA CMMS System to ensure specialist contractors are available as required and close liaison with OPA Maintenance Planner.
* Fault Finding and repair for the OPA facility at Plumley; including plant and equipment, maintenance of plant and equipment
* Confined Space operations to include specialist training (and subject to medical fitness) in the use of:
  + Confined space training;
  + Atmosphere monitoring meters;
* Willing to undertake Short Notice overtime.
* Carrying out quality inspections
* Responding immediately to equipment breakdowns and site emergencies
* Fixing faults and arranging for replacements to be installed
* Keeping line managers informed of progress
* Carry out PPM and extra work requirements in adherence to set engineering standards.
* Continually seek to identify Reliability savings around asset management.
* Oversee projects, maintenance and New Works.
* Establish and maintain safe working arrangements and operating procedures in accordance with mandated legislation and best practice.
* Liaise with Site stakeholders (e.g. Local population, farmers and resident contractors).

**Electrical Technician**

As noted in Section 8.4.1.2, there are no electrical technicians based at Plumley PSD. The principal responsibilities and accountabilities of any Electrical Technician conducting works at Plumley PSD include, but are not limited to, the following:

Self-Management

* Complies with the Fundamental Principles of the Agency;
* Embraces process safety, which is the core of OPA's culture, to ensure all the activities in which they engage are carried out safely and in compliance with the policies and procedures laid out and raise any concerns on safety with the line manager;
* Takes responsibility for the health and safety of themselves and others by what they do or fail to do, as is legally obligated by the Health & Safety Act (1974);
  + Must wear Personal Protective Equipment (PPE) as appropriate and instructed;
  + Must adopt/comply with COSHH & Risk Assessment;
  + Adhere to Permit to Work Procedures;
* Ensures activities completed are fully compliant with the organisations policies, procedures and legal requirements, particularly safety;
* Undertakes training provided which is linked to the Competence Profile;
* Maintains a professional approach in day to day activities;
* Communicates appropriately with others; and
* Maintains high standards of probity and confidentiality.

Operations

These duties include, but are not limited to

* Routine inspection maintenance and electrical repair of fuel storage plant and equipment;
* Fault finding and repair for the depots; including plant and equipment;
* Carrying out planned maintenance activities and defect rectification efficiently;
* Being authorised as a Competent Person / Electrical with all the associated competencies to carry out Electrical work across the OPA depots in accordance with the OPA Electrical Safe System of Work;
* Has an understanding of isolation (Electrical / Mechanical) procedures, ideally in accordance with the OPA Safe System of Work;
* Utilises diagnostic techniques to identify faults in depot systems and components;
* Reinstates the work area after completing the maintenance of depot systems and components;
* Conducts safe and effective handover of depot systems and equipment to others and accept and confirm responsibility for the control of the depot systems and equipment within the work area isolation boundary;
* Checking and calibrating instruments to make sure they are accurate;
* Carrying out quality inspections and responding to equipment breakdowns;
* Carrying out Pre Planned Maintenance (PPM) and extra work requirements in adherence to set engineering standards in accordance with Health and Safety at Work Act requirement.

Compliance with Fire and Safety Regulations

* Taking reasonable care for the Health and Safety of themselves and other persons who may be affected by his acts or omissions at work;
* Co-operating with their employer as far as is necessary, to enable them to comply with the duties placed upon him; and
* Not to intentionally or recklessly interfere with or misuse any service or facility provided in the interests of Health, Safety and Welfare.

**All Employees**

All employees have a general responsibility to remove themselves from areas where they believe uncontrolled hazards may exist. They must understand the hazards, risks and necessary controls to ensure a safe work environment and assess the appropriateness of control measures in place and the hazards associated with any changes.

They are encouraged to report any concerns to their line management and adhere to company policies, procedures, work instructions as well as applicable laws or regulations. They must maintain a safe work environment by using safe work practices and practicing good housekeeping, identify opportunities for improvement of the HSEQ MS and feed these back to the Line Manager and understand the OPA Safety Culture and actively assist in its continual improvement.

**Contractors**

Contractors working at Plumley PSD are expected to comply with the Plumley PSD HSEQ MS. They share responsibilities of OPA employees with regards to working to appropriate standards, procedures, communicating expectations and encouraging an open culture. They also share responsibilities of employees with regards to hazard awareness, compliance with procedures, policy, etc. and reporting as described above. They attend a pre-start meeting (one month before works start) and a mobilisation meeting (on day of mobilisation) at the site.

### Resources

The OPA Board has made a commitment to ensuring the availability of the necessary resources to implement company HSEQ policy and objectives and manage safety. The OPA Board is ultimately responsible for ensuring that sufficient resources are available for major accident hazard control and for implementing and maintaining the MAPP and HSEQ MS. The Chief Executive is accountable for implementing the MAPP and HSEQ Policy at a corporate level. Ultimately, the Plumley PSD Depot Manager is responsible for managing the allocated resources (people, time, etc.) at the site to ensure that it meets its commitment to health and safety. More specifically, the Depot Manager is responsible for managing resources for the following activities:

* Putting in place and maintaining the Plumley PSD HSEQ MS;
* Operation of the corporate HSEQ processes; and
* Supporting the continuous improvement development and execution.

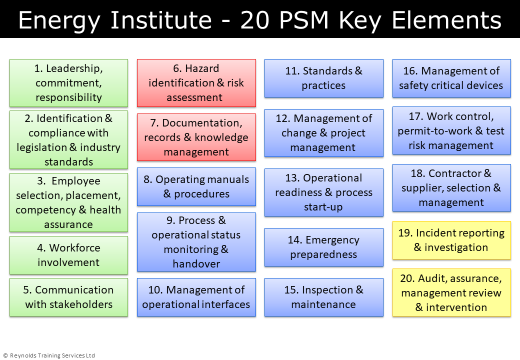
Where resource constraints occur, the Depot Manager is responsible for ensuring that:

* Safety critical activities are not compromised; and
* Any outstanding issues are escalated to the Leadership Team.

#### Process Safety

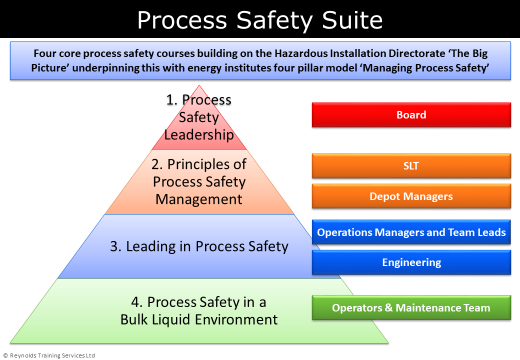
To ensure the OPA has a good Process Safety culture across all levels of the business, a mapping exercise against a recognised Process Safety framework (Energy Institutes Twenty Key Elements) was completed to understand and agree roles and responsibilities for each role within the OPA with regards to Process Safety.

The Twenty Key elements fundamentally support our Process Safety Culture and are listed below:



After the mapping exercise had been completed and roles and responsibilities with regards to Process Safety agreed, four different training programmes were developed to help enable everybody in the OPA to understand their role in regards to Process Safety.

The four levels are detailed below:



The Process Safety Suite covers four different levels:

The Process Safety in a Bulk Liquid Environment programme is part of the Bulk Liquid Operations Level 2 course. It was delivered to new apprentices in 2019 and there is another course planned for new starters in 2020.

The Leading in Process Safety programme started in 2019 and forms part of the Level 3 Diploma in Bulk Storage Operations qualification which all newly appointed Operations Managers and Fuel Supervisors need to complete. Six supervisors have attended and there is another course planned for 2020.

The Principles of Process Safety Management two-day programme was delivered in May 2019 to all the SLT and Depot Managers. This programme covered the management of process safety and how it should be delivered and cascaded down to the Depot Teams.

The Process Safety Leadership programme consists of four, one-hour bite-size sessions delivered to the board members over a two year rolling programme. This programme started in 2019 and will continue in 2020.

#### Allocation of Resources

Allocation of sufficient resources for implementing the MAPP is ensured by:

* Regularly reviewing the levels of resources which are currently allocated;
* Comparing these with changes in the levels of risk of major accident hazards;
* Assessing the requirements of any new legislation; and
* Assessing and planning available resources to meet the MAPP objectives.

Human and financial resources are budgeted on an annual basis and resource allocation is prioritised according to the risk. This process includes agreeing budgets for any identified upgrades or improvements in relation to prevention or mitigation of major accidents (e.g. from ensuring integrity of physical assets through to allocation of sufficient money for training and competence development purposes).

The OPA secures financial resource from Navy Command for the OFDs, however Plumley is funded directly by the Defence Infrastructure Organisation (DIO), which is a part of the MOD. The OPA has full control over the allocation of secured financial resources. Funding is allocated to the OPA annually, as part of the MOD annual budget cycle to enable the OPA to manage its risks.

#### Numbers of Personnel

Plumley PSD is operational between the hours of 0730 and 1530 Monday to Friday.

In addition to the security staff, there are 2 personnel on the site:

* 1 Depot Manager
* 1 Maintenance Supervisor

In addition to these permanent staff, there is a possibility that up to two mobile electrical technicians based at OFD Garelochhead could be onsite performing electrical work. During normal working hours, there may also be a number of contractors on site, depending on any ongoing site works. Periodically there may also be additional OPA personnel on site, depending on meetings or training being undertaken at the site.

This level of resource is considered to be adequate for the activities carried out and is supported by operating experience, which has accumulated over a number of years.

The OPA have a sickness and absence policy and if a staff member is to be absent from work for any reason, they must notify their Line Manager personally and as soon as reasonably practicable on the first day of absence, no later than 10:00 am.

For any maintenance to be carried out that day, pre-job planning meetings would take account of any absences. The required operation would only be undertaken if sufficient resources are available to perform the operation safely. All required roles would be filled by suitably trained and qualified individuals. If this is not the case, the operation would not be carried out.

For managerial roles such as the Depot Manager, the Maintenance Supervisor can fulfil the role until the member of staff has returned to work, in instances of short-term absence. However, depending on the length of anticipated absence the OPA would look at the competencies of the individuals concerned and consider resource secondment from other depots.

### Personnel Competence

It is essential that staff working for the OPA have the necessary skills, knowledge and experience to undertake critical tasks competently. The following section presents how competence is addressed by the OPA at Plumley PSD through the implementation of a Competence Management System.

#### Competence Management System - Policy & Procedure

The Competence Management System (CMS) strives to demonstrate a clear and auditable link between the OPA’s Major Accident Hazards and competence of the individuals engaged in associated Safety Critical Tasks. To this end, the OPA has produced a Competency Management Policy (Ref. 8.17).

The system is based on the 15 principles of the HSE Competence Management System Model (Ref. 8.19) and provides a structured and systematic approach to the management of individual development, competence verification and, as a consequence, effective site safety.

The aim of the CMS is to:

* Ensure that all managers, executives and site personnel who directly, or indirectly, influence process safety performance have the necessary range and level of competencies to perform their duties, safely, to a pre-determined performance level. This shall include tasks, responsibilities and decisions connected to identified, and potential, major accident hazards; and
* Ensure that the Competence Management System covers all OPA staff including contractors. It covers the steps involved from identification, recruitment and selection of new employees through to the induction process and release to the depots. This includes assessment of competence against individual job profiles and the identification and prioritisation of any training or competence requirements.

The Competence Management System is enacted by the OPA’s Competence Management System Procedure (Ref. 8.18).

The following documents support the Competence Management Procedure:

* Competency Profiles (Referenced in SharePoint and within Cascade)

This document details the required skills and qualifications for each individual role. It breaks these down into core competences and supporting competencies, which are used to assess an individual’s current competency status against the requirements of the role. This will then identify any gaps that need to be addressed which can be accounted for in an employee’s training needs (see Section 8.4.3.3). Competency profiles are developed and updated by the Competency Assurance Manager before being reviewed and approved by the appropriate line manager, i.e. Depot Manager. Once approved, the updated competency profiles are uploaded onto the Competency Management System (see Appendix M for an example Competence Description for an EC&I Engineer).

In addition to the competency profiles, a training compliance matrix is also held for personnel who are nominated to undertake specific tasks, which require formal training and revalidation (i.e. driving a forklift truck or performing first aid, etc.). The matrix allows re-training to be scheduled (see Section 8.4.3.4) and competencies re-validated when personnel exceed the training validation period.

* Evidence and validation for profiles (Referenced in SharePoint)

This document identifies the evidence, which is required to demonstrate competence for each line item in the Competency Profile.

* Career Development Plan (Referenced in SharePoint)

This document is used to record the gaps identified by the self-assessment process and to prioritise any necessary training and development requirements.

* Instinct Learning Paths (Referenced in SharePoint and Cascade)

Each Job Profile is allocated a number of e-learning modules, which must be completed as part of the company induction.

* Team Competency Matrices

There are two matrices, one for operators and one for engineering personnel. These matrices measure the competency of OPA employees against their individual competency profiles, therefore identifying any training gaps, which then feed into the OPA training plan. The Team Competency Matrices, which support the Team Performance Planning (TPP) process, are reviewed on a three monthly basis by the Depot Manager and findings are fed back up the organisation to Human Resources Director / Competency Assurance Manager.

OPA personnel competency is reviewed on an individual basis as part of an annual appraisal process where training needs are assessed against the personnel competency profiles. As part of the annual appraisal process:

* Personnel will have undertaken a competence self-assessment against the competence profile for that role. This provides the individual and the OPA an opportunity to identify areas where training is required as well as discussing any competence gaps identified within the team (via the Team Competency Matrix);
* Career Development Plans are formulated and constructed to fill any identified gaps; and
* Agree a Learning Plan with the Depot Manager.

Where a gap in competence is identified against the key skill set for a role the Depot Manager will ensure that other competent personnel cover that aspect of the job role.

#### Recruitment and Selection of Personnel

All persons undertaking work onsite (including contractors) must be Suitably Qualified and Experienced Personnel (SQEP) and must meet fully all sector, trade and depot-specific conditions of entry.

The OPA Recruitment and Selection Policy (Ref. 8.3) provides a process to ensure, so far as possible, that OPA recruit the right individuals with experience, qualifications, training and knowledge to fulfil the roles within the organisation. This will ensure that there are sufficient and suitable resources available to ensure all activities are completed safely. The criteria for experience is found in the Job Description, the Person Specification which together are referenced in the process with the Competency Description.

When the requirement for additional personnel within the OPA is identified, the relevant department manager must define the job description and person specification, liaising with the Human Resources Director, as appropriate. The requirement for additional personnel must be approved by the following personnel:

* Human Resources Director;
* Finance Director; and
* Chief Executive.

Once approved, the relevant department manager and Human Resources Director agree the recruitment process to be used, for example:

* Advert for internal/external communication;
* Recruitment agencies; and
* Who will be involved in at least two interview stages.

Appropriate selection procedures are used for each post, and are dependent on the job role and will include an:

* Interview;
* Occupational Personality Questionnaire or Safe @ Work Questionnaire (which predicts a person’s attitude to safety and thereby whether they are a strong fit for safety critical roles (or otherwise); and may include
* Skills testing.

For senior roles, the recruitment process may include a panel interview and/or a candidate presentation.

At the end of the selection process, the recruiting manager will decide who the ideal candidate is for the job role and the initial job offer is given verbally. Job offers are subject to the OPA reference requirements, security clearance, satisfactory medical clearance and a 6 month probationary period. Job offer letters and employment contracts are issued via the Human Resources Director.

The Human Resources Department will arrange, in conjunction with the recruiting manager, an individual programme of induction for the new start, which will be arranged and agreed as appropriate, ideally at least one week before the employees start date.

Generally, upon commencement of employment, staff are deemed competent to conduct the duties they were initially employed for and are supervised by competent line managers. This is evidenced through review of the employee’s relevant qualifications, references, application form and curriculum vitae (CV).

Additionally, new depot staff undergo an initial 12 month training period, covering all aspects of depot operations and equipment and, upon successful completion of the training, staff are signed off as competent by the Depot Manager / Operations Manager. The decision is then reviewed by the Competency Assurance Manager.

#### Identification of Training Needs

Training needs within the OPA are identified from three main areas:

1. Through the Performance Management System, the employee and their manager identify training requirements during the competency profile review at the annual appraisal (Individual Performance Plan).
2. A Training Needs Analysis (based on the Team Competency Matrix findings) carried out with the Depot Manager and the Competency Assurance Manager to identify the most suitable training or development solution to ensure that personnel have the skills and knowledge to carry out a role successfully.
3. The line manager (i.e. Depot Manager) ensuring that new or transferred employees are given appropriate training and that their skills and expertise are monitored.

In addition, the need for further training is considered by the Depot Manager whenever individual members of staff are required to work on:

* Tasks of which they have little or no previous experience;
* New or revised computer programmes and/or hardware;
* New or revised system procedures and Standard Operating Procedures (SOP);
* New or revised professional procedures or revisions to accepted professional practice; and
* New or revised equipment and assets.

OPA corporate objectives are communicated down from the OPA Board/Leadership Team, through TPP to the Depot Manager. The Depot Manager conducts TPP with their teams, reviewing the current performance of the team and any training needs on an ongoing basis.

#### Provision of Training/Training Effectiveness

Training may be provided through formal courses and/or through structured development in the workplace. Individual training records are held on the Human Resources Management System (HRMS) for each employee and are maintained by the Training Coordinator utilising the HRMS, Cascade. The Plumley PSD Depot Manager is responsible for maintaining and organising the training for staff working onsite.

Training effectiveness is measured in several ways:

* Monitoring on the job compliance with procedures and training material (e.g. proper use of PPE and completion of the training and validation sheet by the Depot Manager in conjunction with the Competency Assurance Manager prior to completing a task).
* If training is initiated by an audit, the following audit establishes if the training was delivered and effective.

Training provided for workers at site ranges from inductions (see Section 8.4.3.5) to pump operation, firefighting, spill response, etc. Training records are reviewed regularly and refresher training is organised by the Depot Manager in conjunction with the Competency Assurance Manager.

Training records are kept up to date, subject to six-monthly review by the Competency Assurance Manager and Depot Manager. Training records are maintained in the HRMS (Cascade) which records up to date personnel training certification information. See Appendix M for an example training record for an EC&I Engineer.

At a corporate level, the Competency Assurance Manager evaluates the effectiveness of training or competence solutions, which have been undertaken.

#### Induction Training

All persons engaged onsite are required to undergo the following induction levels:

* All Depot Staff - Site specific induction and Employee induction
* All Contractors - Site specific Contractor induction
* All Visitors - Visitors’ induction
* All Delivery Drivers - Visitor / Site specific induction

The employee induction process covers the following topics:

* HR induction;
* IT induction; and
* Personal induction plan based on the Competency Profile for the role supported by the Learning Path for the relevant discipline.

Once personnel have completed the induction process, they will be approved to start their role within the OPA.

The visitor’s induction includes the following topics:

* Site speed limits;
* Smoking policy;
* Emergency response;
* Required PPE; and
* Accident reporting.

The site-specific induction includes the following topics in addition to the visitor’s induction:

* Working hours;
* Control of Work;
* Risk assessments;
* Waste disposal; and
* Working at height.

Site management deliver and keep a register of all inductions. No person should be permitted on to site where information is incomplete.

The OPA has updated the process by which it inducts individuals onto the depots (see Section 8.5.2.6).

#### Visitors to the Site

All visitors to site under normal circumstances pre-notify the site regarding their arrival.

All visitors to site must first report to the Security Office and present identification to confirm their identity and sign the visitors’ book. Once signed in, their site contact will escort them to the office area where they will undergo a site induction. They will also be issued with a site information leaflet, which includes the site rules and a map detailing mustering points, buildings etc.

Visitors will be accompanied at all times by an appropriate member of OPA personnel.

#### Contracting Companies

The responsibility for the competency of contracted personnel lies with the contracting company (Ref. 8.27).

The selection and management of contractors is described further in Section 8.5.7.5.

The Contractor Competence System only relates to outcomes of “Works” tenders and not “Supplies” or “Services” and following signing of a contract, the successful contractor will register on this system and upload all certificates and competency documents before a pre-start meeting is held.

In the interim, we have joined CONCOM, which will give us 3rd party auditing by Concom or other approved body (for 22 companies that we have on our approved supplier list).

The following are long term aims and a number of OPA personnel have attended training to achieve this.

* Auditing of contractors at their premises.
* Auditing of onsite arrangements and works, mainly for HSSEQ compliancy.
* Desktop auditing by questionnaire (audit template).

#### Failure to Meet Competence Standards

In the event of unsatisfactory performance, the OPA has a formal performance management procedure (Ref. 8.34) set out in the Competency Management System. Initially, an attempt is made to address the issues with the employee and a short-term improvement plan is agreed, against which the employee is appraised.

Continuation of poor performance can initiate the OPA disciplinary procedure (Ref. 8.32).

### Documents and Standards

Documented standards, which can include company, industry, national and international standards, provide necessary information to personnel performing critical activities and ensure technical integrity, set quality and performance criteria, standardise materials, equipment and documentation and define working procedures. They support and ensure the individual’s competence on the basis of personal abilities, skills developed through experience and knowledge acquired through education and training.

A list of key regulations and international standards applicable to the OPA’s operations is listed in the HSEQ Management System (Ref. 8.2). The OPA utilises a hierarchy of standards where internal company standards take account of relevant industry guidance during their development. Examples of included standards are British Standards or European Norms, then other international standards such as the American Petroleum Institute (API).

For activities at Plumley PSD, applicable standards are defined at corporate level by OPA policies, procedures and guidelines.

#### Document Control

All documents required by the HSEQ MS are controlled.

Documentation, including quality manuals, policies, procedures and standards pertaining to Plumley PSD and all other depots, business centres and departments, is managed by the OPA Document Controller and is available via the OPA SharePoint site. All documents are assigned an owner, a review period and version-control. Templates are provided to ensure consistent formatting.

Prior to a document being deemed ‘in use’, it must be reviewed and approved. Once agreement is reached, an electronic workflow is established in SharePoint to enable the document to be approved. The document is issued via SharePoint once approved and all workers have access via SharePoint.

Documents are confidential and are protected from improper use and loss of integrity.

This is managed and controlled by adopting a governance policy and Document Management Procedure, which outlines the structure to which documents are reviewed, approved and published on SharePoint.

The document control system is a knowledge-based system with each department managing the input and output ensuring that the relevant notification and awareness of any changes or updates is communicated.

### Co-operation

#### Workforce Involvement

Through meeting their responsibilities for implementing the HSEQ MS, all staff working at Plumley PSD are actively involved in the control of major accident hazards on a day-to-day basis. The Depot Manager regularly interact with employees and discuss any safety concerns.

Consultation can take place with all employees directly and the OPA also holds consultation on a quarterly basis at a corporate level by means of two meetings: an OPA Employee Forum, which is attended by nominees from all business functions, and the Negotiation & Consultation Committee, which is attended by recognised Trade Unions. Consultation may also take place as part of the Safety Representatives Meetings (see below) and the Management of Change process where a change is sufficient to affect the workforce.

All personnel may be involved in risk assessments, COSHH assessments, safety workshops, accident and incident investigation, audits, and reviews of operating procedures and associated systems.

All members of the workforce are empowered to intervene in any potentially hazardous situation that they may observe. Staff witnessing what they consider to be unsafe or non-approved methods of working are required, in line with the OPA’s Fundamental Business Principals, to instruct the individual involved to cease work pending investigation of the circumstances by Depot management and/or the service providers.

Employees may raise a concern about an unsafe working practice or welfare concern at any time directly with their Line Manager or within the Employee Forum, Safety Representatives Meetings or directly with their Trade Union Representative. Where HSEQ MS concerns are not being addressed, whistle blowing directly to the Leadership Team is acceptable with no fear of disciplinary action. The OPA Whistle Blowing Policy is designed to provide guidance to all those who work within the OPA who may from time to time feel that they need to raise certain issues relating to the OPA with someone in confidence.

In addition to the Union Agreement, where individuals can raise concerns via their elected Union Representative, there are also voluntary (non-unionised) Safety Representatives at each of the OFDs, Plumley PSD, Fort Blockhouse and Head Office. The Safety Representatives have been trained in Consultation Techniques. When there are changes that impact individuals, the OPA have to consult with the Unions, through the Negotiation & Consultation Committee.

At site level the Safety Representative acts as a contact for personnel safety issues, communicating HSE issues raised by the workforce to management, sharing of information and ideas amongst their fellow Safety Representatives at other depots and feeding back accordingly via regularly scheduled meetings.

Consultation will include all aspects of the HSEQ MS including, but not limited to, objectives and planning, out sourcing, controls on procurement and use of contractors, monitoring, measuring and evaluation, development of audit plans. The results of consultations are used to aid in the continuous improvement of the HSEQ MS.

A key component in the effectiveness of the management of major hazards is the involvement of the workforce in the identification of such hazards and the development of specific prevention, detection, control, mitigation and emergency response measures. Plumley PSD personnel have contributed to this safety report, for example by participating in site hazard identification walkdowns, HAZID workshops and bowtie analyses (see Sections 6 and 7) and not least by thoroughly reviewing the drafts of each section and shaping the content of this final version. The workforce is also briefed on the contents of the issued safety report and personnel are encouraged to read it so that they familiarise themselves with the contribution they make to management of hazards, particularly major hazards.

The safety critical activities (see Appendix I) identified for control of major accident hazards at the site have been reviewed and accepted by site personnel.

#### Contractors

Co-operation of contractors is achieved through a combination of prequalification checks, tendering, formal contract terms and conditions, HSE induction training, pre-job planning and periodic reviews, implementation of the Control of Work system, risk assessments, supervision and Tool Box Talks, etc. Contractors are required to establish formal method statements and obtain agreement from the relevant line managers before any tasks can be started.

#### Local Authorities, Emerg*e*ncy Services and Regulators

Plumley PSD co-operates with the Local Authority and operators of other neighbouring establishments in the interests of implementing an effective emergency response and the emergency services visit the site regularly. The Depot Manager is in contact regularly with the local Emergency Planning Officer to discuss matters of mutual interest between industry, regulators, emergency services and local authorities.

Plumley PSD co-operates fully with the Competent Authority with regards to compliance with the COMAH Regulations, and with all other relevant regulatory bodies.

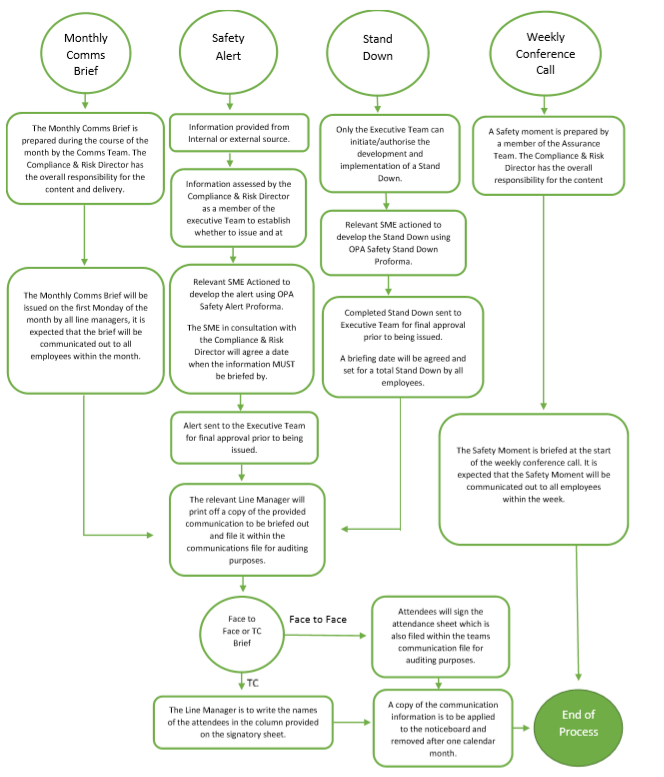
### Effective Communication

#### Internal Communication

A range of communication routes and meetings exist as detailed in Figure 8‑5 to ensure that HSE information is passed down from senior management to employees, and that feedback and input from employees is communicated up to management in an efficient manner.

Communications of an urgent nature, such as communicating immediate actions due to unsafe acts or unsafe conditions, are communicated by means of alerts distributed to sites directly by the OPA to advise, inform and warn the sites of such matters. For even more urgent matters, there is a stand down procedure, where all work is stopped and staff are briefed. OPA maintains a corporate register of all safety alerts.

Figure 8‑5: OPA Communication Process



There are a number of internal meetings at which HSEQ is discussed:

* Quarterly HSEQ Committee meetings (governed in accordance with Ref. 8.26) and minutes of which are circulated post-meeting to attendees and relevant personnel. Each meeting is carried out at a depot and the Depot Manager is invited to attend, in addition to the OPA Leadership Team. The Depot Manager is able to update their staff directly. Key Performance Indicators, audit trends, incident/accident investigations, etc. are reviewed in order to check the continued suitability of the HSEQ MS and appropriate remedial actions generated;
* Monthly OPA Board meetings review HSEQ performance and compliance, attended by the OPA Chief Executive, the non-executive Chair of the HSEQ Committee. Attendance by other members of the OPA Leadership Team varies; some months it includes the whole leadership team and other times it is selected individuals. Information is disseminated post-meeting by the CE to any non-attending members of the OPA Leadership Team, who in turn update their departments. Actions are monitored and carried forward to the OPA monthly Leadership Team meetings;
* Monthly OPA Leadership Team meetings review any HSEQ actions arising from the previous OPA Board Meeting. Relevant information and actions from the Leadership Team Meetings are cascaded out via departmental meetings and/or in an OPA weekly briefing. There is a standard agenda and meetings focus on key issues e.g. significant incidents/accidents in OPA or wider industry, the progress of continuous improvement opportunities, new policies/procedures/initiatives, and Competent Authority activity, etc.
* Weekly teleconference available for the majority of all employees, including all Depot Managers and head-office functions, who are able to disseminate information to their direct reports. The meeting includes a focus on the incidents/accidents that have occurred that week and starts with a safety moment briefing. The continual improvement of the HSEQ MS, results of HSEQ MS audits and emergency response arrangements are also discussed. Minutes are issued by email directly after the meeting;
* Monthly OPA Risk Register Review (see Section 8.5.2.1); and
* Quarterly Safety Representative Meetings (governed in accordance with Ref. 8.29).

There is no shift working at Plumley PSD and therefore no shift handover procedures are required during normal operations.

The OPA’s Focus newsletter is the OPA monthly communications brief focusing on health, safety and/or environmental events and topics at corporate level or site level, generally highlighting a particular safety topic. The newsletter is issued to all OPA personnel via the Cascade system, and personnel confirm they have read the document.

In addition, a notice board located inside the site main office, displays safety alerts, the Focus newsletter and/or other related HSEQ communication (e.g. letters from Competent Authority) designed to raise HSE awareness of site day-to-day activities or industry events. All site staff are briefed on the Safety Alerts, which are displayed on the notice board for one calendar month.

Tool Box Talks are also given on key subjects, as required and records are retained onsite.

All members of staff are free to raise safety concerns with any member of management.

#### External Communication

The Leadership Team ensures that all external communications meet the requirements of the HSEQ MS.

Information on industry best practice relating to the control of major accident hazards is obtained from a wide variety of external sources. The OPA Compliance & Risk Director is responsible for ensuring that HSE legislation developments, trends in technical standards, information on specific and generic incidents with major accident relevance, etc. are monitored using a variety of information sources. External communication occurs through various means, such as:

* Contacts within regulatory organisations and resources provided by regulators (e.g. Health and Safety Executive websites, COMAH sites, Environment Agency (EA) website, Health and Safety Commission (HSC) newsletter);
* Regular communication with the Competent Authority (CA) takes place via the CA Liaison Meeting and bimonthly teleconferences; these communications are supplemented by site intervention visits, as determined by the intervention plan.
* Industry bodies (e.g. Chemical Industries Association (CIA) extranet and Responsible Care networks, membership of UK Oil Pipelines Association (UKOPA), Tank Storage Association (TSA), employee membership and access to Institute of Chemical Engineers (IChemE) databases);
* The OPA attends three sets of quarterly meetings arranged by the TSA - an HSE focused meeting attended by the Compliance & Risk Director, an Operations focused meeting attended by the Operations Director and an HR one;
* Through the professional connections of its employees, the OPA has informal access to other industrial sites within the chemical and process industry. This arrangement allows the OPA to undertake site visits for the purpose of learning industry good practice;
* The OPA recognises two Unions (UNITE the Union and Prospect). Meetings take place with Union National Officers on a quarterly basis through the Negotiation & Consultation Committee. Although Union Representatives are not Health and Safety Representatives, Health and Safety topics related to long-term sickness, changes to roles and responsibilities, welfare condition, etc. form part of the discussion. Union engagement via the Collective Agreement covers depot personnel only;
* Information sharing and online resources (e.g. technical bulletins, Barbour Environment, Health and Safety Index, Safety, Health & Environment briefings, Environmental Data Services (ENDS));
* Formal and informal business contacts with companies (e.g. Shell, Exxon, AirBP, ConocoPhillips, etc.), and technical and HSE contacts within other oil and chemical sector companies; and
* Subscription to industry and HSE-related publications.

Where the OPA identifies a gap between its operations and best practice, options to address the gap will be identified and considered, with the selected improvements undertaken through the Site Improvement Plan or via the OPA’s continuous improvement initiatives.

The OPA maintains a Health and Safety Legal Register through the Legislation Update Service (LUS), (Ref. 8.20). The OPA holds regular liaison meetings with the UK Health and Safety Executive (HSE) at which information is exchanged on developments in current and future pertinent legislation.

Local Authority and Emergency Services engagement is conducted at planning meetings for the COMAH exercises and the regular testing of emergency plans. Further engagement is carried out at site level through invitations for site tours and site exercises.

The OPA Compliance & Risk Director, is primarily responsible for communicating information relating to COMAH and emergency planning matters to external organisations (e.g. Competent Authority inspectors/assessors, emergency services, Local Authority Emergency Planning Officer), neighbouring companies and members of the public.

The management of emergencies is specifically addressed by the Plumley PSD Internal and External Emergency Response Plans (see Section 9). The external plan in particular (Ref. 8.12) details how information about responding to major hazard incidents is distributed to external organisations.

Other interested parties are also consulted as required by the HSEQ MS and feed-back is reviewed.

OPA will respond to communications received and will retain copies of communications within the document retention system.

## Planning and Implementation

The OPA understands the need to plan for implementation of its key policies and to bring about continuous improvement. Implementation of the MAPP objectives is a dynamic, continuously evolving process.

There are processes in place for preparing and implementing Annual HSE Plans (see Section 8.5.1). These are aimed at maintaining compliance with the MAPP and at HSE performance improvement, including those aspects that are important for the control of major accidents.

As part of the risk assessment of major accident hazards, which is central to this safety report, reviews are conducted to identify any gaps or weaknesses in the management measures, key risk control systems, physical controls or workplace precautions needed for control of major accident hazards, and to ensure that major hazard risk levels are ALARP. New risk reduction measures are identified and are implemented if they are reasonably practicable. Identification of Plumley PSD major accident hazards and assessment of their risks is described briefly in Section 8.5.2 below and is covered in detail in Section 6. Identification of areas for risk improvement, including selection of priorities and scheduling / development of remedial action plans, is outlined in Section 8.5.3 and 8.5.4.

There are a number of operational control processes (Section 8.5.6 and Section 8.5.7) applied via the Plumley PSD HSEQ MS in order to implement the MAPP. These include processes for safe maintenance and management of contractors. Procedures also exist to plan changes to the facilities (Section 8.5.8) or organisation, so that major accident hazards continue to be managed effectively.

The site has also established and implemented plans for managing emergency situations (outlined in Section 8.5.9 and described in detail in Section 9) so that, should a major accident hazard scenario arise, appropriate action can be taken to mitigate the consequences and bring the situation under control.

### HSE Planning

The OPA business planning cycle begins with an annual business strategy workshop. Results of performance against OPA strategic objectives and KPIs are reviewed at this time, taking into account the results of the year-end HSEQ management review. The output is a revised 5 year strategic plan with tasks and targets assigned to owners reflected in team performance plans.

Resource planning assesses the current and future work load and the competencies required to complete that work to ensure that there is always adequate resource to meet the requirements of the HSEQ MS.

Budget planning follows the OPA annual business strategy workshop and takes account of the current year’s HSEQ performance and results of CA recommendations.

Further site-specific HSEQ activities may be planned, as required, e.g. HSE training activities in response to a review of training records/requirements or new works in response to findings from HSE audits, reports or inspections.

#### Engineering Planning and Project Management

The Project Process provides the minimum requirements for effective project management execution within OPA and their associated facilities during all stages of the project life cycle.

Its purpose is to set the management process such that projects are safely and efficiently executed within the allocated budget, scope and timescales as per the approved stage proposals.

It is to be used by all staff and contractors involved in preparing, managing, contributing to, or executing projects for, or on behalf of, the OPA.

The process is specifically developed for use on all projects for which it defines the minimum requirements, however, elements of other project management processes may be adopted to improve on the suggested minimum documentation specified, and to ensure that OPA and any chosen contractor use common and agreed processes to aid in the success of reducing cost, time and, most importantly, safety related risks.

They will aid in ensuring that structured decisions are made at the right time and use effective communications to get involvement and collaboration from all stakeholders (Ref. 8.21).

### Risk Management

A robust method of identifying hazards, assessing risk and determining the necessary controls is paramount. Two key risk management processes/tools employed by the OPA are:

* The OPA Corporate Risk Register (Section 8.5.2.1); and
* Hazard identification and risk management processes (see Section 8.5.2.2 to **Error! Reference source not found.**).

#### Corporate Risk Assessment

Risks to the OPA and its sites are identified and ranked in the Corporate Risk Register, which is managed in line with the OPA’s Risk Register Procedure (Ref. 8.41).

The OPA Corporate Risk Register depicts risks across the entire organisation and includes financial, reputation, safety and environment risks. The register aims to actively manage corporate risks, by regularly identifying and classifying risks within a team environment, and by identifying suitable mitigation measures, which are implemented by assigning owners and target dates for completion.

Once identified the risk is categorised and initially assessed, a risk mitigation strategy, including actions required to be undertaken, is developed and the risk is then re-assessed against the OPA’s Corporate Risk Matrix to determine if the risk can be considered to be reduced to ALARP taking into account the proposed mitigation. This risk and its evaluation is then included in the Corporate Risk Register.

The Corporate Risk Register Team (SLT) conducts a full team review of all items recorded on the Corporate Risk Register once a month. They update it as individuals throughout the month and then the individual updates are reviewed by the team at the monthly SLT meeting. Action progress is reviewed along with upcoming activities over the next month, identified problems and support requests. The review team will consider if the risk scoring should be altered or if additional actions are required to manage the risk. This is subsequently submitted to the Board.

This risk register is reviewed at the following organisational levels and intervals:

* OPA Leadership Team on a monthly basis;
* HSEQ Committee on a quarterly basis; and
* OPA Board Members on a quarterly basis in detail and on a monthly basis at a summarised level.

If the identified risk affects numerous sites, it will be managed through the project process to reduce it to ALARP for all sites that are affected. Should the risk only affect a single site then the required action is managed via the Site Improvement Plan (see Section 8.5.4.1) associated with that asset.

#### Design Hazard Identification and Risk Assessment

The original design and construction of Plumley PSD caverns predates any current design or industry standards. There is also a lack of historic or ‘as-built’ data. Section 2 describes how the caverns were formed.

Any new designs or modifications to the site are undertaken in accordance with the OPA Management of Change procedure (Ref. 8.10 and Appendix N) which will identify the necessity for appropriate design hazard identification and risk assessment techniques such as Hazard and Operability (HAZOP) studies, Failure Modes and Effects Analyses (FMEAs), Hazard Identification (HAZID) studies, Safety Integrity Level (SIL) assessments, Layers of Protection Analysis (LOPA) assessments, etc. that may be carried out.

The type of assessment depends upon the nature of the activity and what is required to identify the hazards and control measures necessary to manage the risk. However all activities undertaken by the OPA will be subject to systematic hazard identification, risk evaluation and have adequate control measures implemented.

#### Design of Work Areas

Workplaces have quarterly workplace inspections (Ref 8.45) using a checklist to prompt. Actions that cannot be addressed locally are escalated to the Assurance Dept. and where appropriate, tracked to closure using VelocityEHS.

All workstations are subject to annual DSE assessments.

Any new work areas e.g. control rooms, would be subject to a Human Factors Assessment / Ergonomic Layout Review.

Across the OPA, an Occupied Buildings Risk Assessment (OBRA) is used to assess the hazards onsite and the effects a hazard may have on the buildings on that site. At Plumley there are no Major Accident Hazards so this assessment was not required.

#### COMAH Safety Report Risk Assessment – Management of Major Accident Hazards

Section 6 of this safety report describes, in significant detail, the hazard identification and risk assessment exercises undertaken as part of this safety report development. The hazards identified are recorded in the Plumley PSD Hazard and Effects Register (Appendix E).

The OPA Hazard and Effects risk matrix (Appendix F) was used to rank the risks to people and the environment associated with each hazard and those defined as major hazards were subject to further detailed qualitative assessment in the form of bowtie analysis. This involved review, by a multi-disciplinary team of site and OPA personnel, of all the potential failure mechanisms leading to loss of control of the major hazards, and the predicted consequences should control be lost. Preventive and mitigation/recovery controls in place for each scenario were identified and evaluated. The bowtie analysis method is described in detail in Section 7 and the completed major hazard bowtie diagrams, which display the output from the process, are presented in Appendix G.

Semi-quantitative risk assessment has also been undertaken for the site, to estimate the likelihood of, and provide indicative consequences for, a representative set of hazard scenarios, including major accident hazards. This assessment is fully documented in Section 6.

The controls in place to manage the risks identified for the site are recorded in the Plumley PSD Hazard and Effects Register (Appendix E), the major hazard bowtie diagrams (Appendix G), and are described in Section 7 of this safety report.

Section 7 demonstrates that, through comparison of risk levels against risk tolerability criteria, and consideration and evaluation of additional risk reduction measures, the risk associated with the major hazards has been reduced to ALARP levels.

#### Environmental Risk Management

The environment around the site and any areas of specific interest are described in Section 3. Environmental Risk Assessments (ERAs) have been prepared separately (Ref. 8.8). These include a detailed description of the environment around the site, identification of any potentially vulnerable sites, and follow the ‘source-pathway-receptor’ principle of assessment in accordance with Chemical and Downstream Oil Industries Forum (CDOIF) guidance on Environmental Risk Tolerability for COMAH Establishments (Ref. 8.4).

Due to the relatively low predicted release volumes involved in the credible release scenarios (Section 6.6.1) and proximity of environmental receptors, no MATTE level events are predicted for Plumley.

Further discussion on the absence of MATTE level events is provided in Section 6.9.

All Oil Water Separator (OWS) discharges are monitored using an Aquasentry system as described in Section 4 of this safety report.

#### Inductions

To ensure everyone who works at the OPA understands the risks, measures to be taken in an emergency and the site safety rules, the OPA has updated the process by which it inducts individuals onto the depots. The new induction has three levels and individuals will be allocated a particular induction depending on the nature of their visit to the depot. The three inductions available are Visitor, Main or Contractor induction, with each induction having its own specific content and question set. The induction record will also be placed on a database which will be accessible by authorised personnel. It can be completed via a weblink in advance of arriving and is valid for 3 years.

#### Health Risk Assessment and Health Monitoring

Plumley PSD staff comply with the OPA’s Wellbeing Policy (Ref. 8.39). Compliance with national statutory requirements for all aspects of health management is also mandatory.

All offers of employment are subject to candidates receiving medical clearance. Once employed by the OPA, personnel are subject to annual health surveillance. The HR department maintains the health surveillance records of personnel. Exposure monitoring and health surveillance programmes are implemented where the need is identified by the OPA in line with government requirements.

A screening health-surveillance questionnaire is completed by personnel annually, as part of the health surveillance for review with an Occupational Health Practitioner. The screening includes hearing, lung function, eyesight, driving, display screen equipment, muscular-skeletal and diabetes baseline testing, blood pressure check and a general health review as specified by occupational health specialists. All health incidents with significant impact are reported and investigated by the OPA. OPA staff also have access to Help@Hand, which provides employees and their families access to remote GPs, mental health support, physiotherapy and medical second opinions.

During the design of Plumley PSD, human factors engineering principles available at the time were considered and applied, where design might have the potential for a critical impact on equipment usability and user safety or health. Similarly, human factors will continue to be considered during future modifications.

The necessary information and advice to minimise health risks from the substances received, stored and handled at the site is provided to employees, contractors and customers as appropriate.

Plans are in place (see Section 9 of this safety report) to respond to medical emergencies.

#### Hazardous Area Classification

A hazardous area classification study has been performed for Plumley PSD (Ref. 8.5 and Appendix L) which has been undertaken with reference to Part 15 of the Energy Institute Model Code of Safe Practice (4th Edition). The location and extent of the hazardous areas, together with their allocated zone category, are identified in the report and shown on the drawing in Appendix D.

The only zoned areas are underground within the caverns (Zone 0) and at the CLH compound, which is not owned or operated by OPA. Further detail is presented in Section 6 of this safety report.

Depot staff undertake Dangerous Substances and Explosives Atmospheres Regulations (DSEAR) awareness training to inform them of the hazardous areas and the use of suitably rated equipment. Maintenance work onsite in potentially hazardous or explosive atmospheres is carried out by personnel who are CompEx certified as required (Appendix L for example Gas Monitor Calibration Certificate).

#### Workplace Risk Assessment

Hazard identification and assessment are undertaken prior to the introduction of new plant or machinery, or when operating procedures are being introduced or updated. This is controlled by the Management of Change procedure and is discussed in Section 8.5.8.

All processes / activities involving activities such as:

* working in confined spaces;
* working at height;
* maintenance of systems / plant containing fuel products; or
* any other potentially hazardous activities

are subject to a task-specific risk assessment controlled by the OPA’s Task Risk Assessment procedure (Ref. 8.40).

The ultimate responsibility for hazard identification and, if deemed necessary, provision of formal risk assessments rests with the Depot Manager however the assessments may be undertaken by competent personnel or a third party on behalf of the Depot Manager.

Point of Work risk assessments (PoWRA) are carried out by site staff immediately prior to starting any activity onsite. They are intended to supplement the task risk assessment to ensure current conditions are appropriate.

#### Fire Risk Assessments (FRA)

A Fire Risk Assessment (Ref. 8.25) was undertaken in 2018 for Plumley PSD. The assessment undertook a structured review of the fire risks present at the site (in line with the Regulatory Reform (Fire Safety) Order 2005) and assessed the adequacy of the existing arrangements. A number of recommendations were made within the assessment to improve the effectiveness of the fire protection measures at Plumley PSD. Accepted recommendations have been tracked to completion via VelocityEHS.

### Identifying Improvements in Hazard Control

Section 7 describes the measures currently in place to prevent hazard scenarios from developing, or to mitigate the extent of the consequences and recover from an event should one occur.

As described above, specific risk assessment studies (e.g. fire risk assessment) may identify improvements, which are carried forward as part of the Site Improvement Plan (SIP) or Corporate Risk Register.

On a day-to-day basis at Plumley PSD, further HSE improvements to be incorporated into SIPs may arise during:

* Incident and near-miss investigation and follow up;
* Annual review of the OPA HSEQ Management System;
* Internal and external audits and inspections;
* HAZOPs, HAZIDs and hazard reviews;
* Analysis of Key Performance Indicators (KPIs) or Process Safety Performance Indicators (PSPIs);
* Site weekly interface meetings with the contractors working onsite;
* Emergency exercises;
* Safety alerts from other depots or elsewhere within the OPA; and
* HSE meetings.

### Corrective Action Planning

At the corporate level, the OPA records all non-conformances and actions arising from incident investigations, inspections, audits, etc. in a software management system, called VelocityEHS. All corrective actions must be reviewed during assurance activities (i.e. site inspections, or HSEQ MS audit) to confirm that they have been implemented and are effective.

At site level, recommendations arising from audits, inspections or reports for example are tracked to completion by the Depot Manager, and are also recorded on VelocityEHS. Where appropriate, actions (e.g. maintenance check or change to equipment) may also be entered into the site’s Computerised Maintenance Management System (CMMS).

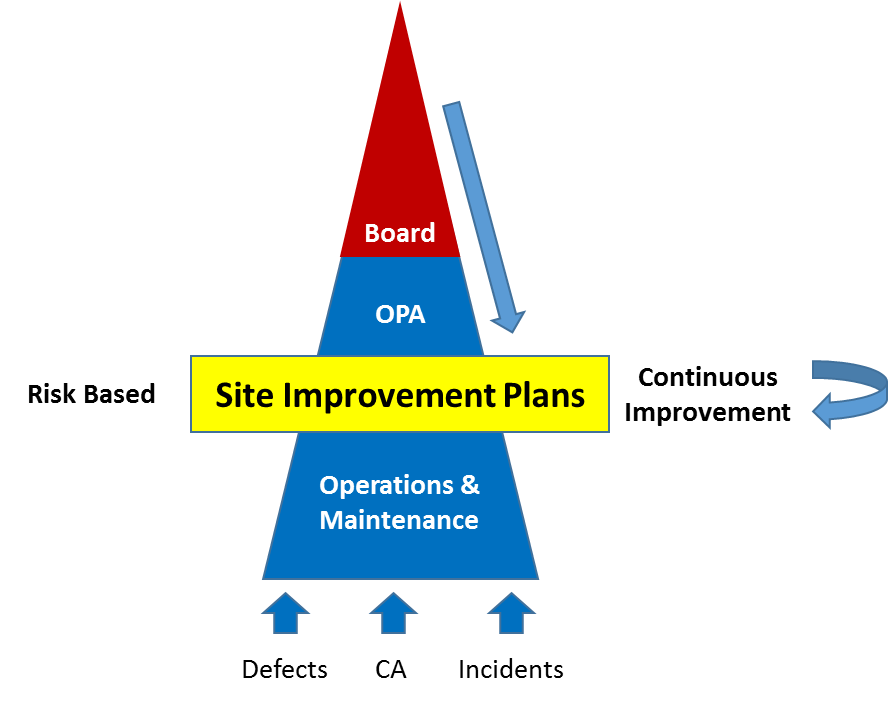
Reports can be generated from VelocityEHS to provide analysis, interpretation and evaluation of corrective action data for monthly management meetings, HSEQ Committee meetings and OPA board meetings.

#### Site Improvement Plan (SIP)

The Site Improvement Plan (SIP) is a repository for all the actions arising from any of the assessment processes (e.g. Hazard and Effects Register or the bowtie analysis), any audits, site inspections, lessons from incidents/near-misses and actions raised via VelocityEHS, etc.

Each action/improvement is scored and prioritised on a risk basis, such that red-risk items will be prioritised above amber-risk items.

Figure 8‑6: Site Improvement Plan Process Overview



Risk items that may present a significant risk at one site or may be applicable to all sites can be elevated to the Corporate Risk Register. This is indicated in Figure 8-6 above. The prioritisation of action and improvements means that they will only reside and be managed via one system either the Corporate Risk Register or the SIP, depending on the level of risk.

The SIP is owned and managed at a site level by the Depot Manager and team members (Ref. 8.15).

By managing the improvements identified within the SIP, the OPA can demonstrate that each site, in this case Plumley PSD, is managing the risks to ALARP.

### Key Risk Control Systems – Accounting for Human Behaviour

The OPA Human Factors Policy is used to manage human failures and prevent major accidents with the potential to harm people and the environment which would be costly to the Agency both financial and to its reputation.

The measures taken to prevent and mitigate major accidents (as described in Section 7), and the HSEQ MS for Plumley PSD, take full account of the role that human behaviour can play in initiating, preventing, controlling, mitigating and responding to incidents.

Plumley PSD is a dormant site and hence the majority of activities are maintenance-related. There is a competent workforce supported by a robust HSEQ MS, with its procedures and checks and balances.

Contributions from and Influences on Human Behaviour

Human behaviour can influence safety management in a number of different ways and the design of the work place environment and arrangements can also influence human behaviour. A diagram detailing the interactions between factors that influence human behaviour is below (see Figure 8‑7 which is based on Ref. 8.14).

Figure 8‑7: Factors Influencing Human Behaviour

INDIVIDUAL

•

Attitudes and perceptions

•

Skills and experience

•

Physiological (e.g. gender,

age)

•

Cognitive (e.g. memory,

attention)

•

Personality and preferences

•

External factors (e.g.

domestic)

•

Limitations in human

capability

JOB

•

Task and system design

•

Workspace and interfaces

•

Displays and controls

•

Work management (e.g.

Team structure, task

allocation, operating

philosophy)

•

Procedures and instructions

•

Training and competency

•

Working environment

ORGANISATION

•

Culture

•

Team working

•

Organisational goals

•

Leadership and supervision

•

Communications

•

Safety management

•

Management of change

The Hazard and Effects Register (Appendix E) explores the people-related hazards which may be present at Plumley PSD, for example poorly designed work spaces, over work/under-resourcing, inadequate work planning, organisational change, stress/anxiety and health effects from exposure to substances, noise, vibration, etc. The register also records where human behaviour may cause an incident (e.g. error during maintenance, driver error, etc.).

The provision of First Aid meets the requirements of the Regulations and there are OPA Procedures that cover workload, working hours, victimisation, harassment and bullying.

Section 8.6.5 outlines the arrangements in place for investigating Plumley PSD incidents. Systematic and thorough investigations will identify where human behaviour and human error has contributed to the chain of events involved in an incident or near miss. Communication of the findings and implementation of effective remedial actions ensure that lessons learned are acted upon and the potential for future errors is reduced.

Section 9 describes in detail the arrangements in place to respond to an emergency at Plumley PSD. These arrangements account for human behaviour by, for example, establishing practical evacuation routes and easily-distinguished assembly point locations, to encourage individuals to follow the designated routes. Regular drills and exercises provide opportunities for individuals to become well versed in the actions they should take on hearing an alarm so that they are more likely to behave in a predictable fashion.

#### Types of Human Error

Different types of human error are encouraged or discouraged by the working environment. For example (Ref. 8.14):

* Lapses (failure to carry out an action) can be caused by a loss of attention, memory failure, and a change in the nature or environment of the task or the action being performed out of sequence; and
* Slips (incorrectly carry out an intended action) happen when familiar tasks are carried out automatically without thinking, or when people are distracted or preoccupied.

Lapses and slips can be prevented / reduced through job design and support e.g. colour coding, provision of checklists, installation of interlocks.

* Mistakes (errors of judgement) are either caused by incorrect application of the rules or incorrect interpretation of experience/knowledge. They can be prevented by providing training, comprehensive procedures and equipment design. Plumley PSD has rigorous training requirements and a comprehensive set of maintenance procedures which are maintained and kept up to date by the Maintenance Department; and
* Violations are deliberate failures to follow rules, either out of malice, or because the individual believes the rules are too restrictive, or because there is a culture of non-compliance with the rules. Violations can be prevented/reduced by providing training, by keeping rules simple and practical, by having clear, accurate procedures, through routine monitoring and supervision.

#### Safety Critical Activities

The safety critical activities identified through bowtie analysis are managed by the HSEQ management system. Safety critical activities are those activities necessary to implement and maintain Major Accident Hazard (MAH) prevention and mitigation controls.

Each control, both procedural and hardware, presented on the MAH bowtie diagrams (Appendix G) has been linked to safety critical activities, which provide and maintain that control. By associating safety critical activities with personnel at Plumley PSD and ensuring individual(s) are fully aware of their personal responsibilities, the control remains in place and effective.

The link to safety critical activities is illustrated on the bowtie diagrams by means of an activity reference number in the lower half of each control box, with safety critical activities listed in Appendix I. By referencing the input documents required to ensure that the responsible person knows when to do the safety critical activity, and what to do, the table in Appendix I shows the link between each safety critical activity, and therefore each major accident control and the relevant elements in the Plumley PSD HSEQ MS.

Repeating this analysis for every control on a bowtie branch, ensures that the MAH scenario depicted by the branch is managed by the Plumley PSD HSEQ MS.

Extending the analysis to all the bowtie branches demonstrates that the site is effectively managing the MAHs, not just at this moment in time, but also in future through ongoing maintenance of the controls for the safety critical activities.

The above process has been undertaken for Plumley PSD and the details are in Section 7.

### Key Risk Control Systems – Operational Control

The operational control measures applied by the Plumley PSD HSEQ MS to ensure that the MAPP is implemented include:

* Applying engineering and technical standards in the construction, commissioning and decommissioning of plant, processes, equipment and facilities;
* Safe operation of plant and processes, including safe operation under maintenance conditions;
* Inspection, testing and maintenance of plant, equipment and facilities; and
* Management of contractors.

#### Construction, Commissioning and Decommissioning of Plant

Available, approved engineering standards and technical specifications are applied to all stages of the depot life cycle i.e. design, construction and commissioning and modification of the facilities, and will be applied to future decommissioning.

Specific plans, risk assessments and procedures are established for engineering projects. The Management of Change procedure (see Section 8.5.8) is also applied, to determine the impact that each individual project might have upon the existing installation, and the actions required to safely accommodate these changes.

Furthermore, construction, commissioning and decommissioning activities carried out onsite are covered by the Control of Work system (see Section 8.5.7.3), to ensure that the activities are well managed and co-ordinated, and that the major accident hazards identified as being present during the activity are sufficiently controlled.

#### Operation of Plant

For certain activities, and in particular where activities are carried out by contractors, approved Method Statements document the key elements of the work, ensure that adequate risk assessment is undertaken and that appropriate safeguards are identified, documented and implemented.

During development of this safety report, preparation of a register of safety critical activities (see Appendix I) as part of the major hazard bowtie analysis has confirmed that effective, documented procedures are in place for the safety critical activities at the site (where required). Where shortfalls have been identified, they are recorded in the SIP.

### Key Risk Control Systems – Asset Integrity Management

Plumley PSD ensures continued asset integrity by:

* Establishing and maintaining a Computerised Maintenance Management System (CMMS) (see Section 8.5.7.1);
* Complying with the Management of Change procedure (Section 8.5.8) to ensure that any proposed changes, alterations, or modifications are only approved after consideration is given to all HSE issues; and
* Enforcing the Control of Work system (Section 8.5.7.3) to control the performance of maintenance tasks.

The existence and effectiveness of these asset integrity procedures is assessed through the application of the risk management process described previously and any shortfalls are addressed through remedial action plans and the Site Improvement Plan.

The OPA Asset Management Policy (Ref. 8.13) is used to support the management of all plant onsite, including aging plant, throughout the OPA. This policy document provides clarity to the OPA and its contractors on Asset Management principles expected within the OPA.

The OPA Maintenance Policy is in development and will supersede the OPA Asset Management Policy (Ref. 8.13). It will define how the depot facilities will deliver the desired performance over the required life of the asset by means of a maintenance strategy. It will outline the reliability/maintenance philosophies at each depot in order to meet the business objectives as communicated in the OPA / MOD Service Level Agreement document. The strategy will be a road map to improve performance at the depot (or maintain levels where performance is presently adequate) and will be focused on the following prioritised areas:

* Environment, Health & Safety;
* Maintenance Spending;
* Capital Spending;
* Asset Mechanical Reliability;
* Maintenance Work Processes;
* Root Cause Investigation; and
* Facility Condition Assessment.

The OPA Maintenance Policy will also address roles and responsibilities of personnel making key decisions in relation to integrity of all identified safety critical equipment.

All assets are given individual criticalities in accordance with the Asset Criticality Procedure (Ref. 8.9). Safety critical assets are defined by means of a flowchart (Ref. 8.9, Appendix 4). Defects affecting any asset are also prioritised and the asset criticality and defect priority are combined to give a work order priority (Ref. 8.9, Appendix 5).

#### Maintenance Management

The OPA Maintenance Manager is responsible for company-wide maintenance of facilities, supported by a team of engineers and contractors. At site level, the Depot Manager is ultimately responsible for co-ordination all maintenance activities on a day-to-day basis. The OPA is responsible for conducting routine maintenance across all the depots, except where third party specialists are engaged for specific work packages.

The OPA recognises that maintenance may be planned preventative maintenance or unplanned corrective maintenance.

The OPA uses a CMMS software tool (Agility) to forward-plan preventative maintenance activities and ensure that critical equipment is inspected, tested and maintained on schedule to ensure continued functioning as desired. Preventative maintenance can take the form of:

* Condition based maintenance - using monitoring techniques to identify impending failures, normally with equipment running;
* Fixed time maintenance - carried out on a regular planned frequency based on the expected interval between potential failures;
* Corrective maintenance - predictive or preventive work plus additional requests where a defect is identified; and
* Design out maintenance - where the frequency of failure is unacceptably high and other maintenance approaches do not improve performance.

Unplanned corrective maintenance is raised as a defect using the CMMS and resource is assigned to rectify the defect as appropriate.

The maintenance activities scheduled by the CMMS, are covered by specific OPA procedures to ensure that the equipment is inspected and maintained in line with appropriate standards.

The test/maintenance periods are based on company standards, manufacturers’ recommendations and statutory requirements. In addition to timing of maintenance activities, the system includes maintenance procedures (work orders) describing the work to be undertaken and HSE precautions to be put in place. Any proposed change to maintenance or inspection regimes are subject to the OPA Management of Change process (see Section 8.5.8) and must be agreed by the Maintenance Manager and Depot Manager.

Maintenance activities are also subject to Method Statements and Risk Assessments, and where applicable a Permit to Work is raised as part of the Control of Work system (see 8.5.7.3).

Depot staff perform daily, weekly and monthly checks, which involve visual inspections of instruments and equipment, and checking for leaks and other obvious signs of poor performance. Such checks can help to ensure timely intervention and maintenance, preventing escalation of problems. The maintenance routines include detailed, step-by-step lists of checks to be undertaken. Any adverse maintenance findings are entered into the CMMS for remedial action.

Third party specialists are also brought in as required to undertake periodic inspection and maintenance of specific systems. These systems include, but are not limited to pipework and underground scanning. The third party specialist will generally be selected by tender when the inspection is required to be undertaken.

In terms of the maintenance of Electrical Control & Instrumentation (EC&I) systems, OPA personnel maintain the majority of electrical items and pressure gauges.

Reports are produced detailing the findings of the inspection/maintenance and recommendations to improve the asset integrity are considered by the OPA. Accepted recommendations will be tracked to completion.

The OPA has developed inspection standards for third party companies to follow where appropriate, which include but are not limited to:

* Onsite Pipework Inspection Standard (Ref. 8.37); and

Backlogged maintenance activities to be carried out are tracked via the Process Safety Performance Indicators (see Section 8.6). Any short term (1 month) and long term (6 month) overdue items are reported monthly. Weekly meetings are also held to progress outstanding items.

#### Asset Management Life Plan and Written Scheme of Examination

An Asset Management Life Plan is in place at Plumley PSD to schedule asset management activities, typically operator checks and planned maintenance tasks, which maintain the design performance and function of equipment or systems onsite. The plan accounts for the following:

* Importance of the equipment to business performance (criticality);
* Use of a risk based approach to determine the failure modes for the equipment (i.e., Failure Mode Effects and Criticality Analysis or Reliability Centred Maintenance);
* Past user experience and manufacturer’s recommendations; and
* Lessons learned from incidents or asset failures of similar assets.

The type of inspection carried out by operators is in proportion to the risk presented by the asset and the likelihood and consequences of failure.

Written Schemes of Examination (WSE) are in place for specific assets, (e.g. valves) and cover considerations including:

* Inspection techniques;
* Deterioration mechanisms;
* Process and operations;
* Design and technology; and
* Maintenance.

An Asset Management Life plan has been developed for each item of equipment at Plumley PSD. This exercise defines what will be done in terms of planned maintenance / checks / inspections, how often they are done, and what is physically done when it is time to undertake the maintenance, inspection, etc. This is then fed into the CMMS and the maintenance, checks, inspection are executed in line with the Asset Management Life Plan.

Any item of equipment onsite that must adhere to regulations has had a WSE developed.

#### Control of Work System

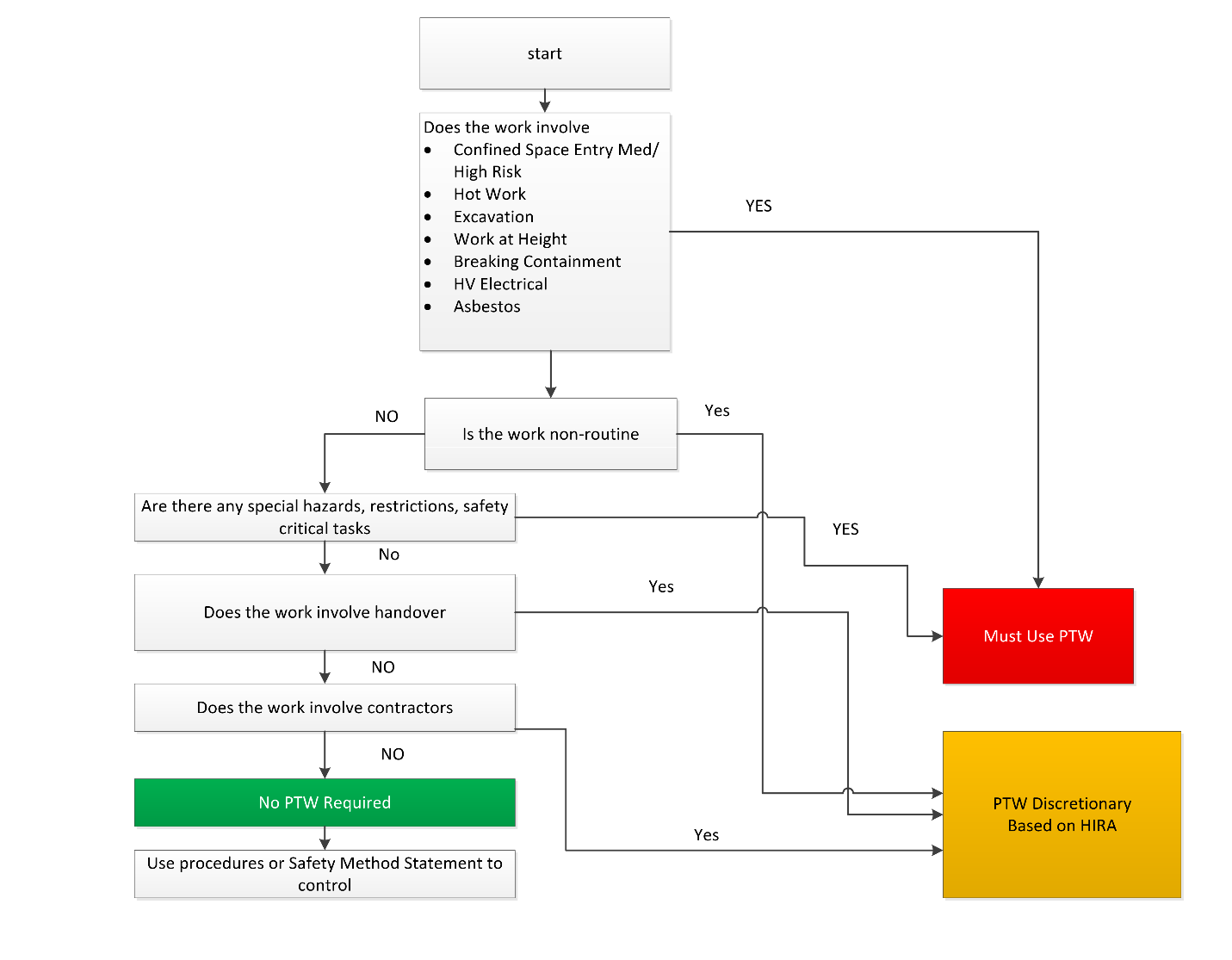
Plumley PSD implements a Control of Work system (Ref. 8.6) which identifies the hazards associated with the work to be carried out.

The Control of Work system recognises that tasks carried out at site will range from low risk to high risk depending on the nature of the hazards associated with the task, novelty or complexity. The level of control required to adequately manage the hazard is proportional to the level of risk:

* Safety method statements – utilised for medium risks, which do not justify the raising of a permit. They are written to cover non-routine tasks and include the workscope to be undertaken, the methodology required, the hazards associated with the task, the controls required to manage the risk and competencies required; and
* Permit to Work – utilised for high risk activities and deemed mandatory for hot work, confined space entry, excavation, working at height, etc. May also be used for activities, which are deemed medium risk but involve hazards or work requirements that justify the use of a permit.

The flowchart in Figure 8‑8 illustrates the decision process applied at Plumley PSD to determine the level of control required for a task.

Figure 8‑8: Permit to Work Decision Tree



Based on Hazard Identification and Risk Assessment

The permit describes the full scope of work to be undertaken, including the location of the works, the specific equipment to be worked on and the tools that will be used. The permit will be supported by related documentation such as a Hazard Identification and Risk Assessment (HIRA), method statements, etc. The personnel undertaking the permitted activity are required to sign the permit to indicate that they understand the conditions stated within permit.

All permits are discussed at a permit meeting, which is chaired by the Depot Manager who will decide if the permit can be authorised. Prior to permit approval, consideration is given to all other works being carried out under a permit at site, which may affect or be affected by the proposed works. The permit issuer (known as an Authorised Person) will ensure effective communication occurs between contractors or permit performers by including relevant cross referencing between permits. Permits are displayed at the point of work and a copy held in the Permit Office as part of the record of all existing permits at Plumley PSD.

All OPA staff and contractors are made aware of the Control of Work system at induction. Personnel who will undertake the role of a permit issuer or approver are given additional training including the statutory regulation, hazard awareness and isolation methodology. Personnel who will perform work have to have successfully completed the site induction and have an understanding of the Control of Work system including the use of Permit to Work.

The site holds and maintains a Petroleum Installation Operating Record (PIOR), which is a record of all works undertaken on the installation. This includes records of risk assessment reviews, permits issued and closed out, Tool Box Talks, inspection of works, etc. Permits and supporting documentation are held for a minimum of 36 months.

Permits are subjected to regular quality auditing by Operations and are included as a subject within the 10 Pillars Audits performed by the OPA corporate entity (see Section 8.7.2.2).

#### Confined Space Working

The OPA Classification and Management of Confined Spaces procedure (Ref. 8.7) identifies and controls work within confined spaces at Plumley PSD.

Examples of confined spaces on OPA sites include but are not limited to:

* Tanks;
* Pits, such as valve pits;
* Trenches;
* Ducts;
* Tunnels;
* Access chambers; and
* Enclosed plant rooms.

Plumley PSD maintains a confined spaces register, which is the principal source of management information for confined spaces within the site.

The level of control to be exercised over entry into a confined space will be determined by the findings of a HIRA. Where the risk assessment identifies a medium or high risk, confined space entry will be controlled by means of a Confined Space Permit to Work. Where the risk is identified as low, the work can be controlled via an operations procedure or method statement.

The level of training required to perform confined space entry will also depend on the classification of the risk. The competence of the team will be assessed during the permit process and will be evidenced by relevant training certification, knowledge of confined spaces, and awareness of the emergency plan for rescue and recovery, as well as being able to perform functional checks on equipment.

#### Selection and Management of Contractors

The following key OPA activities conducted by contractors are, but not limited to:

* Non-Routine Engineering Works, e.g. electrical;
* Facilities Management; and
* Third Party inspections (tanks, jetties, pipework).

The OPA, in April 2017, introduced the OPA Tender Site (OPA/TS) for all Procurement Requirements across all sites. The e-Procurement System is based on the DELTA System used by 25 other Government Agencies as managed by BiP Solutions Ltd, the system administrator and provider.

The OPA/TS has been tailored to meet the requirement of the OPA and to enable depots to undertake procurement within The Public Procurement Regulations 2015. Modules within the system have been established to allow the depots to run the OPA Frameworks Agreements up to the point of contract, which then will require the approval of the Procurement department.

All tendering will be undertaken via the e-procurement system (OPA/TS). The Procurement department or the approved individual will use the Tender Module on the OPA/TS although only the Procurement department can undertake the full process, which includes commercial evaluation and award of Contract.

Approved members of OPA staff will be allowed to conduct Procurement Procedures but only after being trained by the Procurement department in the correct process and use of the OPA e-Procurement System (OPA/TS), including the templates provided for use on the system. Any requirement that is within an OPA Framework can be undertaken irrespective of value. Any requirement that is outside of a Framework or in excess of £50,000 can only be conducted with the support of the Procurement department.

The tendering process by members of staff outside the Procurement department can only be conducted up to the return of the tender. Then, to ensure compliance, the commercial evaluation with be conducted by the Procurement department and the technical requirement that has resulted in this tender process will be evaluated by the originator, Project Team or Line Manager.

Any requirement that is below the £50,000 threshold but above £10,000 will require three quotes in writing and approval will be required from both the Line Manager and Procurement Manager for not accepting the cheapest submission.

Fair and open competition is used and encouraged at all times consistent with the objective of:

1. Securing maximum Value for Money (VfM) for all Agency purchases;
2. Compliance with UK Procurement law applicable to the Public Sector;
3. Assuring the employment of competent suppliers with experience of providing services to high hazard process industry assets regulated by COMAH, when relevant.

All tendering on OPA Frameworks will be undertaken via the e-procurement system (OPA/TS) using the mini-tender module. No other tenderers may be invited apart from the companies listed on the Framework.

The approval member of staff will have the use of specific templates and an instruction manual issued at the time for use with this module on the OPA/TS.

The indicated fields on the OPA/TS will be completed in line with the Instruction Manual and then the employee will release the tender.

On receipt of the bids from the Framework Contractors, the Procurement department will be consulted prior to any award of Contract in the event that a Procurement Clearance Form needs to be released for approval or further assessments are required. The works will be awarded to the lowest priced tenderer within the specific Framework.

Only approved vendors can be used from the OPA Suppliers Listing. If additional vendors are required they need to be approved before being considered. This process will be undertaken with the involvement of the Procurement and HSSEQ departments to avoid any breach of the regulations.

The OPA Procurement department maintains an approved supplier list for all supplies and services based on market place for the category involved and /or those suppliers who provide a consistent service to the OPA.

The Procurement department has established and maintains a Supplier Assurance Process to ensure that all suppliers are chosen based on evidence that they possess appropriate financial resources and the capability of satisfying OPA requirements for health, safety and environment, business needs, confidentiality, information management, security and to ensure a diverse supply base.

The OPA has a qualification process (Ref. 8.28) to ensure the selection of appropriate suppliers and contractors. Initially companies are sent Vendor Questionnaires (short and full form) and a New Account Approval Form which requires details such as confirmation of certificates such as ISO9001, training certificates, previous accident history, finance, insurances etc. These are in line with Procurement Government regulations.

The Procurement department will be responsible for validating any new supplier including carrying out Credit Checks and entering the supplier in to the FocalPoint system following qualification of its capability to meet OPA business requirements. Procurement, after checks with HSSEQ, will add the new Vendor to the approved Supplier Listing and establish log-ins for access to the OPA Procurement Portal (OPA/TS), to enable them to bid for new tender opportunities.

All Approved Suppliers will be required to demonstrate that they meet the expected industrial standards for the service they provide unless they have already carried out work to that requirement previously to a suitable acceptable level within the last two years. Approved suppliers are required to provide up to date information if anything on their original vendor form change i.e., change of address; company acquisition; liquidation/administration; insurances etc.

This level of requirement will also be required for any non-OJEU and OJEU Contractors bidding for work that are not on the current OPA approved supplier listing and must be able to demonstrate that they have worked to that level to be considered for any tendering opportunities.

Any new vendor which wish to be consider for inclusion on the OPA Vendor Listing must complete a Vendor Questionnaire and a New Account Approval Form for the required area of work:-

* Full Vendor Questionnaire for works on the infrastructure.
* Short Vendor Questionnaire for works not required on the infrastructure.

The Full Vendor Questionnaire is required for any Vendor who wishes to work on any depot infrastructure including Tanks, Pipework’s, Jetty’s, Buildings and Control Systems. The OPA will require the proposed Vendor to complete all sections in full and for references to be taken and approved. All Safety, Security, Commercial and Competence are to be fully reviewed before approval is given.

The Short Vendor Questionnaire is required for all non-infrastructures works for example Consultants, Cleaning, Decorating and Office Services. (The Short Form can also be used for obtaining Vendors to carry out assessments and report writing but with a supplementary sheet with questions for their area of expertise). This process is only to be used for requirements under the value of £10k.

Setting up new suppliers & HSEQ involvement is not the only criteria to set up a new supplier. Following receipt of completed Vendor Forms, Procurement will undertake credit checks, check the Insurances and check that the details on the forms have been completed correctly. HSEQ will review the section relating to Health & Safety on the (Short or Full Vendor Forms). Any new supplier on the tender site will request the vendor forms for completion as part of the tender process.

Tender processes are conducted in accordance to spend threshold. A Statement of Need (SON) for funding approval will incorporate which HSEQ evaluator will be involved in a tender process. HSEQ involvement may be required in a RFQ (Request for Quotations) process or any tender that requires a Health & Safety Evaluator who will look at the specification of a requirement and provide questions and scores and evaluate bids for those specific HSEQ questions only. The Technical Evaluator will provide their questions and scores. The Commercial Evaluator will cover the commercial elements of the tender including pricing. The manual questionnaire score sheet is compiled and created onto the tender site by the procurement chief evaluator (administrator).

Following pre-qualification of its capability to meet OPA business requirements, the Procurement department will add the new vendor to the approved Supplier Listing and establish log-ins for access the OPA Procurement Portal (OPA/TS).

The Agency establishes relationships with suppliers and partners to facilitate communication with the aim to mutually improve the effectiveness and efficiency of processes which create value for the Agency.

Our Procurement strategy involves the following:

* Optimising the number of suppliers and partners
* Establishing effective two-way communication in both organizations to facilitate the rapid resolution of problems and avoid costly delays or disputes.
* Encouraging suppliers to implement programmes of continual improvement of performance.
* Evaluating, and recognizing efforts and achievements by suppliers and partners.

The Agency shall carry out a regular evaluation (financial and non-financial) of critical suppliers’ performance with responsible parties (e.g. HSSEQ & Technical).

OJEU Framework Contracts will have separate review process in connection with that Contract.

A review process is conducted on each Contractor/Supplier every 18 months where that company will be evaluated with the managers that have used their services.

The supplier will be assessed with a score from 1 to 10 on each of the following:-

* HSSEQ;
* Standard of workmanship;
* On time delivery;
* Value for money;
* Behaviours; and
* Site issues.

Once the review process has been completed the company concerned will be given the opportunity to submit any comments should their evaluation fall below an acceptable level. Any supplier that falls below a level of 35% may be removed from the OPA Approved Supplier List.

For project engineering works, Plumley PSD must be advised of contractor works by the Project Engineer at least one week in advance of the work starting. The pre-notification includes scope of works, expected start/end dates, risk assessments and safety method statements and any other safety documentation that is required. Prior to the start of any contractor works, a pre-start meeting is held in order to review and agree how the work will be managed.

Contractor risk assessments and method statements, including any additional risks introduced by the contractor, are reviewed by the Depot Manager. Additional control measures such as tool box talks are agreed at the pre-start meeting, as well as how the system for reporting incidents will be implemented. The records of the pre-start meeting are held in the PIOR.

At site, contractors are managed in accordance with the requirements of the Control of Work system. Arrangements are in place to ensure that any contractors working onsite are aware of constraints on their activities and the need to be aware of site operations, procedures and personnel who may be affected by their actions.

All contractors receive a safety induction when they arrive onsite for the first time and, while onsite, contractors are expected to comply with all site rules and are subject to similar levels of supervision as depot staff.

All contractors are restricted to their particular areas and fields of work. All contractor works onsite which fall outside the scope of daily operations are controlled by the Control of Work system.

All third party (non-resident) contractors and their sub-contractors working onsite must work in accordance with the Health and Safety Regulations for Contractors Procedure (Ref. 8.27). Any non-compliance will be construed as serious breach of site rules and may result in the contractor being asked to leave the site.

#### Lone Working

Wherever possible staff are not normally allowed to work alone. However in the few circumstances it is deemed necessary, individuals carry a depot radio and maintain regular contact with their supervisor or the control office.

Security guards conduct site walks downs out of hours and are equipped with a mobile phone.

Lone working above or adjacent to water is not permitted except in exceptional circumstances when authorised by the Depot Manager.

#### Working at Height

Working at height is managed by the Control of Work system (See Section 8.5.7.3) and the OPA Working at Height Procedure (Ref 8.44.) A suitable working platform must be provided via scaffolding or a mobile elevated work platform (MEWP).

#### Working with Electricity

The OPA follow the OPA Electrical Safety Rules to ensure all work with electricity is undertaken safely.

All fixed and portable electrical items are subjected to regulatory testing to meet the requirements of statutory legislation.

Fixed equipment believed to be faulty or unsafe, is isolated, recorded and promptly reported on the OPA computerised maintenance management system (CMMS) to the OPA maintenance team.

Portable electrical equipment without a current valid examination sticker or found to have defects, on inspection prior to use, must not be used.

Subject to consultation with Depot Engineers, all electrical works are undertaken by competent electricians under the OPA Control of Work system. Competence is controlled by the OPA Competency Assurance Manager and reviewed by the OPA Electrical Authorised and Senior Authorised Persons.

#### Personal Protective Equipment (PPE)

Plumley PSD implements the OPA’s Personal Protective Equipment Standard (Ref 8.16). All personnel onsite, including contractors, must maintain a minimum standard of dress and wear appropriate PPE, including long sleeved, flame retardant and anti-static overalls, high visibility clothing and safety boots, eye protection, gloves and helmet.

Where such PPE is to the OPA standard, it is not necessary for this to be controlled through the Control of Work system. Where additional or specific PPE is considered necessary, the specific PPE should be noted on the Permit to Work, for example, confined space harness, life line, nitrile gloves for handling chemicals, or heavy duty gloves for handling sharp-edged materials.

### Key Risk Control Systems – Management of Change

It is recognised that change management is a critical factor in any organisation. It is crucial that changes to people, design, plant, processes, software or anything that changes the established routine are properly managed.

The OPA has developed and implemented a Management of Change (MoC) procedure (see Appendix N for the procedure and a sample Management of Change record). This procedure is implemented via the use of robust auditable MoC software to raise and implement a change. There are ten different types of change, which can be raised using the MoC software.

The MoC software system requests defined information to assess the consequence and likelihood of an event occurring if the change is not implemented. This allows the OPA to make an informed decision with respect to change implementation and to control risks.

The MoC workflow and process, is managed by the MoC coordinator. Each MoC request raised requires specific authorisation from the Subject Matter Experts (SME) and Managers to ensure that all necessary hazard assessments and other MoC related assessments and checks are carried out and uploaded at key stages of the process to progress to the next stage of implementation or completion. Some changes require the input from different SMEs as they cross over disciplines.

There are five roles involved at different stages of the MoC process, they are as follows:

* Initiator – requests or initiates the proposed change;
* MoC Co-ordinator – ensures the MoC procedure is appropriately followed and works with the reviewers, etc. to progress the MoC;
* Subject Matter Expert (SME) – Performs an initial screening of the proposed change and allocates reviewers and approvers. The SME will also carry out pre and post commissioning reviews unless otherwise specified;
* Reviewer – One or more Reviewers can be appointed by the SME to provide professional consideration of the proposed change. This role may be fulfilled by another SME; and
* Approver – ensures the MoC process is suitable and sufficient for the change requested. They are responsible for approval / rejection and final close-out.

When an MoC is not required, a process has been developed to capture key information as to why the change may be rejected; examples include but are not limited to the following:

* The change is like for like;
* The change is a replacement in kind;
* The MoC no longer required; or
* A duplicate MoC has been raised.

In the case of a “replacement in kind” scenario, prior to rejecting the MoC request, consideration is given to any potential alteration to plant operation or maintenance, which could result from the requested change if implemented. If the requested change could alter the plant operation or maintenance, the change will be assessed via the MoC process.

Appropriately documenting the reasons why a MoC request has been rejected is important to ensure that the correct decision has been made in all potential MoC requests.

As part of the OPA’s continuous improvement works, the MoC procedure and training arrangements will be reviewed to give full consideration to the impact of change on safety critical tasks and the management of human factors.

#### Management of Change Process

The OPA Management of Change procedure (Ref. 8.10) specifies the process that is to be followed when assessing any changes. It applies to all emergency, temporary and permanent changes including, but not limited to, changes to:

* Assets and equipment;
* Process conditions;
* Operations or operating procedures;
* Products, materials or substances;
* Designs and specifications;
* Engineering standards, best practices and legislative compliance;
* Inspection, testing and maintenance programmes;
* Process control software;
* Organisation
* Any urgent changes
* New locations
* Changes to work force
* Changes to understanding of hazards and risks
* Developments in technology.

The OPA utilises three MoC categories as presented in Table 8‑2.

Table 8‑2: MoC Categories

|  |  |
| --- | --- |
| **Change** | **Description** |
| Standard | Any change that is permanent. |
| Temporary | This is a change that is intended to only be temporary and will be reverted back to how it was prior to the change. |
| Emergency | This is a change that needs to be carried out on an emergency basis. This must only be used if the change is for one of the following reasons:-   * Prevent injury to someone * Prevent damage to equipment or facilities * Prevent adverse impact on environment or community * Prevent severe business economic impact   All emergency changes will be treated as though they are temporary. Emergency changes are implemented prior to the review stages although management approval is still required prior to implementation. The review stages are performed retrospectively after the change. |

Initiation

The MoC process is initiated by describing the key details of the proposed change, the type of change, the background/justification for the change, its associated risks, proposed hazard assessments, alternative options considered (including consideration of inherent safety, human factors, and changes to safety related procedures) and the expected impact of the change on existing operations. Any supporting documentation such as initial risk assessments, drawings, draft procedures, etc. will also be attached to the MoC case.

A SME is assigned by the MoC Initiator, if more than one change type is selected. The SME will be defined by which topic the proposed change primarily concerns, based one of the following:

* Control and Instrumentation;
* Electrical;
* Mechanical;
* Civil;
* Organisational;
* Process Safety and Environmental;
* Facilities;
* Procedures
* Security; and
* Business Information Systems.

Additional SMEs can also be added, should the change require additional input or review/approval at a later stage.

SME

The SME can select the types of Hazard Assessments required, if any, from the predefined list, and assign a HSEQ member as a ‘Reviewer’ or ‘Approver’ to approve decision, amend or identify any additional Hazard Assessments. These can include:

* Hazard and Operability study (HAZOP);
* Failure Mode Effects Analysis (FMEA);
* Pre-construction design operability review (PreDOR);
* Layers of Protection Analysis (LOPA); and
* Safety Integrity Level (SIL).

Guidance on the appropriate type of assessment for different types of change is provided in the MoC procedure. Less complex changes may only require a review by the technical discipline concerned, whereas complex changes may require a specific study or studies.

The need for additional hazard assessments may be identified later in the MoC process by subsequent reviewers or approvers.

The SME is responsible for the initial screening checklist and pre & post commissioning checklists. The proposed change screening is to determine if the change is valid and determine the appropriate persons to fulfil the roles within the MoC process.

Review

There will always be a minimum of one reviewer.

Each reviewer should be competent in the technical discipline they are being asked to review. Operational staff involved in the review will be suitably experienced in the process and the site involved. All reviewers complete a form within the MoC software system, which prompts them to consider the acceptability of the change.

For changes that can influence operations at site, a pre-implementation design and operability review is carried out.

Any actions raised at the review, or at any other stage, are recorded in the action log associated with the change.

When the review stage is complete, the change is submitted to the manager for approval and authority to proceed.

Approval

All approvers must be a Manager, Depot Manager or a recognised Lead SME within the OPA.

The appropriate manager must ensure that adequate resource is made available for the risk assessment and that the assessment is performed by suitably qualified individuals using appropriate methods.

The approver must ensure the preceding reviews are suitable and sufficient.

The approver can return the MoC for a second review if it is insufficient or requires additional information. Once any pending actions are closed, the authority to proceed is processed by the approver. Any subsequent changes to the approved design are suitably documented and reviewed.

Pre Commissioning Review

Once the change is programed, a pre-commissioning review is carried out prior to start-up. This ensures the change will be implemented as intended and is of appropriate quality, adheres to relevant standards and has not introduced additional hazards during its implementation. If the change is of a sufficient type, scale or scope then a formal commissioning plan will be generated. Once all actions, which are “required for start-up”, have been completed and the manager has approved the pre-commissioning review, the change can be started up.

Post Commissioning Review

After the change has been implemented and started up, a post-commisioning review is held to ensure the change is sustainable and the required due dilegence was achieved. It also provides an opportunity to learn any lessons from the change. Once completed, this review is sent for final approval and the MoC process is closed out.

To ensure that all related drawings, OPA standard procedures, operating procedures and operating & maintenance manuals, etc. are updated to reflect the impletemented changes, a post commissioning checklist contains questions which prompts an action for these updates to be carried out.

#### New Engineering Works Carried Out by Specialist Contractor

New engineering works by specialist contractors are also carried out in line with the OPA Management of Change procedure (Ref. 8.10). Contractors may be responsible for the design, engineering, procurement, construction, testing and commissioning. This includes provision of new procedures, maintenance data and ‘as built’ drawings and records which are handed over on completion of the work. Construction is carried out in accordance with the site’s Control of Work arrangements.

OPA maintains close control of these activities and when the new work is handed over, the site records, procedures and maintenance data are updated in accordance with the details given by the specialist contractor. The OPA will have ensured that, by the time of completion:

* The new design is safe and compatible with existing operations;
* Changes to flows, pressures, tank movements, etc. have been taken into account in the design;
* If appropriate, risk analysis, HAZOP and HAZAN studies have been carried out and documented; and
* Additional operating procedures and maintenance procedures have been established and included in the site’s operating system.

#### Management of Organisational Change

The MoC system also includes the ability to assess organisational change. Examples of potential organisational changes include:

* Changes to staffing levels or structure;
* Changes to job roles or responsibilities;
* Changes to working hours, etc.; and
* Changes to the way that the organisation supports a process including the impact that staffing levels provide as safeguards to prevent process incidents.

The checklists (Ref. 8.31) used for the screening, pre-commissioning and post-commissioning reviews are derived from the HSE guidance on organisational change and major accident hazards (Ref. 8.30).

For organisational changes that are determined to be major or significant, the OPA Board will review the proposed changes. All other proposed organisational changes are reviewed by the Leadership Team or the relevant function’s Leadership Team member.

The organisational change checklist (Ref. 8.31) contains screening questions to establish if the proposed change requires to be assessed within the MoC system.

Prior to implementing an organisational change, the change request is subject to a pre-commissioning review using the checklist to establish if key considerations have been undertaken, including but not limited to the following:

* Has staffing levels been set to cater for foreseeable crises & emergencies as well as normal operation;
* Has the change been communicated to adjacent units or other affected groups; and
* For staff who will be lost to the organisation, has essential information and knowledge held been captured & retained.

Once the proposed change is implemented a post-commissioning review using the checklist is undertaken to establish if key follow up actions have been performed, including but not limited to the following:

* Has the internal emergency response plan been updated;
* Has a review programme been put in place to monitor the effects of the change; and
* Have the relevant Operating and Maintenance procedures and manuals been produced/amended to accommodate the change.

### Key Risk Control Systems – Planning for Emergencies

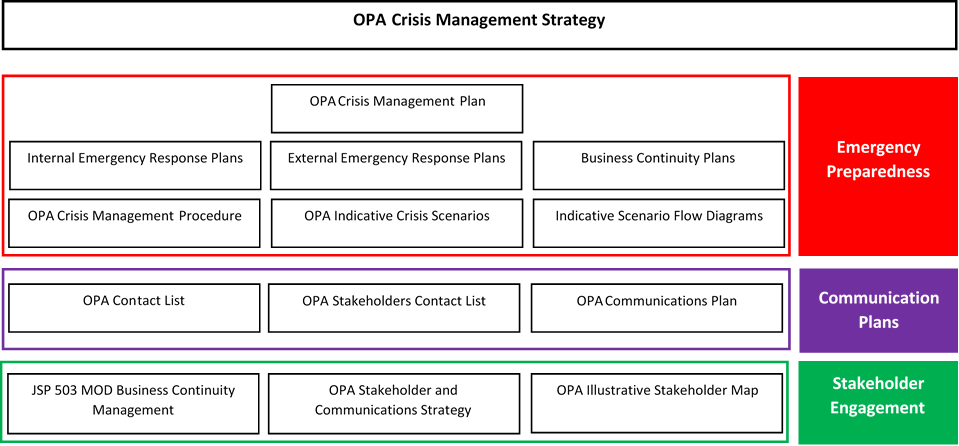
The Internal Emergency Response Plan (Ref. 8.11) and External Emergency Response Plan (Ref. 8.12) describe the overall OPA emergency response arrangements for Plumley PSD and help to form the architecture of the Crisis Management Plan (Ref. 8.33) for the OPA.

The Internal Emergency Response Plan addresses and details major accident response including response of personnel, key roles (such as the Site Incident Controller and Site Main Controller), key contact numbers and resources available for use. Foreseeable emergencies have been identified as part of the development and continued maintenance of the internal plan.

For incidents with the potential to extend beyond the site boundary, an External Emergency Response Plan has been prepared by Cheshire West and Chester Council.

The intention of the Crisis Management Plan is to minimise the effect of an event, or series of events, that has an adverse impact on the OPA. It takes into account the needs of all interested parties. The Crisis Management Plan addresses both emergency preparedness and business continuity within a single framework and sets out emergency response protocols. The architecture of the plan is shown in Figure 8‑9.

Figure 8‑9: Architecture of The Crisis Management Plan



The OPA Crisis Management Plan, Internal Emergency Response Plan and External Emergency Response Plan are described in more detail in Section 9 of this safety report.

#### Emergency Response Training

All depot staff have received Operational Response training in their role in reducing the effects of a major incident, including the duties of the Site Main Controller, Site Incident Controller, and management of the Emergency Control Centre (ECC). At a corporate level, the OPA has established a Strategic Emergency Control Centre, which aims to externally manage the consequences of an incident with the primary focus on people, environments, assets and reputation. OPA corporate personnel are provided with the necessary training to fulfil key roles as part of its operation.

Regular drills are carried out to ensure that the plans work effectively and all participants are aware of their roles and responsibilities.

In addition to emergency response training, site personnel are also briefed on the contents of this safety report and are encouraged to read it so that they familiarise themselves with the contribution they make to management of hazards, particular major hazards, and to effective emergency response.

#### First Aid Arrangements

The Health and Safety (First Aid) Regulations 1981 require that the OPA provides adequate and appropriate equipment, facilities and personnel to ensure that persons onsite receive first aid if they are injured or take ill at work until professional medical help arrives, if required.

At Plumley, both the Depot Manager and the Maintenance Supervisor are first aiders and are trained in the use of first aid equipment and how to deal with foreseeable injuries. The list of trained first aiders is displayed on the notice board at the site.

First aid kits including eyewash bottles are located in the main office. The first aid kits and eyewash bottles are subjected to 3 monthly inspections and re-stocking as required.

In cases of doubt or when injuries are beyond the capability of in-situ first aiders, medical assistance is sought via the 999 emergency services number.

## Measuring Performance

The OPA plans and implements the monitoring, measurement, analysis and improvement processes to support its business. The goals of this requirement are to:

* Establish the extent to which HSEQ objectives outlined in this HSEQ Management System are met.
* Monitor the effectiveness of Health, Safety, Environment and Quality controls.
* Demonstrate conformity of our services and product to applicable legislation.
* Provide assurance to The OPA Board, the MOD, Regulatory agencies and our customers that we are effectively managing the HSE and Quality aspects of our business.
* Continually improve the effectiveness of the HSEQ Management System.

A defined set of criteria - Key Performance Indicators (KPIs) and Process Safety Performance Indicators (PSPIs) - are used to monitor the OPA and Plumley PSD HSEQ performance, and in particular to provide information on whether the measures taken to guard against major accidents are operating as intended.

The performance criteria are a combination of both proactive and reactive indicators. Proactive HSE performance monitoring involves measuring and monitoring achievement of proactive (leading) HSE targets such as numbers of personnel receiving HSE training, numbers of safety meetings held, number of safety audits carried out, etc. Reactive HSE performance monitoring involves measuring reactive (lagging) HSE statistics such as numbers and types of HSE incidents, etc.

### Key Performance Indicators

Performance monitoring using KPIs is a key tool for ensuring that the OPA is on track for delivering its outputs and that it is meeting its commitments to its customers and other key stakeholders.

KPIs are reported to the OPA Board on a monthly basis and the type and number of KPIs are reviewed quarterly by the management team to ensure they are relevant.

The OPA uses KPIs to reflect performance across the whole of the OPA’s operations and they therefore encompass more than HSE performance e.g. operations performance, people performance, security, asset management performance, etc. The tolerance measures for each KPI are set on an individual basis and are reviewed monthly. Some examples are listed in Table 8‑3 and others are included in Appendix N.

Table 8‑3: OPA HSEQ KPI Examples

| **Description** | **Measure** | **Target** |
| --- | --- | --- |
| HSEQ Audits undertaken | Number undertaken | Audit Plan |
| Progress on Continuous Improvement Projects | % progress | Planned progress for year |
| Loss of Containment events | Number of events | Below target for year |
| Management of Change requests – not approved | Number reported | Below target for month |
| Storage Capacity available | Cubic meters | Available capacity |
| Defects rectified | % complete | All defects |
| Absence rate | Average % | Below target for 12 month period |

Individual line managers and / or supervisors are responsible for the collection of the data necessary for monitoring the KPIs and performance of the depot against its specific targets is reported and discussed at the OPA monthly HSEQ Performance Review Meetings.

Good team / employee HS&E performance is rewarded by the staff performance appraisal system. Adverse performance against targets is investigated and plans for corrective actions are drawn up. Wherever possible, the corrective action(s) is incorporated into a corrective action plan as described in Section 8.5.4.

Contractors are required to provide performance data to enable effective review of their HSE performance. Contractors not complying with OPA HSE requirements will be subject to corrective action programmes agreed by both parties.

See Appendix N for an example KPI Report.

### Process Safety Performance Indicators

PSPIs monitor the effectiveness of key barriers or control measures, which either prevent or limit the consequences of a major accident. They therefore focus on the performance of safety critical controls and, similar to KPIs, can be leading or lagging.

PSPIs monitored at Plumley PSD are developed in accordance with OPA’s Process Safety Performance Indicator Development procedure (Ref. 8.23) which is based upon the HSE’s “Developing Process Safety Indicators: A Step by Step Guide for Chemical and Major Hazard Industries” (HSG 254) guidance for developing PSPIs (Ref. 8.24).

PSPIs for each control are selected based on known and potential levels of risk (e.g. from recent past performance, results of inspections and audits, incident investigations, anticipated changes in technology or organisation, Leadership Team visits, asset integrity studies).

There are a number of PSPIs that relate to maintenance, including EC&I systems. There are few critical EC&I systems as the site is non-operational and there are no Safety Instrumented Systems (SIS) installed. Those systems or components that are defined as critical are given a MAH categorisation within the CMMS, which gives prioritisation for maintenance/inspection. Example PSPIs are: PPM Backlog, Defect Backlog, MAH PPM's completed versus total due, all PPMs completed versus total due.

There are a total of 6 PSPIs reported in the monthly KPI spreadsheet, in the Chief Executive (CE) Report, namely: PPM Backlog, Defect Backlog, MAH PPM's completed versus total due, all PPMs completed versus total due, Training Days, & end of month e-learning completion figures.

A further three PSPIs are reported within the body of the CE Report each month, namely: Competency PSPI is reported in the HR section of CE Report, Emergency Exercises and Audit PSPI are reported in the Assurance section of CE Report.

PSPIs are monitored on a monthly basis via the same process that reviews the KPIs i.e. monthly at Board meetings and quarterly at HSEQ Committee meetings.

PSPIs will be made more visible to the depot staff so they are aware of what the OPA leading and lagging PSPIs are.

See Appendix N for an example PSPI Report.

### Customer Satisfaction

Customer satisfaction is measured through customer feedback and any customer complaints are tracked through VelocityEHS where corrective actions are managed through to completion.

### Incident Reporting

#### Internal Reporting

The OPA recognises the importance of full, free and uninhibited reporting of all incidents or near misses that affect HSE in general and process safety in particular. It is the responsibility of all employees and contractors to report any circumstances affecting health, safety, security, environmental contamination or quality shortfalls.

OPA has in place a formal procedure (Ref. 8.35) for reporting and investigating all HSE incidents, from the initial report to the final close-out of corrective action, and uses VelocityEHS to track and manage incident reports. All incidents are recorded, incident owners are assigned and corrective actions are managed through this system.

Examples of incidents required to be reported include all loss of containment of product, all personal injury or exposure to a hazardous substance, motor transport accidents, incidents covered by the Reporting of Injuries, Diseases and Dangerous Occurrences (RIDDOR) regulations, and also potential incidents (near misses).

All site staff regardless of position are responsible for the prompt reporting of observed or suspected defects via their line management. All depot personnel are responsible for ensuring equipment is isolated or made safe and for reporting defects.

In all cases of personal injury, the injured party or their line manager completes the site’s accident book as soon as possible.

Contractors are obliged to report all incidents to Depot Management and the incidents are in turn reported using the above procedure to the OPA head office. Incidents and safety issues are also included in monthly reports and monthly meetings.

The Star Card process was introduced in 2018 to make it easier to raise concerns about health, safety, security, environmental contamination or quality issues. A Star Card can be raised by anybody and it is given to the Depot/Office Manager for review. They are responsible for control of Star Cards on their sites, and for issuing feedback and requesting support from HSSEQ, Engineering etc. as required.

If the Star Card can be closed at the depot/office the Depot Manager or designated person deals with the issue/concern and relays or writes the Star Card. For instance; where a behavioural conversation has taken place, or the matter has been dealt with, it will be deemed as closed out.

If the Star Card cannot be closed out i.e. due to further information being required, input from another department and requires escalation for closure, an action is raised through Velocity after agreement with the action owner. When the Star Card is closed out feedback will be given by the Depot Manager to the relevant person on the status.

All STAR Cards raised are collated by the Assurance Department, a Data Set will be produced and statistical analysis will be provided in the monthly Focus Newsletter which will show how many Star Cards were raised, where, and whether Open or Closed and detail the Open Card status.

#### External Reporting

The OPA is required to report HSE incidents to various regulatory authorities in accordance with regulatory requirements e.g. RIDDOR or conditions set down in its permits.

### Incident Investigation

All accidents and incidents involving staff, contractors, customers or third parties arising from the business activities of Plumley PSD are thoroughly investigated following the OPA incident investigation procedure (Ref. 8.35).

The Depot Manager ensures that all site incidents are classified and reported for investigation. The purpose of the investigation is to:

* Identify the immediate and root causes of the incident;
* Identify the corrective actions necessary to prevent recurrence of similar incidents; and
* Permit the structured communication of findings and recommendations to all appropriate staff and contractors in order to share learning points.

The level of investigation depends on the severity of the actual realised consequence or the potential consequences (whichever is the more serious). This leads to a three-tier classification system, which dictates the level of notifications and incident investigation required for the incident:

* Category 1 – Local
* Category 2 – Major
* Category 3 – Catastrophic

Incidents with the potential to cause a major accident merit the most rigorous category of investigation, which is undertaken by an independent investigator.

For incidents that result in an injury or significant near misses, a more detailed investigation will be carried out in addition to the investigation embedded within VelocityEHS. In these instances, the report will be attached within VelocityEHS and the actions added and tracked within the VelocityEHS system. The report is also circulated to SLT and saved on SharePoint.

If required, the HSEQ MS can be updated after the full investigation has been completed to ensure lesson learnt are retained.

The OPA Incident Investigator, appointed through the reporting and investigation process, is ultimately responsible for defining the corrective actions to prevent re-occurrence, which are then monitored for progress by the Compliance & Risk Director.

Each month the numbers of open and outstanding actions are reported to the OPA Board, and each quarter they are also reviewed at the HSEQ Committee Meeting. This reporting enables identification of trends to be discussed and evaluated to ensure an appropriate resolution.

### Lessons Learned

#### Internal Learning

Using VelocityEHS as described in Section 8.6.4, the OPA has the ability to review incidents across all parts of the organisation and cascade learnings from site to site.

**Lessons Learned at Plumley PSD**

Security Guard Contaminated with Diesel

While filling up the fuel drum that feeds the generator for the security cabin, diesel splashed the security guard in the eyes, mouth and chest. The security guard went down to the site office and washed his eyes out with sterile eye wash. He also removed his contaminated clothing and completed his shift.

The investigation found that a number of factors led to the initiation of this event, including:

• The filling hose was not connected correctly; it was subsequently reconnected with jubilee clips.

• PPE (safety glasses) was not worn for the task as it was not provided by the contract security company. After the incident they provided PPE.

• There was no RAMS for the task. After the incident the security company provided a RAMS.

• The wrong equipment was being used for the task potentially due to previous custom and practice or insufficient planning of the task; the security company provided a new pump but OPA asked them to arrange a new way of working.

Now diesel is delivered directly to the generator (i.e. pumped off a wagon directly) and the guard does not have to use fuel drums or pump diesel across.

**Lessons Learned From Other OPA Assets**

As examples, at the Thanckes OFD, the following incidents have been highlighted for learnings:

Leak during loading operations

A 3” hose fitting came apart during loading of a road tanker under normal operating pressure, leading to a loss of containment which came into contact with the operator and resulted in a release to ground.

Investigation of the incident determined that the fault was a failure of the interface between the fitting and the soldered joint. Immediate action was taken to withdraw all similar fittings from use across all OFDs. The long term corrective action was to change adaptors for fixed flanged fittings, thus eliminating the weak point that lead to the incident.

OFD Thanckes Tank 32 Failure

The OPA has suffered one tank failure within its operations, which is related to high groundwater levels.

Tank 32 at the OPA Thanckes facility suffered a significant failure in late 2012. The tank is semi-buried and the shell failed at the top shell to roof weld when the tank was empty due to excessive external force being applied between the concrete surround and tank shell, due to the adjacent ground water pressure. This was discussed in terms of the foreseeability of a similar failure at the Scottish establishments. The OPA has decided this failure mechanism is not credible at the Scottish sites. This is due to a design difference for the Scottish NATO tanks, which provides a drainage arrangement between the concrete surround and steel shell of the tank compared to the Thanckes design.

The OPA has taken long term corrective action across all OFDs via the implementation of a 5 year plan to ensure compliance with EEMUA 159. EEMUA 159 is an industry standard for surface tanks which are used to store dangerous substances. Although, the Scottish sites’ NATO tanks are all semi-buried, complying with the EEMUA guidance for surface tanks is deemed as applicable industry good practice due to the unavailability of a similar standard for semi-buried tanks.

The OPA has used the EEMUA surface tank guidance to implement a five yearly tank inspection programme, as the tanks previously had no inspection history. As part of the tank inspection programme, the OPA has undertaken Non Destructive Testing (NDT) to scan 100% of the walls and floors of the tanks and build a tank profile to ensure that the integrity of the semi-buried tanks is in line with industry good practice.

#### External Learning

Industry learnings are shared across all depots by issuing safety alerts, either from third parties or from the OPA. The learnings are sourced from OPA industry colleagues, particularly the Tank Storage Association (TSA) of which the OPA is a member.

As an example, at the Buncefield Oil Storage Depot, the following incident has been highlighted for learnings:

On the 10th of December 2005, Tank 912 at the Hertfordshire Oil Storage Limited (HOSL), part of the Buncefield oil storage Depot, filled with petrol. The tank had two forms of level control: a gauge that enabled the employees to monitor the filling operation and an independent high-level switch (IHLS) which was meant to close down operations automatically if the tank was overfilled. The first gauge stuck and the IHLS was inoperable – there was therefore no means to alert the control room staff that the tank was filling to dangerous levels. Eventually large quantities of petrol overflowed from the top of the tank. A vapour cloud formed which ignited causing a massive explosion and a fire that lasted five days.

The OPA has conducted a gap analysis against the Safety and Environmental Standards for Fuel Storage Sites (Ref. 8.22) which were developed by the HSE Process Safety Leadership Group to prevent the recurrence of a Buncefield type incident. Appropriate action (such as implementation of an overfill protection system, a competency management system, tank inspection standard in line with EEMUA 159, containment policy scorecards, etc.) has been taken by the OPA to address any shortfalls as part of the continuous improvement works (See Section 10).

The OPA has access to the eMars database which is reviewed for previous accidents at fuel storage sites. In Appendix N, the OPA have considered the lessons learned from those accidents and listed the measures in place to prevent/mitigate similar accidents at the depots.

The OPA also has access to the Barbour Index and the Tanks Storage Association (TSA) and Institution of Occupational Safety and Health (IOSH) Safety Alerts. The OPA utilises these to issue suitable safety alerts, where applicable, to communicate any external learnings.

## Audit and Review

### Inspection and Audit Plan

The OPA Compliance & Risk Director is responsible for establishing an annual, risk-based, coordinated OPA HSEQ inspection and audit plan to ensure that all facets of the business are audited according to business need, and at least once per annual audit cycle. The audit plan is reviewed each year to account for areas of concern, learning from industry, etc. A copy of the audit schedule is included in Appendix N.

The plan includes those inspections and audits required to satisfy the MOD, external regulatory and legal bodies and focuses on:

* 10 Pillars Compliance audits;
* Occupational EHS audits; and
* Security Audits and inspections.

The audit plan defines which processes and areas are to be covered. Auditors are predominately members of the Assurance Team, supported by other members of the Senior Leadership Team (SLT) on an ad-hoc basis, to ensure objectivity and impartiality of the process and to achieve the best use of resources and skill sets.

Adherence to the audit plan is monitored each month within the Chief Executive Report as part of the Board governance, along with any key audit findings. The number of audit actions raised each month and the number of outstanding audit actions are also included in the monthly KPI figures reported to the Board.

### Site-specific Inspections and Audits

Within the OPA audit programme, there are various types of audit activity, ranging from routine inspection to formal third party audits. Audits carried out include specific references to major hazards and to closely allied aspects of the operations such as Control of Work, emergency planning and availability and currency of key documentation. They can involve documentation review and/or physical examination of elements of the depot.

Following each audit, the auditor will hold a meeting with the Depot Manager to discuss findings and agree any actions that may be required. A draft report will then be issued to the Depot Manager for comment, prior to it being issued to the wider (SLT) audience.

Audit findings are recorded and recommendations for corrective actions to rectify any deficiencies are captured in VelocityEHS and monitored until close out. The number of audit actions raised each month and the number of outstanding audit actions are included in the monthly KPI figures reported to the Board.

There is no formal Leadership Visit Schedule because each site is visited regularly, but the number of visits a depot has by an SLT member is monitored on a monthly basis and reported as a KPI within the monthly CE Report to the Board. This is to ensure that there is a spread of leadership representation across the network.

However, it is still expected that members of the management team will continue to involve themselves in informal discussions with employees and contractors at all levels as well as carrying out a site tour/inspection. The purpose is to have a two-way dialogue with all employees and contractors to help move the culture of the company on towards a hazard aware and process safety driven culture. Other issues may be discussed but fundamentally this is a ‘hearts and minds’ visit to the site. This may be undertaken whilst a senior member of staff is on site for another reason or as a standalone objective.

Actions from the visit may be raised with the Depot Manager for immediate action, added to the Site Improvement Plan, raised as a STAR Card or added to the VelocityEHS reporting system.

Examples of the OPA audit schedule, 10 Pillar Compliance Audit, EHS Audit, and Security Audit can be found in Appendix N.

#### Workplace Inspections

Workplace HSE inspections are a form of proactive monitoring and are conducted on all workplaces controlled and operated by the OPA. These inspections include sampling of Health, Safety and Environment work practices, verification of compliance with applicable HSE legislation for the activities carried out in the workplace, and identifying opportunities for continual improvement. The Plumley Maintenance Supervisor carries out the inspection on a quarterly basis. Any findings and corrective actions are raised within VelocityEHS.

#### 10 Pillar Compliance Audits

The OPA is committed to achieving assured regulatory compliance in 10 key areas, known as the 10 Strategic Pillars of Compliance. These are:

* Safety Management System – Control of Work system, MoC, hazard identification, etc.;
* Ageing plant – asset register, maintenance management, etc.;
* Competence – performance and competency systems, etc.;
* Safety Instrumented Systems – Testing and inspection, etc.;
* Secondary & Tertiary Containment – Containment score cards, inspection, etc.;
* Overfill – proof testing of ATG alarms, etc.;
* Internal Emergency Response – outcome of liaison meetings with external agencies, etc.;
* External Emergency Response – Public Information Zone, exercises, etc.;
* PSPIs and SIP – awareness, performance and progress, etc.; and
* Safety Leadership – behaviour and culture, engagement, etc.

Audits of the 10 Pillars of COMAH Compliance are carried out at all depots to score each site in levels of compliance against the Competent Authority’s Strategic 10 Pillars of COMAH Compliance. A 10 Pillar Audit is performed bi-annually for Plumley PSD. These are usually a one-day audit on site looking at two or more of the scored pillars to monitor compliance levels as seen at that time. Each Pillar covers a myriad of smaller subjects. The audit examination is sample based, and the findings will be indicative of the areas examined.

The report is then made on *VelocityEHS* using the attached 10 Pillars Audit template. The scores for each audit are added to the Site Status spreadsheet and the average of these scores will be used to record the OPA score for each pillar. Corrective actions are taken where the audit finds deficiencies and are then monitored for completion in VelocityEHS.

#### Occupational Environment, Health and Safety (EHS) Audits

These audits cover all depots and each audit is scheduled to ensure each depot is audited against the Occupational EHS Audit criteria twice per year. The audit is conducted by a member of the Assurance department.

The proforma (see Appendix N) covers a number of key areas, and the audit will only cover a selection of those key areas based on past performance, business focus, known vulnerabilities, industry focus, etc. Hence the audit examination is sample based, and the findings will be indicative of the areas examined. Inevitably, there will be overlap with the 10 Pillars Audits.

On occasion, there may be a requirement to cover a key aspect by engaging a third party to do a focussed audit.

#### Security Audits

These audits/inspection cover all depots and one is scheduled to ensure each depot is audited/inspected once per year. The objective is to establish a baseline understanding at each facility and whether or not it is in compliance with JSP440. Although JSP440 is only applicable to the OFDs, the Plumley site is still subject to the same security audits. These audits are undertaken by a member of the Assurance department who is the designated Security Officer.

### External Audits

In addition to the above internal audits and inspections, the OPA is subject to audits by the following organisations:

* Defence Internal Audit Committee;
* Department for Transport – Marine audits;
* Navy Command – Security audit; and
* Competent Authority – Legislative compliance.

### Evaluation of Audits

All the actions arising from audits and inspections, both internal and external are recorded in *VelocityEHS* and assigned actionees and time-bound period for close-out. The audits are also recorded within *VelocityEHS*, to enable cross-reference between the actions and their source.

Line Managers are responsible for ensuring that all HSEQ related corrective actions have been implemented. Significant findings are reviewed and discussed at the monthly Leadership meetings and at the HSEQ Committee meeting.

To assure effectiveness of corrective actions taken, any non-conformances from previous audits or inspections have to be reviewed as part of the pre-audit or pre-inspection preparation for the next audit.

Each month the numbers of open and outstanding audit actions are reported to the OPA Board, and each quarter they are also reviewed at the HSEQ Committee meeting. This reporting enables identification of trends to be discussed and evaluated to ensure an appropriate resolution.

### Management Review

The management review process includes specific consideration of MAHs and the MAPP, and checks the continued suitability, adequacy and effectiveness of the HSEQ MS by determining:

* How well the system is being implemented and maintained;
* The effectiveness of the system;
* Whether performance targets are being achieved and the desired outcomes obtained; and
* Whether any changes to the business, legislation, or external factors necessitate a change in the HSEQ MS.
* Whether changes to risks, opportunities and resources are identified and managed within the HSEQ MS
* Whether the monitoring and auditing activities are calibrated
* Whether communications are appropriate and meet the requirements of the HSEQ MS
* Whether documents are correctly retained and controlled
* Review the effectiveness of actions taken following incidents and near misses.

The various management reviews are described in Section 8.4.6.1.

Company HS&E performance is monitored as described in Section 8.6 and provides an input into the management review process, along with findings from audits (Section 8.7.2), incident investigations (Section 8.6.5) and lessons learned (Section 8.6.6), etc.

The output of the management review is utilised to further develop the HSEQ MS by feeding back to the “plan” elements and cascading the required changes to policies and procedures accordingly. The findings of the management review are cascaded to the wider OPA via the weekly held teleconferences and departmental team meetings.

Individual elements of the HSEQ MS, for example the internal emergency response plan, are reviewed and updated as required e.g. due to changes to the plant, organisation, operating procedures, hazards, etc.

The OPA has a five year plan to address any deficiencies, which may come to light as a result of the review process and this plan is reviewed annually by the management team.

## Continuous Improvement

The OPA is committed to continually improving all its sites in accordance with good industry practice, industry standards and evolving and emerging legislation. Improvements are being made to the organisation as whole, which impact all the depots, as well as site-specific improvements. The improvement projects in progress at Plumley PSD and other OPA sites are discussed in further detail in Section 10 of this report.

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34. OPA Performance Management Procedure, 2017.
35. Incident Investigation & Reporting, 2019.
36. OPA EMS Procedure, 2018.
37. On Site Pipework Inspection, SRD, ASENG-0302, Revision 1.0, March 2013.
38. Environmental Management System Policy, 2018.
39. Wellbeing Policy, 2017.
40. Task Risk Assessment, 2018.
41. Risk Register Procedure, 2018.
42. OPA EMS Objectives and Targets, 2020.
43. OPA Environmental Aspects & Impacts Register – Plumley PSD, 2020.
44. OPA Working at Height Procedure, 2020.
45. Workplace Inspection Procedure, 2020.