



The system of maintaining and improving the safety and reliability of machinery, equipment and infrastructure on the premises of GlaxoSmithKline Pharmaceuticals plant in Poznan

1. Case metadata

▪ Country/ies of origin:

Poland

▪ Year of publication by agency:

2011

▪ Sector:

C21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations

C21.1 - Manufacture of basic pharmaceutical products

C21.1.0 - Manufacture of basic pharmaceutical products

C21.2 - Manufacture of pharmaceutical preparations

C21.2.0 - Manufacture of pharmaceutical preparations

▪ Keywords:

EU-OSHA Thesaurus: Pharmaceuticals (38201D), Maintenance (21401C), Maintenance worker (55261D), Machine safety (18361E), Large business (01161D), Vocational training (10241D), On-the-job training (11081D), Accident prevention (18081D), Integration of OSH management system (19161D), Safety programs (20241D), Safety culture (19961D), Education, OSH information, OSH training (09161B), Good Practice (24361C), Case studies (24401C)

2. Organisations involved

GlaxoSmithKline Pharmaceuticals S.A.

3. Description of the case

3.1. Introduction

GlaxoSmithKline Pharmaceuticals S.A. is a pharmaceutical company. The factory in Poznań employs approximately 600 permanent employees; the company also collaborates with many external companies providing various services, such as housekeeping, room upgrades, and repairs. Various initiatives are constantly undertaken to improve the safety of machinery and equipment and of the plant infrastructure, including GSK buildings.

CASE STUDIES

GlaxoSmithKline, as an employer, cooperates actively with the trade unions. The Parity Committee, consisting of four representatives of the unions and 4 representatives of GSK, has been working for 11 years. This is a forum for mutual consultation, not required by law, which has worked very well over the years. In recent years, many agreements with the unions have been concluded—the Collective Bargaining Agreement, regulations, agreements regarding the reduction of employment, an agreement regarding the division of the company, decisions required by law and others. The consultations of many organizational and staff-related solutions are conducted in harmony. In accordance with the Polish law, the Work Council (a forum for consultation and information) was established in 2006. The unions appointed their representatives, and the cooperation of GSK with the Council began. In addition, very active in the Poznań GSK factory is the Safety Committee, which is a forum to discuss OH&S issues, including fire safety and environmental protection, not only with the employees, but also with Unions representatives.

3.2. Aims

Accidents related to the operation of machinery are often the cause of serious injury leading to permanent disability. Between 2004 and 2009, there were a few dozen serious accidents related to the operation of machinery in the GSK factories all over the world, including 23 cases of amputation. There was also an accident at work in the factory in Poznań, which resulted in the amputation of a fingertip.

The enterprise is striving to minimize the risk of working with machinery and equipment, improve the security of buildings and circulation routes and other infrastructure, both for their own employees and for employees of external companies performing work in the factory.

GSK makes an effort to control occupational risk and reduce the number of accidents through comprehensive, systematic operation aimed at the OH&S area.

3.3. What was done, and how?

GlaxoSmithKline Pharmaceuticals S.A. has its own local policies on environment, health and safety (EHS). A continuous productivity, high quality products and high level of safety is achieved thanks to correct and very careful maintenance among others things.

In accordance with the Policy and the existing system of safety, health and environment, all devices should be designed, installed, operated and maintained to prevent worker contact with dangerous parts of machinery. The areas where machines work must also comply with applicable local laws or regulations, as well as corporate standards.

Each new machine installed at the GSK factory must meet the following minimum requirements:

- binding legal regulations, applicable to a given case,
- applicable national or international standards for machinery, and
- GSK Access Zero standard for physical security, as well as LOTO (lock-out tag-out), including the requirement to reduce the numbers of interventions to a necessary minimum.

Therefore, all GSK plants, including the plant in Poznań, have implemented or are implementing the Zero Access programme as the primary standard for machinery and equipment guarding. When the programme is fully implemented and rigorously observed, access to dangerous parts of machinery will be impossible without the use of a tool to remove or disable protections. The Zero Access process begins at the stage of the purchase of new equipment, and then applies to its installation, acceptance, commissioning and staff training.

The purchase process of new machinery and equipment concerns all groups of machines and equipment. An important part of purchasing new equipment is a preliminary EHS (Environment, Health, and Safety) risk assessment. This assessment allows for preliminary identification of project-related risks, and refers to both the purchase of machinery and equipment, as well as to the

CASE STUDIES

modification / reconstruction / construction of new facilities on the premises. In addition, in the case of purchasing new machinery and equipment, a thorough Machine Safety Assessment must be carried out according to the suitable checklist.

In the case of new equipment, effective safety management involves not only the appropriate specification of requirements, design and delivery, but also correct installation and a technical acceptance process.

All new equipment must be checked and tested immediately after installation as part of the Local Compliance Test. The check must include making sure that all guards and protections are correctly installed and that they operate properly. The Machine Safety Assessment (checklist) should also be checked and completed at this stage by machines' operators and OSH services.

Whenever possible, safety tests should be carried out and any malfunctions should be corrected prior to switching on the power, and all malfunctions found after switching on the power must be corrected before continuing the technical acceptance.

The following actions should be performed before commissioning the equipment:

- Machine safety assessment must be completed and approved by machine owner.
- All defects and deficiencies related to the machine protections, Standard Operating Procedures, maintainable procedures, documentation, etc. must be identified and corrected.
- All interested operators, technical personnel and supervisors should receive appropriate training on operation of the new machine.

In addition to the manufacturer's documentation, the equipment operated by operators in production processes also has a local GSK document which describes operation of the equipment in conjunction with specific work conditions in a given area.

These internal Operation Manuals are used for obligatory training of operators; the lists of training courses along with the tests are placed in the MyLearning electronic system. After each update of the Operation Manual (every 3 years), employees undergo "refreshment" training.

In addition to training on documents, operational staff at the GSK factory in Poznań receives obligatory and non-obligatory OH&S and fire safety training, and they participate in a so-called basic knowledge certification process. The purpose of the certification process is to provide operational staff with the basic knowledge needed to adequately understand and carry out tasks in the workplace. The scope of knowledge included in the Operators Certification Manual is the necessary minimum to effectively carry out tasks in the workplace.

Use of machinery and equipment, in particular, its adjustment, maintenance and repairs are another high risk factor for employees, especially for maintenance staff.

Therefore, the LOTO (Lock-out and Tag-out) procedure plays a very important part in improving the safety of working with machines at GSK. LOTO is aimed at protecting workers during the intervention, in the process of which they may be exposed to contact with dangerous parts. Such situations occur during cleaning, changeover, checking the purity of lines, maintenance, adjustment, troubleshooting, etc.

Scheduled maintenance is also an important element in ensuring the safety of machinery and equipment. The document called Operation Manuals (also so-called SOP's – Standard Operational Procedures) includes all useful information to plan and carry it out properly.

The enterprise is also aware that worn and decommissioned equipment should be safely removed from the plant.

In addition to maintenance of machinery and equipment, all remaining infrastructure at the GSK Poznań plant (mainly the buildings) is subject to periodic evaluation. Depending on the size, each facility is subject to periodic inspections: every 6 months or every year, and its technical condition and suitability for use is tested every 5 years. In the event of serious external factors that could affect the facility, immediate emergency inspection is performed.

CASE STUDIES

The entire GSK infrastructure is subject to a yearly engineering audit, called TP13. The purpose of the TP13 engineering audit is to determine good engineering practices and to achieve the suitable infrastructure technical level of the GSK plants.

Safe maintenance of buildings is also related to the proper organization of work. An example of a significant safety improvement in the workplaces is the Poznań plant warehouses. Solutions reducing the risk related to the traffic of people and forklifts, ergonomics and work organization were undertaken. Fire protection of the buildings is also very high on the GSK priority list.

As far as proper workplace organization is concerned, the factory is implementing the 5S methodology - keep the workplace tidy and organized (5S is a workplace organization methodology based on 5 primary phases: sorting, straightening, systematic cleaning, standardizing, and sustaining).

The processes related to ensuring the proper operation of machinery, equipment and buildings are subject to internal monitoring by specific Key Performance Indicators.

The enterprise carries on the Living Safety programme – embedding safe behaviours during work on machines, in particular the reporting of potentially dangerous incidents, self-inspection, auditing and training (a joint initiative with Quality Assurance), regular communication and use of visual boards and *GEMBA*. *GEMBA* (meaning "place") is derived from the Japanese phrase *genchi genbutsu* which essentially means "go and see." In more details, to really understand what is happening, you need to go and see what is going on. The principle emphasizes that real process improvement takes place at the front line and should be experienced through personal observation and interaction.

3.4. What was achieved?

As a result of the EHS policy, reliable work of the OH&S staff, technical departments, engineering specialists, continuous control of all workstations and observance of the fundamental principles by all employees, the number of accidents at work is decreasing every year (in 2008-2009 there were 4 accidents, until September 2010 - only 1). This keeps the accident rates for the factory at a low level. The severity of accidents, as measured by the sick leave length, is also decreasing.

Internal staff surveys show that employees feel safe at their workstations (positive responses from 89% of employees), which proves the effectiveness of measures taken to ensure workplace safety.

The benefit for the company is the reduced number of accidents and decreased accident severity, as well as improved work effectiveness and comfort. By maintaining machinery, equipment and infrastructure in a good condition, negative impact on the environment is reduced by limiting emissions of particulate matter and CO₂ in connection with decreasing consumption of energy, water and raw materials. Keeping an equipment and infrastructure in good working order means fewer failures and less destroyed materials. It considerably helps to reduce the amount of generated waste. As a result of preventive maintenance, keeping the outside noise at a level conforming to the applicable regulations is possible. Thanks to that factory's neighbours (employees of other plants and residents of nearby residential estates) have no reason to complain.

3.5. Success factors

The main success factor is the attitude of people working at GlaxoSmithKilne. All staff cares about their own safety and safety of their colleagues. The supervisors involved in OH&S issues, as well as the top management, regularly once a month review the EHS (Environment, Health, and Safety) results.



3.6. *Transferability*

The systemic and comprehensive approach to safe maintenance is a great advantage of the project. A similar approach and the majority of described means can be successfully implemented into practice by other enterprises. Information on the project can be used in other situations, Member States, industry sectors and other workplaces.

3.7. *Further information*

Ms Anna Majcher-Stabrowska

EHS & Risk Mgmt Manager

GlaxoSmithKline Pharmaceuticals SA

Grunwaldzka 189, Poznan 60-322

Office: + 48 (0) 61 8601 995 Mobile: + 48 504 110 73

Ms Zuzanna Kaleta-Michalak - Senior Specialist OH&S and Environmental Protection

60-322 Poznań, ul. Grunwaldzka 189, Poland

Tel +48 61 860 12 00

Fax +48 61 860 57 17

Email: zuzanna.z.kaleta-michalak@gsk.com

4. References, resources:

- <http://www.gsk.com.pl/>